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African Tetranychidae (Acari: Prostigmata)

- WITH REFERENCE TO THE WORLD GENERA

MAGDALENA K.P. SMITH MEYER

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ABSTRACT

From Africa 40 genera and 319 species of phytophagous tetranychid mites are recognized. Two new genera, *Toronobia* with a new species *T. hirsutae* as type-species and *Evertella* with *Mixonychus koegasensis* Meyer as type-species, are described and figured. The following 53 new species are also described and illustrated: *Bryobia petrilunara, B. kakamaensis, B. angolensis, B. burkei, Marainobia robusta, Porcupinychus nicolasi, P. humilis, P. sheilae, P. kalahariensis, Mesobryobia keetchi, Aplonobia carinati, A. inflata, A. aughrabiensis, A. pentziae, Neopetrobia arboriformae, N. leipoldtiae, N. namaensis, N. albiei, N. africana, N. oryx, N. amaranthae, N. dideltae, N. vulgata, N. inornata, Schizonobia viticola, Petrobia (P.) haematoxylon, P. (Mesotetranychus) enodis, Eurytetranychus acaciae, Eutetranychus fici, E. namibianus, Chinotetranychus parydrus, Eonychus subspathulatae, E. flavae, Schizotetranychus pennamontanus, S. triquetrus, S. setariae, Mononychellus heteromniae, M. vaalensis, Eotetranychus reduncus, E. mucronatae, E. tokaiensis, E. africanus, Tetranychus axinitus, T. mesembryanae, T. chaeropus, T. joanni, T. salsolae, Oligonychus apohadrus, O. waltersi, O. campestris, O. ocellatus, O. castrensis* and *O. barbatae.*

Keys to 72 genera in the Tetranychidae and the African species are given. A list of host plants and localities follows the description of each new species. New records for known species are also included.

Uittreksel

TETRANYCHIDAE (ACARI: PROSTIGMATA) VAN AFRIKA, MET VERWYSING NA WÊRELDGENERA

In hierdie hersiening van die plantparasitiese familie Tetranychidae word 'n algemene oorsig van die verspreiding, klassifikasie en die uitwendige morfologie van 319 ou en nuwe spesies, wat in Afrika versamel is, gegee: 265 reeds beskryfde spesies word gedefinieer en na elke beskrywing volg 'n volledige lys van gasheerplante en lokaliteite, wat ook nuwe gasheerplante en lokaliteitsrekords insluit. Twee nuwe genera, Toronobia *met 'n nuwe spesie* T. hirsutae *as tiepspesie en* Evertella *met* Mixonychus koegasensis *Meyer as tiepspesie, word volledig geteken en beskrywe. Die volgende nuwe spesies word ook geteken en beskrywe:* Bryobia petrilunara, B. kakamaensis, B. angolensis, B. burkei, Marainobia robusta, Porcupinychus nicolasi, P. humilis, P. sheilae, P. kalahariensis, Mesobryobia keetchi, Aplonobia carinati, A. inflata, A. aughrabiensis, A. pentziae, Neopetrobia arboriformae, N. leipoldtiae, N. namaensis, N. albiei, N. africana, N. oryx, N. amaranthae, N. dideltae, N. vulgata, N. inornata, Schizonobia viticola, Petrobia (P.) haematoxylon, P. (Mesotetranychus) enodis, Eurytetranychus acaciae, Eutetranychus fici, E. namibianus, Chinotetranychus parydrus, Eonychus subspathulatae, E. flavae, Schizotetranychus pennamontanus, S. triquetrus, S. setariae, Mononychellus heteromniae, M. vaalensis, Eotetranychus reduncus, E. mucronatae, E. tokaiensis, E. africanus, Tetranychus axinitus, T. mesembryanae, T. chaeropus, T. joanni, T. salsolae, Oligonychus apohadrus, O. waltersi, O. campestris, O. ocellatus, O. castrensis *en* O. barbatae.

'n Sleutel tot 72 genera van die Tetranychidae word gegee en onder elke genus wat in Afrika gevind is, word 'n sleutel tot die spesies gegee.

INTRODUCTION

The Tetranychidae is one of the most important families in the Acari because these mites cause great damage and yield losses to ornamental and agricultural plants.

Knowledge of the African Tetranychidae is based on the work of Tucker (1926), Sayed (1938-1946), Moutia (1958), Meyer & Ryke (1959), Baker & Pritchard (1960), Robinson (1961), Meyer (1964-1974), Meyer & Rodrigues (1966), Attiah (1967a-c, 1969), Gutierrez (1966-1982), Saba (1973, 1975a-b). Matthysse (1978) and Meyer & Bolland (1984).

The comprehensive taxonomic study by Meyer (1974) recorded 36 genera and 247 species from Africa. Of these 8 were new genera and 130 new species. More recently Zaher, Gomaa & El-Enany (1982) studied the spider mites of Egypt and dealt with 12 genera and 33 species, including a new genus and 12 new species.

In Africa the number of described species of spider mites has increased rapidly over the past 30 years, yet every collecting trip continues to yield new species. This indicates that there are still many undiscovered species of spider mites on the African continent. Despite of this fact and the damage caused to crops by tetranychid mites few acaroligists are actively studying the taxonomy of African species.

This paper is a comprehensive review of the African species of tetranychid mites. A total of 40 African genera and 319 species are recorded, including 2 new genera and 54 new species. Thirty-two genera not known to occur in Africa are defined and in some cases illustrated. These genera are included in a generic key. The type material is deposited in the National Collection of Arachnida, Plant Protection Research Institute, Pretoria.

TETRANYCHIDAE Donnadieu

Tetranycidés Donnadieu, 1875: 9.

Tetranychidae Murray, 1977: 93, 97; Pritchard & Baker, 1955: 4; Tuttle & Baker, 1968: 1; Meyer, 1974: 2; Tuttle, Baker & Abbatiello, 1976: 2.

The Tetranychidae can be defined as follows: Stylophore eversible, with long, slender recurved chelae; peritremes ending simple or anastomosing distally, arising from base of stylophore; duplex setae present or absent; ambulacral tenent hairs present; tarsal claws (true claws) and empodia pad-like or claw-like; palpal tibia with strong claw forming a "thumb-claw complex" with palp-tarsus; female genitalia characteristically wrinkled; male aedeagi protrusible, variously shaped and important for species identification.

The subfamily classification used in this review is that of Pritchard & Baker (1955), Tuttle & Baker (1968) and Meyer (1974). Mitrofanov (1972) raised the Bryobiinae to family rank, proposed several new tribes in the Bryobiidae and separated the Tetranychidae into the subfamilies Eurytetranychinae and Tetranychinae. Unfortunately, the stability of many diagnostic characters used by Mitrofanov are now suspect, therefore his classification has not been followed. In my opinion, more collecting on a world-wide scale is needed before the taxonomy of the Tetranychidae can be satisfactorily resolved.

The supraspecific concepts of many authors are based on minor differences such as the position, length, presence or absence of certain body setae and the dorsal striation pattern of the females. This has resulted in many genera being separated on morphological characters so slight that an artificial classification has been created. I would draw the attention of acarologists to the following statement by Baker (1979) on the importance of a carefully constructed system of classification: "Without such a system the ever increasing number of newly described species will be lost in the maze of spider mite taxa. Use of modern technology and techniques such as the scanning electron microscope, eletrophoresis, cladistics and numerical taxonomy could add significantly to our understanding of this interesting group of mites. There is a great need for biological studies as they relate to systematics. Until we attain a better understanding of environmentally induced variation many of our taxa may be artificially defined."

Lindquist (in correspondence, 1984) pointed out that the superficiality of many taxonomists and their failure to study the immature stages have added to the taxonomic confusion in the Tetranychidae. He feels that the classification of tetranychid taxa needs to be started afresh using a different methodology, such as phylogenetic systematics.

The morphological variability of certain characters used to separate species in some genera has also made identification very difficult. It is important to use diagnostic features that do not vary between or even within populations of the same species. In the study of the Bryobiinae, especially the genus *Bryobia*, the larval stages are of great value in species identification. Van Eyndhoven (1972) advised the study of the spermatheca because it can be a useful additional differential character. In the Bryobiinae and some genera of the Tetranychinae the spermathecae are generally easy to detect whereas in some genera, *Tetranychus* and *Oligonychus*, the spermathecae are very small and therefore very difficult to find.

Helle, Gutierrez & Bolland (1970); Gutierrez, Helle & Bolland (1970); Gutierrez, Bolland & Helle (1979); Helle, Bolland & Heitmans (1981) and Bolland, Gutierrez & Helle (1981) indicated the importance of cytogenetic studies in phylogenetic relationships. In particular, these authors emphasized the taxonomic value of chromosome numbers because they are constant in the same species from different geographical regions.

Recently Gutierrez (1985) revised the classification of the Tetranychidae, but as his publication reached me after this manuscript was already in press I cannot comment on it.

KEY TO THE SUBFAMILIES, TRIBES AND GENERA OF TETRANYCHIDAE

1. Empodium with tenent hairs; female with 3 pairs of anal setae and male with 5 pairs of genito-anal setae ... (BRYOBIINAE) 2

- Empodium without tenent hairs or empodium may be absent; female with 1 or 2 pairs of anal setae and male with 3 or 4 pairs of genito-anal setae ... (TETRANYCHINAE) 39
2. True claws uncinate or if pad-like, prodorsum with well-developed setiferous lobes; empodium pad-like ... (BRYOBIINI) 3
- True claws pad-like; pad rarely with a strong hook on midventral surface; anteriorly, prodorsum may have 0 to 3 setiferous lobes; empodium pad-like or uncinate 10
3. Prodorsum with 8 setae (4 pairs) 4
- Prodorsum with 7 setae (1 unpaired) ....*Septobia* Zaher, Gomaa & El-Enany
- Prodorsum with 6 setae (3 pairs) 8
4. Prodorsum without setiferous lobes anteriorly; opisthosoma with fourth pair of dorsocentral setae (f_1) in dorsal position, not more widely spaced than preceding 3 pairs of dorsocentrals 5
- Prodorsum with setiferous lobes anteriorly; opisthosoma with fourth pair of dorsocentral setae (f_1) marginal or more widely spaced than preceding 3 pairs of dorsocentrals 6
5. One pair of pregenital setae and 1 pair of hypostomal setae present; coxa I with 2 setae . .....*Pseudobryobia* McGregor
- Two pairs of pregenital setae and 2 pairs of hypostomal setae present; coxa I with 3 or 4 setae ..... *Strunkobia* Livshitz & Mitrofanov
6. True claws uncinate 7
- True claws pad-like, those of leg I each with 2 tenent hairs and those of legs II-IV each with 2 rows of ventrally directed tenent hairs ....*Bryocopsis* Meyer
7. Coxal setal formula 2-1-1-1; empodia II-IV with more than 1 pair of tenent hairs .... *Bryobia* Koch
- Coxal setal formula 2-1-2 or 3-2; empodia II-IV with 1 pair of tenent hairs ....*Toronobia* gen. nov.
8. Tarsus I devoid of duplex setae; para-anal setae located dorsally ....*Bryobiella* Tuttle & Baker
- Tarsus I with normal 2 sets of duplex setae; para-anal setae located ventrally 9
9. Opisthosoma with 10 pairs of dorsal body setae; fourth pair of dorsocentral setae (f_1) in dorsal position; 2 pairs of pregenital setae present .... *Eremobryobia* Strunkova & Mitrofanov
- Opisthosoma with 12 pairs of dorsal body setae; fourth pair of dorsocentral setae (f_1) marginal; 1 pair of pregenital setae present ... . *Hemibryobia* Tuttle & Baker
10. True claws pad-like, but rarely with a midventral hook; empodium pad-like .... (HYSTRICHONYCHINI) 11
- True claws pad-like and empodium uncinate distally or with midventral hook 30
11. Prodorsum with 4 pairs of setae 12
- Prodorsum with 3 pairs of setae 14
12. Opisthosoma with 9 to 12 pairs of dorsal body setae; true claws completely pad-like and not with a midventral hook 13
- Opisthosoma with 6 pairs of dorsal body setae; dorsal body setae set on prominent tubercles; true claws pad-like distally, but each with a midventral hook ..... *Marainobia* Meyer
13. Opisthosoma with 12 pairs of dorsal setae, set on strong tubercles and most of them contiguous; opisthosoma without a caudal dorsal shield ..... *Tetranycopsis* Canestrini
- Opisthosoma with 9 pairs of dorsal setae, set on small tubercles and well separated; opisthosoma with a caudal dorsal shield .... *Notonychus* Davis
14. Opisthosoma with 8 or 9 pairs of dorsal body setae 15
- Opisthosoma with 10 or more pairs of dorsal setae 17
15. Opisthosoma with 8 pairs of dorsal body setae, of which only 2 pairs are in a dorsocentral position 16
- Opisthosoma with 9 pairs of dorsal setae, of which 3 pairs are in a dorsocentral position ... .*McGregorella* Baker & Tuttle
16. Humeral setae (c_3) contiguous with first pair of dorsolateral setae (c_2); dorsal body setae set on strong tubercles and mostly contiguous; dorsal integument without tuberculate pattern ....*Porcupinychus* Anwarullah
- Humeral setae (c_3) and other dorsal setae well separated and set on small tubercles; dorsal integument with tuberculate protuberances, forming a reticulate pattern .... *Afronobia* Meyer
17. Prodorsum with projections or elevations over rostrum; bodies elongate, about twice as long as broad or nearly so 18
- Prodorsum without projections over rostrum; bodies not elongate, considerably less than twice as long as broad 20
18. Fourth pair of dorsocentral setae (f_1) more widely spaced than first pair of dorsocentrals (c_1) 19
- Fourth pair of dorsocentral setae (f_1) closer together than first pair of dorsocentrals (c_1) ... . *Dolichonobia* Meyer
19. With 2 anterior projections over rostrum ....*Mesobryobia* Wainstein
- With 3 anterior projections over rostrum ....*Monoceronychus* McGregor
20. Dorsum with 10 pairs of opisthosomal setae (including humerals (c_3)) 21
- Dorsum with 12 pairs of opisthosomal setae .. .. *Hystrichonychus* McGregor
21. Female with normal 2 sets of duplex setae on tarsus I 22
- Female with 4 sets of duplex setae on tarsus I . .....*Parapetrobia* Meyer & Ryke
22. Opisthosoma with 5 pairs of setae in a dorsocentral position 23
- Opisthosoma with 4 pairs of setae in a dorsocentral position ..... *Beerella* Wainstein
23. Dorsum with striate integument, except where covered by shields; dorsal body setae serrate, slender, spindle-shaped or spatulate 24
- Dorsum with tuberculate pattern, lacking shields; dorsal body setae broadly clavate and

not serrate ..... *Reckia* Wainstein

24. With 2 pairs of ventral setae between coxae III and IV; number of coxal setae not exceeding 4-3-2-2 25
- With at least 6 pairs of ventral setae between coxae III-IV; number of coxal setae 11-9-9-9; other segments of legs also characterized by an enriched chaetotaxy .... *Tauriobia* Livshitz & Mitrofanov

25. Coxal setae less than 4-3-2-2 26
- Coxal setae 4-3-2-2 .... *Brachynychus* Mitrofanov & Strunkova

26. Opisthosoma without plates; prodorsum with a plate 27
- First to fourth pairs of dorsocentral setae located on oblong cushion-like plates; prodorsum without a plate .... *Peltanobia* Meyer

27. Dorsal body setae not on tubercles or set on small tubercles 28
- Some [at least fourth pair of dorsocentrals (f_1) and dorsolaterals (c_2, d_2, e_2 and f_2)] or all dorsal body setae set on strong tubercles .... *Aplonobia* Womersley (including *Georgiobia* Wainstein)

28. Empodial pads longer than pads of true claws, bearing 2 rows of tenent hairs 29
- Empodial pads as long as, or shorter than pads of true claws, bearing 1 pair of tenent hairs, or a row in which the tips are coalescent .... *Anaplonobia* Wainstein

29. With simple peritremes .... *Paraplonobia* Wainstein
- With anastomosing peritremes .... *Neopetrobia* Wainstein (including *Langella* Wainstein)

30. Dorsum with not more than 15 pairs of dorsal body setae 31
- Dorsum with many dorsal body setae, about 28 or more (neotrichy in first 3 transverse rows of opisthosomal setae) ..... (DASYOBIINI) ..... *Dasyobia* Strunkova

31. With normal 3 pairs of ventral body setae .... (PETROBIINI) 32
- With many ventral body setae .... (NEOTRICHOBIINI) .... *Neotrichobia* Tuttle & Baker

32. Tarsus I with normal number of 2 or more sets of duplex setae; duplex setae absent on tibia I of male 33
- Tarsus I with a single set of duplex setae; duplex setae also present on tibia I of male ... . *Schizonobiella* Beer & Lang

33. Prodorsum without setiferous projections . 34
- Prodorsum with 3 setiferous projections .... *Mezranobia* Athias-Henriot

34. Empodium with 2 rows of ventrally directed tenent hairs 35
- Empodium with a single compound pair of tenent hairs ..... *Schizonobia* Womersley

35. Para-anal setae in a ventral position; empodium uncinate distally 36
- Para-anal setae in a dorsal position; empodium hooked midventrally ..... *Edella* Meyer

36. Opisthosoma with 10 pairs of dorsal body setae (including humerals (c_3)); coxae I and II each with 2 setae 37
- Opisthosoma with 9 pairs of dorsal body setae (including humerals (c_3)); coxae I and II each with 1 setae ..... *Tenuicrus* Womersley

37. Empodia each with 2 rows of hairs, which are not knobbed at tips; dorsal body setae short, spatulate, only fifth pair of dorsocentral setae (h_1) set on prominent tubercles; dorsal integument with striae clustered into lumps, giving a reticulate effect .... *Lindquistiella* Mitrofanov
- Empodia each with 2 rows of knobbed tenent hairs; dorsal body setae long or short, not spatulate, some or all opisthosomal setae set on prominent tubercles or not; dorsal integument striate 38

38. Dorsal body setae not on tubercles .... *Petrobia* Murray (including *Mesotetranychus* Reck)
- Some or all the body setae set on tubercles ... . *Tetranychina* Banks

39. Tarsus I dorsally with a single set of usually loosely associated duplex setae, or duplex setae absent ... (EURYTETRANYCHINI) ... 40
- Tarsus I dorsally with 2 sets of closely associated duplex setae ..... (TENUIPALPOIDINI & TETRANYCHINI) 48

40. Empodial claw present 41
- Empodial claw absent 42

41. Empodial claw large, about half as long as tenent hairs of true claw ... *Synonychus* Miller
- Empodial claw very small and hooked .... *Eurytetranychus* Oudemans

42. Female with 2 pairs of anal setae; fourth pair of dorsocentral setae (f_1) in normal position 43
- Female with 1 pair of anal setae; fourth pair of dorsocentral setae (f_1) marginal 44

43. Opisthosoma with 10 pairs of dorsal body setae, including first pair of dorsolaterals (c_2) .. .. *Eutetranychus* Banks
- Opisthosoma with 9 pairs of dorsal setae, lacking first pair of dorsolaterals (c_2) .... *Meyernychus* Mitrofanov

44. Opisthosoma with 10 pairs of dorsal body setae 45
- Opisthosoma with 9 pairs of dorsal setae . 46

45. Coxae II each with 2 setae .... *Aponychus* Rimando
- Coxae II each with 1 seta .... *Chinotetranychus* Ma & Yuan

46. Opisthosoma caudally with 3 pairs of dorsal setae in a marginal position 47
- Opisthosoma caudally with 4 pairs of dorsal setae in a marginal position .... *Paraponychus* Gonzalez & Flechtmann

47. Opisthosoma with all dorsal setae or at least dorsocentrals (c_1, d_1 and e_1) longer than longitudinal intervals between them; stylophore with 2 rounded projections distally .... *Sinotetranychus* Ma & Yuan
- Opisthosoma with dorsal body setae mostly shorter than longitudinal intervals between

them; stylophore with 2 pointed cone-like projections distally ..... *Stylophoronychus* Prasad

48. Opisthosoma with fourth pair of dorsocentral setae (f_1) marginal ..... (TENUIPALPOIDINI) 49
- Opisthosoma with fourth pair of dorsocentrals (f_1) in normal dorsal position or if more widely spaced than preceding 3 pairs of dorsocentrals (c_1, d_1 and e_1), these setae (f_1) are situated well proximal to body margin ..... (TETRANYCHINI) 52

49. Opisthosoma with 10 pairs of dorsal body setae; fourth pair of dorsocentral setae (f_1) present 50
- Opisthosoma with 9 pairs of dorsal setae; fourth pair of dorsocentral setae (f_1) absent ... . *Eonychus* Gutierrez

50. Empodium split distally into several hairs; dorsum striate-spiculate ..... *Crotonella* Tuttle, Baker & Abbatiello
- Empodium uncinate and without proximoventral hairs; dorsum striate-reticulate 51

51. Tarsus II with distal member of duplex set a short solenidion; peritreme hooked or with a pectinate enlargement distally ..... *Tenuipalpoides* Reck & Bagdasarian
- Tarsus II with distal member of duplex set long and tapering; peritreme ends in a simple bulb .. .. *Tenuipalponychus* Channabassavanna & Lakkundi

52. Tarsus II devoid of closely associated duplex setae 53
- Tarsus II with 1 set of duplex setae 54

53. Empodium a rudimentary knob ..... *Duplanychus* Meyer
- Empodial claw long and slender ..... *Anatetranychus* Womersley

54. With 2 pairs of para-anal setae 55
- With 1 pair of para-anal setae 71

55. Empodium claw-like, entire or split bilaterally into 2 claw-like structures 56
- Empodium ending in a tuft of hairs 66

56. Empodium a single claw-like structure ... 57
- Empodium split bilaterally into 2 claw-like structures; usually with appendant hairs .. 65

57. Empodium without proximoventral hairs . 58
- Empodium with proximoventral hairs 64

58. Tarsus I with 2 sets of duplex setae; peritreme ends simply 59
- Tarsus I with a single set of duplex setae; peritreme anastomosing distally ..... *Atetranychus* Tuttle, Baker & Abbatiello

59. Gnathosoma not elongate; female dorsum reticulate, punctulate or striate, without spinules 60
- Gnathosoma elongate; female dorsum with spinules ..... *Tylonychus* Miller

60. Empodial claw very short, about as long as pads of true claws; dorsum punctulate ..... *Brevinychus* Meyer
- Empodial claw much longer than pads of true claws; dorsum striate or striate-reticulate 61

61. Dorsum finely striate; dorsal body setae slender and not set on tubercles ....*Sonotetranychus* Tuttle, Baker & Abbatiello
- Dorsum reticulate or with striae clustered into lumps; may be reticulate on prodorsum and striate on opisthosoma; some or all dorsal opsithosomal setae set on small to moderate-sized tubercles 62

62. Dorsum appearing reticulate, due to striae clustered into lumps; dorsal body setae lanceolate or subspatulate, serrate, vary from moderately long to short 63
- Opisthosoma with broad, broken striae; prodorsum reticulate mediodorsally; dorsal body setae long, thick, finely setose, sometimes lanceolate or subspatulate .. *Bakerina* Chaudhri

63. Opisthosoma with 9 pairs of dorsal setae (fourth pair of dorsolaterals (f_1) absent); peritreme with branches distally ..... *Evertella* gen. nov.
- Opsithosoma with 10 pairs of dorsal setae; peritreme ending simply ..... *Mixonychus* Ryke & Meyer

64. Empodial claw as long as or longer than proximoventral hairs, which are at right angle to claw ..... *Panonychus* Yokoyama
- Empodial claw shorter than proximoventral hairs, which are at less than a right angle to claw ..... *Allonychus* Pritchard & Baker

65. Opisthosoma with 9 pairs of dorsal setae (fourth pair of dorsolaterals (f_1) absent) ..... *Yezonychus* Ehara
- Opisthosoma with 10 pairs of dorsal setae .... *Schizotetranychus* Trägårdh

66. Dorsal body setae short to long, set on small tubercles or not; all dorsocentral setae (c_1, d_1, e_1, f_1, and h_1) well spaced from another .. 67
- Dorsal body setae long and strong, set on prominent tubercles of which first (c_1), second (d_1) and sometimes third (e_1) pairs of dorsocentrals are contiguous ..... *Acanthonychus* Wang

67. Dorsal striae of female forming a basketweave pattern ..... *Neotetranychus* Trägårdh
- Dorsal striae of female not forming a basketweave pattern 68

68. Opisthosomal striae transverse dorsomedially; dorsal striae usually inconspicuously lobed 69
- Opisthosomal striae irregular to longitudinal between third pair of dorsocentral setae (e_1); dorsal striae usually prominently lobed ..... *Mononychellus* Wainstein

69. Dorsal body setae very short, not as long as longitudinal intervals between their bases ..... *Platytetranychus* Oudemans
- Dorsal body setae as long as, or longer than intervals between their bases 70

70. Female with 2 pairs of anal setae; tarsus I with 3 tot 5 tactile setae proximal to duplex setae .. .. *Eotetranychus* Oudemans
- Female with 1 pair of anal setae; tarsus I with no tactile seta proximal to duplex setae (although with 1 tactile seta ventrally at level of

proximal duplex setae) .....
..... *Palmanychus* Baker & Tuttle

71. Tarsus I with duplex setae distal and approximate 72
- Tarsus I with duplex sets well separated, dividing segment into 3 more or less equal parts ..... *Tetranychus* Dufour

72. Female with 2 pairs of anal setae; dorsal body setae not set on tubercles 73
- Female with 1 pair of anal setae; dorsal body setae set on tubercles .....
..... *Atrichoproctus* Flechtmann

73. All legs or most of them with empodial claws, which are about half as long as proximoventral hairs ..... *Hellenychus* Gutierrez
- All legs or most of them with empodial claws, which are as long as, or longer than proximoventral hairs .... *Oligonychus* Berlese

BRYOBIINAE Berlese

Bryobiini Berlese, 1913: 17.

Bryobiinae Reck, 1950: 122; Pritchard & Baker, 1955: 12; Wainstein, 1960b: 91; Tuttle & Baker, 1968: 2; Mitrofanov, 1972: 1171; Meyer, 1974: 5.

In the Bryobiinae the tarsal claws and empodia have tenent hairs; tarsal claws and empodia pad-like or claw-like; 12 to 15 pairs of dorsal body setae; 1 to 2 pairs of anal setae and 1 or 2 pairs of para-anal setae.

BRYOBIINI Berlese

Bryobiini Berlese, 1913: 17; Pritchard & Baker, 1955: 14; Wainstein, 1960b: 93; Tuttle & Baker. 1968: 4; Mitrofanov, 1972: 1172; Meyer, 1974: 5.

This tribe is characterized by having the true claws uncinate distally; if true claws are pad-like then prodorsum has 4 well-developed setiferous lobes anteriorly.

Septobia Zaher, Gomaa & El-Enany

Septobia Zaher, Gomaa & El-Enany, 1982: 94.

Type-species: *Septobia bakeri* Zaher, Gomaa & El-Enany.

This genus is recognized by the following combination of characters: Prodorsum with 7 setae of which 3 are located on lobes anteriorly; shape and number of dorsal setae on opisthosoma arranged similar to that of *Bryobia*; peritreme anastomoses distally; tarsal claws uncinate and with tenent hairs; empodium pad-like bearing rows of tenent hairs; coxal setal formula 2-1-1-1.

Septobia is known by 2 species described from Egypt. Zaher, Gomaa & El-Enany (1982) differentiated between the 2 species as follows:

KEY TO THE SPECIES OF *SEPTOBIA*

1. Femur I with 16 setae; tibia I with 15 setae; lobes on prodorsum widely spaced; median lobe the longest .. *S. bakeri* Zaher, Gomaa & ..... El-Enany
- Femur I with 18 setae; tibia I with 16 setae; lobes on prodorsum closer together and about the same length .....
.....*S. aegyptiacus* Zaher, Gomaa & El-Enany

Septobia bakeri Zaher, Gomaa & El-Enany
(Fig. 1-2)

Septobia bakeri Zaher, Gomaa & El-Enany, 1982: 94.

This species can be recognized by the widely spaced lobes (Fig. 2) on the prodorsum, medium lobe the longest; femur I bears 16 setae and tibia I with 15 setae.

Habitat and locality. This species was collected on *Mentha sativa* in Egypt.

Septobia aegyptiacus Zaher, Gomaa & El-Enany

Septobia aegyptiacus Zaher, Gomaa & El-Enany, 1982: 97.

This species is distinctive in that the lobes on the prodorsum are situated close together and more or less of equal length; femur I with 18 setae; tibia I with 16 setae.

Habitat and locality. *S. aegyptiacus* was found on *Malva sylvestris* in Egypt.

Pseudobryobia McGregor
(Fig. 3)

Pseudobryobia McGregor, 1950: 366; Baker & Tuttle, 1972: 2; Meyer, 1974: 13; Tuttle, Baker & Abbatiello, 1976: 5.

Type-species: *Pseudobryobia bakeri* McGregor.

Prodorsum without anterior lobes over gnathosoma; opisthosoma bears 12 pairs of dorsal setae; fourth pair of dorsocentral setae (f_1) in a normal position and more or less aligned with first 3 pairs (c_1, d_1, and e_1); peritremes simple or anastomosing distally; true claws uncinate and with tenent hairs; empodium pad-like and with tenent hairs; coxal setal formula 2-2-1-1.

This genus is represented by a number of species in the Northern Hemisphere but has not been found in Africa.

Strunkobia Livshitz & Mitrofanov
(Fig. 4-5)

Strunkobia Livshitz & Mitrofanov, 1972: 8.

Type-species: *Strunkobia pamirica* Livshitz &

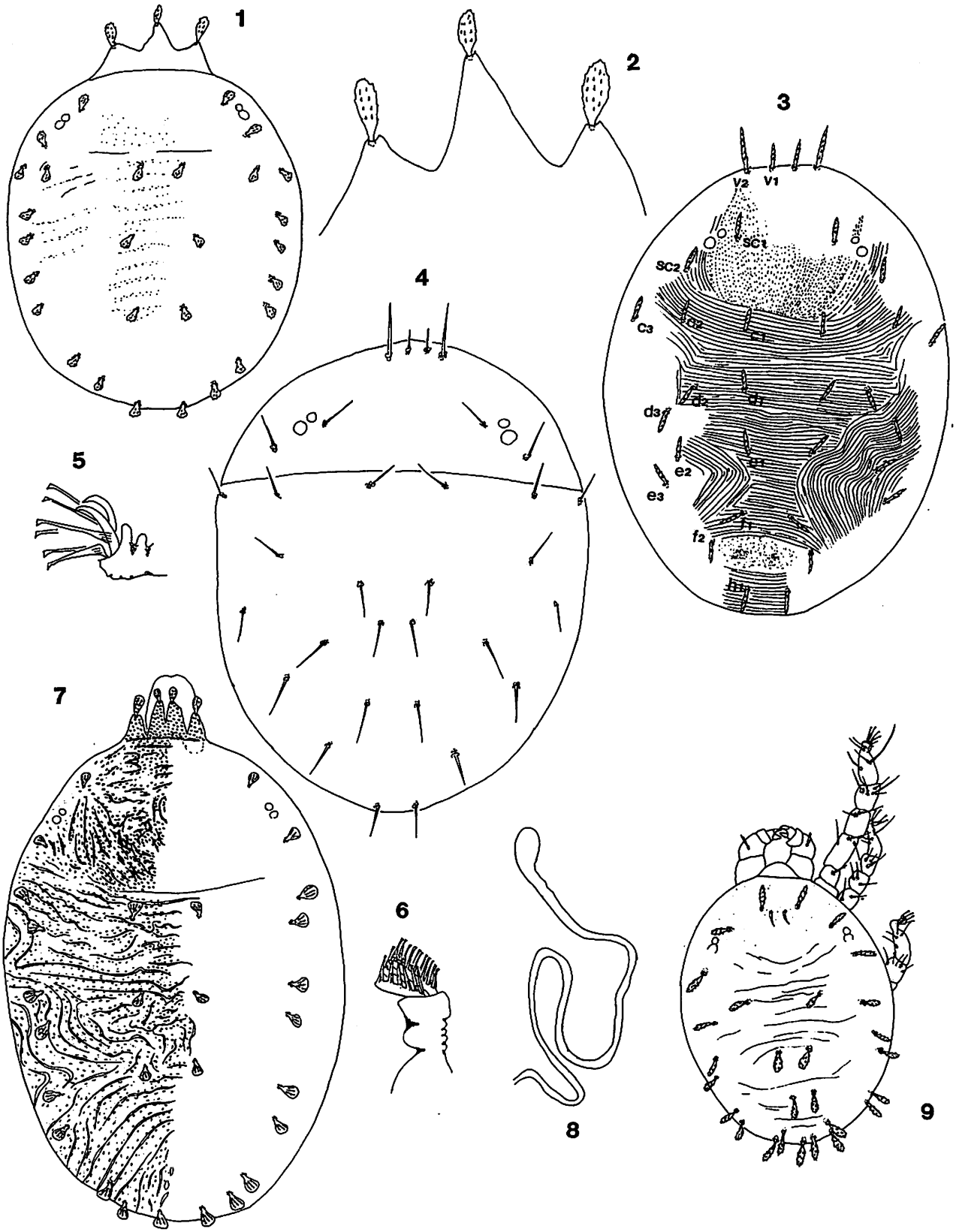

FIG. 1-2. *Septobia bakeri* Zaher, Gomaa & El-Enany. Female/ *Wyfie* (After Zaher, Gomaa & El-Enany, 1982)
FIG. 1. Dorsal view/ *Dorale aansig*
FIG. 2. Prodorsal lobes/ *Prodorsale lobbe*
FIG. 3. *Pseudobryobia bakeri* McGregor (After Tuttle, Baker & Abbatiello, 1976). Dorsal view of female with notations of dorsal body setae according to Grandjean's system/ *Dorsale aansig van wyfie met die notasie van die dorsale liggaamsetas volgens Grandjean se sisteem*
FIG. 4-5. *Strunkobia pamirica* Livshitz & Mitrofanov. Female/ *Wyfie* (After Livshitz & Mitrofanov, 1972)
FIG. 4. Dorsal view/ *Dorsale aansig*
FIG. 5. Tarsal appendages/ *Tarsale aanhangsels*
FIG. 6-8. *Bryocopsis mansoni* Meyer. Female/ *Wyfie*
FIG. 6. Tarsal appendages/ *Tarsale aanhangsels*
FIG. 7. Dorsal view/ *Dorsale aansig*
FIG. 8. Spermatheca/ *Spermateka*
FIG. 9. *Bryobia praetiosa* Koch. Dorsal view of larva/ *Dorsale aansig van larf*

Mitrofanov.

This genus is characterized by 4 pairs of setae on the prodorsum (v_{1-2} and sc_{1-2}); anterior lobes absent; true claws uncinate and with tenent hairs (Fig. 5); ventrally 2 pairs of pregenital and hypostomal setae are present; coxal setal formula 3 or 4-2 or 3-1-1.

The type is the only species known and was collected on *Euphorbia pamirica*, in Eastern Pamir, USSR.

Bryocopsis Meyer

Bryocopsis Meyer, 1974: 8.

Type-species: *Bryocopsis mansoni* Meyer.

The genus *Bryocopsis* may be recognized by the pad-like tarsal claws; those of leg I relatively short and each bears 2 tenent hairs whereas those of legs II-IV are relatively long and each bears 2 rows of ventrally directed tenent hairs; empodium I is a short pad, about as long as the tarsal claws, bearing about 3-4 pairs of tenent hairs; empodia II-IV are also as long as the tarsal claws and bear 2 rows of ventrally directed tenent hairs (Fig. 6). The dorsal aspect of the female (Fig. 7) is similar to that of *Bryobia*. Four strongly developed setiferous lobes project from the anterior end of the prodorsum and the latter bears 4 pairs of setae; opisthosoma with 12 pairs of dorsal setae which are spatulate; peritreme anastomoses distally; fourth pair of dorsocentral setae (f_1) situated marginally; coxal setal formula 2-1-1-1.

KEY TO THE SPECIES OF *BRYOCOPSIS*

1. Genu I with 8 setae and tibia I with 14 or 15 tactile setae and 1 solenidion ..... *B. mansoni* Meyer
- Genu I with 5 setae and tibia I with 11 or 12 tactile setae and 1 solenidion ..... *B. vrystaatensis* Meyer

Bryocopsis mansoni Meyer
(Fig. 6-8)

Bryocopsis mansoni Meyer, 1974: 9.

This species can be recognized by 8 setae on genu I and 14 or 15 tactile setae plus a solenidion on tibia I; spermatheca illustrated in Fig. 8.

Habitat and locality. In South Africa *B. mansoni* is widely distributed in the Cape and has been recorded from the following host-plants: *Anthospermum tricostatum, A. aethiopicum, Elytropappus rhinocerotis, Cliffortia burchellii, Restio gaudichaudianus, Erica* sp., *Gnidia polystachya* and *Nenax microphylla.*

A new record is from: Unidentified wild herb, 5 km from Silverstream Strand, C.P., 18 June 1981 (D.P. Keetch).

Bryocopsis vrystaatensis Meyer

Bryocopsis vrystaatensis Meyer, 1974: 9-12.

Bryocopsis vrystaatensis has 5 setae on genu I; on tibia I of the female and male are 11 or 12 tactile setae and a solenidion.

Habitat and locality. This species is known only from grass and soil, Edenville, O.F.S.

Bryobia Koch

Bryobia Koch, 1836: 8,9: Pritchard & Baker, 1955: 14-15; Van Eyndhoven, 1958: 927-929; Meyer & Ryke, 1959: 354; Wainstein, 1960b: 94-100; Manson, 1967a: 76-80; Tuttle & Baker, 1968: 4; Livshitz & Mitrofanov, 1971: 5-48; Meyer, 1974: 13; Tuttle, Baker & Abbatiello, 1976: 4; Gonzalez, 1977: 634.
Nuciforella Vacante, 1984: 70-71. Syn. nov.

Type-species: *Bryobia praetiosa* Koch.

The adult members of *Bryobia* have 4 pairs of setae on the prodorsum; anterior 2 pairs usually on prominent lobes; in some species the lobes are feebly developed and are merely represented by small tubercles; 12 pairs of dorsal setae located on opisthosoma, fourth pair of dorsocentral setae (f_1) marginal; peritremes either end simply or form an anastomosis distally; coxal formula 2-1-1-1; genu I usually with not more than 8 setae: all the true claws or at least those of tarsi II-IV uncinate and provided with tenent hairs; on legs II-IV empodia pad-like and bear rows of tenent hairs; the empodium of tarsus I may have 1 or more pairs of tenent hairs. The shape of the spermatheca is of significance in species identification.

Mitrofanov (1971), Livshitz & Mitrofanov (1972) and Mitrofanov (1973) divided the genus *Bryobia* into 6 subgenera namely *Bryobia* s.str., *Lyobia, Periplanobia, Allobia, Eharobia* and *Bryobiopsis*. However, from our current knowledge of this large group of tetranychids it is felt that the use of a trinomial nomenclature would only complicate matters.

Vacante (1984) segregated a new genus *Nuciforella,* with *Bryobia nikitensis* Livshitz & Mitrofanov as type-species, on the basis that the anterior lobes are represented by small setiferous tubercles. The rest of the diagnostic characters of this species are typical for *Bryobia.* Such slight differences do not warrant the creation of a new genus.

KEY TO THE AFRICAN SPECIES OF *BRYOBIA*

1. Empodium I with a pair of tenent hairs ... 2
- Empodium I with more than 1 pair of tenent hairs 12
2. Prodorsum of female with 4 lobes anteriorly, of which 2 lobes are anteromedially 3
- Prodorsum of female with 3 lobes anteriorly, of which 1 lobe is anteromedially 10

3. Solenidia on tarsi III and IV or on either associated with tactile setae to form "duplex setae" 4
- Solenidia on tarsi III and IV not associated with tactile setae 9
4. Tarsi III and IV each with 1 pair of duplex setae 5
- Tarsus III with 1 pair of duplex setae; solenidion on tarsus IV proximal to and well separated from tactile seta 7
5. Larval body setae filiform, 30-40 μm long; dorsal body setae of female 23-25 μm long and 15-20 μm wide; femur I with 18-21 setae; peritremal enlargement 38 μm long and 13 μm wide ..... *B. cristata* (Dugès)
- Dorsal body setae of larva spatulate 6
6. Dorsal body setae of larva 21-28 μm long and 5-8 μm wide; dorsal body setae of female 33 μm long and 17 μm wide; prodorsum with outer lobes triangular; femur I with 18-22 setae; peritremal enlargement 44-56 μm long and 7-13 μm wide ..... *B. praetiosa* Koch
- Dorsal body setae of larva 14-18 μm long and 3-8 μm wide; dorsal body setae of female 25-30 μm long and 16-18 μm wide; prodorsum with outer lobes teat-like, inner lobes bottle-shaped; femur I with 21-25 setae; peritremal enlargement 38-63 μm long and 10 μm wide ... . *B. neopraetiosa* Meyer
7. Lobes on prodorsum with spine-like outgrowths; dorsal body setae of female 25-27 μm long and 12-17 μm broad; dorsal body setae of larva 20-24 μm long and 7-10 μm wide; femur I with 16-18 setae; peritremal enlargement sausage-like, 19 μm long and 9 μm wide ..... *B. rubrioculus* (Scheuten)
- Lobes on prodorsum without spine-like outgrowths; peritremal enlargement not sausage-like but having a small anastomosis or a few lobulate diverticula 8
8. True claws of leg I uncinate; femur I with 12-13 setae ..... *B. chrysocomae* Meyer
- True claws of leg I straight; femur I with 16 setae ..... *B. ericoides* Meyer
9. Lobes on prodorsum with deep incisions between them; outer lobes teat-like and inner lobes bottle-shaped; femur I with 16-18 setae; femora III and IV each with 6 setae .... *B. lucens* Meyer
- Lobes on prodorsum with shallow incisions between them; outer lobes more or less triangular; femur I with 15 setae; femora III and IV each with 5 setae .... *B. rhodesiana* Meyer
10. True claws of leg I strongly hooked; dorsal body setae of female 19-24 μm long and 13-15 μm wide; femur I with 16-18 setae ....*B. geyeri* Meyer
- True claws of leg I straight 11
11. Femur I with 18-20 setae; true claws of legs II-IV each with about 4 pairs of tenent hairs; dorsal body setae of female finely serrated..... ..... *B. triloba* Meyer
- Femur I with 12-16 setae; true claws of legs II-IV each with 2 pairs of tenent hairs; dorsal body setae of female virtually without serrations ..... *B. spinescens* Meyer
12. Female prodorsum with 2 small lobes anteromedially; some leg setae strongly furcate ..... *B. petrilunara* spec. nov.
- Female prodorsum with 3 lobes anteriorly; leg setae not strongly furcate 13
- Female prodorsum with 4 lobes anteriorly; leg setae not strongly furcate 17
13. Female dorsum with a bead-like striation pattern; femur I with 12-15 setae; dorsal body setae of female 23-42 μm long and 16-27 μm wide; dorsal body setae of larva 15-18 μm long and 9-10 μm wide ..... *B. tuberosa* Meyer
- Striae on female dorsum not bead-like but normal; dorsal body setae not more than 25 μm long 14
14. True claws of leg I uncinate; leg I shorter than body or slightly longer 15
- True claws of leg I pad-like; leg I nearly 1,3 times as long as body ....*B. kakamaensis* spec. nov.
15. Peritreme ending in a simple bulb 16
- Peritreme ending in a small anastomosis; femur I with 12-13 setae ..... *B. monechmae* Meyer
16. Femur I of female with 7 setae, male with 10 setae on femur I, dorsal body setae of female 14-24 μm long and 13-16 μm wide; dorsal body setae of larva 9-12 μm long and 3-7 μm wide .. ..*B. coatesi* Meyer
- Femur I with 21 setae; dorsal body setae of female 15 μm long and 13 μm wide ....*B. angolensis* spec. nov.
17. True claws of leg I with a strong hook ... 18
- True claws of leg I straight, or if not straight the uncinate portion relatively thin 19
18. Femur I with 14 setae; solenidia on tarsi III and IV not associated with tactile setae ....*B. imbricata* Meyer
- Femur I with 10 or 11 setae; solenidia on tarsi III and IV associated with tactile setae .... *B. burkei* spec. nov.
19. Femur I of female with 12 setae, male with 14 setae; dorsal body setae of female 22-24 μm long and 14-15 μm wide, dorsal body setae of larva spatulate, 19-25 μm long and 4-6 μm wide ..... *B. geigeriae* Meyer
- Femur I of female and male with 10 setae; dorsal body setae of female 19-25 μm long and 9-15 μm wide; dorsal body setae of larva subspatulate, 14-21 μm long and 3-4 μm wide . .....*B. karooensis* Meyer

Bryobia praetiosa Koch
(Fig. 9)

Bryobia praetiosa Koch, 1836: 8; Pritchard & Baker, 1955: 26-32; Meyer & Ryke, 1959: 354-357 (in part); Mathys, 1961: 295-304; Tuttle & Baker, 1968: 6; Livshitz & Mitrofanov, 1971: 59-60; Meyer, 1974: 20-21.

This species has the following diagnostic

characters: Outer lobes on prodorsum of female with broad bases and more or less triangular; incision between outer and anteromedian lobes wide but not deep; incision between inner lobes also shallow; peritremal enlargement about 56 μm long and 13 μm wide; femur I bears 17-22 setae, genu I with 8 setae, tibia I with 15-16 setae and genu II with 6 setae; tactile members of duplex setae on legs III and IV proximal and approximate to solenidia and about three quarters their length; each claw with a pair of tenent hairs; empodium I is a short pad bearing 1 pair of tenent hairs; empodia II-IV also pad-like but nearly as long as claw and bearing 2 rows of ventrally directed tenent hairs; chromosome numbers n = 4; dorsal body setae of larva (Fig. 9) spatulate.

Habitat and locality. *B. praetiosa* is widely distributed in Africa and attacks many species of low-growing plants.

The following are new records for this species: *Sphaeralcea bonariensis*, Kroonstad, O.F.S., 29 September 1976 (L.C. Jordaan); *Senecio cineraria*, Klerksdorp, Tvl., 17 August 1979 (E.A. Ueckermann); *Bromus* sp. and *Pentzia suffruticosa*, Donkergat-Langebaan road fork, C.P., 28 September 1982 (M.K.P. Meyer & S.C. Cruickshank); *Atriplex cinerea* subsp. *bolusii*, 8 km from Rocherpan Nature Reserve, C.P., 29 September 1982 (S. Cruickshank); *Dicliptera clinopodia*, Magoebaskloof, Tvl., 26 May 1983 (E.A. Ueckermann); *Arctotheca calendula*, Olifantshoek, C.P., 10 September 1983 (E.A. Ueckermann); *Pentzia suffruticosa*, 4 km from Springbok (Kleinsee road), C.P., 17 September 1983 (M.K.P. Meyer); *Senecio niveus* and *Forsskaolea candida*, 10 km from Springbok (Kleinsee road), C.P., 17 September 1983 (E.A. Ueckermann); *Atriplex suberecta*, 20 km from Carnarvon (Vosburg road), C.P., 22 September 1983 (N.C.J. Basson).

Bryobia neopraetiosa Meyer (Fig. 10)

Bryobia neopraetiosa Meyer, 1974: 21-23.

This species exhibits the following characteristics: Prodorsum with outer lobes teat-like; inner lobes bottle-shaped and taper sharply towards their tips; incision between median and outer lobes narrow and deep; incision between median lobes also deep and narrow; peritremal enlargement about 63 μm long and 10 μm broad; in some specimens the peritremal enlargement is 38-53 μm long and about 6 μm wide; femur I bears 21-25 setae, genu I 8 setae, tibia I 16 setae and genu II 6 setae; tactile members of duplex setae of legs III and IV proximal and approximate to and about three quarters the length of the solenidia; each claw has 2 tenent hairs; short empodial pad on tarsus I with 1 pair of tenent hairs; empodial pads on tarsi II-IV about as long as claws and each bears 2 rows of ventrally directed tenent hairs; dorsal body setae of larva vary from spatulate to subspatulate.

Habitat and locality. This species is widely distributed in South Africa and was previously collected on 23 species of plants.

New records are: *Chenopodium* sp., 7 km from Pearston (Somerset East road), C.P., 6 February 1974 (L.C. Jordaan); *Plantago lanceolata, Bromus willdenowii* and *Rumex* sp., Kroonstad, O.F.S., 28 September 1976 (L.C. Jordaan); *Venidium microcephalum*, Parys, O.F.S., 29 September 1967 (M.K.P. Meyer); *Hyparrhenia hirta*, 5 km from Fochville (Parys road), O.F.S., 29 September 1976 (E.A. Ueckermann); *Pennisetum clandestinum*, Groblersdal, Tvl., 31 August 1977 (E.A. Ueckermann); *P. clandestinum* , Onrus River, C.P., 25 January 1980 (E.A. Ueckermann); unidentified wild herb, Blouberg Strand, C.P., 17 June 1981 (D.P. Keetch); *Senecio inaequidens*, Badplaas, Tvl., 25 August 1981 (E.A. Ueckermann); *Gnaphalium pensylvanicum*, Nelspruit, Tvl., 27 August 1981 (E.A. Ueckermann); unidentified grass, Gaint's Castle, Natal, 2 February 1982 (M.K.P. Meyer); *Pennisetum clandestinum*, Golden Gate Highlands National Park, O.F.S., 8 February 1982 (M.K.P. Meyer); *Lolium multiflorum*, Milnerton, C.P., 28 September 1982 (D.P. Keetch); *Torilis arvensis*, 5 km from Yzerfontein, C.P., 28 September 1982 (S.C. Cruickshank); *Dimorphotheca sinuata* and *Phalaris paradoxa*, 7 km from Gouda, C.P., 30 September 1982 (M.K.P. Meyer & S.C. Cruickshank).

Bryobia rubrioculus (Scheuten)

Sannio rubrioculus Scheuten, 1857: 104-112.
Bryobia rubrioculus (Scheuten) Van Eyndhoven, 1956: 45-46; Baker & Pritchard, 1960: 457; Manson, 1967a: 97-101; Meyer, 1974: 23-26.
Bryobia arborea Morgan & Anderson, 1957: 385-390.

The larva may be readily distinguished by the length of the dorsal spatulate setae; lobes on prodorsum of female normally provided with spine-like outgrowths; tactile member of duplex setae on tarsus IV distal to and well separated from solenidion; chromosome numbers n = 4.

Habitat and locality. This species is a world-wide pest of deciduous fruit trees and is widely distributed in Africa.

New records are: *Prunus domestica*, Uniondale, C.P., 21 September 1977 (L. Braack); *P. persica*, Klerksdorp, Tvl., 1 February 1979 (E.A. Ueckermann); *P. persica* and *Prunus* sp., Golden Gate Highlands National Park, O.F.S., 8 February 1982 (E.A. Ueckermann & M.K.P. Meyer); *Malus sylvestris*, Golden Gate Highlands National Park, O.F.S., 11 February 1982 (E.A. Ueckermann); *Prunus persica*, Roodeplaat, Tvl., 2 November 1982 (M.C. Bolton); *P. persica,* Pelindaba, 25 November 1982 (E.A. Ueckermann).

Bryobia chrysocomae Meyer (Fig. 11)

Bryobia chrysocomae Meyer, 1974: 27-30.

Bryobia chrysocomae is closely related to *B.*

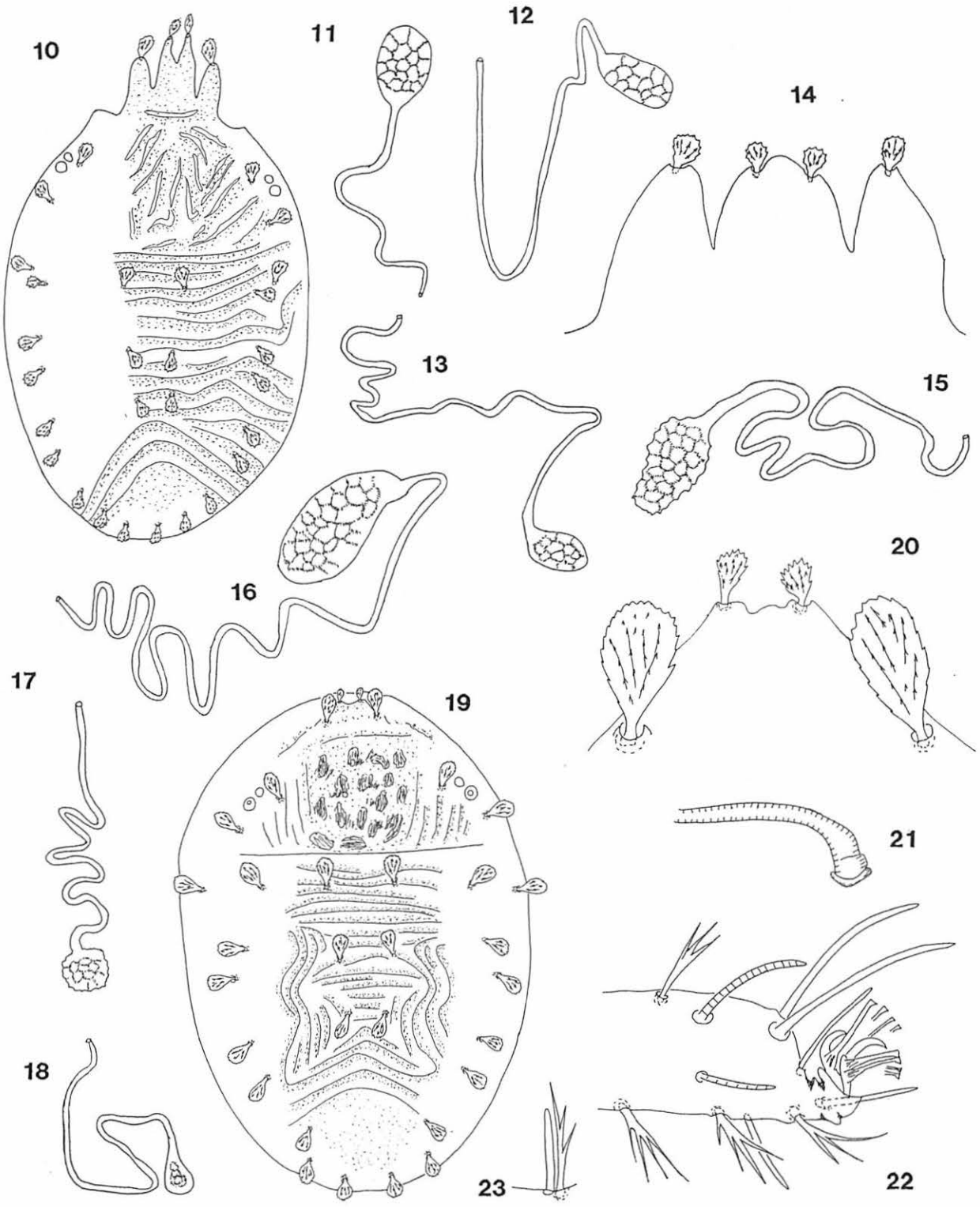

FIG. 10. *Bryobia neopraetiosa* Meyer. Dorsal view of female/ *Dorsale aansig van wyfies*
FIG. 11. *Bryobia chrysocomae* Meyer. Spermatheca/ *Spermateka*
FIG. 12. *Bryobia ericoides* Meyer. Spermatheca/ *Spermateka*
FIG. 13-14. *Bryobia lucens* Meyer
FIG. 13. Prodorsal lobes of male/ *Prodorsale lobbe van mannetjie*
FIG. 14. Spermatheca/ *Spermateka*
FIG. 15. *Bryobia rhodesiana* Meyer. Spermatheca/ *Spermateka*
FIG. 16. *Bryobia geyeri* Meyer. Spermatheca/ *Spermateka*
FIG. 17. *Bryobia triloba* Meyer. Spermatheca/ *Spermateka*
FIG. 18. *Bryobia spinescens* Meyer. Spermatheca/ *Spermateka*
FIG. 19-27. *Bryobia petrilunara* spec. nov.
FIG. 19. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 20. Prodorsal lobes of female/ *Prodorsale lobbe van wyfie*
FIG. 21. Termination of peritreme of female/ *Eindpunt van peritreem van wyfie*
FIG. 22. Tarsus I of female/ *Tarsus I van wyfie*
FIG. 23. Duplex setae on tarsi III and IV/ *Dubbelhare op tarsi III en IV*

rubrioculus (Scheuten) because empodium I is provided with 2 tenent hairs and the tactile member of the duplex setae on tarsus IV is distal to and well separated from the solenidion. However, femur I of *B. chrysocomae* has fewer setae (12-16) than that of *B. rubrioculus* and the peritreme of the former species ends in a few branches instead of a complex sausage-like structure. Spine-like outgrowths on the anterior lobes of the prodorsum of the female of *B. rubrioculus* are absent in this species; the short empodial pad on tarsus I has 2 tenent hairs; basal portion of true claw of tarsus I appears pad-like but bears a thinner uncinate distal portion; empodial pads on tarsi II-IV about two thirds the length of the claws and bear 2 rows of ventrally directed tenent hairs; spermatheca small and more or less oval (Fig. 11).

Habitat and locality. This species was reported from *Chrysocoma tenuifolia*, Kraaipoort Dam, near Koffiefontein, O.F.S. and 50 km from Onseepkans, C.P.

A new record for this species is: *Mesembryanthemum magniflorum*, Springbok, C.P., 20 September 1970 (M.K.P. Meyer).

Bryobia ericoides Meyer
(Fig. 12)

Bryobia ericoides Meyer, 1974: 30.

Bryobia ericoides and *B. chrysocomae* are very similar in the shape of the anterior lobes on the prodorsum and the tactile member of the duplex setae on tarsus IV being distal to and well separated from the solenidion. In contrast, however, the true claws of leg I of *B. chrysocomae* are uncinate whereas the true claws of leg I of *B. ericoides* and *B. rhodesiana* are straight. Outer lobes on prodorsum of female more or less conical and separated from anteromedian lobes by shallow incisions; incision between anteromedian lobes shallow and wide; femur I with 16 setae; solenidion on tarsus III associated with a tactile seta which is about three quarters the length of solenidion; spermatheca small and oval (Fig. 12).

Habitat and locality. This species was collected on *Eriocephalus ericoides*, 32 km from Kimberley (Hopetown road), C.P.

A new record for *B. ericoides* is from *Eriocephalus pubescens*, 26 km from Postmasburg, C.P., 8 October 1979 (E.A. Ueckermann).

Bryobia lucens Meyer
(Fig. 13-14)

Bryobia lucens Meyer, 1974: 27.

This species is related to *B. rhodesiana* Meyer because the true claws on tarsus I are straight and empodium I is a short pad which is provided with 1 pair of tenent hairs. However, the lobes on the prodorsum of the female are strong and resembling those of *B. neopraetiosa* Meyer; outer anterior lobes are teat-like but inner lobes bottle-shaped and taper towards their tips; incision between median and outer lobes narrow and deep; incision between median lobes also narrow and deep; spermatheca with a small oval sacculus (Fig. 13); unlike female male with 3 anterior lobes (Fig. 14); solenidia on tarsi III and IV distal and not associated with tactile setae; pads of true claws on leg I each with a pair of tenent hairs and about twice as long as empodial pads; dorsal body setae of larva spatulate and 10-13 μm long and 5-6 μm wide.

Habitat and locality. *B. lucens* was recorded from *Petalidium lucens*, Blouputs, C.P.

New records are: *P. setosum*, Onseepkans, C.P., 15 September 1983 (E.A. Ueckermann); *P. lucens*, Wabrand, Aughrabies Falls National Park, C.P., 14 September 1983 (M.K.P. Meyer).

Bryobia rhodesiana Meyer
(Fig. 15)

Bryobia rhodesiana Meyer, 1974: 17.

As in *B. triloba* Meyer and *B. spinescens* Meyer the true claws are straight and empodium I is a short pad with 1 pair of tenent hairs. However, this species can be distinguished by the outer lobes on the prodorsum of the female, which are more or less cone-shaped; anteromedian lobe relatively long and divided by a shallow incision into 2 lobes, each bearing the first pair of prodorsal setae (v_1); peritreme ends in a more or less oval, anastomosing chamber; tibia I with 15 setae and 1 solenidion; femur I with 15 setae; femora III and IV each with 5 setae; solenidia on tarsi III and IV not associated with tactile setae; spermatheca depicted in Fig. 15.

Habitat and locality. This species was collected on *Ormocarpum kirkii, Amaranthus hybridus, Diospyros lycioides* and other wild plants in Zimbabwe.

Bryobia geyeri Meyer
(Fig. 16)

Bryobia geyeri Meyer, 1974: 30.

The median lobes on the prodorsum are fused to form a single lobe as in *B. tuberosa* Meyer but the anteromedian setae (v_1) on the prodorsum are shorter, being half the size of the second pair of prodorsal setae (v_2); true claws uncinate and empodium I a short pad bearing 2 tenent hairs as in *B. tuberosa*; femur I with 16-18 setae; solenidia of tarsi II, III and IV not associated with tactile setae and about as long as other leg setae; spermatheca large and pear-shaped (Fig. 16).

Habitat and locality. This species was described from *Elytropappus rhinocerotis*, Bains Kloof, C.P.

A new record is: *Vernonia fastigiata*, Oudestad, near Groblersdal, Tvl., 5 December 1979 (E.A. Ueckermann).

Bryobia triloba Meyer
(Fig. 17)

Bryobia triloba Meyer, 1974: 31-32.

Bryobia triloba has the following distinctive morphological characters: Outer anterior lobes almost triangular, with broad bases; anteromedian lobes represented by a broad rounded lobe, bearing 2 spatulate setae (v_1) which are about half the size of the second pair of prodorsal setae (v_2) on the outer lobes; incision between outer and median lobes not very deep; base of anteromedian lobe wider than the lobe is long; dorsal body setae of female finely serrated; many of the leg setae broadly spatulate; femur I with 18-20 setae; solenidion on tarsi III and IV not associated with a tactile seta and about equal in length to other leg setae; short proximal member of duplex setae on tarsi I and II absent; the solenidion representing the duplex setae on tarsus II about the same length as the other setae on the tip of the tarsus; empodium I short, pad-like, about half the length of true claw and provided with 1 pair of tenent hairs; other empodia pad-like, about as long as claws and with 2 rows of ventrally directed hairs; true claws of tarsus I straight, relatively short and with 2 tenent hairs; other legs with 2 hooked claws, each of which has a row of about 4 tenent hairs on each side; spermatheca small and rounded (Fig. 17); dorsal body setae of larva broadly spatulate.

Habitat and locality. In South Africa this species was found on *Barleria monticola, Thunbergia dregeana, Lippia wilmsii* and grass in Natal, Orange Free State and the Transvaal.

Bryobia triloba is now recorded for the first time from: *Convolvulus farinosus*, 5 km from Uitenhage (Jansenville road), C.P., 5 February 1974 (L.C. Smit); *Turbina oblongata*, Stentor Estates, between Malelane and Kaalrug, Tvl., 18 January 1977 (E.A. Ueckermann); unidentified plant, Skukuza, Kruger National Park, Tvl., 7 October 1981 (E.A. Ueckermann); *Barleria monticola*, Golden Gate Highlands National Park, O.F.S., 11 February 1982 (E.A. Ueckermann).

Bryobia spinescens Meyer
(Fig. 18)

Bryobia spinescens Meyer, 1974: 34.

As in *B. triloba* Meyer, true claws of tarsus I not uncinate but pad-like and anteromedian lobes fused to form a single lobe of which the base is narrower than its length; dorsal body setae virtually without serrations; femur I with 12-16 setae; spermatheca depicted in Fig. 18.

Habitat and locality. *B. spinescens* is known from Sterkspruit and Great Brak River, near Schoombee, C.P. collected on *Pherothrix spinescens* and *Helichrysum pentzioides*.

New records for this species are: *Elytropappus gnaphaloides* and *Anthospermum aethiopicum*, Sir Lowry's Pass, C.P., 9 March 1983 (M.K.P. Meyer & S.C. Cruickshank).

Bryobia meyerae Zaher, Gomaa & El-Enany

Bryobia meyerus Zaher, Gomaa & El-Enany, 1982: 93-94.

This species is similar to *B. spinescens* Meyer in that the true claws of tarsus I are pad-like and the anteromedian lobes are fused to form a single lobe; the base of this lobe is broader than its length; chaetotaxy of legs is as follows: coxae 2-1-1-1; trochanters 1-1-1-1; femora 12-8-5-5; genua 8-5-5-5; tibiae 13-9-9-7; tarsi 19+2 dupl.-16+1 dupl.-14-15 (Zaher, Gomaa & El-Enany, 1982); true claws on legs II-IV uncinate and with a single pair of tenent hairs.

Habitat and locality. This species was described from *Convolvulus arvensis* and *Cynodon dactylon* in Egypt.

Bryobia petrilunara spec. nov.
(Fig. 19-27)

Bryobia petrilunara is distinct in that only the first pair of prodorsal setae (v_1) are located on short tubercles; second pair of prodorsal setae (v_2) not situated on lobes and about 4 times as long as first pair (v_1); some leg setae, especially those located ventrally, strongly furcate.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 560 μm (513-533); length (excluding gnathosoma) 493 μm (453-467); breadth 340 μm (320-327); length of leg I 320 μm (307-313).

Dorsum (Fig. 19). Prodorsum with feebly developed lobes (Fig. 20) anteromedially; first pair of prodorsal setae (v_1) situated on these lobes but second pair (v_2) not on lobes; the latter pair of setae (v_2) about 4 times as long as first pair (v_1).

Body setae spatulate, serrate, about 23 μm long and 13 μm broad; integument punctulate; prodorsum with longitudinal to irregular striae; striae on opisthosoma transverse to irregular and widely spaced.

Gnathosoma. Mediodistally, stylophore incised; peritreme ends simply (Fig. 21).

Legs. Setae and solenidia (in parentheses) on leg podomeres as follows: coxae 2-1-1-1; trochanters 1-1-1-1; femora 11 to 13-10-5-5; genua 9-8-6-6; tibiae 14(1)-10-9-9; tarsi 18(4)+2 dupl.-15(1)+1 dupl. -13+1 dupl. True claws uncinate and each with 1 pair of tenent hairs; empodial pads with 2 pairs of tenent hairs (Fig. 22); some leg setae, especially those situated ventrally, strongly furcate (Fig. 22); solenidia and associated tactile setae on legs III and IV subequal in length (Fig. 23).

Spermatheca. The sacculus is figured in Fig. 24.

Male. Dimensions: length of body (including gnathosoma) 466 μm; length (excluding gnathosoma) 367 μm; breadth 200 μm; length of leg I 307 um.

Anterior lobes of prodorsum are illustrated in Fig. 25; dorsum similar to that of female except that the opisthosoma is divided by a suture; dorsal body

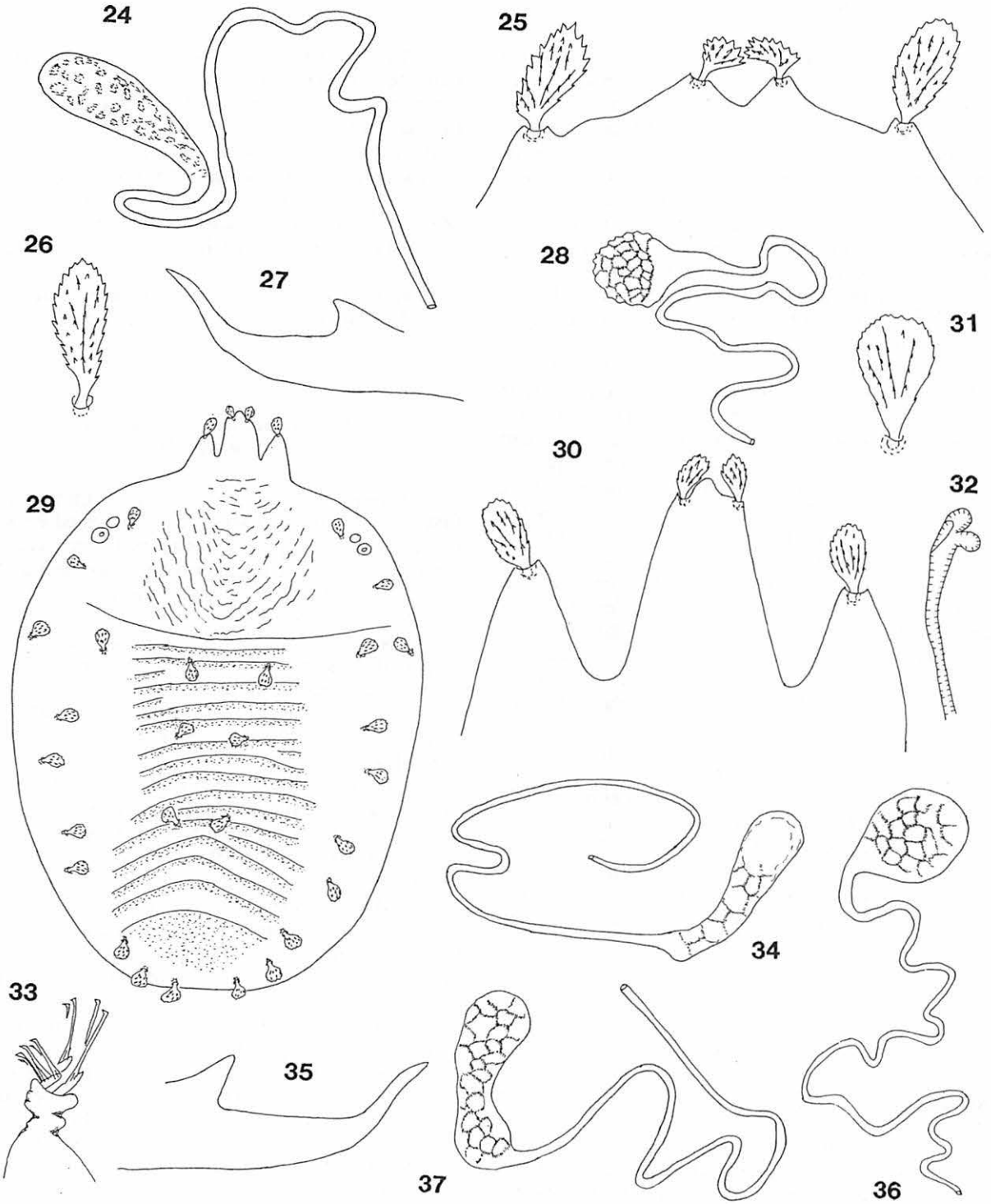

FIG. 24-27. *Bryobia petrilunara* (continued/*vervolg*)
FIG. 24. Spermatheca/*Spermateka*
FIG. 25. Prodorsal lobes of male/*Prodorsale lobbe van mannetjie*
FIG. 26. Dorsal setae of male/*Dorsale seta van mannetjie*
FIG. 27. Aedeagus
FIG. 28. *Bryobia tuberosa* Meyer. Spematheca/*Spermateka*
FIG. 29-35. *Bryobia kakamaensis* spec. nov.
FIG. 29. Dorsal view of female/*Dorsale aansig van wyfie*
FIG. 30. Prodorsal lobes of female/*Prodorsale lobbe van wyfie*
FIG. 31. Dorsal seta of female/*Dorsale seta van wyfie*
FIG. 32. Termination of peritreme of female/*Eindpunt van peritreem van wyfie*
FIG. 33. Tarsal appendages of tarsus I/*Tarsale aanhangsels van tarsus I*
FIG. 34. Spermatheca/*Spermateka*
FIG. 35. Aedeagus
FIG. 36. *Bryobia monechmae* Meyer. Spermatheca/*Spermateka*
FIG. 37. *Bryobia coatesi* Meyer. Spermatheca/*Spermateka*

setae 19 μm long and 8 μm broad (Fig. 26); setal formula for legs I-IV as follows: femora 12-9-5 or 6-5; genua 9-8-5-5 or 6; tibiae 14(1)-10-9-9; tarsi 19(7)+2 dupl.-15(1)+1 dupl.-13+1 dupl.-13+1 dupl.; distal portion of the aedeagal shaft (Fig. 27) curves abruptly dorsad; the curved portion tapers towards its tip and about as long as shaft.

Nympha. Nymphs closely resemble females in the organization of the gnathosoma, dorsum and legs.

Habitat and locality. Holotype female, 5 paratype females, 3 paratype males and 3 paratype nymphae from *Indigofera heterotricha*, Moon Rock, Aughrabies Falls National Park, C.P., 13 September 1983 (M.K.P. Meyer).

Bryobia tuberosa Meyer
(Fig. 25)

Bryobia tuberosa Meyer, 1974: 34-40.

This species is characterized by the shape of the female anterior lobes; outer lobes with very broad bases and almost triangular; the 2 anteromedian lobes fused to form a single lobe with a swelling between the anteromedian setae (v_1); the latter pair of setae (v_1) about three quarters the length of the second pair (v_2) which are located on the outer lobes; incision between outer and anteromedian lobes wide and shallow; dorsum with coarse, beaded, widely spaced striae; empodial pad on tarsus I with about 4 pairs of tenent hairs; solenidia on tarsi III and IV nearly as long as other segmental setae and not associated with tactile setae; femur I bears 12-20 setae; sacculus of spermatheca rounded (Fig. 28); dorsal body setae of larva broadly spatulate.

Habitat and locality. *B. tuberosa* is widely distributed in South Africa and has been collected on the following plants: *Stoebe plumosa, S. vulgaris, Phaenocoma prolifera, Helichrysum odoratissimum, Pentzia africana, P. incana, P. globosa, Aster muricatus, Chrysocoma tenuifolia, Senecio glutinosus* and *Chrysanthemum* sp.

New records for this species are: *Felicia zeyheri* subsp. *linifolia*, 5 km from Uitenhage (Jansenville road), C.P., 5 February 1974 (M.K.P. Meyer); *Salsola kali*, and *Pentzia incana*, Jansenville, C.P., 5 February 1974 (L.C. Smit, C.J. Colijn & M.K.P. Meyer); *Pentzia incana*, 5 km from Pearston (Graaff-Reinet road), C.P., 6 February 1974 (L.C. Smit); *Helichrysum rugulosum*, 2,5 km from Thomas Baines Nature Reserve (Grahamstown-P.E. road), C.P., 13 February 1974 (L.C. Smit); *H. cymosum*, 2,5 km from Thomas Baines Nature Reserve (Grahamstown-P.E. road), C.P., 13 February 1974 (C.J. Colijn); *Felicia muricata*, 2,5 km from Thomas Baines Nature Reserve (Grahamstown-P.E. road), C.P., 13 February 1974 (M.K.P. Meyer); *Helichrysum rugulosum*, Stone Crescent Hotel, Howiesons Poort, near Grahamstown, C.P., 13 February 1974 (M.K.P. Meyer); *Tarchonanthus camphoratus*, Komga River (Grahamstown-P.E. road), C.P., 13 February 1974 (F.W. Schultz); *Pentzia globosa*, 7 km from Addo Elephant National Park (Patterson road), C.P., 13 February 1974 (C.J. Colijn); unidentified species of the Mesembryanthemaceae, Addo Elephant National Park, C.P., 14 February 1974 (C.J. Colijn); *Pentzia incana*, Addo Elephant National Park, C.P., 14 February 1974 (L.C. Smit); *Helichrysum reflexum*, Shiga N'Gubu, Tvl., 24 March 1976 (M.K.P. Meyer); *Chrysocoma tenuifolia*, 5 km from Koffiefontein (Petrusburg road), O.F.S., 7 September 1977 (M.K.P. Meyer); unidentified wild herb, Long Tom Pass, 25 km from Lydenburg, Tvl., 20 February 1978 (M.K.P. Meyer); *Setaria flabellata*, Sishen, C.P., 5 February 1979 (E.A. Ueckermann); *Helichrysum kraussi*, Charter's Creek, Lake St. Lucia and Sodwana Bay, Natal, 15 and 20 September 1972 (M.K.P. Meyer); *H. rugulosum*, 13 km from Delmas (Devon road), Tvl., 9 November 1973 (M.K.P. Meyer); *Pentzia calcarea*, 11 km from Postmasburg, C.P., 8 October 1979 (E.A. Ueckermann); *Helichrysum reflexum*, Kaapschehoop, Tvl., 5 October 1981 (E.A. Ueckermann); *H. odoratissimum*, Golden Gate Highlands National Park, O.F.S., 11 February 1982 (M.K.P. Meyer); *Stoebe plumosa*, Hermanus-Stanford road, C.P., 9 March 1983 (M.K.P. Meyer); *Helichrysum patulum*, near Elim (Struisbaai road), C.P., 10 March 1983 (D.P. Keetch).

Bryobia kakamaensis spec. nov.
(Fig. 29-35)

This species is distinctive in that the true claws of leg I is 1,3 times as long as the body; prodorsum with 3 lobes anteromedially; solenidia on tarsi III and IV not associated with tactile setae.

Female. Dimensions of holotype: length of body (including gnathosoma) 667 μm; length (excluding gnathosoma) 600 μm; breadth 493 μm; length of leg I 867 μm.

Dorsum (Fig. 29). Outer anterior lobes (Fig. 30) broadly triangular; single anteromedian lobe broad and bears 2 setae (v_1), about half the length of second pair (v_2).

Body setae (Fig. 31) spatulate, serrate and about 22 μm long and 13 μm broad; dorsal integument granulate.

Gnathosoma. Stylophore rounded anteriorly; peritreme ends simply (Fig. 32).

Legs. Setae and solenidia (in parentheses) on legs I-IV as follows: coxae 2-1-1-1; trochanters 1-1-1-1; femora 17-11-6-5; genua 8-5-5-5; tibiae 15(1)-10-9-9; tarsi 17 to 19(5)+2 dupl.-15(1)+1 dupl.-14(1)-14(1). Solenidia on tarsi III and IV not associated with tactile setae and almost as long as other leg setae. True claws of tarsus I (Fig. 33) pad-like but claws of other legs normal; short empodial pad of leg I bears 4 pairs of tenent hairs; empodial pads of legs II-IV carry 2 rows of ventrally directed tenent hairs.

Spermatheca. The sacculus is depicted in Fig. 34.

Male. Dimensions: length of body (including gnathosoma) 467 μm; length (excluding gnathosoma) 400 μm; breadth 493 μm; length of leg I 653 μm.

The anterior lobes, distribution and shape of dorsal setae and the morphology of the gnathosoma resemble those of the female; inclusive counts of leg setae (solenidia in parentheses) are as follows: femora 17 or 18-11-6-5; genua 8-5-5-5; tibiae 15(1)-9-9-9; tarsi 18(5)+2 dupl.-15(1)+1 dupl. -14(1)-14(1); distal portion of aedeagus (Fig. 35) curves abruptly dorsad; curved portion needle-like and shorter than shaft.

Nympha. Anterior lobes relatively short; rest of the dorsum resembles that of the female.

Habitat and locality. Holotype female, 1 paratype female, 1 paratype male and 2 paratype nymphae from *Barleria rigida*, 10 km from Kakamas (Keimoes road), C.P., 12 September 1983 (E.A. Ueckermann).

Bryobia monechmae Meyer
(Fig. 36)

Bryobia monechmae Meyer, 1974: 41.

The shape of the anterior lobes and the structure of the claw complex of leg I resemble those of *B. coatesi* Meyer. However, *B. monechmae* can be separated from *B. coatesi* by the presence of 12-13 setae on femur I; spermatheca broadly rounded (Fig. 36); dorsal setae of larva relatively long.

Habitat and locality. This species was described from *Monechma atherstonei* and *M. spartioides* at Aughrabies Falls National Park, Blouputs and Onseepkans, C.P.

A new record is from: *M. pseudopatulum*, Pella, C.P., 15 September 1983 (E.A. Ueckermann).

Bryobia coatesi Meyer
(Fig. 37)

Bryobia coatesi Meyer, 1974: 40.

This species is similar to *B. geyeri* Meyer and *B. tuberosa* Meyer in that the outer anterior lobes are triangular in shape and there is a single median lobe. It is distinctive in that female femur I bears 7 setae; male femur I with 10 setae; true claws uncinate and each bearing 1 pair of tenent hairs; spermatheca depicted in Fig. 37; dorsal body setae of larva subspatulate.

Habitat and locality. This species was described from specimens collected on *Chrysocoma tenuifolia, Protasparagus setaceus* and *Walafrida saxatilis* in the Cape Province.

The following are new records for this species: *Felicia zeyheri* subsp. *linifolia*, 5 km from Uitenhage (Jansenville road), C.P., 5 February 1974 (M.K.P. Meyer); *Walafrida geniculata*, Addo Elephant National Park, C.P., 13 February 1974 (M.K.P. Meyer); *Rosenia humilis*, 19 km from Postmasburg, C.P., 9 October 1979 (E.A. Ueckermann).

Bryobia angolensis spec. nov.
(Fig. 38-45)

The shape of the anterior lobes and the structure of the claw complex of leg I resemble those of *B. monechmae* Meyer. However, *B. angolensis* can be separated from the latter species by the peritreme which terminates in a simple bulb; dorsal body setae relatively short; structure of claw complex of legs I-IV distinctive.

Female. Dimensions of holotype (measurements in parentheses indicate variations in paratypes): length of body (including gnathosoma) 620 μm (607-620); length (excluding gnathosoma) 507 μm (500-507); breadth 400 μm (389-400); length of leg I 640 μm.

Dorsum (Fig. 38). Outer anterior lobes (Fig. 39) broadly triangular; single anteromedian lobe relatively broad and bears 2 setae (v_1) about two thirds the length of second pair (v_2).

The 16 pairs of body setae (Fig. 40) are spatulate, serrate and 15 μm long and 13 μm wide; integument granulate; prodorsum with incomplete reticulations medially; opisthosoma with widely spaced striae which are transverse to irregular.

Gnathosoma. Stylophore indented anteriorly; palptarsus with 6 setae, including eupathidia; peritreme ends in a simple bulb (Fig. 41).

Legs. Leg setae and solenidia (in parentheses) as follows: coxae 2-1-1-1; femora 21-10-6-5; genua 8-7-5-5; tibiae 15(1)-9-9-9; tarsi 18(5)+2 dupl. -15(2)+1 dupl.-14(1)-14(1); solenidia on tarsi III and IV not associated with tactile setae; true claws of leg I uncinate and each having 1 pair of tenent hairs; empodial pad of leg I shorter than true claws (Fig. 42) and bearing 4 pairs of tenent hairs; true claws of legs II-IV resemble pads with terminal hooks (Fig. 43); empodial pads about as long as true claws and bearing 2 rows of tenent hairs.

Spermatheca. The sacculus is broadly oval-shaped (Fig. 44).

Male. Anterior lobes and the organization of the dorsum resemble those of the female; leg chaetotaxy as follows (solenidia in parentheses); coxae 2-1-1-1; femora 21-10-6-5; genua 8-6-6-5; tibiae 15(1)-9-9-9; tarsi 18(8)+2 dupl.-15(2)+1 dupl. -14(1)-14(1); aedeagus (Fig. 45) curves dorsad and is distally aciculate.

Habitat and locality. Holotype female, 6 paratype females and 1 paratype male from a wild plant belonging to the family Acanthaceae, Ceilunga, Angola, 7 April 1972 (M.K.P. Meyer).

Bryobia urticae Sayed

Bryobia urticae Sayed, 1946a: 86.

Pritchard & Baker (1955) synonymized this species with *B. cristata* Dugès but Pritchard & Keifer (1958) pointed out that they erred in their identification and included *B. urticae* in their key to the *Bryobia* species.

This species has leg I as long as the body; empodium I consists of 2 rows of tenent hairs; prodorsum with second pair of setae (v_2) similar to first pair (v_1).

Habitat and locality. This species was reported from *Urtica urens, Ageratum conyzoides* and *Chenopodium ambrosioides* in Egypt.

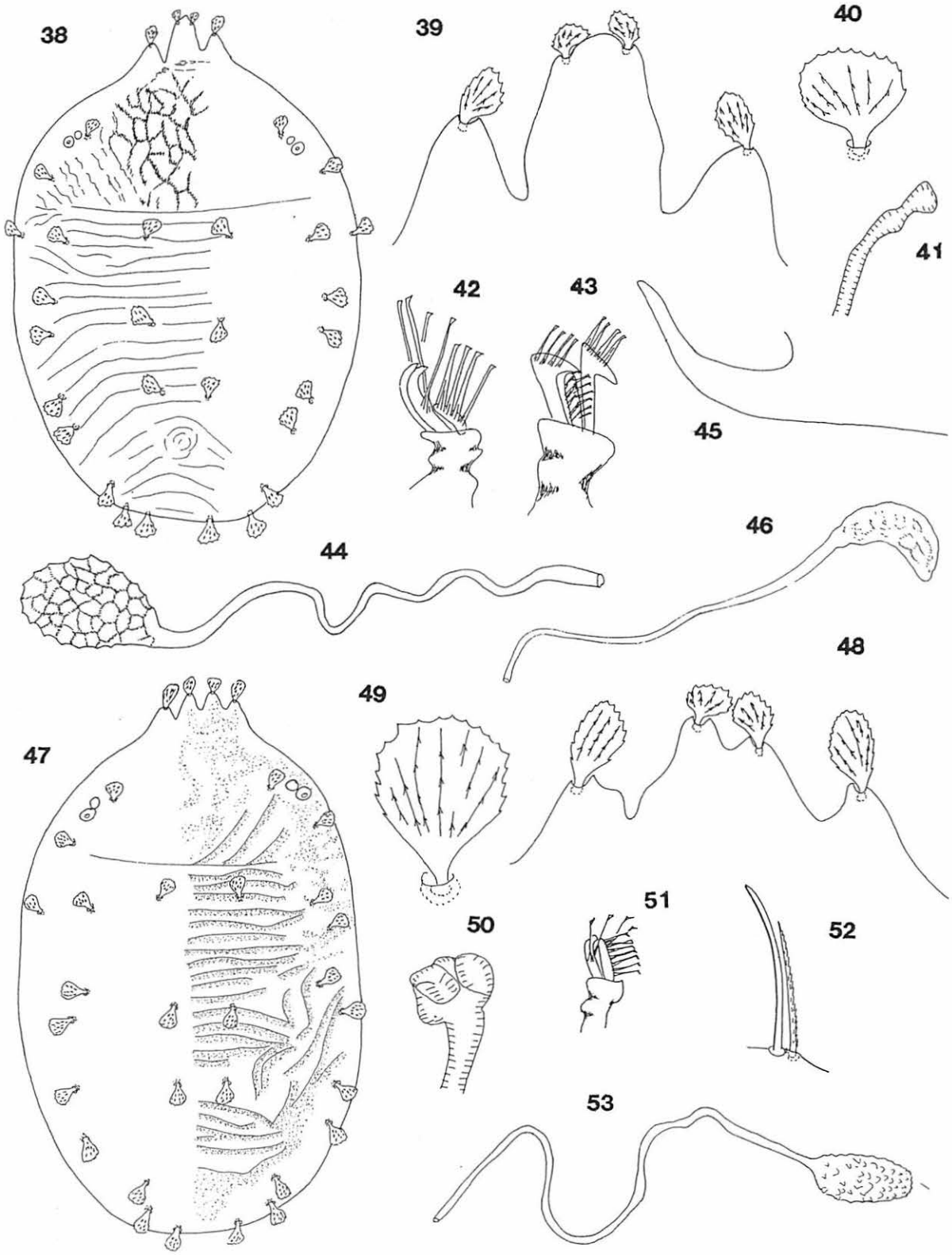

FIG. 38-45. *Bryobia angolensis* spec. nov.
FIG. 38. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 39. Prodorsal lobes of female/ *Prodorsale lobbe van wyfie*
FIG. 40. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 41. Termination of peritreme of female/ *Eindpunt van peritreem van wyfie*
FIG. 42. Tarsal appendages of tarsus I/ *Tarsale aanhangsels van tarsus I*
FIG. 43. Tarsal appendages of tarsi II-IV/ *Tarsale aanhangsels van tarsi II-IV*
FIG. 44. Spermatheca/ *Spermateka*
FIG. 45. Aedeagus
FIG. 46. *Bryobia imbricata* Meyer. Spermatheca/ *Spermateka*
FIG. 47-57. *Bryobia burkei* spec. nov.
FIG. 47. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 48. Prodorsal lobes of female/ *Prodorsale lobbe van wyfie*
FIG. 49. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 50. Termination of peritreme of female/ *Eindpunt van peritreem van wyfie*
FIG. 51. Tarsal appendages of tarsus I/ *Tarsale aanhangsels van tarsus I*
FIG. 52. Duplex setae on tarsi III and IV of female/ *Dubbelhare op tarsi III en IV van wyfie*
FIG. 53. Spermatheca/ *Spermateka*

Bryobia imbricata Meyer
(Fig. 46)

Bryobia imbricata Meyer, 1974: 41-46.

Bryobia imbricata is closely related to *B. monechmae* Meyer but the female of the former species has 2 anteromedian lobes with a shallow incision between them instead of a single anteromedian lobe as in *B. monechmae*; femur I bears 14 setae instead of 12-13; dorsal body setae relatively broader than those of *B. monechmae*; solenidia on tarsi III and IV not associated with tactile setae and slightly shorter than other leg setae; true claws uncinate and each with 1 pair of tenent hairs; empodial pad of leg I bears 4 pairs of tenent hairs and those of legs II-IV with 2 rows of ventrally directed tenent hairs; spermatheca figured in Fig. 46.

Habitat and locality. This species was collected on *Eroeda imbricata*, 25 km from Riversdale, C.P.

Bryobia burkei spec. nov.
(Fig. 47-57)

The anterior lobes of the female resemble those of *B. geigeriae* Meyer but this species can be distinguished from the latter by the uncinate claws on tarsus I.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes) length of body (including gnathosoma) 667 μm (600-647); length (excluding gnathosoma) 560 μm (520-553); breadth 400 μm (360-387); length of leg I 393 μm (347-366).

Dorsum (Fig. 47). Anterior lobes (Fig. 48) weakly developed; anteromedian lobes shallowly incised; first pair of prodorsal setae (v_1) about half as long as second pair (v_2).

Dorsal body setae (Fig. 49) spatulate and serrate, being about 19 μm long and 16 μm wide; integument granulate; prodorsum with longitudinal to irregular striae; opisthosoma with coarse, mostly transverse striae.

Gnathosoma. Stylophore indented mediodistally; palpal claw bidentate distally; peritreme ends in a bulb, consisting of a few lobes (Fig. 50).

Legs. Leg setae and solenidia (in parentheses) as follows: coxae 2-1-1-1; trochanters 1-1-1-1; femora 10 or 11-9-4 or 5-5; genua 8-5 or 6-6 or 7-6; tibiae 10 to 13(1)-8 or 9-9-9; tarsi 18 or 19 (3 or 4)+2 dupl.-15(1)+1 dupl.-12 or 13+1 dupl.-13+1 dupl.; true claws of legs I-IV uncinate and each bearing a pair of tenent hairs; empodial pads of all the legs about as long as true claws and each with 2 rows of ventrally directed tenent hairs (Fig. 51); tactile members of duplex setae on tarsi III and IV three quarters the length of solenidia (Fig. 52).

Spermatheca. The sacculus is oval-shaped and figured in Fig. 53.

Male. Dimensions: length of body (including gnathosoma) 467-475 μm; length (excluding gnathosoma) 400-425 μm; breadth 213-220 μm; length of leg I 373-382 μm.

Anterior lobes (Fig. 54) on prodorsum shorter than those of female; opisthosoma divided by a suture; in spite of these differences the dorsum generally resembles that of the female; chaetotaxy of legs as follows: femora 11-10-5-5; genua 8-5-6-6; tibiae 13(1)-9-9-9; tarsi 18(6)+2 dupl.-15(1)+1 dupl.-13+1 dupl.-13+1 dupl.; tactile members of duplex setae on tarsi III and IV about two thirds the length of solenidia (Fig. 55); aedeagus (Fig. 56) curves gradually dorsad to an acicular tip.

Nympha. Anterior lobes on prodorsum shorter than those of female; rest of dorsum resembles that of female.

Larva. First pair of prodorsal setae (v_1) lanceolate and serrate, whereas rest of dorsal body setae are spatulate and serrate (Fig. 57).

Habitat and locality. Holotype female, 15 paratype females, 5 paratype males, 7 paratype nymphae and 1 paratype larva from *Geigeria burkei*, Vygeboom Dam, near Badplaas, Tvl., 21 February 1983 (M.K.P. Meyer).

Bryobia geigeriae Meyer
(Fig. 58)

Bryobia geigeriae Meyer, 1974:46-47.

As in *B. karooensis* Meyer true claws on tarsus I are not uncinate but short and more or less pad-like; however, this species can be distinguished from the latter by relatively longer anteromedian lobes which are more prominent than outer lobes, that are merely short tubercles; setae and solenidia (in parentheses) distributed on leg podomeres as follows: femora 11 or 12-10-5-5; genua 8-5-6-6; tibiae 13(1)-9-9-9; tarsi 20(3)+2 dupl.-15(1)+1 dupl.-13+1 dupl.-13+1 dupl.; true claws of tarsus I pad-like whereas other legs have normal claws: empodia I-IV pad-like and with 2 rows of tenent hairs, each of which is about 4-6 in number; solenidion and associated tactile seta on tarsus IV subequal in length; spermatheca sausage-like (Fig. 58); chromosome numbers n=2; dorsal body setae of larva spatulate.

Habitat and locality. This species was described from the Transvaal and Cape Province and South West Africa (Namibia) collected on *Geigeria rigida, G. ornativa, G. aspera* and *Senecio glutinosus*.

Bryobia karooensis Meyer
(Fig. 59)

Bryobia karooensis Meyer, 1974: 47-50.

Bryobia karooensis resembles *B. geigeriae* Meyer by having short anterior lobes and with a pad-like empodium on tarsus I, bearing 4 pairs of tenent hairs. However, it can be distinguished by the presence of 10-11 setae on femur I of the female and male; spermatheca depicted in Fig. 59; dorsal body setae of larva subspatulate.

Habitat and locality. This species has a wide distribution in the drier regions of South Africa and

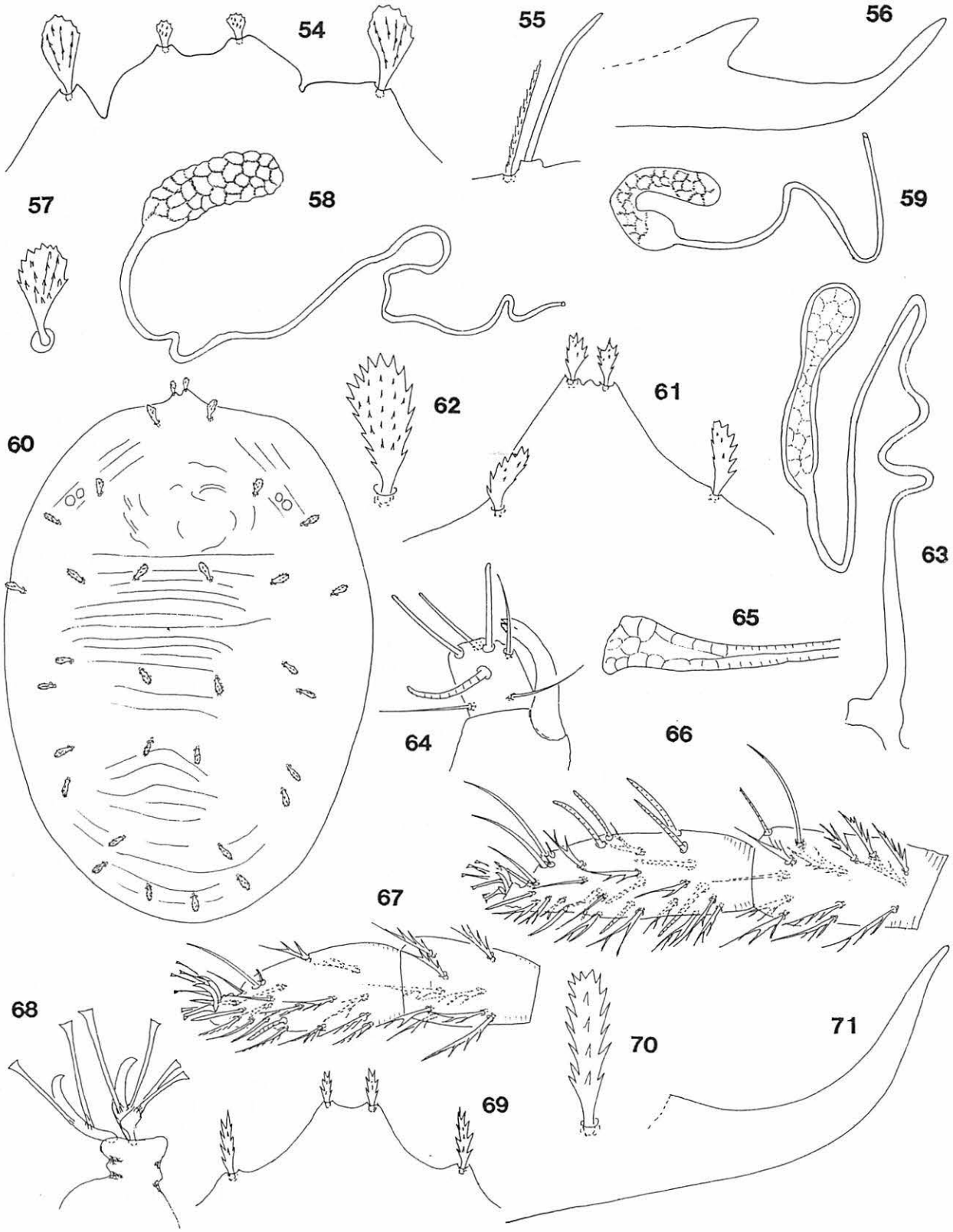

FIG. 54-57. *Bryobia burkei* (continued/*vervolg*)
FIG. 54. Prodorsal lobes of male/*Prodorsale lobbe van mannetjie*
FIG. 55. Duplex setae on tarsi III and IV of male/*Dubbelhare op tarsi III en IV van mannetjie*
FIG. 56. Aedeagus
FIG. 57. Dorsal seta of larva/*Dorsale seta van larf*
FIG. 58. *Bryobia geigeriae* Meyer. Spermatheca/*Spermateka*
FIG. 59. *Bryobia karooensis* Meyer. Spermatheca/*Spermateka*
FIG. 60-75. *Toronobia hirsutae* n.g. n.sp.
FIG. 60. Dorsal view of female/*Dorsale aansig van wyfie*
FIG. 61. Prodorsal lobes of female/*Prodorsale lobbe van wyfie*
FIG. 62. Dorsal seta of female/*Dorsale seta van wyfie*
FIG. 63. Spermatheca/*Spermateka*
FIG. 64. Terminal segments of palpus of female/*Terminale segmente van palp van wyfie*
FIG. 65. Termination of peritreme of female/*Eindpunt van peritreem van wyfie*
FIG. 66. Tibia and tarsus I of female/*Tibia en tarsus I van wyfie*
FIG. 67. Tibia and tarsus II of female/*Tibia en tarsus II van wyfie*
FIG. 68. Tarsal appendages of tarsus I of female/*Tarsale aanhangsels van tarsus I van wyfie*
FIG. 69. Prodorsal lobes of male/*Prodorsale lobbe van mannetjie*
FIG. 70. Dorsal seta of male/*Dorsale seta van mannetjie*
FIG. 71. Aedeagus

was described from the following hostplants: *Atriplex semibaccata, Chrysocoma tenuifolia, C. coma-aurea, Galenia procumbens, Pentzia globosa, Diospyros lycioides, Aster muricatus, Aptosimum marlothii, Melolobium candicans* and *Phaeoptilum spinosum.*

New records are: *Chrysocoma tenuifolia*, Adelaide, C.P., 6 February 1974 (F.W. Schultz); *C. tenuifolia*, Hogsback, C.P., 8 February 1974 (M.K.P. Meyer & L.C. Smit); *Felicia muricata*, 2,5 km from Thomas Baines Nature Reserve (Grahamstown-P.E. road), C.P., 13 February 1974 (M.K.P. Meyer); *Helichrysum kraussii*, 5 km from Fochville (Parys road), Tvl., 29 September 1976 (M.K.P. Meyer); *Hermannia* sp., 30 km from Severn, C.P., 6 February 1979 (E.A. Ueckermann) unidentified wild plant, Kamkwa, Kalahari Gemsbok National Park, C.P., 14 March 1980 (P.D. Theron); *Chrysocoma tenuifolia*, Hotazel, 3 October 1979 (L.C. Jordaan); *C. tenuifolia*, 10 km from Postmasburg, C.P., 8 October 1979 (E.A. Ueckermann).

Toronobia gen. nov.

Type-species: *Toronobia hirsutae* spec. nov.

This genus is similar to *Bryobia* in that the prodorsum bears 4 pairs of setae and the fourth pair of dorsocentral setae (f_1) are not longitudinally aligned with other dorsocentral setae but are located marginally. However, only the first pair of prodorsal setae (v_1) are situated on lobes. *Toronobia* can be separated from *Bryobia* by a different coxal setal formula namely 2-1-2 or 3-2; in *Toronobia* genu I with 9 setae whereas genu I of *Bryobia* has 8 setae; true claws uncinate and bearing tenent hairs; empodia of all the legs pad-like and each with 1 pair of tenent hairs which are in contrast to those of *Bryobia* where empodia II-IV usually have more than 1 pair of tenent hairs.

Toronobia hirsutae gen. nov. spec. nov.
(Fig. 60-75)

Female. Dimensions of holotype (measurements in parentheses are variations in paratype): length of body (including gnathosoma) 834 μm (720-732); length (excluding gnathosoma) 667 μm (600-620); breadth 467 μm (433-453).

Dorsum (Fig. 60). First pair of prodorsal setae (v_1) located anteromedially on a broad, more or less cone-shaped lobe (Fig. 61); body setae subspatulate and strongly serrate (Fig. 62); opisthosoma with 12 pairs of setae; fourth pair of dorsocentral setae (f_1) in a lateral position and not in line with other dorsocentral setae; prodorsum with a few irregular striae; optisthosomal striae predominantly transverse and widely spaced.

Spermatheca. The sacculus is elongate and constricted medially (Fig. 63); the duct flares out towards its origin.

Gnathosoma. Mediodistal margin of stylophore slightly notched; palptarsus (Fig. 64) with 3 setae, 1 solenidion and 3 eupathidia; peritreme terminates in a simple bulb (Fig. 65).

Legs. Chaetotaxy of legs as follows (solenidia in parentheses): coxae 2-1-2 or 3-2; trochanters 1-1-1-1; femora 16-11-7-7; genua 9-9-6-6; tibiae 14(1)-9-9-9; tarsi 21 (8)+2 dupl.-18(1)+1 dupl. -17(1)-17(1). Tibiae and tarsi I and II as figured in Fig. 66-67; leg setae strongly serrate; solenidia on tarsi III and IV associated with setae; true claws uncinate and each with 2 tenent hairs; empodia of all the legs with a short pad bearing a pair of tenent hairs (Fig. 68).

Male. Anterior lobe (Fig. 69) relatively shorter than that of female; opisthosoma divided by a suture; dorsum generally resembles that of female; dorsal body setae (Fig.70) subspatulate; chaetotaxy of legs as follows: coxae 2-1-2 or 3-2; femora 17 or 18-11-7 to 9-7; genua 9-9-6 or 7-7; tibiae 14(1)-9-9-9; tarsi 21(13)+2 dupl.-18(2)+1 dupl.-18 or 19(1)-18(1); aedeagus (Fig. 71) curves gradually dorsad to an acicular tip.

Larva. First pair of prodorsal setae (v_1) relatively short and filiform; other dorsal body setae (Fig. 72) lanceolate and strongly serrate; prodorsum with a few irregular striae; opisthosoma with mostly transverse, widely spaced striae; coxal setal formula for legs is :1-0-0; true claws more pad-like, narrow distally and slightly curved (Fig. 73).

Nympha. Dorsal body setae more subspatulate (Fig. 74) than those of larva but more slender than those of female; coxal setal formula for legs is: 2-1-1-0; true claws slightly more curved than those of larva (Fig. 75).

Natural colour. This species is blackish-red.

Habitat and locality. Holotype female, 7 paratype females, 3 paratype males, 3 paratype nymphae and 1 paratype larva from *Nidorella anomala*, 20 km from Delmas (Devon road), Tvl., 13 February 1973 (L.C. Jordaan).

Bryobiella Tuttle & Baker

Bryobiella Tuttle & Baker, 1968: 15; Meyer, 1974: 8.

Type-species: *Bryobiella desertorum* Tuttle & Baker.

Bryobiella is characterized by the presence of 3 pairs of setae (v_2, sc_{1-2}) on prodorsum; 14 pairs of opisthosomal setae, including humeral setae (c_3); 2 pairs of para-anal setae (h_{2-3}) located dorsally immediately anterior to anal opening which is in a terminal position; true claws uncinate and each bearing a pair of tenent hairs; tarsi I and II devoid of duplex setae but bearing 2 and 1 solenidia respectively; male tarsus I with 6 solenidia; peritreme ends in a simple bulb.

Bryobiella inflata Meyer
(Fig. 76)

Bryobiella inflata Meyer, 1974: 8.

Bryobiella inflata can be differentiated from *B. desertorum* Tuttle & Baker by the dorsal body setae,

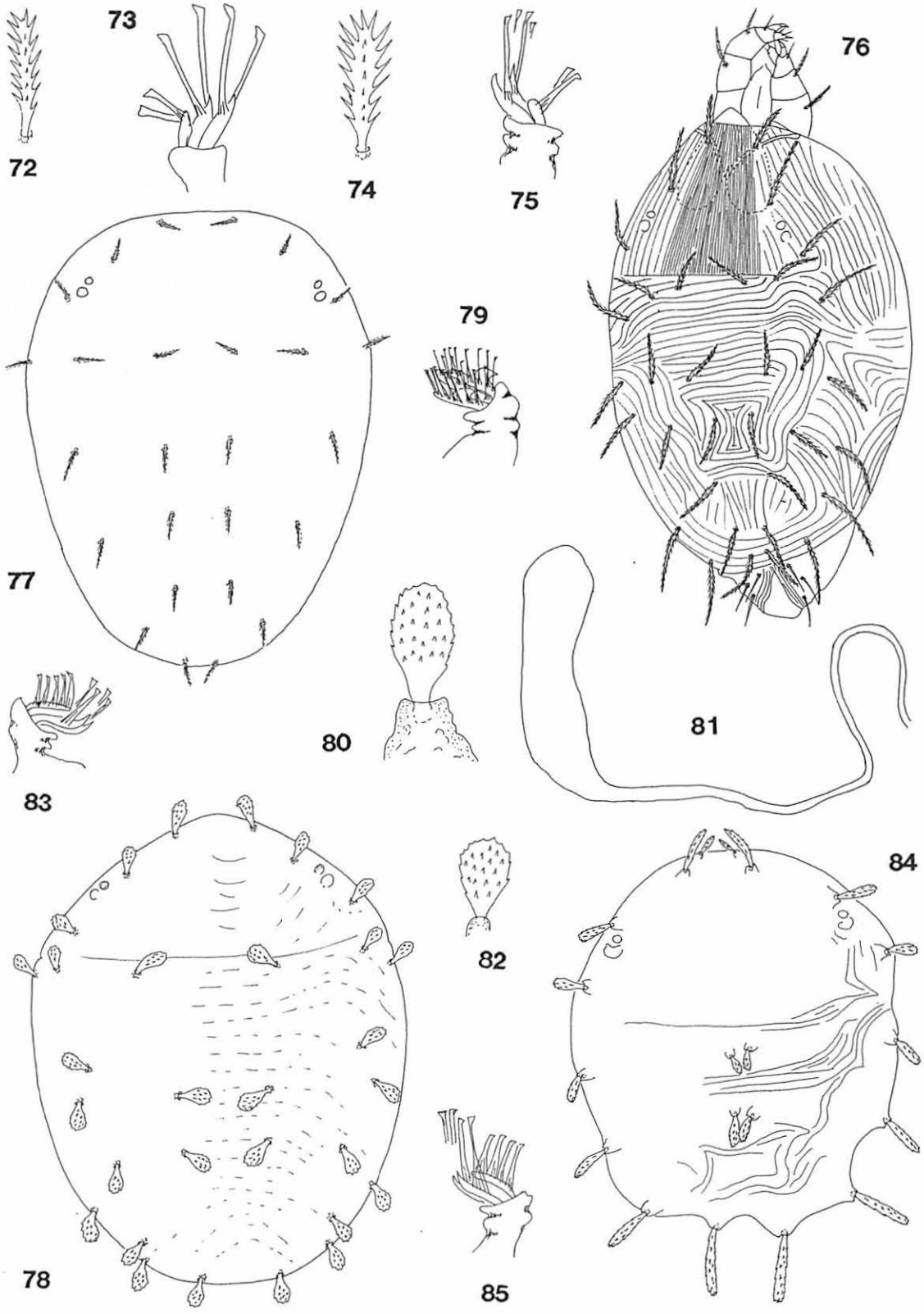

FIG. 72-75. *Toronobia hirsutae* (continued/*vervolg)*
FIG. 72. Dorsal seta of larva/*Dorsale seta van larf*
FIG. 73. Tarsal appendages of tarsus I of larva/*Tarsale aanhangsels van tarsus I van larf*
FIG. 74. Dorsal seta of nympha/*Dorsale seta van nimf*
FIG. 75. Tarsal appendages of tarsus I of nympha/*Tarsale aanhangsels van tarsus I van nimf*
FIG. 76. *Bryobiella inflata* Meyer. Dorsal view of female/*Dorsale aansig van wyfie*
FIG. 77. *Eremobryobia haloxyli* Strunkova & Mitrofanov. Dorsal view of female/*Dorsale aansig van wyfie (After Strunkova & Mitrofanov, 1982)*
FIG. 78. *Hemibryobia deleoni* (Tuttle & Baker). Dorsal view of female/*Dorsale aansig van wyfie (After Tuttle & Baker, 1968)*
FIG. 79-85. *Marainobia pulchella* Meyer
FIG. 79. Tarsal appendages of tarsus I of female/*Tarsale aanhangsels van tarsus I van wyfie*
FIG. 80. First pair of dorsocentral setae of female/*Eerste paar dorsosentrale setas van wyfie*
FIG. 81. Spermatheca/*Spermateka*
FIG. 82. Dorsal seta of nympha/*Dorsale seta van nimf*
FIG. 83. Tarsal appendages of tarsus I of female/*Tarsale aanhangsels van tarsus I van wyfie*
FIG. 84. Dorsal view of larva/*Dorsale aansig van larf*
FIG. 85. Tarsal appendages of tarsus I of larva/*Tarsale aanhangsels van tarsus I van larf*

which are much more expanded basally and provided with long serrations: empodium pad-like, bearing 4 pairs of tenent hairs; counts of setae and solenidia (in parentheses) on segments of legs I-IV are: coxae 2-2-1-1; femora 4-4-2-1; genua 5-5-4-3; tibiae 4(1)-5-3-3; tarsi 17(2)-13(1)-10-10; leg setae relatively long and setose; true claws uncinate and each with a pair of tenent hairs; empodia pad-like and bearing 4 pairs of tenent hairs arranged in 2 rows.

Habitat and locality. This species is known only from grass, Potchefstroom, Tvl. and Edenville, O.F.S.

A new record is from Gobabeb, South West Africa (Namibia), 12 February 1980 (P.D. Theron), collected on *Cynodon dactylon*.

Eremobryobia Strunkova & Mitrofanov
(Fig. 77)

Eremobryobia Strunkova & Mitrofanov, 1982: 1909-1911.

Type-species: *Eremobryobia haloxyli* Strunkova & Mitrofanov.

Eremobryobia is characterized by 3 pairs of setae on prodorsum and 10 pairs of setae on the opisthosoma; 2 pairs of pregenital and 1 pair of hypostomal setae are present; true claws pad-like and each with a pair of tenent hairs; empodium a short pad, bearing 1 pair of tenent hairs; coxal setal formula 2-1-1-1.

This genus is represented by the type-species and *E. calligoni* Strunkova & Mitrofanov, both collected in the desert in Turkmenia and Uzbekistan, USSR.

Hemibryobia Tuttle & Baker
(Fig. 78)

Parabryobia Tuttle & Baker, 1968: 12. Preoccupied in Tuckerellidae.

Hemibryobia Tuttle & Baker, 1969: 193; Meyer, 1974:8; Tuttle, Baker & Abbatiello, 1976: 7-9.

Type-species: *Hemibryobia deleoni* (Tuttle & Baker).

Hemibryobia can be identified by the presence of 3 pairs of setae on prodorsum and 12 pairs of opisthosomal setae; true claws uncinate, empodia pad-like and both bear tenent hairs; tarsus I with 2 sets of duplex setae; tarsi III and IV each with a solenidion and an adjacent tactile seta; opisthosomal setae arranged as in *Bryobia*; the peritreme ends in a distal anastomosis.

This genus is only known from the type which was collected on *Selaginella* plants in Mexico.

HYSTRICHONYCHINI Pritchard & Baker

Hystrichonychini Pritchard & Baker, 1955: 35; Wainstein, 1960b: 120; Tuttle & Baker, 1968: 20; Meyer, 1974: 50.

This tribe can be recognized by the true claws and empodia which are pad-like, though true claws rarely with a strong hook on midventral surface of pad, but then they are distinctly pad-like distally; prodorsum with 0 to 3 setiferous lobes anteriorly.

The Hystrichonychini comprises now the following genera: *Marainobia* Meyer, *Tetranycopsis* Canestrini, *Notonychus* Davis, *McGregorella* Baker & Tuttle, *Porcupinychus* Anwarullah, *Afronobia* Meyer, *Dolichonobia* Meyer, *Mesobryobia* Wainstein, *Monoceronychus* McGregor, *Hystrichonychus* McGregor, *Parapetrobia* Meyer & Ryke, *Beerella* Wainstein, *Reckia* Wainstein, *Tauriobia* Livshitz & Mitrofanov, *Brachynychus* Mitrofanov & Strunkova, *Peltanobia* Meyer, *Aplonobia* Womersley, *Anaplonobia* Wainstein, *Paraplonobia* Wainstein and *Neopetrobia* Wainstein.

Marainobia Meyer

Marainobia Meyer, 1974: 12.

Type-species: *Marainobia pulchella* Meyer.

Marainobia is characterized by the presence of 4 pairs of setae on the prodorsum; 6 pairs of opisthosomal setae, consisting of 2 pairs of dorsocentral setae and 4 pairs of marginal setae; dorsal body setae set on prominent tubercles; tubercles bearing marginal setae big and strong; true claws (Fig. 79) pad-like distally, but each with a strong claw medioventrally and 2 rows of tenent hairs; empodium pad-like with 2 rows of tenent hairs; peritreme forms an anastomosis distally; palpal tibia with 2 claws, the outer accessary claw being shorter than inner one; 2 sets of duplex setae present on tarsus I and 1 pair on tarsus II.

KEY TO THE SPECIES OF *MARAINOBIA*

1. Two pairs of dorsocentral setae (c_1 and d_1) spatulate ..... *M. pulchella* Meyer
- Two pairs of dorsocentral setae (c_1 and d_1) lanceolate ..... *M. robusta* spec. nov.

Marainobia pulchella Meyer
(Fig. 79-85)

Marainobia pulchella Meyer, 1974: 12-13.

This species is distinctive in that the 2 pairs of dorsocentral setae (c_1 and d_1) are spatulate (Fig. 80); the sacculus of the spermatheca (Fig. 81) of the female is oval and slightly constricted medially. In the nymph the dorsocentral setae (c_1 and d_1) are shorter and broader than those of female (Fig. 82); nymphal true claws slightly curved distally (Fig. 83). Dorsum of larva depicted in Fig. 84; as in nymph the larval true claws are also slightly curved distally (Fig. 85).

Habitat and locality. *M. pulchella* has been described from *Grewia occidentalis* and *G. flavescens* in Natal, the Cape Province and Transvaal.

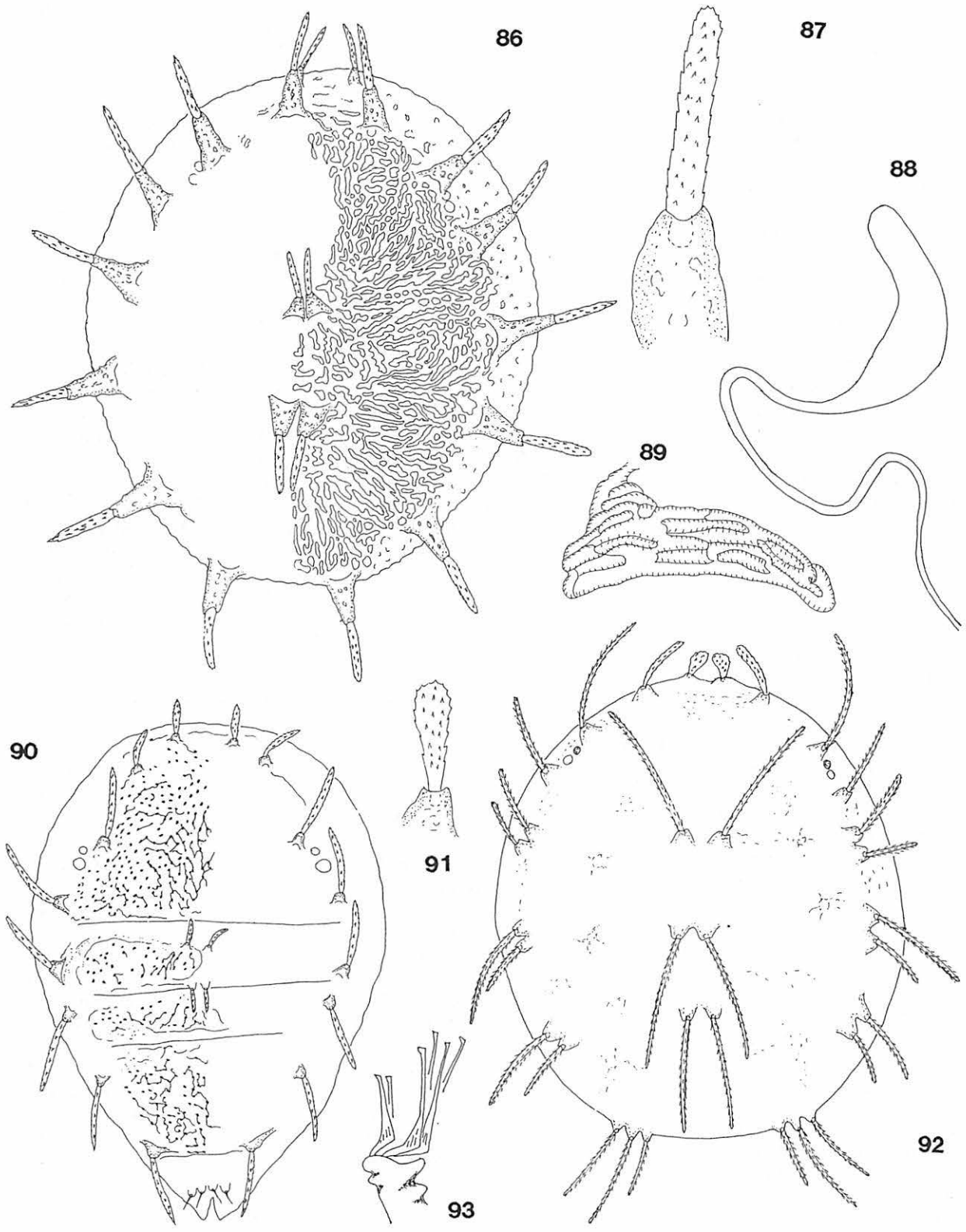

FIG. 86-91. *Marainobia robusta* spec. nov.
FIG. 86. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 87. First pair of dorsocentral setae of female/ *Eerste paar dorsosentrale setas van wyfie*
FIG. 88. Spermatheca/ *Spermateka*
FIG. 89. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 90. Dorsal view of male/ Dorsale aansig van mannetjie
FIG. 91. First pair of dorsocentral setae of nympha/ *Eerste paar dorsosentrale setas van nimf*
FIG. 92-93. *Tetranycopsis horridus* (Canestrini & Fanzago). Female/ *Wyfie. (After Pritchard & Baker, 1955)*
FIG. 92. Dorsal view/ *Dorsale aansig*
FIG. 93. Tarsal appendages of tarsus I/ *Tarsale aanhangsels van tarsus I*

New records for this species are: *Xeromphis rudis*, Katberg Mountains, C.P., 8 February 1974 (F.W. Schultz); *Grewia occidentalis*, Great Kei River Pass, C.P., 9 February 1974 (F.W. Schultz); *Allophyllus decipiens* and *Grewia occidentalis*, Aqualea Caravan Park, near East London, C.P., 12 February 1974 (M.K.P. Meyer & L.C. Smit); *G. occidentalis*, Fort Grey Forest Reserve, near East London, C.P., 12 February 1974 (F.W. Schultz); *G. occidentalis*, 2,5 km from Thomas Baines Nature Reserve (Grahamstown-P.E. road), C.P., 13 February 1974 (F.W. Schultz); *G. occidentalis*, Stone Crescent Hotel, Howieson's Poort, near Grahamstown, 13 February 1972 (C.J. Colijn); *G. occidentalis*, Assegaai River (Grahamstown-P.E. road), C.P., 13 February 1974 (M.K.P. Meyer); *G. occidentalis*, Blydepoort Nature Reserve, Tvl., 22 February 1978 (M.K.P. Meyer); *G. occidentalis*, Montrose Falls, near Nelspruit, Tvl., 8 June 1976 (M.K.P. Meyer); *G. occidentalis*, Farm near Lake St. Lucia, Natal, 21 August 1980 (E.A. Ueckermann); *G. occidentalis*, near Moria, Lebowa, 6 May 1981 (E.A. Uekermann).

Marainobia robusta spec. nov.
(Fig. 86-91)

This species is closely related to *M. pulchella* Meyer, differing in that the 2 pairs of dorsocentral setae (c_1 and d_1) taper distally.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 746 μm (640-733); length (excluding gnathosoma) 613 μm (567-600); breadth 533 μm.

Dorsum (Fig. 86). Body more or less rounded with no discernible division between prodorsum and opisthosoma; dorsum with 4 pairs of prodorsal setae (v_{1-2} and sc_{1-2}) and 6 pairs of opisthosomal setae, which are set on prominent tubercles; second to fourth pairs of prodorsal setae and 4 pairs of marginal setae situated on extremely large tubercles, which are nearly as long as the setae themselves; these setae are rod-like and serrate; first (c_1) and second (d_1) pairs of dorsocentral setae (Fig. 87) relatively shorter than marginal setae but contiguous and taper distally; first pair of prodorsal setae (v_1) relatively thinner than marginal setae and set on much smaller tubercles; integument covered with a reticulum of which the elements vary from relatively small and rounded to long and irregularly shaped.

Spermatheca. The sacculus is elongate and narrows distally; its surface is unornamented (Fig. 88). Chromosome numbers n = 4.

Gnathosoma. Stylophore relatively short, broad and slightly emarginate mediodorsally; distal enlargement (Fig. 89) of peritreme sausage-shaped, resembling that of *M. pulchella*; palptarsus with 4 eupathidia and 3 setae; palptibia with 2 claws distolaterally; outer claw three quarters the length of inner one.

Legs. Chaetotaxy of leg segments is: coxae 3-1-1-1; femora 6-5-3-3; genua 4-3-1-1; tibiae 7(1)-5-5-5; tarsi 11+2 dupl.-10+1 dupl.-8-9. True claws consist of a pad with a strong medioventral hook and 2 rows of tenent hairs; empodium pad-like with 2 rows of ventrally directed tenent hairs.

Male (Fig. 90). Dorsum of male resembles that of female in the location and structure of dorsal setae. However, dorsal tubercles relatively smaller than those of female; 2 pairs of short para-anal setae situated on dorsal tubercles; dorsal integument most clearly reticulated in female but has thick, lobed and irregular striae in male; shaft of aedeagus relatively long and abruptly constricted to form a stylet-like distal portion; 4 eupathidia on palptarsus relatively longer than those of female; distribution of leg setae and solenidia (in parentheses) is: coxae 3-1-1-1; femora 12-7-3-3; genua 8-6-4 or 5-4; tibiae 9(1)-7 or 8-6 or 7-6 or 7; tarsi 12 or 13(5)+2 dupl.-12(2)+1 dupl.-10-10; tarsus I with 5 relatively long solenidia and 8 tactile setae proximal to duplex setae.

Nympha. Dorsum of nymph closely resembles female except that the 2 pairs of dorsocentral setae (c_1 and d_1) are more subspatulate (Fig. 91).

Natural colour. This species is red.

Habitat and locality. Holotype female, 5 paratype females, 3 paratype males and 2 paratype nymphae from *Grewia robusta*, Addo Elephant National Park, C.P., 6 December 1977 (M.K.P. Meyer); 1 paratype female from *Protasparagus buchananii*, Rustenburg Kloof Nature Reserve, Tvl., 5 February 1980 (E.A. Ueckermann).

***Tetranycopsis* Canestrini**
(Fig. 92-93)

Tetranycopsis Canestrini, 1889: 495, 504; Pritchard & Baker, 1955: 34; Wainstein 1960b: 116; Tuttle & Baker, 1968: 27; Meyer 1974: 125.

Type-species: *Tetranychus horridus* Canestrini & Fanzago.

Tetranycopsis exhibits the following characteristics: prodorsum provided with 4 pairs of setae; opisthosoma with 12 pairs of setae; all dorsal body setae set on prominent tubercles; true claws and empodia pad-like, each bearing 2 pairs of tenent hairs (Fig. 93). No species of this genus have as yet been recorded from Africa.

This genus comprises *Tetranycopsis horridus* (Canestrini & Fanzago), *T. maticashviliae* Reck, *T. hystriciformes* Reck, *T. spiraeae* Reck, *T. borealis* Ehara & Mori, *T. potentilla* Baker & Tuttle and *T. naraniensis* Chaudhri.

***Notonychus* Davis**
(Fig. 94-95)

Notonychus Davis, 1969: 103; Meyer, 1974: 125.

Type-species: *Notonychus asper* Davis.

Notonychus can be diagnozed on the following characters: idiosoma flattened, relatively narrow and provided with prodorsal and opisthosomal shields; area between shields with coarse transverse striae; 4 pairs of setae on prodorsum; first pair (v_1) being

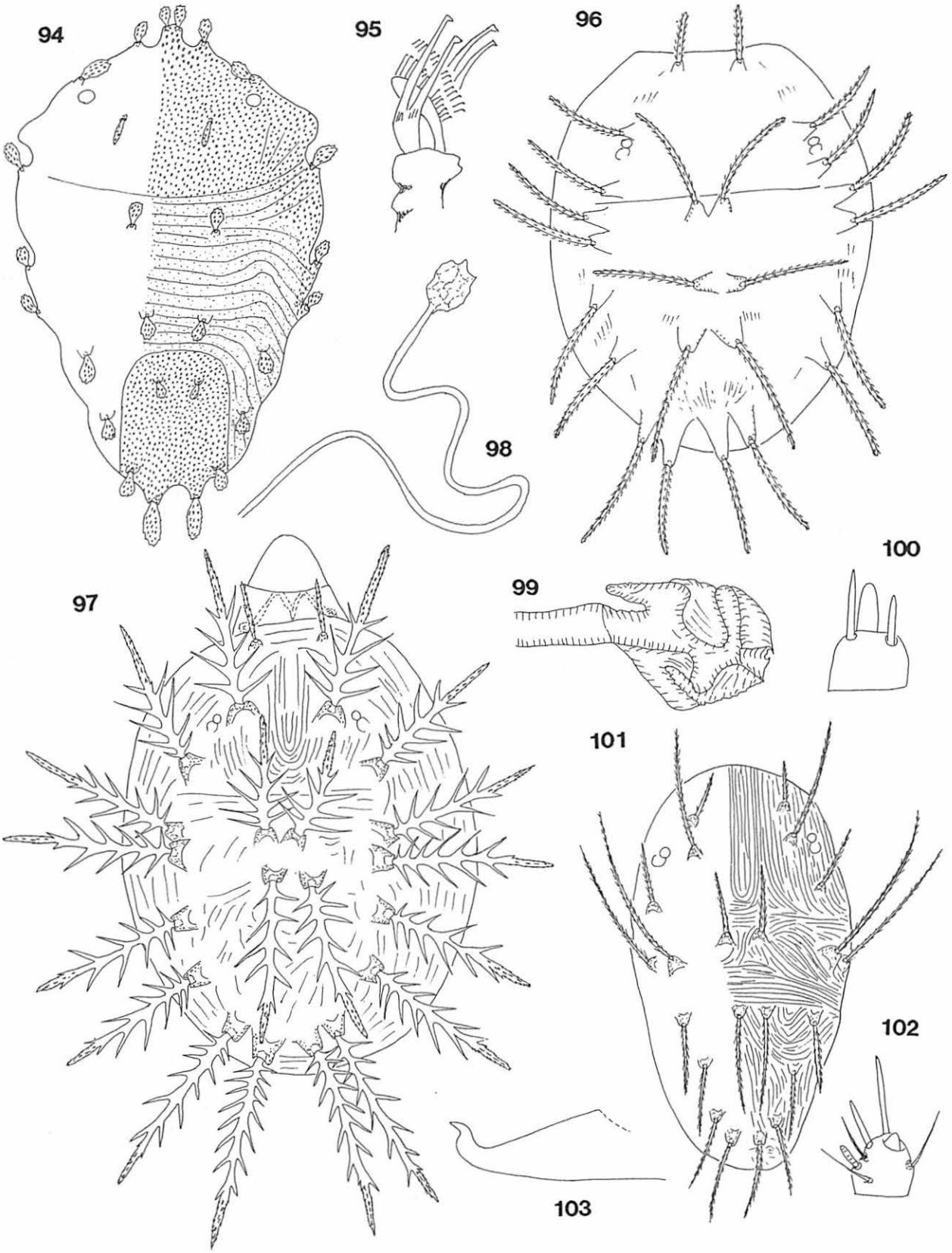

FIG. 94-95. *Notonychus asper* Davis. Female/ *Wyfie. (After Davis, 1969)*
FIG. 94. Dorsal view/ *Dorsale aansig*
FIG. 95. Tarsal appendages of tarsus I/ *Tarsale aanhangsels van tarsus I*
FIG. 96. *McGregorella incana* Baker & Tuttle. Dorsal view of female/ *Dorsale aansig van wyfie (After Baker & Tuttle, 1972)*
FIG. 97-103. *Porcupinychus nicolasi* spec. nov.
FIG. 97. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 98. Spermatheca/ *Spermateka*
FIG. 99. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 100. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 101. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 102. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 103. Aedeagus

situated on an anteromedian projection and second pair (v_2) on small outer projections; opisthosoma bears 9 pairs of dorsal setae; fourth pair of dorsocentral setae (f_1) more widely spaced than first 3 pairs (c_1, d_1 and e_1) and located nearly marginally; dorsal body setae short, broadly spatulate and serrate; opisthosomal setae set on small tubercles; peritreme anastomoses distally; true claws pad-like and each has a pair of tenent hairs; empodia pad-like and each bears 2 rows of ventrally directed hairs (Fig. 95).

This is a monotypic genus only represented by its type-species from Queensland, Australia.

McGregorella Baker & Tuttle
(Fig. 96)

McGregorella Baker & Tuttle, 1972: 5.

Type-species: *McGregorella incana* Baker & Tuttle.

The genus *McGregorella* is characterized by 3 pair of setae on prodorsum, 9 pairs of opisthosomal setae (including humerals (c_3)); 3 pairs (c_1, d_1 and e_1) are in a dorsocentral position but the fourth pair of dorsocentrals (f_1) are marginal; most of the dorsal body setae set on prominent tubercles; humerals (c_3) contiguous to or apart from first pair of dorsolateral setae (c_2); peritreme anastomosing distally; claws and empodia pad-like and provided with tenent hairs; tarsus I bears 2 sets of duplex setae and tarus II 1 set.

This genus is represented by 3 species namely *M. incana* Baker & Tuttle, *M. trifida* Baker & Tuttle and *M. lantanae* Tuttle, Baker & Abbatiello from North America. It is not known from Africa.

Porcupinychus Anwarullah

Porcupinychus Anwarullah, 1966: 71; Meyer, 1974: 51.
Trichonychus Gutierrez, 1968a: 14.

Type-species: *Porcupinychus abutiloni* Anwarullah.

This genus is characterized by the presence of 3 pairs of setae on prodorsum and 8 pairs of setae on opisthosoma; dorsal body setae located on strong tubercles; opisthosomal setae consist of 3 pairs of dorsocentral setae, 1 pair of humeral and 4 pairs of marginal or dorsolateral setae; humeral setae (c_3) contiguous with first pair of dorsolateral setae (c_2); members of first 2 pairs of dorsocentral setae (c_1 and d_1) also contiguous; third pair of dorsocentral setae (h_1) marginal; true claws and empodia short pads, each bearing a pair of tenent hairs; tarsus I with 2 pairs of duplex setae and tarsus II with 1 pair but short tactile member absent; peritreme forms an anastomosis distally, which is greatly enlarged.

KEY TO THE AFRICAN SPECIES OF *PORCUPINYCHUS*

1. Dorsal body setae of female coarsely serrate 2
- Dorsal body setae of female ramiform .... *P. nicolasi* spec. nov.
2. Tibia I with 7 tactile setae and tibia II with 6 tactile setae ..... *P. humilis* spec. nov.
- Tibia I with 9 tactile setae and tibia II with 7 or 8 tactile setae 3
- Tibiae I and II each with 10 or 11 tactile setae 5
3. Male with humerals (c_3) more than half as long as first pair of dorsolateral setae (c_2); male with second pair of dorsocentral setae (d_1) reaching past bases of setae next behind 4
- Male with humerals (c_3) about half as long as first pair of dorsolateral setae (c_2); male with second pair of dorsocentral setae (d_1) much shorter than distances between consecutive setae ..... *P. evexus* Meyer
4. Male with humeral setae (c_3) three quarters the length of first pair of dorsolateral setae (c_2); first (c_1) and second (d_1) pairs of dorsocentral setae about equal in length or slightly subequal .....*P. cuspidatus* Meyer
- Male with humeral setae (c_3) two thirds the length of first pair of dorsolateral setae (c_2); first pair of dorsocentral setae (c_1) two thirds the length of second pair of dorsocentral setae (d_1) ..... *P. insularis* (Gutierrez)
5. Tibiae III and IV with 10 or 11 tactile setae 6
- Tibia III with 9 and tibia IV with 7 or 8 tactile setae ..... *P. sheilae* spec. nov.
6. Male humeral setae (c_3) about two thirds the length of first pair of dorsolateral setae (c_2); first (c_1) and second (d_1) pairs of female dorsocentral setae nearly or about as long as distances between consecutive setae ....*P. hermanniae* Meyer
- Male humeral setae (c_3) about three quarters the length of first pair of dorsolateral setae (c_2); first (c_1) and second (d_1) pairs of female dorsocentral setae much longer than distances between consecutive setae .... *P. kalahariensis* spec. nov.

Porcupinychus nicolasi spec. nov.
(Fig. 97-103)

The ramiferous dorsal body setae of the female are distinctive for this species.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 473 μm (427-533); length (excluding gnathosoma) 367 μm (333-400); breadth 307 μm (260-333).

Dorsum (Fig. 97). The 11 pairs of body setae are ramiform and reach past bases of setae next behind; first pair of prodorsal setae (v_2) the shortest and not ramiform but coarsely serrate; setae located on tubercles.

Spermatheca. The sacculus is small and rounded (Fig. 98).

Gnathosoma. Stylophore rounded anteriorly; peritreme terminates distally in a rounded anastomosis (Fig. 99); terminal sensillum on

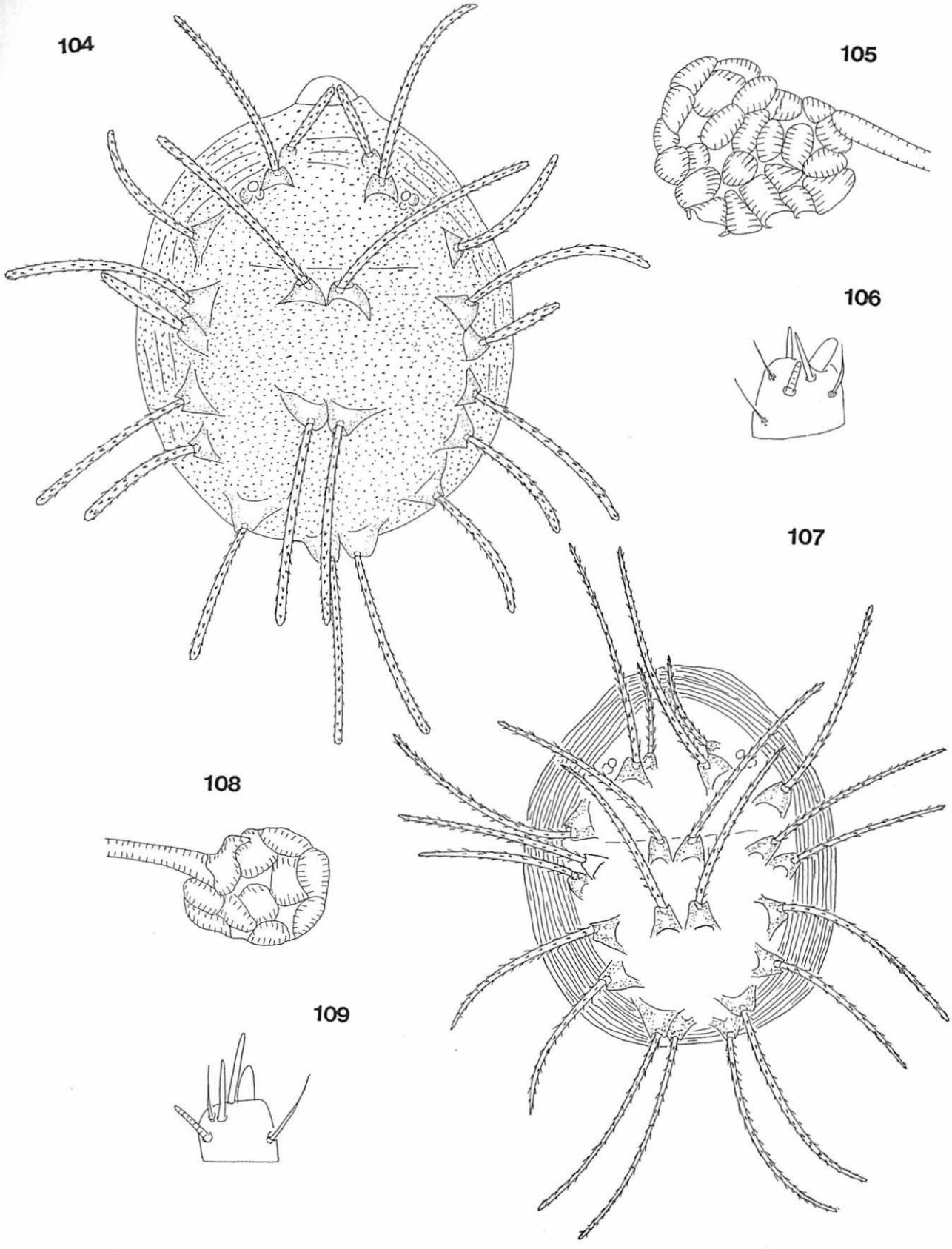

FIG. 104-106. *Porcupinychus humilis* spec. nov. Female/ *Wyfie*
FIG. 104. Dorsal view/ *Dorsale aansig*
FIG. 105. Peritremal anastomosis/ *Peritremale anastomose*
FIG. 106. Palptarsus
FIG. 107-111. *Porcupinychus sheilae* spec. nov.

FIG. 107. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 108. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 109. Palptarsus of female/ *Palptarsus van wyfie*

palptarsus (Fig. 100) about twice as long as broad.

Legs. Setae and solenidia (in parentheses) distributed on legs podomeres as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 4-4-2-2; genua 3-3-2-1; tibiae 9(1)-8-6-6; tarsi 11(1)+ 2 dupl.-11(1)+ 1 dupl.-10(1)-10. Short tactile members of duplex setae absent; tarsi I and II each bearing 6 tactile setae and 1 solenidion well proximal to duplex setae; pads of true claws and empodia very short and each with 1 pair of tenent hairs.

Male (Fig. 101). Dorsal body setae coarsely serrate and set on tubercles; first pair of setae (v_2) on prodorsum the shortest, being about a third the length of second pair (sc_1); first pair of dorsolateral setae (c_2) the longest; humeral setae (c_3) about four fifths the length of first pair of dorsolaterals (c_2); first pair of dorsocentral setae (c_1) about three quarters the length of second pair of dorsocentrals (d_1); dorsal integument striated; terminal sensillum on palptarsus (Fig. 102) small and triangular; shaft of aedeagus (Fig. 103) bends dorsad in a sigmoid curve; setae and solenidia (in parentheses) on legs are: femora 8-7-3-3; genua 4-4-3-2; tibiae 9(3)-8(2) -6-6; tarsi 11(4)+2 dupl.-11(4)+1 dupl.-10(1)-10.

Nympha. Except for fewer leg setae, the nymph is similar to female.

Natural colour. The mites of this species are green.

Habitat and locality. Holotype female, 30 paratype females, 2 paratype males and 2 paratype nymphae from *Grielum humifusum*, 30 km from Port Nolloth (Steinkopf road), C.P., 19 September 1983 (N.C.J. Basson); 13 paratype females and 2 paratype males from *Galenia rigida*, 15 km from Bitterfontein (Garies road), C.P., 20 September 1983 (M.K.P. Meyer).

This species is named for Mr Nicolaas C.J. Basson of the Plant Protection Research Institute, Pretoria.

Porcupinychus humilis spec. nov. (Fig. 104-106)

Porcupinychus humilis is related to *P. evexus* Meyer. However, it differs in that the humeral setae (c_3) of the female are about half as long as first pair of dorsolateral setae (c_2); tibiae I and II bear respectively 7 and 6 tactile setae, instead of 9 and 8 as in *P. evexus*.

Female. Dimensions of holotype: length of body (including gnathosoma) 467 μm; length (excluding gnathosoma) 400 μm; breadth 333 μm.

Dorsum (Fig. 104). The 11 pairs of body setae serrate, blunt and reach past bases of setae next behind; all located on very prominent tubercles; first pair of prodorsal setae (v_2) the shortest and about a third the length of second pair (sc_1); humeral setae (c_3) about half the length of first pair of dorsolateral setae (c_2); first (c_1), second (d_1) and third (h_1) pairs of dorsocentral setae about equal in length; first (c_1) and second (d_1) pairs of dorsocentral setae reach to bases of setae next behind; first (c_2) and second (d_2) pairs of dorsolateral setae about equal in length; third pair (e_2) about three quarters the length of fourth pair of dorsolateral setae (f_2); all opisthosomal setae contiguous; integument punctate.

Gnathosoma. Stylophore rounded anteriorly; peritreme ends in a distal, anastomosing, circular enlargement (Fig. 105); terminal sensillum of palptarsus (Fig. 106) about twice as long as broad and about two thirds the length of proximodorsal sensillum.

Legs. Inclusive counts of setae on leg segments are (solenida in parentheses): coxae 2-2-1-1; femora 4-4-3-3; genua 3-3-1-1; tibiae 7(1)-6-5-5; tarsi 10(1)+2 dupl.-10(1)+1 dupl.-8-8; duplex setae without small tactile setae; tarsi I and II each with 6 tactile setae and 1 solenidion proximal to duplex setae; empodia and true claws pad-like, each bearing a pair of tenent hairs; most dorsal tactile setae on legs relatively thick and serrate.

Male. Unknown.

Habitat and locality. Holotype female and 2 paratypes from plant material underneath an *Acacia* tree, Boskop Dam, near Potchefstroom, Tvl., 4 March 1971 (P.D. Theron).

Porcupinychus evexus Meyer

Porcupinychus evexus Meyer, 1974: 51-54.

This species can be recognized easily by the relatively long, blunt dorsal body setae of female, which are longer than distances between bases of consecutive setae; male with humeral setae (c_3) about half as long as first pair of dorsolateral setae (c_2); in female humeral setae (c_3) about two thirds the length of first pair of dorsolateral setae (c_2).

Habitat and locality. This species was formerly collected on *Hibiscus micranthus* in the Kruger National Park, Tvl. and Zimbabwe.

A new record is from *Dombeya rotundifolia*, 15 km from Ohrigstad, Tvl., 23 February 1978 (M.K.P. Meyer).

Porcupinychus cuspidatus Meyer

Porcupinychus cuspidatus Meyer, 1974: 55-58.

Porcupinychus cuspidatus is closely related to *P. abutiloni* Anwarullah and *P. insularis* Gutierrez; however, the female may be differentiated from that of the former species by tarsi I and II, each of which bear 6 tactile setae and 1 solenidion proximal to duplex setae; tarsus III with 8 or 9 tactile setae and 1 solenidion instead of the 11 tactile setae and 1 solenidion in *P. abutiloni*; tarsus IV with 8 or 9 tactile setae instead of 11; male humeral setae (c_3) about three quarters the length of first pair of dorsolateral setae (c_2) whereas they are about half the length of first pair of dorsolaterals (c_2) in *P. abutiloni*; leg setae also fewer than in male of *P. abutiloni*; the male of *P. cuspidatus* differs from that of *P. insularis* in that the humeral setae (c_3) are longer than second pair of dorsocentral setae (d_1);

the latter pair of setae do not extend past margin of body; male and female with 10 setae on tarsus I and 11 on tarsus II.

Habitat and locality. *P. cuspidatus* is known to occur on *Abutilon quineense, A. austro-africanum, A. grandiflorum, Melhania forbesii, Celtis africana* and *Sida cordifolia* in South Africa, Zimbabwe and Mocambique.

Porcupinychus insularis (Gutierrez)

Trichonychus insularis Gutierrez, 1968a: 14-17.
Porcupinychus insularis (Gutierrez), Meyer, 1974: 58.

Porcupinychus insularis exhibits the following characteristics: humeral setae (c_3) of male about three quarters the length of second pair of dorsocentral setae (d_1) and about two thirds the length of first pair of dorsolateral setae (c_2); second pair of dorsocentral setae (d_1) extend well beyond posterior margin of body; first pair of dorsocentral setae (c_1) about two thirds the length of second pair of dorsocentral setae (d_1); female with 9 tactile setae and 1 solenidion on tibia I; 8 tactile setae and 1 solenidion on tarsus II; chromosome numbers n = 4.

Habitat and locality. Gutierrez (1968) collected this species on *Sida rhombifolia* and *Hibiscus* sp. in the Malagasy Republic.

Porcupinychus sheilae spec. nov. (Fig. 107-111)

This species is similar to *P. kalahariensis* spec. nov., but differs in that the terminal sensillum on the female palptarsus is about twice as long as broad; tibia III bears 9 setae and tibia IV 7 or 8 setae.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 500 μm (480); length (including gnathosoma) 407 μm (373); breadth 280 μm (270).

Dorsum (Fig. 107). The 11 pairs of body setae are very long, sharply pointed and coarsely serrate; first pair of prodorsal setae (v_2) the shortest, about a third the length of second pair (sc_1); all setae situated on large tubercles of which those of the humerals (c_3), first pair of dorsolaterals (c_2), first (c_1) and second (d_1) pairs of dorsocentral setae are contiguous; setae much longer than distances between bases of consecutive setae; integument finely striated.

Gnathosoma. Stylophore rounded anteriorly: peritreme ends in a distal, anastomosing, circular enlargement (Fig. 108); terminal sensillum on palptarsus (Fig. 109) about twice as long as broad.

Legs. Inclusive counts of setae and solenidia (in parentheses) on leg segments are: coxae 2-2-1-1; trochanters 1-1-1-1; femora 4-4-3-3; genua 3-3-2-1; tibiae 11(1)-10-9-7 or 8; tarsi 12(1)+2 dupl.-12(1)+1 dupl.-10 or 11(1)-10(1); short tactile members of duplex setae absent; tarsi I and II each bears 6 tactile setae and 1 solenidion well proximal to duplex setae; empodia and true claws pad-like and each with a pair of tenent hairs.

Male (Fig. 110). In contrast to female the dorsal body setae vary greatly in length; second pair of prodorsal setae (sc_1) the longest, being about 3 times as long as first (v_2) and third pair (sc_2); humeral setae (c_3) about two thirds the length of first pair of dorsolateral setae (c_2); first pair of dorsocentral setae (c_1) extend past bases of second pair of dorsocentral setae (d_1); first 2 pairs of dorsocentral setae of about equal length; male dorsal body setae serrate and set on prominent tubercles; shaft of aedeagus narrows distally and curves dorsad to form a sigmoid curve; distribution of leg setae and solenidia (in parentheses) as follows; femora 8-8-3-3; genua 4-4-3-2; tibiae 11(5)-11-(2)-9-8; tarsi 11(4)+2 dupl.-12(3)+1 dupl.-11(1)-11(1); terminal sensillum on palptarsus (Fig. 111) broader than long.

Nympha. Except for fewer leg setae, the nymph is similar to female.

Natural colour. The mites of this species are red.

Habitat and locality. Holotype female, 3 paratype females, 1 paratype male and 1 paratype nympha from *Hermannia prismatocarpa,* 5 km north of Rocher Pan Nature Reserve, C.P., 29 September 1982 (S.C. Cruickshank).

This species is named for Mrs Sheila C. Cruickshank formerly of the Plant Quarantine Station, Stellenbosch.

Porcupinychus hermanniae Meyer

Porcupinychus hermanniae Meyer, 1974: 54-55.

Morphologically this species and *P. kalahariensis* spec. nov. are very similar except that the dorsal body setae of *P. hermanniae* are generally shorter and more blunt distally; first (c_1) and second (d_1) pairs of dorsocentral setae vary in different specimens from being slightly shorter, as long as, or slightly longer than distances between consecutive setae; second pair of male prodorsal setae (sc_1) vary from being twice as long as first pair (v_2) to slightly longer than first pair; male humeral setae (c_3) about two thirds the length of first pair of dorsolateral setae (c_2); second pair of male dorsocentral setae (d_1) vary from being as long as first pair of dorsocentrals (c_1) to about 1,3 times as long as these setae.

Habitat and locality. Meyer (1974) described this species from *Hermannia spinosa* and *H. stricta.*

New records for this species are from: *Hermannia spinosa*, Aughrabies Falls National Park, C.P., 13 September 1983 (E.A. Ueckermann); *Hermannia* sp., Wabrand, Aughrabies Falls National Park, C.P. 14 September 1983 (E.A. Ueckermann) *H. trifurca*, 10 km from Steinkopf (Springbok road) C.P., 19 September 1983 (E.A. Ueckermann); *H. stricta*, side road to Gamoep, from Pofadder-Aggeneys main road, C.P., 16 September 1983 (E.A. Ueckermann); *H. trifurca*, 5 km north of Rocher Pan Nature Reserve, C.P., 29 September 1982 (M.K.P. Meyer).

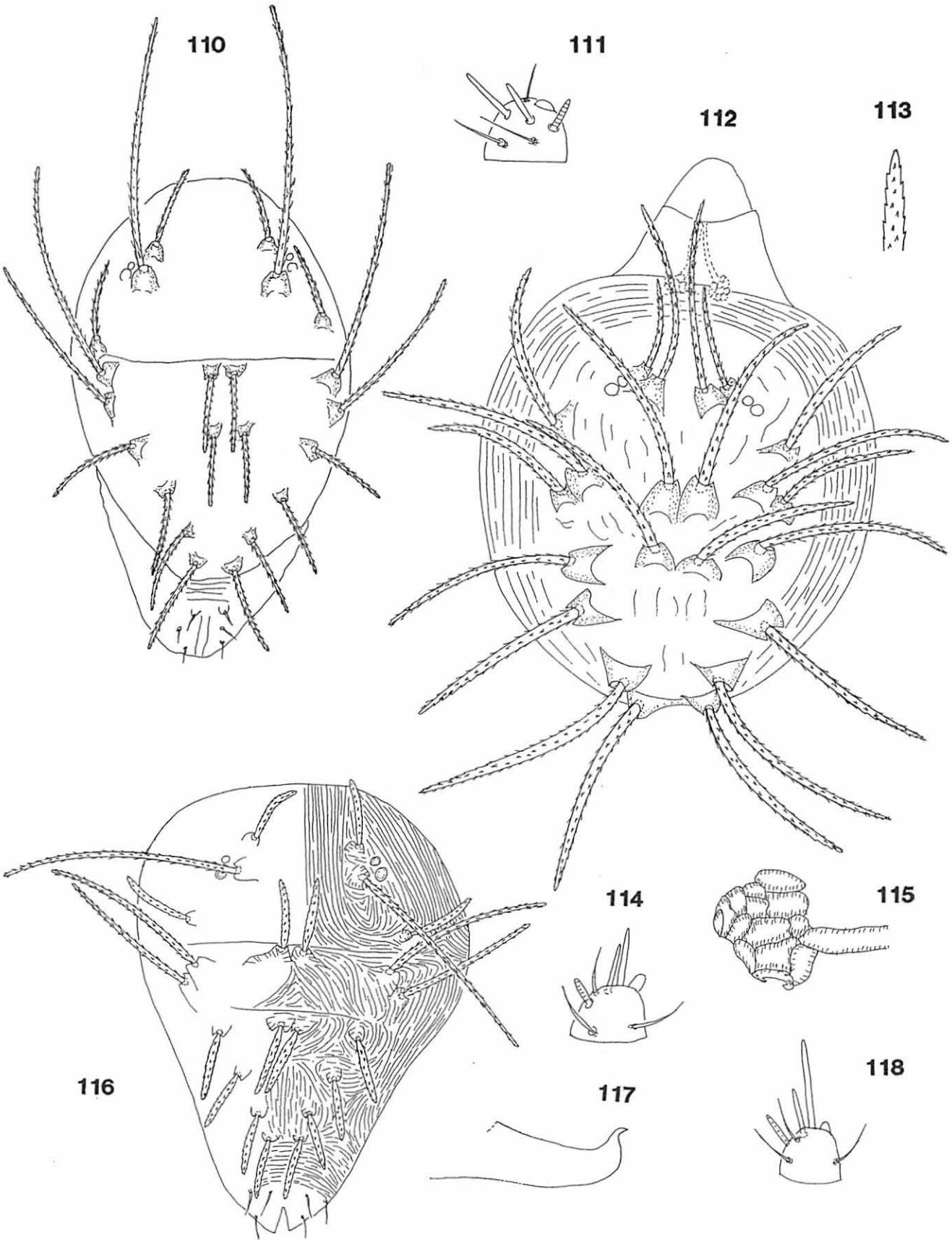

FIG. 110-111. *Porcupinychus sheilae* (continued/*vervolg)*
FIG. 110. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 111. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 112-118. *Porcypinychus kalahariensis* spec. nov.
FIG. 112. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 113. Tip of dorsal seta of female/ *Punt van dorsale seta van wyfie*
FIG. 114. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 115. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 116. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 117 - Aedeagus
FIG. 118 - Palptarsus of male/ *Palptarsus van Mannetjie*

Porcupinychus kalahariensis spec. nov.
(Fig. 112-118)

This species resembles *P. abutiloni* Anwarullah, but can be separated from the latter by the terminal sensillum on female palptarsus which is about as long as broad; genu III of female provided with 2 setae; male with humeral setae (c_3) about three quarters the length of first pair of dorsolateral setae (c_2); second (d_2) and third (e_2) pairs of dorsolateral setae about equal in length.

Female. Dimensions of holotype: length of body (including gnathosoma) 467 μm; length (excluding gnathosoma) 367 μm; breadth 300 μm.

Dorsum (Fig. 112). The 11 pairs of body setae relatively long, slender, serrate and pointed (Fig. 113); first pair of prodorsal setae (v_2) the shortest, being about two thirds the length of second (sc_1) and third (sc_2) pairs; humeral setae (c_3) about three quarters the length of first pair of dorsolateral setae (c_2) and slightly shorter than third pair of dorsolateral setae (e_2); members of first (c_1) and second (d_1) pairs of dorsocentrals contiguous, as are humerals (c_3) and first pair of dorsolateral setae (c_2); body setae much longer than intervals between bases of consecutive setae and set on strong tubercles; integument finely striated.

Gnathosoma. Terminal sensillum of palpus (Fig. 114) about as long as broad; mediodorsal tapering sensilla unequal in length, the shortest being about two thirds the length of the longest; spindle-shaped proximodorsal sensillum about twice as long as terminal one; 3 additional setae situated on palpus; palpal tibia with a strong claw and 3 setae; peritreme ends in a branched enlargement (Fig. 115); stylophore rounded in front.

Legs. Setae and solenidia (in parentheses) distributed on leg podomeres as follows: coxae 2-2-1-1; femora 4-4-3-3; genua 3-3-2-1; tibiae 10 or 11(1)-11-10 or 11-10 or 11; tarsi 11(1)+2 dupl. -12(1)+1 dupl.-10 or 11(1) -11 or 12(1); tarsi about two thirds the length of tibiae; short tactile members of duplex setae absent; tarsus I bears 6 tactile setae and 1 solenidion well proximal to duplex setae; all the tactile setae are serrate; pads of true claws and empodia very short and each with 1 pair of tenent hairs.

Male (Fig. 116). Dorsal body setae vary in length; first pair of setae (v_2) on prodorsum and third pair (sc_2) about equal in length; humeral setae (c_3) about three quarters the length of first pair of dorsolaterals (c_2); second (d_2) and third (e_2) pairs of dorsolateral setae about equal in length; first (c_1) and second (d_1) pairs of dorsocentral setae shorter than distances between consecutive setae; dorsal body setae serrate and set on tubercles; shaft of aedeagus (Fig. 117) narrows distally and curves dorsad, forming a sigmoid curve; terminal sensillum on palptarsus (Fig. 118) tiny; chaetotaxy of legs as follows: femora 8-8-3-3; genua 4-4-3-2; tibiae 11(3) -11(1)-11-11; tarsi 12(4)+2 dupl.-12(4)+1 dupl. -11(1)-11(1); tarsus I bears 6 tactile setae and 2 solenidia well proximal to duplex setae.

Nympha. Except for fewer leg setae, the nymph is similar to female.

Natural colour. Mites of this species are light green.

Habitat and locality. Holotype female, 5 paratype females, 2 paratype males and 2 paratype nymphae from *Hermannia* sp., 30 km from Kuruman, C.P., 6 February 1979 (E.A. Ueckermann).

Afronobia Meyer

Afronobia Meyer, 1974: 58.

Type-species: *Afronobia januae* Meyer.

This genus is distinctive in having the claws and empodia pad-like and provided with tenent hairs; prodorsum with 3 pairs of setae and opisthosoma with 8 pairs of setae, all well separated and located on small tubercles; with 3 pairs of dorsocentral setae (c_1, d_1 and h_1), the last pair is submarginal to the 4 pairs of dorsolateral setae, of which the first (c_2) pair is not contiguous with humeral setae (c_3); tarsus I bears 2 sets of duplex setae and tarsus II 1 set; in that the dorsum is ornamented with clusters of small teat-like protuberances, giving a reticulate effect; peritreme is enlarged and anastomosed distally.

KEY TO THE SPECIES OF *AFRONOBIA*

1. Dorsal body setae slender and pointed distally; femora I and II, each with 4 setae; genua I and II each with 3 setae; tibiae III and IV with 6 and 7 setae respectively .... *A. januae* Meyer
- Dorsal body setae broadly spatulate; femora I and II each with 6 or 7 setae; genua I and II each with 4 setae; tibiae III and IV each with 8 setae ..... *A. karroo* Meyer

Afronobia januae Meyer
(Fig. 119)

Afronobia januae Meyer, 1974: 59.

This species is distinctive in that the dorsal body setae are more or less pointed distally and femora I and II each bears 4 setae.

Habitat and locality. This species is known from *Hermannia geniculata* in the Golden Gate Highlands National Park, O.F.S.

Afronobia karroo Meyer

Afronobia karroo Meyer, 1974: 59-64.

Afronobia karroo differs from *A. januae* Meyer, in that the dorsal body setae are expanded distally and femora I and II, each bears 7 setae instead of 4.

Habitat and locality. This species was described from *Acacia karroo*, Potchefstroom, Tvl.

Dolichonobia Meyer

Dolichonobia Meyer, 1974: 64-65.

Type-species: *Dolichonobia prolata* Meyer.

The species of *Dolichonobia* may be readily recognized by their long, slender bodies, which are more than twice as long as wide; dorsal body setae serrate but varying from short and subspatulate to moderately long and lanceolate; prodorsum with 3 pairs of setae and opisthosoma with 10 pairs of dorsal setae; humeral setae (c_3) located anterolaterad of first pair of dorsolateral setae (c_2) and not set on tubercles; most opisthosomal setae well separated and not set on tubercles; only most posterior 3 pairs of opisthosomal setae set on strong tubercles of which the fourth pair of dorsocentral setae (f_1) are narrowly separated; peritremes end simply; claws pad-like, each with 1 pair of tenent hairs; empodia pad-like, each bearing 2 rows of tenent hairs.

KEY TO THE SPECIES OF *DOLICHONOBIA*

1. Prodorsum with a shallowly indented anteromedian projection; peritreme very short, ending simply without a bulb; fourth pair of dorsocentral setae (f_1) about three quarters the length of fifth pair of dorsocentral setae (h_1) .. .. *D. prolata* Meyer
- Prodorsum without a prominent projection, with a small elevation which is inconspicuously indented medially; peritreme of normal length, ending in a simple bulb; fourth (f_1) and fifth (h_1) pairs of dorsocentral setae about equal in length ..... *D. faceta* Meyer

Dolichonobia prolata Meyer
(Fig. 120-121)

Dolichonobia prolata Meyer, 1974: 64-65.

Dolichonobia prolata can be recognized by the second pair of prodorsal setae (sc_1) which are as long as the third pair (sc_2); fourth pair of dorsocentrals (f_1) about twice as long as anterior 3 pairs (c_1, d_1 and e_1) and three quarters the length of the fifth pair (h_1); sacculus of spermatheca (Fig. 121) more or less rounded and spiculate; peritreme short and ends simply, without a bulb.

Habitat and locality. This species was found on *Eragrostis* sp., East London and 24 km from Aliwal North (Lady Grey road), C.P.

Dolichonobia faceta Meyer

Dolichonobia faceta Meyer, 1974: 65.

Dolichonobia faceta is characterized by the second pair of prodorsal setae (sc_1) which are longer than third pair (sc_2); fourth (f_1) and fifth (h_1) pairs of dorsocentral setae about equal in length; peritremes end in a simple bulb.

Habitat and locality. *D. faceta* was collected on *Berzelia intermedia*, Outeniqua Pass, C.P.

Mesobryobia Wainstein

Mesobryobia Wainstein, 1956: 73; Tuttle & Baker, 1968: 49.

Monoceronychus (Mesobryobia) Wainstein, 1960b: 124; Meyer, 1974: 70.

Type-species: *Mesobryobia cervus* Wainstein.

This genus is distinctive in that there are 2 anterior projections over the rostrum, each bearing a seta; fourth pair of dorsocentral setae (f_1) situated further apart than first 3 pairs (c_1, d_1 and e_1) but not quite marginal; some or all of the last 3 pairs of opisthosomal setae may be on tubercles; claws and empodia pad-like and with tenent hairs; peritreme elongate and ends in an anastomosis.

KEY TO THE SPECIES OF *MESOBRYOBIA*

1. Fourth pair of dorsocentral setae (f_1) set on strong tubercles 2
- Fourth pair of dorsocentral setae (f_1) not set on tubercles 4
2. Dorsal body setae, except for posterior setae, spatulate 3
- Dorsal body setae lanceolate to subspatulate; second (d_1) and third (e_1) pairs of dorsocentrals and second (d_2) and third (e_2) pairs of dorsolateral setae minute .... *M. brevillosa* Meyer, 1974
3. Prodorsum reticulated medially; fourth pair of dorsolaterals (f_2) about equal in length to fourth pair of dorsocentrals (f_1) .... *M. foliata* Meyer, 1974
- Prodorsum without a reticulum medially; fourth pair of dorsolaterals (f_2) considerably longer than fourth pair of dorsocentrals (f_1) and nearly as long as fifth pair of dorsocentrals (h_1) ..... *M. cervus* Wainstein, 1956
4. Fourth pair of dorsolaterals (f_2) and fifth pair of dorsocentrals (h_1) spatulate 5
- Fourth pair of dorsolaterals (f_2) and fifth pair of dorsocentrals (h_1) subspatulate 8
5. Prodorsum with anterior projections well developed 6
- Prodorsum with anterior projections weakly developed ..... *M. delospermae* Meyer, 1974
6. Dorsal body setae spatulate 7
- Some dorsal body setae lanceolate .... *M. parmata* Meyer, 1974
7. Prodorsum with lobes longer than accompanying first pair of prodorsal setae (v_2); femora III and IV with 2 and 3 setae respectively; genua III and IV each with 4 setae ..... *M. keetchi* spec. nov.
- Prodorsum with lobes shorter than accompanying first pair of prodorsal setae (v_2); femora III and IV each with 4 setae; genua III

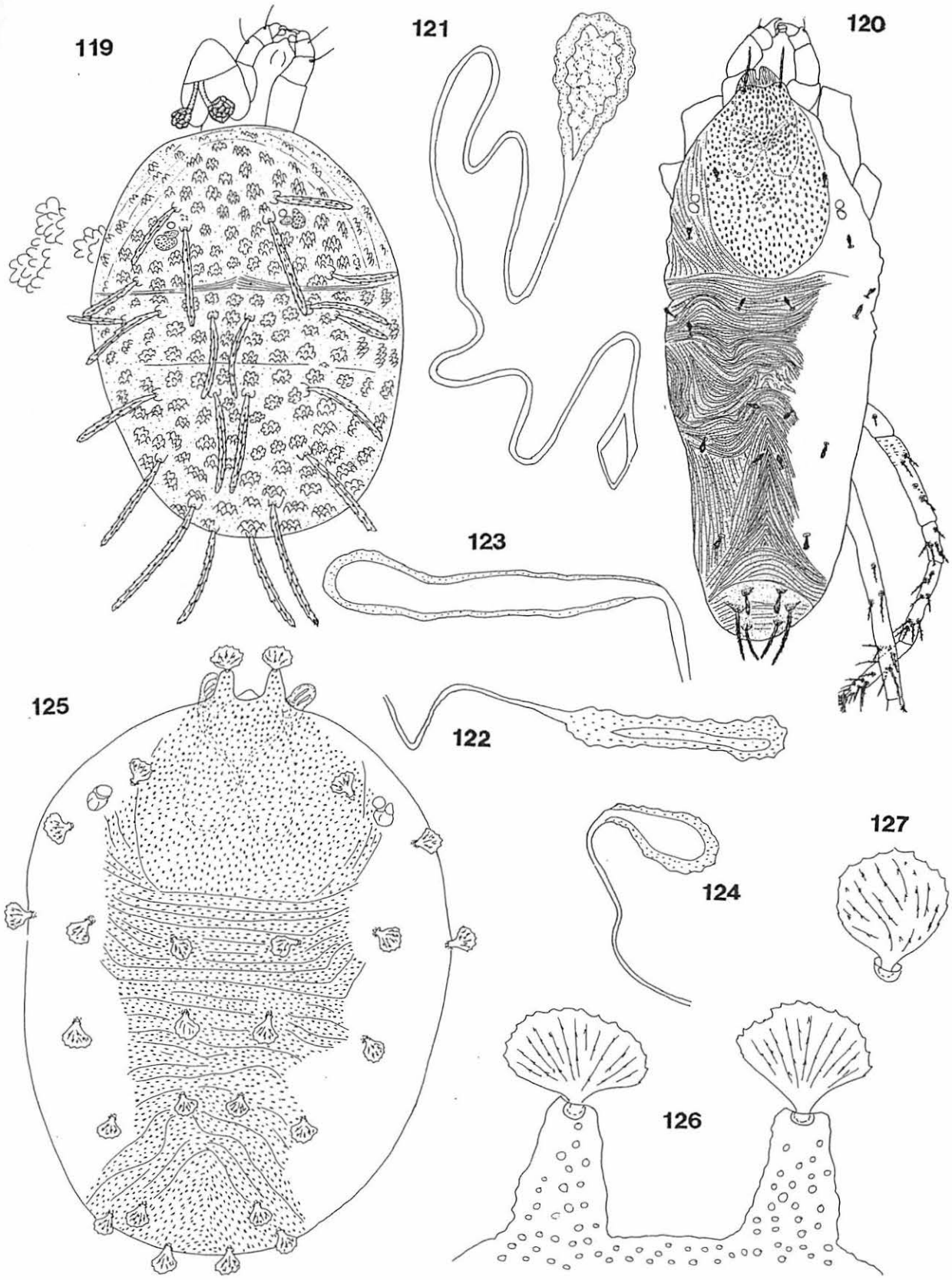

FIG. 119. *Afronobia januae* Meyer. Dorsal view of female / *Dorsale aansig van wyfie*
FIG. 120-121. *Dolichonobia prolata* Meyer. Female/ *Wyfie*
FIG. 120. Dorsal view/ *Dorsale aansig*
FIG. 121. Spermatheca/ *Spermateka*
FIG. 122. *Mesobryobia brevillosa* Meyer. Spermatheca/ *Spermateka*
FIG. 123. *Mesobryobia foliata* Meyer. Spermatheca/ *Spermateka*
FIG. 124. *Mesobryobia parmata* Meyer. Spermatheca/ *Spermateka*
FIG. 125-129. *Mesobryobia keetchi* spec. nov. Female/ *Wyfie*
FIG. 125. Dorsal view/ *Dorsale aansig*
FIG. 126. Prodorsal lobes/ *Prodorsale lobbe*
FIG. 127. Dorsal seta/ *Dorsale seta*

and IV each with 3 setae .... *M. ter-poghossiani* (Bagdasarian, 1959)

8. Fifth pair of dorsocentral setae (h_1) lanceolate, tubercles on which they are situated virtually non-existent ..... *M. comatula* Meyer, 1974

- Fifth pair of dorsocentral setae (h_1) subspatulate and situated on prominent tubercles 9

9. Fourth pair of dorsolaterals (f_2) lanceolate .... *M. genisi* Meyer, 1974

- Fourth pair of dorsolaterals (f_2) subspatulate .. .. *M. jobneri* Prasad, 1975

Mesobryobia brevillosa Meyer
(Fig. 122)

Mesobryobia brevillosa Meyer, 1974: 70-71.

Mesobryobia brevillosa may be recognized by the lanceolate to subspatulate dorsal body setae; second (d_1) and third (e_1) pairs of dorsocentral setae minute and the shortest of the dorsal body setae; prodorsum with lobes weakly developed; spermatheca oblong, somewhat widened distally and with a coarse surface (Fig. 122).

Habitat and locality. This species was described from *Acacia longifolia*, collected near the road from Cape Town to Die Strand and from *Helichrysum petiolatum*, Outeniqua Pass, C.P.

Mesobryobia foliata Meyer
(Fig. 123)

Mesobryobia foliata Meyer, 1974: 71.

This species has a median reticulum on the prodorsum; fourth pair of dorsolateral setae (f_2) about equal in length to fourth pair of dorsocentral setae (f_1); spermatheca elongate, widening distally and unornamented (Fig. 123).

Habitat and locality. The specimens described by Meyer (1974) were collected from *Themeda triandra* at Potchefstroom, Tvl.

Mesobryobia delospermae Meyer

Mesobryobia delospermae Meyer, 1974: 76.

This species may be recognized by the absence of well developed anterior lobes; male prodorsum with a mediocephalic projection in the form of a small shelf bearing first pair of setae (v_2); in deuto-nymph first pair of prodorsal setae (v_2) situated on strong tubercles.

Habitat and locality. *M. delospermae* was collected on *Delosperma ornatulum*, Pauls River at the Middelburg-Cradock road bridge, C.P.

Mesobryobia parmata Meyer
(Fig. 124)

Mesobryobia parmata Meyer, 1974: 71-76.

Dorsally, the body is covered with 3 reticulated plates; dorsal body setae minute except for those on well developed anterior lobes and posterior tubercles on opisthosoma; fourth pair of dorsocentral setae (f_1) not set on strong tubercles; spermatheca pear-shaped and with a rugose surface (Fig. 124).

Habitat and locality. This species has been collected from grass at Potchefstroom, Tvl., Pongola Natal and Baviaans River, 24 km from Cookhouse, C.P.

Mesobryobia keetchi spec. nov.
(Fig. 125-129)

This species resembles *M. ter-poghossiani* (Bagdasarian) but can be distinguished from the latter by the longer lobes; femora III and IV bear 2 and 3 setae respectively; genua III and IV each with 4 setae.

Female. Dimensions of holotype: length of body (including gnathosoma) 934 μm; length (excluding gnathosoma) 800 μm; breadth 633 μm; length of leg I 1 167 μm.

Dorsum (Fig. 125). Anterior lobes (Fig. 126) well-developed, bearing first pair of prodorsal setae (v_2) which are shorter than lobes; body setae (Fig. 127) broadly spatulate and not set on tubercles; integument punctulate; opisthosoma with widely spaced transverse striae.

Spermatheca. Duct slender and long; sacculus more or less rounded, surface with a reticulate pattern (Fig. 128).

Gnathosoma. Stylophore pointed anteriorly; peritreme ends in a large, anastomosing chamber (Fig. 129).

Legs. Numbers of setae and solenidia (in parentheses) on podomeres of legs I-IV are: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-6-2-3; genua 4-4-4-4; tibiae 12(1)-9-9-9; tarsi 10(4)+2 dupl.-12+1 dupl. -10(1)-10(1); tarsi III and IV with solenidia short, solitary and without accompanying tactile seta; empodial pad of tarsus I slightly longer than pads of true claws but empodial pads of other legs about twice as long as pads of true claws.

Natural colour. Dark red.

Male. Unknown.

Habitat and locality. Holotype female from unidentified grass, Golden Gate Highlands National Park, O.F.S., 9 February 1982 (E.A. Ueckermann).

This species is named for Dr D.P. Keetch of the Plant Protection Research Institute, Pretoria.

Mesobryobia comatula Meyer
(Fig. 130-131)

Mesobryobia comatula Meyer, 1974: 77.

Mesobryobia comatula may be recognized by minute, dorsal body setae, including those posteriorly on opisthosoma; tubercles bearing fourth pair of dorsolaterals (f_2) and fifth pair of dorsocentrals (h_1) not prominent but very small; spermatheca broadly pear-shaped and with a coarse surface (Fig. 130-131).

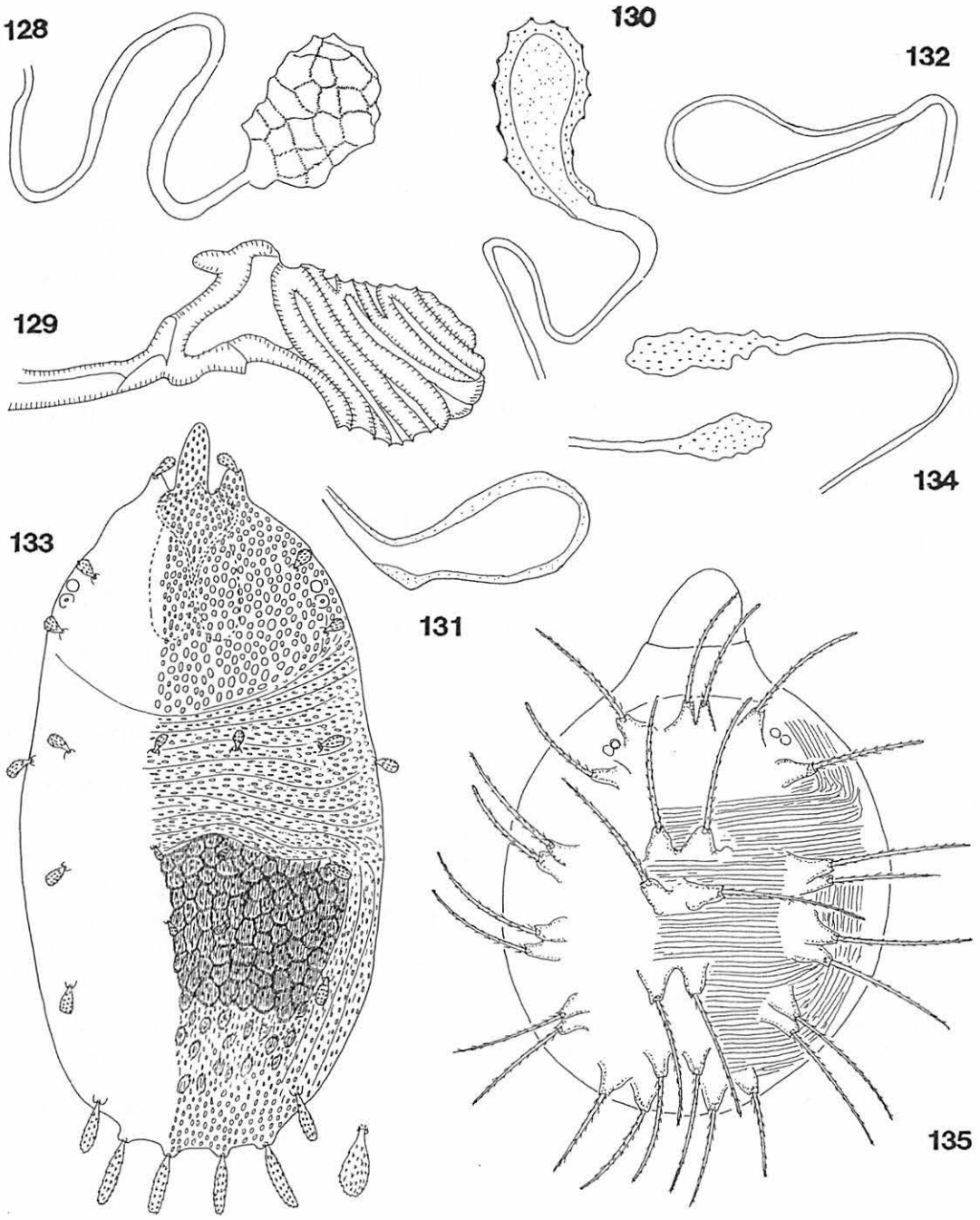

FIG. 128-129. *Mesobryobia keetchi* (continued/ *vervolg)*
FIG. 128. Spermatheca/ *Spermateka*
FIG. 129. Peritremal anastomosis/ *Peritremale anastomose*
FIG. 130-131. *Mesobryobia comatula* Meyer. Variations of spermathecae/ *Variasies van spermatekas*
FIG. 132. *Mesobryobia genisi* Meyer. Spermatheca/ *Spermateka*
FIG. 133-134. *Monoceronychus sticticus* Meyer. Female/ *Wyfie*
FIG. 133. Dorsal view/ *Dorsale aansig*
FIG. 134. Variations of spermathecae/ *Variasies van spermatekas*
FIG. 135. *Hystrichonychus sidae* Pritchard & Baker. Dorsal view of female/ *Dorsale aansig van wyfie* (After Tuttle, Baker & Abbatiello, 1976)

Habitat and locality. Meyer (1974) described this species from *Eragrostis curvula, Themeda triandra*, grass and soil at Potchefstroom, Tvl.

Mesobryobia genisi Meyer
(Fig. 132)

Mesobryobia genisi Meyer, 1974: 77-78.

This species is related to *M. comatula* Meyer but can be distinguished from the latter by the fourth pair of dorsolaterals (f_2) which situated on very small tubercles; fifth pair of dorsocentrals (h_1) set on strong tubercles; fifth pair of dorsocentrals (h_1) much longer than other dorsal body setae; spermatheca sub-bulbous and unornamented (Fig. 132).

Habitat and locality. This species was collected on grass at Pongola, Natal.

Monoceronychus McGregor

Monoceronychus McGregor, 1945: 100; Pritchard & Baker, 1955: 74: Wainstein, 1960b: 123; Tuttle & Baker, 1968: 30; Meyer, 1974: 78-79; Tuttle, Baker & Abbatiello, 1976: 11.

Type-species: *Monoceronychus californicus* McGregor.

Species of *Monoceronychus* are readily recognized by their elongate bodies; prodorsum with 3 projections and 3 pairs of dorsal setae (v_2, sc_{1-2}); opisthosoma bears 10 pairs of dorsal body setae, fourth pair of dorsocentral setae (f_1) widely spaced and usually located marginally; true claws and empodia pad-like.

Monoceronychus sticticus Meyer is the only species known from Africa. The other species known in this genus are included in the following key:

KEY TO THE SPECIES OF *MONOCERONYCHUS*

1. Inner anterior lobe reaching to or past tips of first pair of prodorsal setae (v_2) 2
- Inner anterior lobe not reaching past tips of first pair of prodorsal setae (v_2) 9
2. Some or all posterior caudal setae on opisthosoma spatulate, subspatulate or broadly lanceolate 3
- Posterior caudal setae on opisthosoma narrowly lanceolate 7
3. Lateral anterior lobes rudimentary 4
- Lateral anterior lobes well developed 5
4. All dorsal body setae spatulate .... *M. phleoides* Tuttle & Baker, 1968
- All dorsal body setae not spatulate, some being subspatulate and lanceolate .... *M. aristidoides* Tuttle & Baker, 1968
5. Opisthosoma with first 3 pairs of dorsocentral setae (c_1, d_1 and e_1) spatulate 6
- Opisthosoma with first 3 pairs of dorsocentral setae (c_1, d_1 and e_1) lanceolate .... *M. linki* Pritchard & Baker, 1955
6. Posterior caudal setae on opisthosoma elongate and broadly lanceolate .... *M. sticticus* Meyer, 1974
- Posterior caudal setae on opisthosoma elongate and spatualte ..... *M. pachucensis* Tuttle, Baker & Abbatiello, 1976
7. Caudal 3 pairs of opisthosomal setae not similar to other marginal setae 8
- Caudal 3 pairs of opisthosomal setae similar to other marginal setae .... *M. scolus* Pritchard & Baker, 1955
8. Dorsal leg setae broadly lanceolate ....*M. muhlenbergiae* Tuttle & Baker, 1964
- Dorsal leg setae narrowly lanceolate .... *M. aristidae* Tuttle & Baker, 1968
9. Opisthosoma with 2 pairs of caudal setae narrowly lanceolate 10
- Opisthosoma with 2 pairs of caudal setae spatulate or broadly lanceolate 13
10. Opisthosoma with third pair of dorsocentral setae (e_1) lanceolate ....*M. enoplus* Pritchard & Baker, 1955
- Opisthosoma with third pair of dorsocentral setae (e_1) spatulate 11
11. Leg I longer than body 12
- Leg I about as long as body .... *M. panici* Tuttle & Baker, 1968
12. Fourth pair of dorsocentral setae (f_1) spatulate ..... *M. curtipendulae* Tuttle & Baker, 1968
- Fourth pair of dorsocentral setae (f_1) lanceolate ..... *M. machetes* Pritchard & Baker, 1955
13. Caudal setae as long as other dorsal body setae 14
- Caudal setae longer than other dorsal body setae 15
14. Outer lobes of prodorsum nearly as long as inner lobe ..... *M. littoralis* Tuttle, Baker & Abbatiello, 1976
- Outer lobes about half as long as inner lobe .. .. *M. californicus* McGregor, 1945
15. Outer lobes of prodorsum about equal in length to inner lobe ....*M. pulcherrimae* Tuttle & Baker, 1964
- Outer lobes about half as long as inner lobe 16
16. Opisthosomal setae subspatulate ....*M. boreus* Krantz, 1962
- Opisthosomal setae spatulate .... *M. aechmetes* Pritchard & Baker, 1955

Monoceronychus sticticus Meyer
(Fig. 133-134)

Monoceronychus sticticus Meyer, 1974: 79.

Monoceronychus sticticus has the outer lobes of the prodorsum about half as long as inner lobe; caudal setae on opisthosoma elongate and broadly lanceolate but rest of dorsal body setae short and spatulate; spermatheca oval to oblong and with a coarse surface (Fig. 134).

Habitat and locality. This species was recorded

from *Themeda triandra*, Potchefstroom, Tvl.

New records are from: grass, Roodeplaat, near Pretoria, Tvl., 23 February 1977 (E.A. Ueckermann); *Cynodon dactylon*, Rietvlei Dam, near Pretoria, Tvl., 29 March 1977 (E.A. Ueckermann).

Hystrichonychus McGregor
(Fig. 135)

Hystrichonychus McGregor, 1950: 272: Pritchard & Baker, 1955: 37; Wainstein, 1960b: 121-122; Tuttle & Baker, 1968: 20; Meyer, 1974: 100; Tuttle, Baker & Abbatiello, 1976: 21-25; Gonzalez, 1977: 650-652.

Type-species: *Tetranychus gracilipes* Banks.

This genus is distinctive in that the dorsum (Fig. 135) is provided with 3 pairs of prodorsal and 12 pairs of opisthosomal setae; dorsal body setae long and set on strong tubercles; most opisthosomal setae contiguous; true claws short pads provided with tenent hairs distally; peritreme forms an anastomosis distally.

Hystrichonychus has not been found in Africa but the following species are known in this genus: *H. gracilipes* (Banks), *H. spinosus* Tuttle & Baker, *H. sidae* Pritchard & Baker, *H. ambiguae* Tuttle & Baker, *H. nepetae* (Bagdasarian), *H. pamirica* Mitrofanov & Strunkova and *H. atacamensis* Gonzalez.

Parapetrobia Meyer & Ryke
(Fig. 136-137)

Parapetrobia Meyer & Ryke, 1959: 362-364; Tuttle & Baker, 1968: 47; Meyer, 1974: 100.

Type-species: *Parapetrobia capensis* Meyer & Ryke.

This genus is distinctive in that tarsus I (Fig. 137) is provided with 4 pairs of duplex setae whereas tarsus II has the normal single set; empodium not truly pad-like but has a curved distal part bearing rows of dorsally directed tenent hairs; true claws pad-like; dorsal body setae set on prominent tubercles; second (d_1), third (e_1) and fourth (f_1) pairs of dorsocentral setae contiguous but first pair of dorsocentral setae (c_1) contiguous with first pair of dorsolateral setae (c_2); dorsal body setae relatively long, slender and serrate; peritreme forms an anastomosis distally.

This genus, known only from the female of *P. capensis*, was collected from an unidentified wild plant, Grabouw, C.P.

Beerella Wainstein
(Fig. 138)

Beerella Wainstein, 1961: 606; Meyer, 1974: 79.

Type-species: *Aplonobia verrucosa* Beer & Lang.

The 12 pairs of dorsal body setae of this genus are strong and located on prominent tubercles; first to third pairs of dorsocentral setae (c_1, d_1 and e_1) contiguous; fourth pair of dorsocentrals (f_1) marginal; peritremes terminate in an anastomosis; tarsus I with 2 pairs of duplex setae; claws and empodia pad-like and bear 2 rows of tenent hairs.

Two species are known, namely *Beerella verrucosa* (Beer & Lang) and *B. petiolaris* Thewke.

Reckia Wainstein
(Fig. 139-140)

Reckia Wainstein, 1960b: 154; Tuttle & Baker, 1968: 44; Meyer, 1974: 79.

Type-species: *Mesotetranychus samgoriensis* Reck.

This genus is distinctive in that the integument is covered by a tuberculate pattern (Fig. 139); true claws and empodia pad-like; empodia much longer than true claws and bearing a double row of tenent hairs (Fig. 140); opisthosoma with 5 pairs of dorsocentral setae (c_1, d_1, e_1, f_1, and h_1), 4 pairs of dorsolateral setae (c_2, d_2, e_2, and f_2) and 1 pair of humeral setae (c_3); fourth pair of dorsocentral setae (f_1) in a marginal position; dorsal body setae broadly clavate; peritreme ends in a distal anastomosis.

This genus is known only from the type-species.

Tauriobia Livshitz & Mitrofanov
(Fig. 141)

Tauriobia Livshitz & Mitrofanov, 1967: 1850.

Type-species: *Tauriobia insueta* Livshitz & Mitrofanov.

Tauriobia may be recognized by the increasing number of coxal setae; coxal setal formula is 11-9-9-9; other podomeres characterized by an enriched chaetotaxy; prodorsum with 3 pairs of setae and opisthosoma with 10 pairs of dorsal setae, set on small tubercles; about 6 pairs of ventral setae are present between coxae III and IV; true claws and empodia pad-like, equal in length and provided with 1 pair of tenent hairs; peritreme anastomoses distally.

This genus is known only from the type-species which was found on *Cistus tauricus* in the Crimea.

Brachynychus Mitrofanov & Strunkova
(Fig. 142)

Brachynychus Mitrofanov & Strunkova, 1971: 17; Meyer, 1974: 119.

Type-species: *Brachynychus cousiniae* Mitrofanov & Strunkova.

The diagnostic characters of this genus are: Prodorsum with 3 pairs of setae; opisthosoma with 10 pairs of dorsal setae, not located on tubercles; fourth pair of dorsocentral setae (f_1) closer together

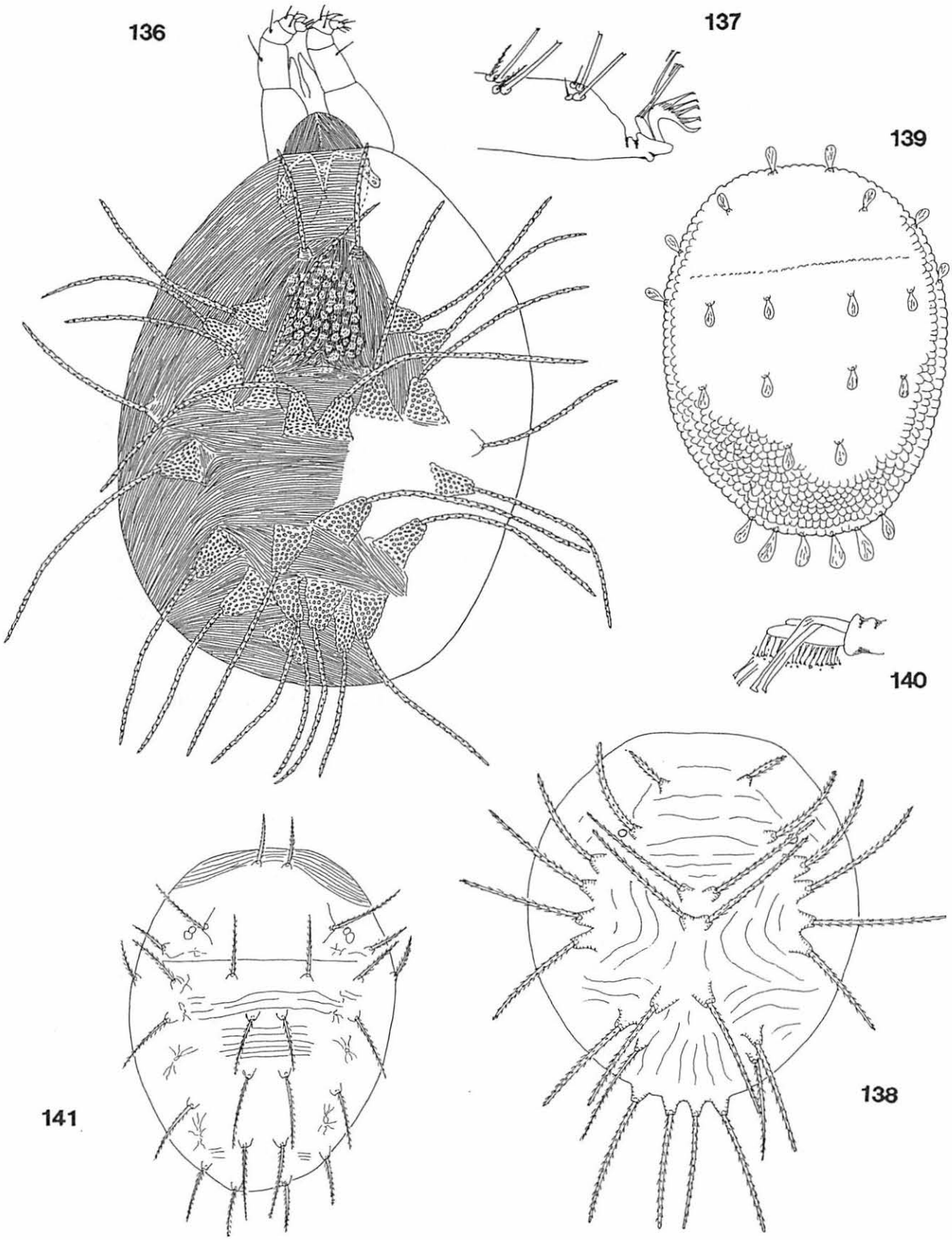

FIG. 136-137. *Parapetrobia capensis* Meyer & Ryke. Female/ *Wyfie*
FIG. 136. Dorsal view/ *Dorsale aansig*
FIG. 137. Tip of tarsus I showing 4 pairs of duplex setae and tarsal appendages/ *Punt van tarsus I met 4 paar dubbelhare en tarsale aanhangsels*
FIG. 138. *Beerella verrucosa* (Beer & Lang). Dorsal view of female / *Dorsale aansig van wyfie* (After Beer & Lang, 1958)

FIG. 139-140. *Reckia samgoriensis* (Reck). Female/ *Wyfie.* (After Bagdasaria, 1957)
FIG. 139. Dorsal view/ *Dorsale aansig*
FIG. 140. Tarsal appendages of tarsus I/ *Tarsale aanhangsels van tarsus I*
FIG. 141. *Tauriobia insueta* Livshitz & Mitrofanov. Dorsal view of female/ *Dorsale aansig van wyfie* (After Livshitz & Mitrofanov, 1967)

than first 3 pairs of dorsocentral setae (c_1, d_1 and c_1); peritreme ends simply. As far as the above-mentioned features are concerned this genus strongly resembles *Paraplonobia*. However, it differs in that the empodial pads and the true claws are equal in length and each bear 1 pair of tenent hairs and coxae I-IV bear 4-3-2-2 setae respectively.

This genus is not known from Africa but is represented by a single species from Russia.

Peltanobia Meyer

(Fig. 143)

Peltanobia Meyer, 1974: 101.

Type-species: *Peltanobia erasmusi* Meyer.

Dorsal body setae of *Peltanobia* located on small tubercles and well separated; prodorsum with 3 pairs of setae and opisthosoma with 10 pairs of dorsal setae, subequal in length, moderately short and spatulate; first to fourth pairs of dorsocentral setae (c_1, d_1, e_1 and f_1) located on cushion-like plates; humeral setae (c_3) situated in a line with the dorsolateral setae (c_2, d_2, e_2 and f_2); true claws pad-like, each bearing 1 pair of tenent hairs; empodia pad-like, each with 2 rows of tenent hairs.

This monotypic genus was collected from grass in the Umfolozi Game Reserve and Makatini Flats, Natal and Malala Drift, Tvl. It is also known from *Commelina* sp. and *Ipomoea magnusiana* at Chisumbanje, Zimbabwe.

Aplonobia Womersley

Aplonobia Womersley, 1940: 252; Pritchard & Baker, 1955: 58; Wainstein, 1960b: 139; Tuttle & Baker, 1968: 47; Meyer,1974: 102.

Georgiobia Wainstein, 1960a: 217; Wainstein, 1960b: 138-139; Tuttle & Baker, 1968: 58; Baker & Tuttle, 1972: 12; Meyer, 1974: 102; Tuttle, Baker & Abbatiello, 1976: 25. Syn nov.

Type-species: *Tetranychopsis histricina* Berlese.

Previously *Georgiobia* was separated from *Aplonobia* on the following characters: some dorsocentral setae [at least fourth pair (f_1)] borne on strong tubercles; members of fourth pair of dorsocentral setae (f_1) contiguous; humeral setae (c_3) situated anterior to or contiguous with first pair of dorsolateral setae (c_2). These very slight differences of which only one may be exhibited by some species make it difficult to justify the validity for 2 genera. It was decided, therefore to consider *Georgiobia* a synonym of *Aplonobia*.

Aplonobia can now be recognized by all or some body setae being well separated or contiguous and set on prominent tubercles; claws and empodia pad-like and provided with tenent hairs; peritreme usually anastomosing distally.

KEY TO THE AFRICAN SPECIES OF *APLONOBIA*

1. All or some dorsal body setae expanded distally 2
- All dorsal body setae tapering distally 7
2. First (c_1) and second (d_1) pairs of dorsocentral setae reaching more than halfway to bases of setae next behind; dorsum partly striate 3
- First (c_1) and second (d_1) pairs of dorsocentral setae reaching about halfway to bases of setae next behind; dorsum finely tuberculate ..... *A. punctata* Meyer
3. Dorsocentral setae (c_1, d_1, e_1 and f_1) reaching well beyond bases of consecutive setae 4
- Dorsocentral setae (c_1, d_1, e_1 and f_1) shorter or as long as distances between consecutive setae .. 5
4. Peritreme with terminal sausage-like enlargement about 3 times as long as broad ... *A. citri* Meyer
- Peritreme with terminal enlargement shorter, about twice as long as broad ..... *A. carinati* spec. nov.
5. Dorsocentral setae (c_1, d_1, e_1 and f_1) not reaching beyond bases of setae next behind ... 6
- Dorsocentral setae (c_1, d_1, e_1 and f_1) reaching to bases of setae next behind . *A. digitata* Meyer
6. Members of third pair of dorsocentral setae (e_1) contiguous; peritreme ending in a large anastomosis ..... *A. inflata* spec. nov.
- Members of third pair of dorsocentral setae (e_1) well separated; peritreme ending in a small anastomosis ..... *A. crassata* Meyer
7. Leg I roughly twice to 3 times as long as body 8
- Leg I obviously less than twice as long as body 11
8. Humeral setae (c_3) more or less in a line with dorsolateral setae 9
- Humeral setae (c_3) lateral to first pair of dorsolateral setae (c_2) ..... *A. aughrabiensis* spec. nov.
9. Dorsocentral setae (c_1, d_1, e_1 and f_1) longer than distances to setae second behind in row ..... *A. caesariata* (Meyer)
- Dorsocentral setae (c_1, d_1, e_1 and f_1) shorter than distances to setae second behind in row .. 10
10. Second pair of dorsocentral setae (d_1) about two thirds the length of first pair of dorsocentral setae (c_1); second pair of dorsolateral setae (d_2) as long as distances to bases of third pair of dorsolateral setae (e_2) ... *A. lootsi* Meyer
- First (c_1) and second (d_1) pairs of dorsocentral setae about equal in length; second pair of dorsolateral setae (d_2) shorter than distances to bases of third pair of dorsolateral setae (e_2) ... *A.transvaalensis* Meyer
11. Humeral setae (c_3) lateral to first pair of dorsolateral setae (c_2) 12
- Humeral setae (c_3) more or less in a line with dorsolateral setae 13
12. Female tarsi with more than 30 tactile setae; male tarsi with not less than 40 tactile setae ... *A. honiballi* Meyer

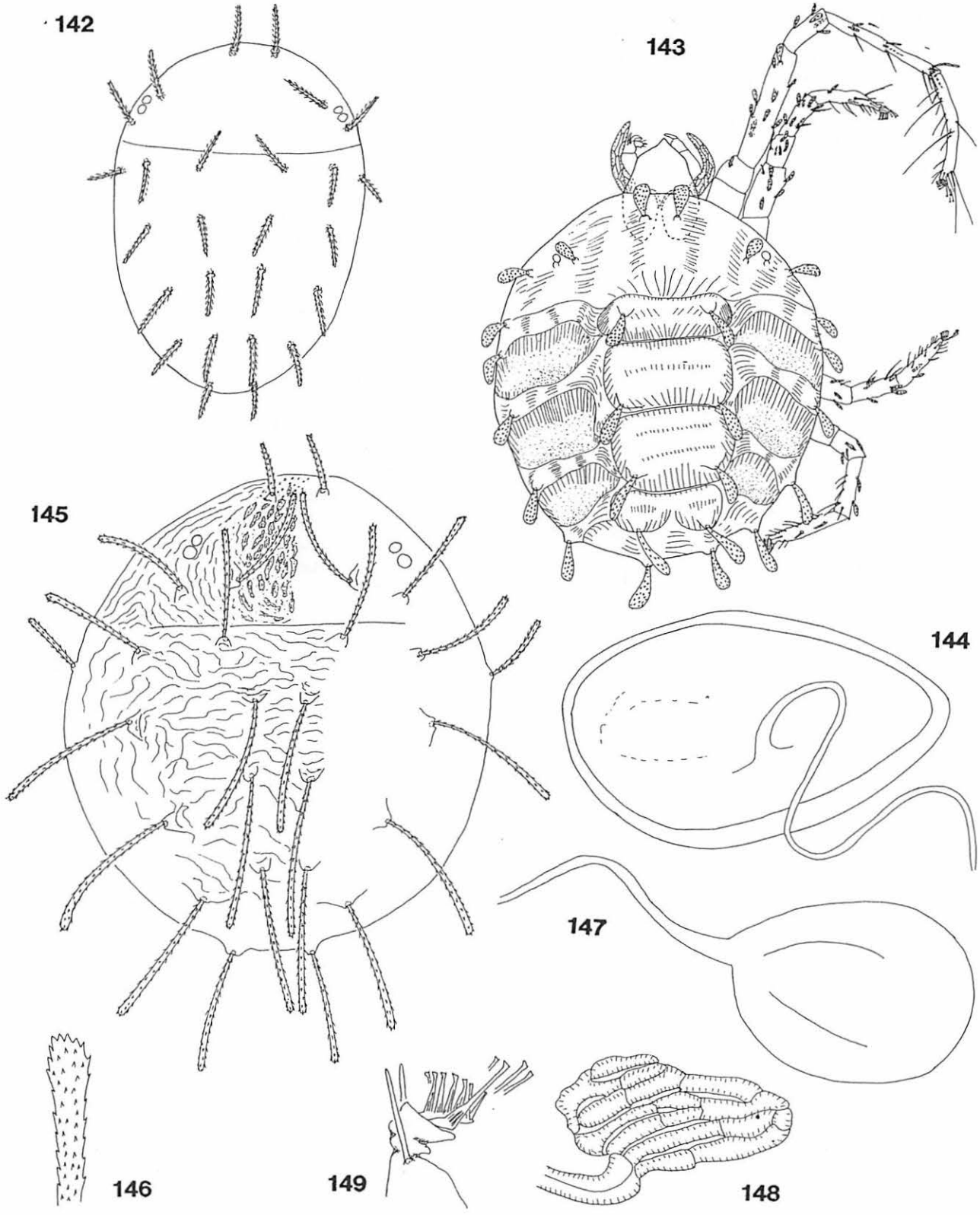

FIG. 142. *Brachynychus cousiniae* Mitrofanov & Strunkova. Dorsal view of female/ *Dorsale aansig van wyfie.* (After Mitrofanov & Strunkova, 1971)
FIG. 143. *Peltanobia erasmusi* Meyer. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 144. *Aplonobia citri* Meyer. Spermatheca/ *Spermateka*

FIG. 145-149. *Aplonobia carinati* spec. nov. Female/ *Wyfie*
FIG. 145. Dorsal view/ *Dorsale aansig*
FIG. 146. Tip of dorsal seta/ *Punt van dorsale seta*
FIG. 147. Spermatheca/ *Spermateka*
FIG. 148. Peritremal anastomosis/ *Peritremale anastomose*
FIG. 149. Tarsal appendages of tarsus I/ *Tarsale aanhangsels van tarsus I*

- Female tarsi with less than 30 tactile setae except tarsus I which may have 22 to 34 tactile setae; male tarsi with less than 40 tactile setae ..... *A. pentziae* spec. nov.

13. Tubercles of third (e_1) and fourth (f_1) pairs of dorsocentral setae well separated 14
- Tubercles of third (e_1) and fourth (f_1) pairs of dorsocentral setae contiguous .... *A. pongolana* (Meyer)

14. Prodorsum reticulated; empodial pads less than twice as long as pads of true claws .... *A. curvula* Meyer
- Prodorsum punctate; empodial pads twice as long as pads of true claws ....*A. histricina* (Berlese)

Aplonobia citri Meyer
(Fig. 144)

Aplonobia citri Meyer, 1974: 103-108.

This species has the dorsal body setae expanded distally and longer than distances between consecutive setae; peritreme terminates in a sausage-like branched enlargement; spermatheca large and oval (Fig. 144); legs about as long as, or slightly longer than body.

Habitat and locality. *A. citri* was collected on *Citrus sinensis* at Citrusdal, C.P.

Aplonobia carinati spec. nov.
(Fig. 145-149)

This species resembles *A. citri* Meyer in that the dorsal body setae are expanded distally but differs in the relatively longer dorsal body setae and the shape of the peritremal anastomosis.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 720 μm (667-733); length (excluding gnathosoma) 573 μm (567-607); breadth 480 μm (400-486); length of leg I 587 μm; leg II 353 μm; leg III 400 μm; leg IV 453 μm.

Dorsum (Fig. 145). Dorsum with 3 pairs prodorsal setae and 10 pairs of opisthosomal setae of unequal length; humeral setae (c_3) situated marginally and located on small tubercles; serrate dorsal setae (Fig. 146) with expanded tips and mostly set on strong tubercles; first pair of prodorsal setae (v_2) about half as long as second pair (sc_1); third pair of prodorsal setae (sc_2) about three quarters the length of second pair (sc_1); except for humerals (c_3), opisthosomal setae longer than intervals between bases of consecutive setae; integument with longitudinal striae on prodorsum, except for a median punctate area; opsithosoma bears broken, transverse striae.

Spermatheca. The slender duct gradually widens distally and dilates in a large bulb (Fig. 147).

Gnathosoma. Distally, peritreme dilated into a large pear-shaped, branched enlargement (Fig. 148); stylophore slightly incised anteriorly; palptarsus bears a sensillum proximodorsally and 5 additional setae.

Legs. Distribution of setae and solenidia (in parentheses) on legs is: coxae 2-2-1-1; trochanters 1-1-1-1; femora 9-7-5-5-; genua 5-5-6-6; tibiae 13(1)-9-9-9; tarsi 17(5)+2 dupl.-13(1)+1 dupl. -14(1)-14(1); tarsus I bears 12 tactile setae and 5 solenidia proximal to duplex setae; tarsus II with 7 tactile setae and 1 solenidion proximal to duplex setae; empodial pads about twice as long as pads of true claws and with a double row of tenent hairs (Fig. 149).

Male. Unknown.

Larva. Dorsum and gnathosoma resemble those of female; differentiation of striae on dorsum more clear than in female; counts for leg setae (solenidia in parentheses) are: femora 3-3-2; genua 4-4-2; tibiae 5(1)-5-5; tarsi 7+1 dupl.7+1 dupl.-6.

Habitat and locality. Holotype female, 2 paratype females and 2 paratype larvae from *Chenopodium carinatum*, 10 km from Fort Beaufort (Seymore road), C.P., 6 February 1974 (M.K.P. Meyer).

Aplonobia crassata Meyer
(Fig. 150)

Aplonobia crassata Meyer, 1974: 114-115.

This species has thick dorsal body setae, which are expanded distally; in female first (c_1), second (d_1) and third (e_1) pairs of dorsocentral setae shorter than distances between bases of consecutive setae; spermatheca sausage-like (Fig. 150); tarsus I of male with 2 sets of duplex setae and male tibia I with 3 sets of duplex setae.

Habitat and locality. This species was collected from grass, Potchefstroom, Tvl.

Aplonobia punctata Meyer
(Fig. 151)

Aplonobia punctata Meyer, 1974: 103.

Aplonobia punctata may readily be recognized by the dorsal integument which is finely tuberculate; first pair of dorsocentral setae (c_1) situated further apart than other 4 pairs of dorsocentrals (d_1, e_1, f_1 and h_1); second pair of dorsocentral setae (d_1) closest together; first (c_1) and second (d_1) pairs of dorsocentral setae reach about halfway to bases of setae next behind; the spermatheca is depicted in Fig. 151.

Habitat and locality. This species was collected on an unidentified wild herb and *Buddleja saligna*, Bontebok National Park, near Swellendam, C.P.

Aplonobia inflata spec. nov.
(Fig. 152-158)

Aplonobia inflata is related to *A. digitata* Meyer but can be separated from the latter by the shorter dorsal body setae and the shape of the peritremal anastomosis.

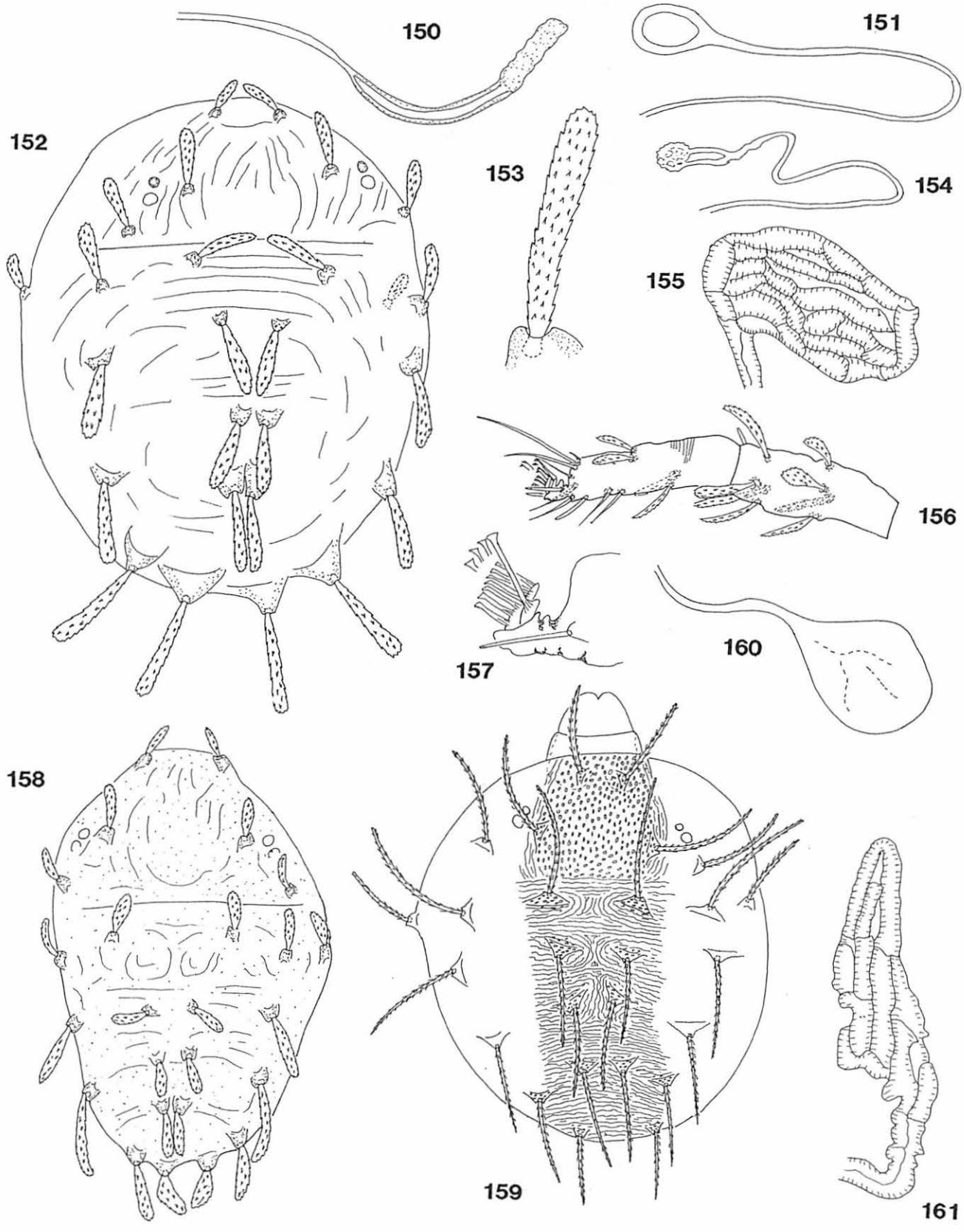

FIG. 150. *Aplonobia crassata* Meyer. Spermatheca/ *Spermateka*
FIG. 151. *Aplonobia punctata* Meyer. Spermatheca/ *Spermateka*
FIG. 152-158. *Aplonobia inflata* spec. nov.
FIG. 152. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 153. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 154. Spermatheca/ *Spermateka*
FIG. 155. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 156. Tibia and tarsus I of female/ *Tibia en tarsus I van wyfie*
FIG. 157. Tarsal appendages of tarsus I of female/ *Tarsale aanhangsels van tarsus I van wyfie*
FIG. 158. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 159-161. *Aplonobia aughrabiensis* spec. nov. Female/ *Wyfie*
FIG. 159. Dorsal view/ *Dorsale aansig*
FIG. 160. Spermatheca/ *Spermateka*
FIG. 161. Peritremal anastomosis/ *Peritremale anastomose*

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 507 μm (530-533); length (excluding gnathosoma) 467 μm (480-500); breadth 333 μm (340-393); length of leg I 320 μm; leg II 233 μm; leg III 240 μm; leg IV 267 μm.

Dorsum (Fig. 152). Prodorsum with 3 pairs of setae and opisthosoma with 10 pairs of setae being subspatulate (Fig. 153), serrate and of different lengths; setae on prodorsum and anterior part of opisthosoma about a half or two thirds the length of those on posterior part of opisthosoma; first pair of dorsocentral setae (c_1) situated further apart than second (d_1), third (e_1), fourth (f_1) and fifth (h_1) pairs; fourth pair of dorsocentral setae (f_1) closest together; humerals (c_3) located marginally; all dorsal body setae set on tubercles and most of them shorter than longitudinal intervals between their bases; integument covered with a few widely spaced striae.

Spermatheca. Duct slender, flares distally and ends in a small bulb (Fig. 154).

Gnathosoma. Stylophore cleft anteriorly; peritreme ends distally in an anastomosing, oval-shaped enlargement (Fig. 155).

Legs. Inclusive counts of setae (solenidia in parentheses) on legs segments are: coxae 2-2-1-1; trochanters 1-1-1-1; femora 9-6-3-3; genua 4-4-3-3; tibiae 9-5-3-3; tarsi 13+2 dupl.-13(1)+1 dupl.-12-11 tarsus I (Fig. 156) and tarsus II bear 6 tactile setae proximal to duplex setae; empodial pads about twice as long as pads of true claws and bearing ventral rows of tenent hairs (Fig. 157).

Male. Dimensions: Length of body (including gnathosoma) 367 μm; length (excluding gnathosoma) 320 μm; breadth 200 μm; length of leg I 267 μm.

Male relatively smaller than female and pointed towards rear but resembles female in organization of dorsum (Fig. 158) and gnathosoma; distribution of setae (solenidia in parentheses) on leg podomeres as follows: femora 9-6-4-4; genua 4-4-3-3; tibiae 9(3)-5-3-3; tarsi 12(4)+3 dupl.-13(2)+1 dupl.-12-10; aedeagus relatively long, slender and narrows distally to form a thin stylet-like tip.

Nympha. Except for fewer leg setae, nymph similar to female.

Habitat and locality. Holotype female, 3 paratype females and 1 paratype nympha from *Indigofera* sp., Gonubie Strand, near East London, C.P., 9 February 1974 (F.W. Schultz); 1 paratype female from *Sida rhombifolia*, 15 km from East London (Umtata road), C.P., 9 February 1974 (M.K.P. Meyer); 1 paratype female from *Berkeya bipinnatifida*, 20 km from East London (Umtata road), C.P., 9 February 1974 (F.W. Schultz).

Aplonobia digitata Meyer

Aplonobia digitata Meyer, 1974: 109.

Aplonobia digitata is distinctive in that the dorsal body setae are expanded distally and most of them shorter than distances between bases of consecutive setae; dorsocentral setae (c_1, d_1, e_1 and f_1) reaching to bases of setae next behind.

Habitat and locality. This species was collected on *Hypolaena digitata* at Cape Point.

Aplonobia aughrabiensis spec. nov.
(Fig. 159-161)

As in *A. shirakensis* (Reck) the first pair of legs is about twice as long as the body; however, *A. aughrabiensis* differs from *A. shirakensis* in the longer dorsal body setae and the shape of the peritremal anastomosis.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 767 μm (734-800); length (excluding gnathosoma) 640 μm (633-672); breadth 587 μm (547-590); length of leg I 1 367 μm; leg II 592 μm; leg III 667 μm; leg IV 833 μm.

Dorsum (Fig. 159). Dorsal body setae serrate and longer than distances between consecutive setae; all setae located on tubercles; humeral setae (c_3) situated marginally; integument with longitudinal striae on prodorsum, except for a punctate area medially; opisthosoma bears mostly transverse striae.

Spermatheca. The sacculus is balloon-shaped (Fig. 160).

Gnathosoma. Distally peritreme forms a sausage-like branched enlargement (Fig. 161); stylophore deeply indented anteriorly.

Legs. Setae and solenidia (in parentheses) disposed on leg podomeres as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 12-7-5-5-; genua 5-5-6-6; tibiae 15(1)-11-11-11; tarsi 17(7)+2 dupl.-14(2)+1 dupl.-14(1)-14(1); tarsus I with 12 tactile setae and 7 solenidia well proximal to duplex setae; tarsus II with 6 tactile setae and 2 solenidia well proximal to duplex setae; empodial pads about twice as long as pads of true claws and each bearing a double row of tenent hairs.

Male. Unknown.

Nympha. Nympha morphologically similar to female.

Habitat and locality. Holotype female, 7 paratype females and 2 paratype nymphae from *Passerina vulgaris*, Aughrabies Falls National Park, C.P., 19 September 1983 (M.K.P. Meyer).

Aplonobia lootsi Meyer
(Fig. 162)

Aplonobia lootsi Meyer, 1974: 109.

This species may be distinguished by the humeral setae (c_3) situated in a line with the dorsolateral setae; second pair of dorsocentral setae (d_1) about two thirds the length of first pair of dorsocentral setae (c_1); second pair of dorsolateral setae (d_2) as long as distances to bases of third pair of dorsolateral setae (e_2); spermatheca sausage-like (Fig. 162).

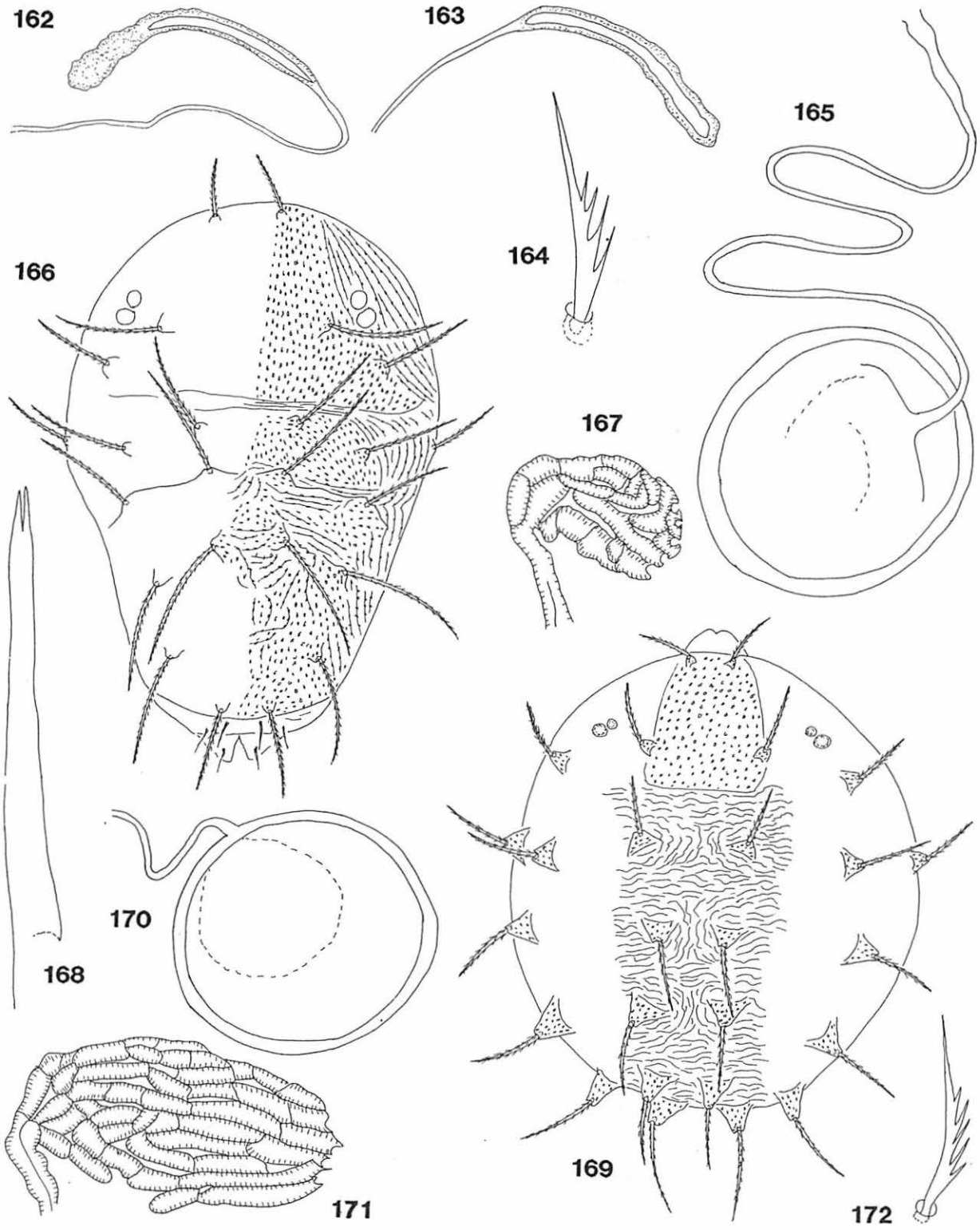

FIG. 162. *Aplonobia lootsi* Meyer. Spermatheca/ *Spermateka*
FIG. 163. *Aplonobia transvaalensis* (Meyer). Spermatheca/ *Spermateka*
FIG. 164-168. *Aplonobia honiballi* Meyer
FIG. 164. Ventral tactile seta of legs of female/ *Ventrale tasseta van pote van wyfie*
FIG. 165. Spermatheca/ *Spermateka*
FIG. 166. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 167. Peritremal anastomosis of male/ *Peritremale anastomose van mannetjie*
FIG. 168. Aedeagus
FIG. 169-175. *Aplonobia pentziae* spec. nov.
FIG. 169. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 170. Spermatheca/ *Spermateka*
FIG. 171. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 172. Ventral tactile seta of legs of female/ *Ventrale tasseta van pote van wyfie*

Habitat and locality. Meyer (1974) reported this species from grass at Potchefstroom, Tvl. and Pongola, Natal.

Aplonobia transvaalensis (Meyer)
(Fig. 163)

Georgiobia transvaalensis Meyer, 1974: 118.

Aplonobia transvaalensis is distinctive in that the humeral setae (c_3) are located in a line with the dorsolateral setae (c_2, d_2, e_2 and f_2); first (c_1) and second (d_1) pairs of dorsocentral setae about equal in length; second pair of dorsolateral setae (d_2) shorter than distances to bases of third pair of dorsolateral setae (e_2); spermatheca sausage-like (Fig. 163).

Habitat and locality. This species is known from grass, Potchefstroom, Tvl.

Aplonobia honiballi Meyer
(Fig. 164-168)

Aplonobia honiballi Meyer, 1974: 109.

This species and *A. pentziae* spec. nov. are similar to each other but *A. honiballi* differs in having more leg setae; setal formulae of legs (solenidia in parentheses): femora 15 to 23-10 to 16-8 to 12-10 to 13; genua 10 to 17-11 to 17-10 to 12-10 to 12; tibiae 32 to 44 (1)-23 to 38-24 to 29-24 to 30; tarsi 35 to 42(6 to 10)+2 dupl.-31 to 33 (3 or 4)+1 dupl.-35 to 37 (1 or 2)-32 to 34(2); legs about as long as or longer than body; ventral setae of legs strongly serrate (Fig. 164); dorsal body setae of female tapering and reach about as far as distances to bases of consecutive setae or slightly shorter; dorsal body setae borne on strong tubercles; spermatheca (Fig. 165) broadly rounded.

The original description of this species was based on females only, the males have hitherto been unknown. The following is a description of the male:

Male (Fig. 166). Dorsal body setae resemble those of female; dorsum divided into 4 punctate areas, 1 on prodorsum and 3 on opisthosoma; distal anastomosis (Fig. 167) of peritreme relatively smaller than that of female; setae and solenidia (in parentheses) distributed on leg segments as follows: coxae 3-3-1-1; trochanters 1-1-1-1; femora 19 to 21-15 to 18-12 to 14-10 or 11; genua 11 to 15-12 to 14-13 or 14; tibiae 36 to 44(26)-25 to 30(9)-28 to 31-30; tarsi 42 to 44 (11 to 19)+2 dupl.-42 or 43(5 to 7)+1 dupl. 46(3)-43 or 44(2); shaft of aedeagus (Fig. 168) relatively long and terminates into 2 short stylets.

Habitat and locality. Meyer (1974) described this species from the trunk of *Citrus sinensis*, Citrusdal, C.P.

New records for it are from: *Dimorphotheca pluvialis*, Citrusdal, C.P., September 1972 (F. Honiball); unidentified wild plant, 7 km from Gouda, C.P., 30 September 1982 (S.C. Cruickshank); *Anthospermum dregei*, Clanwilliam Dam, C.P., 21 September 1983 (E.A. Ueckermann).

Aplonobia pentziae spec. nov.
(Fig. 169-175)

Aplonobia pentziae is similar to *A. honiballi* Meyer but is considered a different species because it has markedly fewer leg setae.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 1 065 μm (866-1 133); length (excluding gnathosoma) 929 μm (733-1 033); breadth 766 μm (600-969).

Dorsum (Fig. 169). Body setae serrate, tapering and set on strong tubercles; most body setae reach about as far as distances between bases of consecutive setae; prodorsum punctate medially and provided with longitudinal, broken striae laterally; opisthosomal striae longitudinal and also broken.

Spermatheca. The sacculus is large and rounded (Fig. 170).

Gnathosoma. Peritreme ends in an ovate anastomosis (Fig. 171); stylophore incised anteriorly.

Legs. Setae and solenidia (in parentheses) distributed on leg segments as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 11 to 15-9 or 10-7 to 9-5 to 7; genua 9 to 11-9 to 11-6 to 9-7 to 10; tibiae 23 to 28(1)-16 to 21-14 to 25-16 to 18; tarsi 22 to 34(2 to 5)+2 dupl.-22 to 27(2)+1 dupl.-22 to 25(2 or 3)-22 to 24(2); tactile setae on venter of tarsi not as strongly serrate as those of *A. honiballi* (Fig. 172); pads of true claws about two thirds the length of empodial pads; legs about as long as or slightly longer than body.

Male (Fig. 173). Male relatively smaller than female and pointed posteriorly; dorsal body setae about as long as longitudinal intervals between their bases or longer; dorsum divided into 4 punctate areas, 1 on prodorsum and 3 on opisthosoma; distal enlargement (Fig. 174) of peritreme smaller than that of female; inclusive counts of setae and solenidia (in parentheses) on leg podomeres are: coxae 3-3-1-1; femora 18-15-9-7; genua 12-13-11-10; tibiae 35(12)-27(10)-24-24; tarsi 33(17)+2 dupl.-27(5)+1 dupl.-31(3)-31(2); shaft of aedeagus (Fig. 175) long and terminates into stylets.

Nympha. Nymph exhibits the same diagnostic characters but has fewer leg setae.

Natural colour. This species is dark red.

Habitat and locality. Holotype female, 6 paratype females and 5 paratype males from *Pentzia suffruticosa*, 30 km from Port Nolloth (Steinkopf road), C.P., 19 September 1983 (M.K.P. Meyer); 1 paratype female and 1 paratype male from *Osteospermum calendulaceum*, Klip River (Graaff-Reinet/Pearston road), C.P., 6 February 1974 (F.W. Schultz); 18 paratype females, 14 paratype males and 10 paratype nymphae from *Pentzia suffruticosa*, Donkergat/Langebaan road fork, C.P., 28 September 1982 (D.P. Keetch & M.K.P. Meyer); 28 paratype females, 10 paratype males and 2 paratype nymphae from *Pentzia*

grandiflora, near Lamberts Bay, C.P., 29 September 1982 (D.P. Keetch).

Aplonobia curvula Meyer
(Fig. 176)

Aplonobia curvula Meyer, 1974: 109-114.

The female of *A. curvula* may be distinguished by the first pair of dorsocentral setae (c_1) about as long as distances to bases of second pair of dorsocentral setae (d_1); the latter pair of setae shorter than distances to bases of third pair of dorsocentral setae (e_1); third pair of dorsocentral setae (e_1) reach past bases of fourth pair of dorsocentral setae (f_1); spermatheca as depicted in Fig. 176.

Habitat and locality. Meyer (1974) described this species from grass at Potchefstroom, Tvl. and Maseru, Lesotho.

Aplonobia caesariata (Meyer)
(Fig. 177)

Georgiobia caesariata Meyer, 1974: 118.

This species is distinctive in that the dorsocentral setae (c_1, d_1, e_1 and f_1) extend past bases of setae second behind in row; peritreme ends in an anastomosing, broad, ovate enlargement; spermatheca as shown in Fig. 177.

Habitat and locality. *A. caesariata* was collected from grass at Roodeplaat, Tvl.

Aplonobia pongolana (Meyer)
(Fig. 178)

Georgiobia pongolana Meyer, 1974: 118.

Aplonobia pongolana may be recognized by the prodorsum that is reticulated medially; second pair of prodorsal setae (sc_1) extend past bases of first pair of prodorsal setae (v_2); distal anastomosis of peritreme slender and more or less oval; spermatheca is illustrated in Fig. 178.

Habitat and locality. This species was first recorded from grass at Pongola, Natal.

Aplonobia histricina (Berlese)
(Fig. 179)

Tetranychopsis histricina Berlese, 1910: 243.
Aplonobia histricina (Berlese), Pritchard & Baker, 1955: 59-61; Meyer & Ryke, 1959: 358; Inserra & Barbagallo, 1971: 61-68; Meyer,1974: 108.

Aplonobia histricina may be recognized by the linear-lanceolate, serrate dorsal body setae, which are about as long as distances between consecutive setae; all setae except first pair of prodorsal setae (v_2) located on prominent tubercles; peritreme ends in a large oval-shaped enlargement; leg I about 1,5 times as long as body; empodial pads about twice as long as pads of true claws; spermatheca large and oval (Fig. 179).

Habitat and locality. This species was found on *Pyrus communis* in the Cape and *Oxalis* sp., Stellenbosch, C.P., 5 September 1979 (S.C. Cruickshank).

***Anaplonobia* Wainstein**

Aplonobia (Anaplonobia) Wainstein, 1960a: 218; Wainstein, 1960b: 143.
Anaplonobia Wainstein, Tuttle & Baker, 1968: 57; Meyer, 1974: 122; Gonzalez, 1977: 122.

Type-species: *Aplonobia calame* Pritchard & Baker.

In recent years much confusion has surrounded the true identity of *Anaplonobia* and the related genus *Langella*. Here *Langella* is synonymized with *Neopetrobia* and *Anaplonobia* redefined as follows: in the type-species, *A. calamae*, empodial pads shorter than pad-like true claws and bear only 1 pair of tenent hairs; *A. acharis* (Pritchard & Baker) also included in this genus, with a short pad-like empodium bearing a double row of tenent hairs, the tips of which are coalescent. It is proposed here that this genus be restricted to species which have short empodial pads bearing 1 pair of tenent hairs or if there are more than 1 pair of tenent hairs then their tips are united distally to form a pair of compound tenent hairs (Fig. 180). Another species such as *A. candicans* Meyer that exhibits this feature is retained in this genus but all other species formerly placed under *Anaplonobia* are transferred to *Neopetrobia*.

The genus *Anaplonobia* is further characterized by the anastomosing peritremes; dorsal body setae consisting of 3 pairs of setae on prodorsum and 10 pairs of dorsal setae on opisthosoma; fourth pair of dorsocentral setae (f_1) closer together than first 3 pairs of dorsocentral setae (c_1, d_1, and e_1); dorsal body setae without tubercles or borne on small tubercles; tarsus I devoid of supraunguinal setae (tc) distally; leg setae may be strongly serrate; coxal setal formula 2-2-1-1 or 2-3-1-1.

According to the above definition the world species now included in this genus are: *Anaplonobia calame* (Pritchard & Baker), *A. acharis* (Pritchard & Baker), *A. candicans* Meyer, *A. brickellia* (Baker & Tuttle) and probably *A. contiguus* Chaudhri. The inclusion of the latter species, however, is uncertain because Chaudhri (1974) failed to illustrate the tarsal appendages.

KEY TO THE SPECIES OF *ANAPLONOBIA*

1. Dorsal body setae as long as longitudinal distances between their bases .... *A. calamae* (Pritchard & Baker, 1955)
- Dorsal body setae shorter than longitudinal distances between their bases 2
2. Second (d_1) and third (e_1) pairs of dorsocentral setae lanceolate and about half as long as

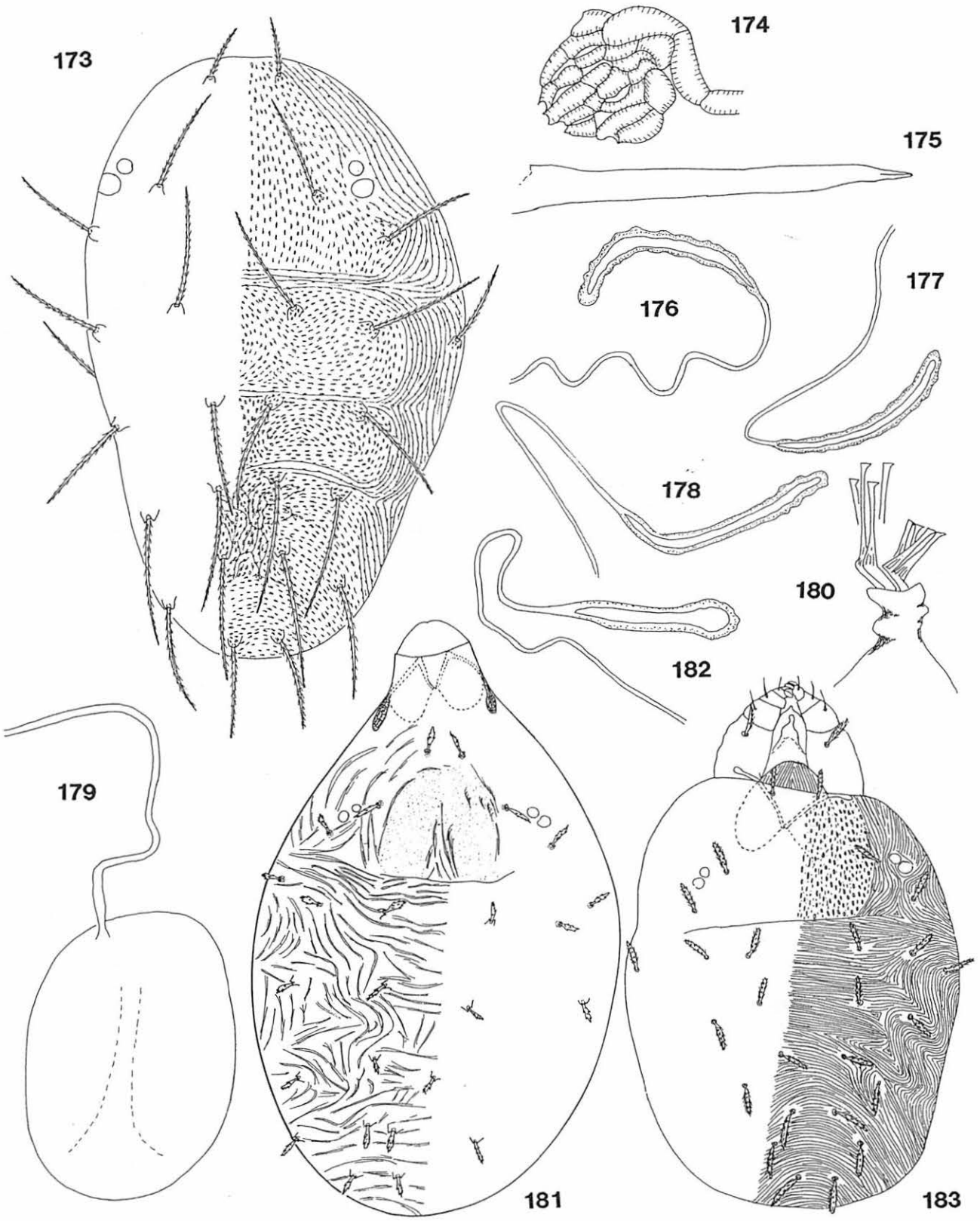

FIG. 173-175. *Aplonobia pentziae* (continued/*vervolg*)
FIG. 173. Dorsal view of male/*Dorsale aansig van mannetjie*
FIG. 174. Peritremal anastomosis of male/*Peritremale anastomose van mannetjie*
FIG. 175. Aedeagus
FIG. 176. *Aplonobia curvula* Meyer. Spermatheca/*Spermateka*
FIG. 177. *Aplonobia caesariata* (Meyer). Spermatheca/*Spermateka*
FIG. 178. *Aplonobia pongolana* (Meyer). Spermatheca/*Spermateka*
FIG. 179. *Aplonobia histricina* (Berlese). Spermatheca/*Spermateka*
FIG. 180-182. *Anaplonobia candicans* Meyer. Female/*Wyfie*
FIG. 180. Tarsal appendages of tarsus I/*Tarsale aanhangsels van tarsus I*
FIG. 181. Dorsal view/*Dorsale aansig*
FIG. 182. Spermatheca/*Spermateka*
FIG. 183-185. *Paraplonobia edenvillensis* Meyer. Female/*Wyfie*
FIG. 183. Dorsal view/*Dorsale aansig*

fourth pair (f_1) which are spatulate .... *A. brickellia* (Baker & Tuttle, 1972)

- Dorsocentral setae lanceolate to subspatulate and of unequal length 3

3. Peritreme with distal enlargement consisting of a few branches 4

- Peritreme with relatively large and complex anastomosis ..... *A. candicans* Meyer, 1974

4. Dorsocentral setae about half as long as distances between bases of consecutive setae ... . *A. contiguus* Chaudhri, 1974

- Dorsocentral setae minute, much shorter than distances between bases of consecutive setae ... . *A. acharis* (Pritchard & Baker, 1955)

Anaplonobia candicans Meyer
(Fig. 180-182)

Anaplonobia candicans Meyer, 1974: 124.

The female (Fig. 181) is recognized by the subspatulate dorsal body setae that are shorter than the distances between the bases of consecutive setae; distal enlargement of peritreme oval; empodial pads with 2 pairs of tenent hairs, the tips of which are coalescent (Fig. 180); tarsus I with 12 tactile setae proximal to duplex setae; spermatheca as depicted in Fig. 182. The following stages were not described in the original description:

Male. Dorsal body setae longer and somewhat narrower than those of female; opisthosoma divided by a second suture into 2 parts; peritremal anastomosis smaller than that of female; aedeagus stylet-like.

Nympha. Diagnostic characters of dorsum similar to that of female.

Habitat and locality. This species was described from *Melolobium candicans* at Sishen, C.P. and 22 km from Kuruman (Vryburg road).

A new record is: *Melolobium* sp., Postmasburg, C.P., 8 October 1979 (E.A. Ueckermann).

Paraplonobia Wainstein

Aplonobia (Paraplonobia) Wainstein, 1960a: 218; Wainstein, 1960b: 140.

Paraplonobia (Paraplonobia) Wainstein, Tuttle & Baker, 1968: 50.

Paraplonobia Wainstein, Meyer, 1974: 119; Tuttle, Baker & Abbatiello, 1976: 19.

Type-species: *Aplonobia (Paraplonobia) echinopsili* Wainstein.

Paraplonobia has 3 pairs of setae on the prodorsum and 10 pairs slender or lanceolate opisthosomal setae, not set on prominent tubercles; fourth pair of dorsocentral setae (f_1) usually closer together than first pair (c_1); peritremes end simply; empodial pads longer than pads of true claws and bear 2 rows of tenent hairs (Fig. 184); coxal setal formula 2-2-1-1.

Presently, this genus comprises the following species: *P. echinopsili* (Wainstein), *P. penicillatus* Chaudhri, *P. tridens* Tuttle & Baker, *P. hilariae* Tuttle & Baker, *P. herniariae* (Bagdasarian), *P. edenvillensis* Meyer, *P. bouteloua* Baker & Tuttle and *P. myops* (Pritchard & Baker). *P. edenvillensis* is the only African representative.

KEY TO THE SPECIES *PARAPLONOBIA*

1. Stylophore rounded anteriorly 2

- Stylophore cleft anteriorly 3

2. Dorsal body setae lanceolate; leg I shorter than body ..... *P. edenvillensis* Meyer, 1974

- Dorsal body setae slender; leg I about as long as body . *P. myops* (Pritchard & Baker, 1955)

3. Dorsal body setae slender and pointed distally 4

- Dorsal body setae broadly lanceolate 6

4. First 3 pairs of dorsocentral setae (c_1, d_1 and e_1) about half as long as distances between consecutive setae 5

- First 3 pairs of dorsocentral setae (c_1, d_1 and e_1) minute, about a third to a fourth as long as distances between bases of consecutive setae .. .. *P. boutelouna* Baker & Tuttle, 1972

5. Posterior opisthosomal setae longer than longitudinal distances between their bases; leg I as long as body .... *P. hilariae* Tuttle & Baker, 1968

- Posterior opisthosomal setae shorter than longitudinal distances between their bases; leg I shorter than body .... *P. herniariae* (Bagdasarian, 1954)

6. Dorsocentral setae (c_1, d_1, e_1 and f_1) more than half as long as distances between consecutive setae; leg I shorter than body 7

- Dorsocentral setae (c_1, d_1, e_1 and f_1) almost half as long as distances between bases of consecutive setae; leg I slightly longer than body ..... *P. tridens* Tuttle & Baker, 1968

7. Peritremal ending rounded; prodorsum with a well-marked punctate shield; tibia IV with 8 setae ..... *P. penicillatus* Chaudhri, 1974

- Peritremal ending oval; prodorsum without a well-marked shield; tibia IV with 7 setae; duct of spermatheca slender, becoming swollen distally and ends in a small bulb (Fig. 186) ... . *P. echinopsili* (Wainstein, 1960)

Paraplonobia edenvillensis Meyer
(Fig. 183-186)

Paraplonobia edenvillensis Meyer, 1974: 122.

Dorsal body setae much shorter than longitudinal intervals between them and being lanceolate and serrate; stylophore rounded anteriorly; spermatheca broadly rounded (Fig. 185), in contrast to that of *P. echinopsili* (Wainstein) which is elongate (Fig. 186).

Habitat and locality. *P. edenvillensis* has been collected on grass, Edenville, O.F.S.

Neopetrobia Wainstein

Neopetrobia Wainstein, 1956: 151; Wainstein, 1960a:

128; Tuttle & Baker, 1968: 57; Meyer, 1974: 93-94.

Langella Wainstein, 1961: 607-608; Estebanes & Baker, 1968: 67; Meyer, 1974: 80. Syn. nov.

Type-species: *Neopetrobia dubinini* Wainstein.

Wainstein (1956) erected *Neopetrobia* on the basis that the fourth pair of dorsocentral setae (f_1) are set wide apart and the dorsal body setae are fusiform. Later (Wainstein, 1961) established the genus *Langella* with *Aplonobia dyschima* Beer & Lang as type-species. It was distinguished from *Neopetrobia* only by the spatulate, dorsal body setae, otherwise the characters of the 2 genera are very similar.

The question must be asked whether genera should be based on such minor differences as the structure and spacing of dorsal body setae. The spacing of the dorsocentral setae (c_1, d_1, e_1 and f_1) is variable among species of the same genus and therefore is not a suitable character for generic separation. In my opinion the slight morphological differences between *Neopetrobia* and *Langella* do not justify their separate existence, so they are synonymized here.

Neopetrobia is now redefined as follows: true claws pad-like, each bearing a pair of tenent hairs; empodial pad longer than true claws, bearing a row of tenent hairs, distally not coalescent; dorsum with 3 pairs of prodorsal setae and 10 pairs of opisthosomal setae which are short and spindle-shaped or spatulate; setal tubercles small or nonexistent; fourth pair of dorsocentral setae (f_1) variously spaced but not marginal; peritremes anastomosing distally.

KEY TO THE SPECIES OF *NEOPETROBIA*

1. Dorsal body setae short and spindle-shaped; fourth pair of dorsocentral setae (f_1) set further apart than first pair of dorsocentrals (c_1) ... 2
- Dorsal body setae spatulate or if slender then fourth pair of dorsocentral setae (f_1) situated closer together than first pair of dorsocentrals (c_1) 9
2. Including duplex setae and solenidia, tarsus I with less than 15 setae 3
- Including duplex setae and solenidia, tarsus I with 15 or more setae 4
3. Tarsus I with 14 setae .... *N. vediensis* (Bagdasarian, 1959)
- Tarsus I with 11 setae; dorsal body setae minute and setiform; peritreme ending in a sausage-like anastomosis ....*N. mcgregori* (Pritchard & Baker, 1955)
4. Tarsus I with 21 or more setae 5
- Tarsus I with less than 21 setae 6
5. Tarsus I with 21 setae; peritremal enlargement sausage-like ..... *N. dubinini* Wainstein, 1956
- Tarsus I with 22 or 23 setae; peritremal enlargement oval ....*N. hexapetalae* Mitrofanov, 1975
6. Dorsal body setae about equal in length; tarsus I with 15 setae ... *N. georgiana* Meyer, 1974
- First pair of prodorsal setae (v_2) much longer than other dorsal body setae; tarsus I with more than 15 setae 7
7. First pair of prodorsal setae (v_2) broadly lanceolate or spatulate 8
- First pair of prodorsal setae (v_2) narrowly lanceolate and about 5 times as long as other dorsal body setae .... *N. globosa* Meyer, 1974
8. First pair of prodorsal setae (v_2) about 4 times as long as other dorsal body setae ....*N. tarkaensis* Meyer, 1974
- First pair of prodorsal setae (v_2) about twice as long as second pair of prodorsal setae (sc_1) and nearly 3 times as long as third pair of prodorsals (sc_2) and opisthosomals ....*N. arboriformae* spec. nov.
9. Dorsal body setae as long as or longer than intervals between consecutive setae 10
- Dorsal body setae shorter than intervals between consecutive setae 15
10. Dorsal body setae expanded distally 11
- Dorsal body setae pointed distally 12
11. Prodorsum with a basketweave pattern of striations medially; dorsal body setae as long as, or shorter than longitudinal distances between their bases ....*N. euphorbiae* (Tuttle & Baker, 1964)
- Prodorsum with indistinct, broken, longitudinal striae medially; dorsal body setae longer than longitudinal distances between their bases ....*N. tshipensis* (Meyer, 1974)
12. Opisthosomal setae much longer than distances between consecutive setae .... *N. coldeniae* (Tuttle & Baker, 1964)
- Opisthosomal setae about as long as, or slightly longer than distances between consecutive setae 13
13. Striation pattern of prodorsal shield composed of short longitudinal, irregular striae ....*N. artemisiae* (Baker & Tuttle, 1972)
- Prodorsal shield tuberculate 14
14. Opisthosomal striae mostly broad folds, covered with tubercles .... *N. berberis* (Baker & Tuttle, 1972)
- Opisthosoma with finely lobed striae .... *N. alliona* (Baker & Tuttle, 1972)
15. All or some dorsal body setae broadly spatulate or subspatulate 16
- Dorsal body setae slender and pointed distally 41
16. Opisthosoma with at least first (c_1) and fourth (f_1) pairs of dorsocentral setae more or less equal in length to other dorsal body setae . 17
- Opisthosoma with first to fourth pairs of dorsocentrals (c_1, d_1, e_1 and f_1) minute .... *N. acuminata* (Meyer, 1974)
17. Peritremal anastomosis weak, consisting of a few branches 18
- Peritremal anastomosis a complex enlargement 20
18. Dorsolateral setae (c_2, d_2, e_2 and f_2) subspatulate; second (d_1) and third (e_1) pairs of dorsocentral setae shorter than dorsolaterals 19

- Dorsolateral setae (c_2, d_2, e_2 and f_2) spatulate; second (d_1) and third (e_1) pairs of dorsocentral setae about as long as dorsolateral setae .... *N. augustae* (Meyer, 1974)

19. Second (d_1) and third (e_1) pairs of dorsocentral setae about two thirds the length of first pair of dorsocentrals (c_1); tibia I with 7 or 8 tactile setae and 1 solenidion .... *N. adamanta* (Meyer, 1974)
- Second (d_1) and third (e_1) pairs of dorsocentral setae about half as long as first pair of dorsocentrals (c_1); tibia I with 9 tactile setae and 1 solenidion ... *N. hispida* (Meyer, 1974)

20. First pair of dorsocentral setae (c_1) less than half as long as distances to bases of setae next behind 21
- First pair of dorsocentral setae (c_1) half as long as distances to bases of setae next behind .... *N. prosopis* (Tuttle & Baker, 1964)

21. Dorsal body setae broadly lanceolate 22
- Dorsal body setae mostly spatulate 23

22. Dorsal integument with striae ....*N. theroni* (Meyer, 1974)
- Dorsal integument with low tubercles or lumps ..... *N. glebulenta* (Meyer, 1974)

23. Dorsocentral setae (c_1, d_1, e_1 and f_1) less than a third as long as distances between bases of consecutive setae 24
- Dorsocentral setae (c_1, d_1, e_1 and f_1) about a third as long as distances between bases of consecutive setae 35

24. Dorsocentral setae (c_1, d_1, e_1 and f_1) less than a fourth as long as distances between consecutive setae 25
- Dorsocentral setae (c_1, d_1, e_1 and f_1) about a fourth as long as distances between consecutive setae ..... *N. dyschima* (Beer & Lang, 1958)

25. Female tibia II with 5 tactile setae 26
- Female tibia II with more than 5 tactile setae 27

26. First pair of prodorsal setae (v_2) of female spatulate and about 3 times as long as dorsocentral setae .... *N. eberlanziae* (Meyer, 1974)
- First pair of prodorsal setae (v_2) subspatulate and about twice as long as dorsocentrals .... *N. leipoldtiae* spec. nov.

27. Members of duplex setae on tarsus II of female about equal in length; spermatheca broadly oval ..... *N. namaensis* spec. nov.
- Tactile member of duplex setae on tarsus II of female shorter than solenidion 28

28. Male tibia I with 1 pair of duplex setae; spermatheca bulbous .....*N. albiei* spec. nov.
- Male tibia I with more than 1 pair of duplex setae 29

29. Male tibia I with 4 pairs of duplex setae ... 30
- Male tibia I with less than 4 pairs of duplex setae 31

30. Fifth pair of dorsocentral setae (h_1) of male about two thirds the length of fourth pair of dorsocentrals (f_1) and fourth pair of dorsolaterals (f_2); male peritremal anastomosis more or less oval ..... *N. africana* spec. nov.
- Fifth (h_1) and fourth (f_1) pairs of dorsocentrals and fourth pair of dorsolaterals (f_2) about equal in length; male peritremal anastomosis more or less rounded ..... *N. galeniae* (Meyer, 1974)

31. Female tibiae III and IV, each with 6 setae; male with second (d_1) and third (e_1) pairs of dorsocentrals and dorsolateral setae (c_2, d_2, e_2 and f_2) spatulate ..... *N. oryx* spec. nov.
- Female tibiae III and IV, each with more than 6 setae; male with all the dorsal body setae narrowly lanceolate 32

32. Female tibia II with 7 setae; male tibia I with 2 pairs of duplex setae; spermatheca bulbous ... . *N. amaranthae* spec. nov.
- Female tibia II with more than 7 setae 33

33. Male peritremal anastomosis strong and rounded; first pair of prodorsal setae (v_2) about 4 to 6 times as long as other dorsal body setae of female ..... *N. dideltae* spec. nov.
- Male peritremal anastomosis weak, consisting of a few branches 34

34. Female peritremal anastomosis very strong and more or less pear-shaped; spermatheca sub-bulbous ..... *N. vulgata* spec. nov.
- Female peritremal anastomosis smaller and more or less rounded to oval in shape; spermatheca more or less pear-shaped ....*N. karasiensis* (Meyer, 1974)

35. Prodorsum finely reticulate or punctate medially 36
- Prodorsum with smooth or tuberculated striae medially 39

36. Prodorsum with fine reticulations or punctations medially 37
- Prodorsum and opisthosoma strongly tuberculate medially .... *N. corynetes* (Pritchard & Baker, 1955)

37. Solenidia on tarsi III and IV not associated with tactile setae 38
- Solenidion on tarsus IV associated with a tactile seta ..... *N. hirta* (Meyer, 1974)

38. Dorsal striae on opisthosoma not punctate; tibia I with 15 tactile setae and 4 solenidia .... *N. potchensis* (Meyer, 1974)
- Dorsal striae on opisthosoma punctate; tibia I with 12 setae ..... *N. summersi* (Zaher, Gomaa & El-Enany, 1982)

39. Prodorsum with weak, longitudinal striae .. 40
- Prodorsum with a few strong, broken longitudinal striae which are strongly tuberculate ..... *N. mexicana* (Tuttle, Baker & Abbatiello, 1974)

40. Prodorsum with irregular, broken striae ....*N. boutelounae* (Tuttle & Baker, 1968)
- Prodorsum with fine, longitudinal striae medially ... *N. algarrobicola* (Gonzalez, 1977)

41. Dorsocentral setae (c_1, d_1, e_1 and f_1) about half to three quarters the length of distances between bases of consecutive setae 42
- Dorsocentral setae (c_1, d_1, e_1 and f_1) about a third to a fourth as long as distances between bases of consecutive setae 43

42. Peritreme ending in a bulbous anastomosing structure .....

N. ambrosiae (Tuttle, Baker & Abbatiello, 1976)

- Distal end of peritreme weakly anastomosed, consists of a few branches .... *N. inornata* spec. nov.

43. Shield on prodorsum with transverse striae; leg I longer than body ....*N. concolor* (Chaudhri, 1974)

- Shield on prodorsum with irregular striae; leg I shorter than body .... *N. daryaensis* (Chaudhri, 1974)

Neopetrobia georgiana Meyer
(Fig. 187)

Neopetrobia georgiana Meyer, 1974: 94-95.

Neopetrobia georgiana may be differentiated from other species by the punctate dorsal integument of the prodorsum; dorsal body setae minute; peritreme with ovate distal enlargement, tarsus I with 15 setae; spermatheca pear-shaped (Fig. 187).

Habitat and locality. This species was described from *Carpobrotus edulis*, George, C.P.

Neopetrobia globosa Meyer
(Fig. 188)

Neopetrobia globosa Meyer, 1974: 95-100.

This species is distinctive in that its body is rounded; body surface rugose and punctulate; dorsal body setae narrowly lanceolate and minute; first pair of prodorsal setae (v_2) longest, about 5 times as long as other dorsal setae; spermatheca small and spiculate (Fig. 188).

Habitat and locality. This species was formerly known from *Psilocaulon absimile, P. arenosum, Mesembryanthemum magniflorum, Acacia karroo, Tetragonia decumbens* and *Medicago sativa* in the Cape.

New records are from: Addo Elephant National Park, C.P., 13 February 1974 (M.K.P. Meyer) on *Mesembryanthemum* sp.; Spektakelberg Pass, C.P., 17 September 1983 (M.K.P. Meyer) on *Zygophyllum retrofractum*; Garies, C.P., 20 September 1983 (N.C.J. Basson) on *Aridaria noctiflora*; 20 km from Nuwerus (Van Rhynsdorp road), C.P., on unidentified wild shrub.

Neopetrobia tarkaensis Meyer
(Fig. 189)

Neopetrobia tarkaensis Meyer, 1974: 95.

Neopetrobia tarkaensis may readily be recognized by the spatulate first pair of prodorsal setae (v_2), that are about 4 times as long as the other lanceolate, dorsal body setae; spermatheca small and pear-shaped (Fig. 189).

Habitat and locality. This species was first described from *Drosanthemum floribundurm* collected at the Tarka River, Cookhouse-Cradock road bridge, C.P.

Neopetrobia arboriformae spec. nov.
(Fig. 190-198)

This species closely resembles *N. tarkaensis* Meyer, but can be distinguished by the first pair of prodorsal setae (v_2) being nearly twice as long as second pair of prodorsal setae (sc_1) and nearly 3 times as long as third pair of prodorsal setae (sc_2) and opisthosomal setae. In *N. tarkaensis* the first pair of prodorsal setae (v_2) are about 4 times as long as the rest of the body setae which are more or less equal in length.

Female. Dimensions of holotype: length of body (including gnathosoma) 600 μm; length (excluding gnathosoma) 500 μm; breadth 400 μm.

Dorsum (Fig. 190). First (v_2), second (sc_1) and third (sc_2) pairs of prodorsal setae spatulate, serrate and measure 15-16 μm, 7 μm and 9 μm respectively; rest of body setae (Fig. 194) lanceolate and serrate; length of opisthosomals (6 to 8 μm) nearly a third of that of first pair of prodorsal setae (v_2); integument punctulate; opisthosoma with widely spaced striae, which are transverse or irregular.

Spermatheca. Sacculus small and subovate (Fig. 195).

Gnathosoma. Stylophore rounded medio-distally; peritreme anastomoses distally (Fig. 196).

Legs. Chaetotaxy of legs as follows (solenidia in parentheses): coxae 2-2-1-1; trochanters 1-1-1-1; femora 4 to 6-4-2 or 3-2 or 3; genua 5 or 6-5-2 to 4-2 or 3; tibiae 7(1)-5-5-5; tarsi 12+2 dupl.-10+1 dupl.-8+1 dupl.-10+1 dupl.; solenidia of tarsi III and IV associated with tactile setae which are slightly longer than solenidia; pad of true claw about two thirds the length of empodial pad, which bears 2 rows of ventrally directed hairs.

Male. Dorsum (Fig. 197). First (v_2) and second (sc_1) pairs of prodorsal setae subspatulate; other dorsal body setae lanceolate and about a third the length of first pair of prodorsal setae (v_2); integument punctulate; opisthosoma divided into 3 parts by transverse striae.

Gnathosoma. Stylophore rounded anteriorly; peritreme anastomoses distally to form a more or less oval chamber (Fig. 198).

Aedeagus. Shaft of aedeagus terminates in short stylets distally.

Legs. Numbers of setae and solenidia (in parentheses) on legs I-IV are: femora 7-4-3-3; genua 6-6-3-3; tibiae 4(1)+4 dupl.-5-5-5; tarsi 10(3 or 4)+4 dupl.-11+1 dupl. -8 or 9+1 dupl.-10+1 dupl.

Nympha. Except for the first (v_2) and second (sc_1) pairs of prodorsal setae that are subspatulate, the nymph exhibits the same diagnostic characters as the female.

Habitat and locality. Holotype female from *Mestoklema arboriforme*, 10 km from Koffiefontein (Petrusburg road), C.P., 7 September 1977 (M.K.P. Meyer); 13 paratype females and 9 paratype males from *Ruschia tenella*, 10 km from Riviersonderend (Stormsvlei road), C.P., 11 March 1983 (M.K.P. Meyer, S.C. Cruickshank & D.P. Keetch); 2 paratype females and 1 paratype nympha from *Cliffortia ruscifolia*, Riviersonderend/Bredasdorp

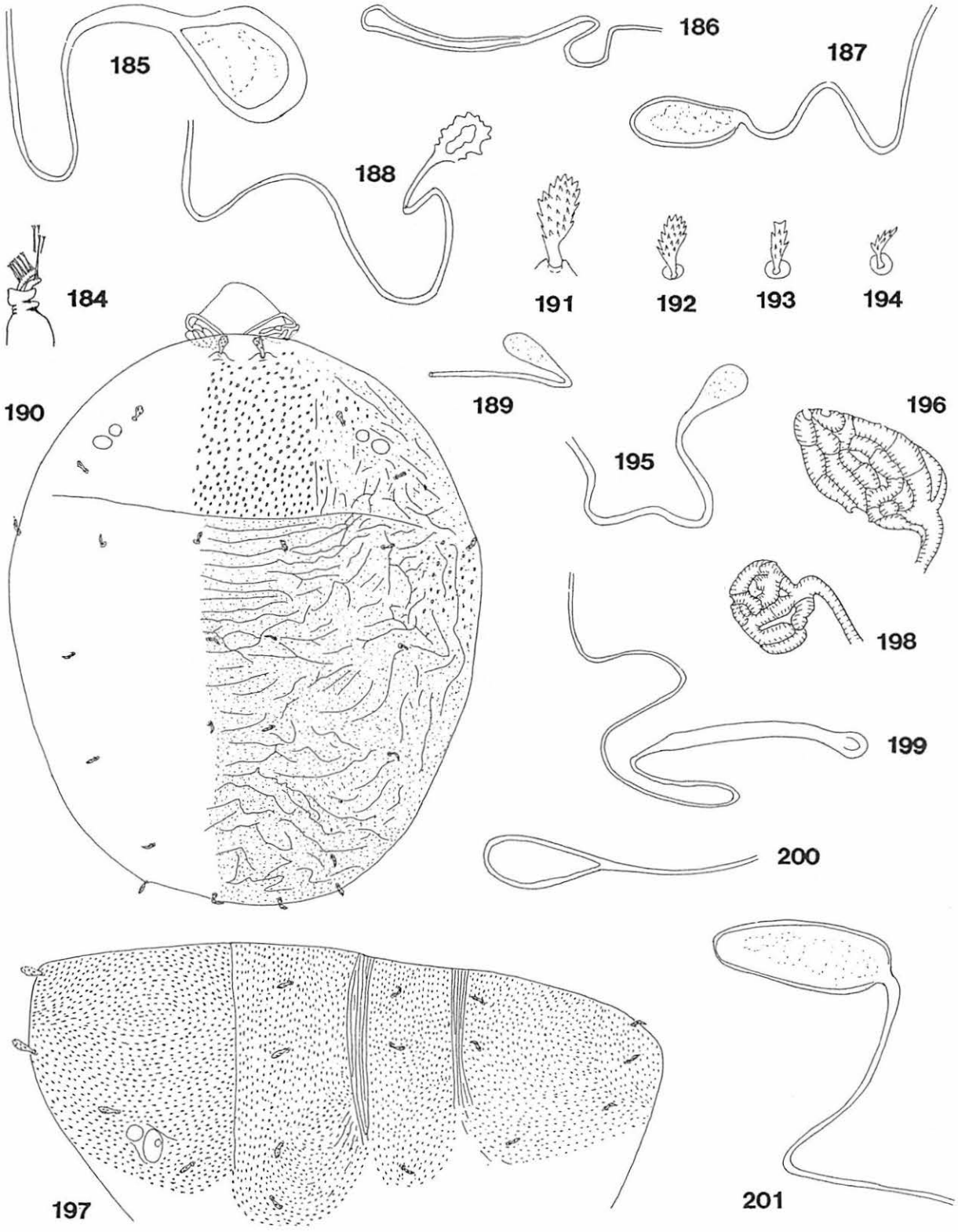

FIG. 184-185. *Paraplonobia edenvillensis* (continued/vervolg)
FIG. 184. Tarsal appendages of tarsus I/ *Tarsale aanhangsels van tarsus I*
FIG. 185. Spermatheca/ *Spermateka*
FIG. 186. *Paraplonobia echinopsili* (Wainstein). Spermatheca/ *Spermateka*
FIG. 187. *Neopetrobia georgiana* Meyer. Spermatheca/ *Spermateka*
FIG. 188. *Neopetrobia globosa* Meyer. Spermatheca/ *Spermateka*
FIG. 189. *Neopetrobia tarkaensis* Meyer. Spermatheca/ *Spermateka*
FIG. 190-198. *Neopetrobia arboriformae* spec. nov.
FIG. 190. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 191. First pair of prodorsal setae/ *Eerste paar prodorsale setas*
FIG. 192. Second pair of prodorsal setae/ *Tweede paar prodorsale setas*
FIG. 193. Third pair of prodorsal setae/ *Derde paar prodorsale setas*
FIG. 194. Opisthosomal seta/ *Opistosomale seta*
FIG. 195. Spermatheca/ *Spermateka*
FIG. 196. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 197. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 198. Peritremal anastomosis of male/ *Peritremale anastomose van mannetjie*
FIG. 199. *Neopetrobia tshipensis* (Meyer). Spermatheca/ *Spermateka*
FIG. 200. *Neopetrobia acuminata* (Meyer). Spermatheca/ *Spermateka*
FIG. 201. *Neopetrobia augustae* (Meyer). Spermatheca/ *Spermateka*

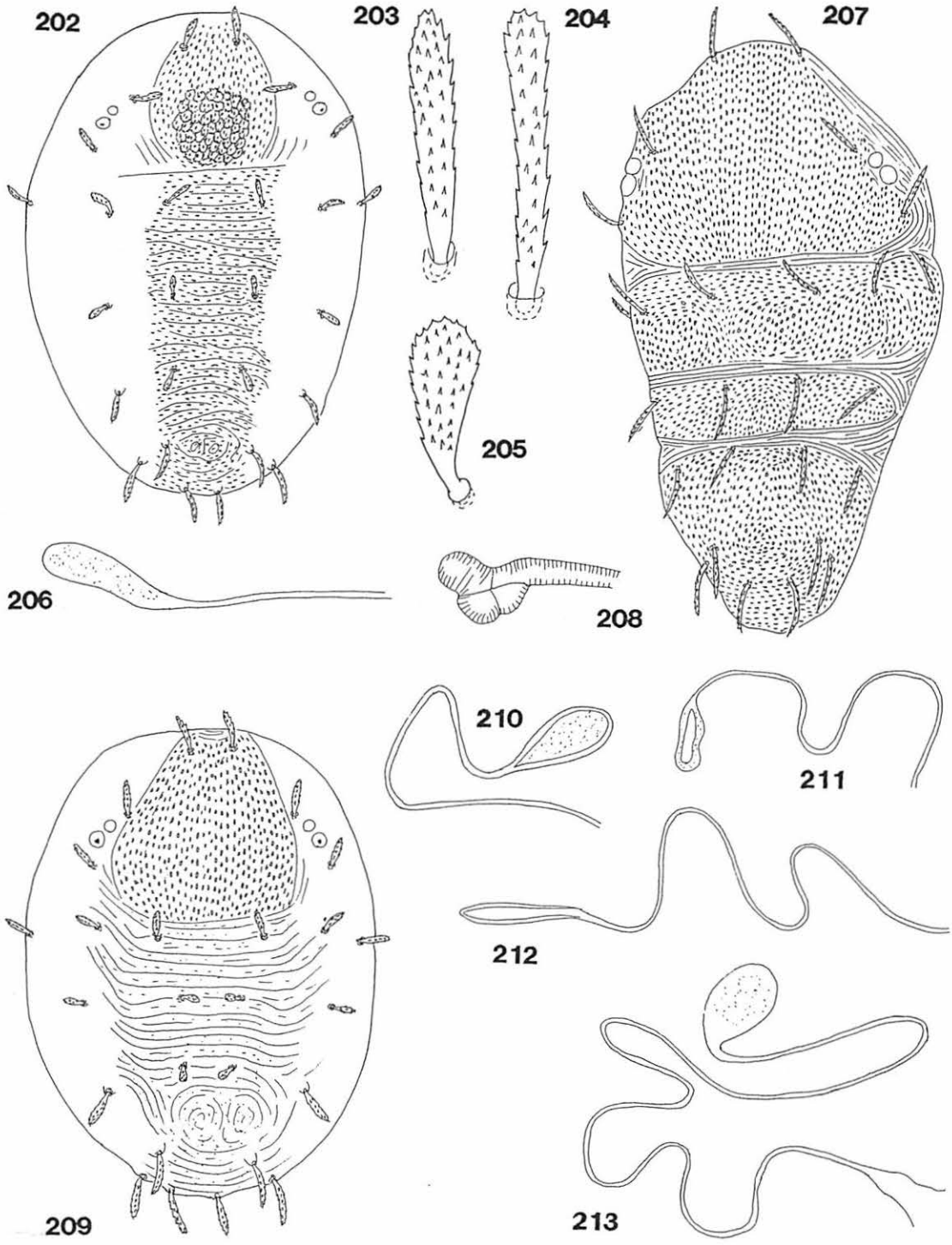

FIG. 202-209. *Neopetrobia adamanta* (Meyer)
FIG. 202. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 203. First pair of prodorsal setae/ *Eerste paar prodorsale setas*
FIG. 204. Fourth pair of dorsolateral setae/ *Vierde paar dorsolaterale setas*
FIG. 205. Second pair of dorsocentral setae/ *Tweede paar dorsosentrale setas*
FIG. 206. Spermatheca/ *Spermateka*
FIG. 207. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 208. Termination of peritreme of male/ *Eindpunt van peritreem van mannetjie*
FIG. 209. Dorsal view of nympha/ *Dorsale aansig van nimf*
FIG. 210. *Neopetrobia hispida* (Meyer). Spermatheca/ *Spermateka*
FIG. 211. *Neopetrobia theroni* (Meyer). Spermatheca/ *Spermateka*
FIG. 212. *Neopetrobia glebulenta* (Meyer). Spermatheca/ *Spermateka*
FIG. 213. *Neopetrobia eberlanziae* (Meyer). Spermatheca/ *Spermateka*

R317 road junction, C.P., 11 March 1983 (D.P. Keetch).

Neopetrobia tshipensis (Meyer)
(Fig. 199)

Anaplonobia tshipensis Meyer, 1974: 124-125.

Neopetrobia tshipensis can be distinguished by the stylophore which is deeply incised; dorsal body setae longer than distances between consecutive setae, slightly expanded and densely serrate distally; prodorsum with indistinct, broken longitudinal striae medially; spermatheca elongate and globular distally (Fig. 199).

Habitat and locality. This species was formerly recorded on grass from Tshipise, Tvl.

Neopetrobia acuminata (Meyer)
(Fig. 200)

Langella acuminata Meyer, 1974: 81.

This species can be distinguished by the minute first 4 pairs of dorsocentral setae (c_1, d_1, e_1 and f_1); fourth pair of dorsocentral setae (f_1) in a normal dorsal position; except for the 4 pairs of dorsocentral setae the dorsal body setae set on tubercles and spatulate; spermatheca pear-shaped (Fig. 200).

Habitat and locality. *N. acuminata* was first described from *Aspalathus acuminata*, Caledon, C.P.

Neopetrobia augustae (Meyer)
(Fig. 201)

Langella augustae Meyer, 1974: 81.

All the dorsal body setae of *N. augustae* are spatulate and more or less of equal length; prodorsum punctate medially; opisthosomal striae non-tuberculate; spermatheca large and pear-shaped (Fig. 201).

Habitat and locality. This species was first described from *Indigofera spinescens*, 10 km from Marquard (Marquard-Senekal road), O.F.S.

Neopetrobia adamanta (Meyer)
(Fig. 202-209)

Langella adamanta Meyer, 1974: 92-93.

Female (Fig. 202). Prodorsum tuberculate and with a faint reticulum medially; opisthosoma with tuberculate striae; first (v_2) pair of prodorsal setae (Fig. 203), dorsolateral setae (c_2, d_2, e_2 and f_2) and fourth pair of dorsocentrals (f_1) subspatulate (Fig. 204) whereas dorsocentral setae (c_1, d_1 and e_1) tend to be more spatulate (Fig. 205); second (d_1) and third (e_1) pairs of dorsocentral setae two thirds the length of first pair of dorsocentral setae (c_1) and also shorter than dorsolateral setae; tibia I bears 7 or 8 tactile setae and 1 solenidion; tarsi III and IV with tactile setae of duplex setae about three quarters the length of solenidia; spermatheca elongate and oval-shaped (Fig. 206).

Male (Fig. 207). Dorsum punctulate and opisthosoma divided into 3 parts; dorsal body setae lanceolate; peritreme ends in a chamber which is divided into 3 parts (Fig. 208).

Nympha (Fig. 209). Prodorsum punctulate medially and opisthosoma with coarse striae; dorsal body setae tend to be more subspatulate than those of the female.

Habitat and locality. This species was found on *Lebeckia multiflora*, 48 km from Port Nolloth (Alexander Bay road), C.P.

A new record is: *Galenia sarcophylla*, 18 km from Springbok (Windhoek road), C.P., 19 September 1983 (M.K.P. Meyer).

Neopetrobia hispida (Meyer)
(Fig. 210)

Langella hispida Meyer, 1974: 93.

This species has the prodorsum punctate medially; dorsolateral setae (c_1, d_1, e_1, f_1 and h_1) spatulate and shorter than the dorsolateral setae; second (d_1) and third (e_1) pairs of dorsocentral setae about half as long as first pair of dorsocentrals (c_1); tibia I with 9 tactile setae and 1 solenidion; spermatheca pear-shaped (Fig. 210).

Habitat and locality. *N. hispida* was described from *Aspalathus hispida*, Heidelberg, C.P.

Neopetrobia theroni (Meyer)
(Fig. 211)

Anaplonobia theroni Meyer, 1974: 123-124.

The broadly lanceolate, serrate, dorsal body setae and small oval, peritremal enlargement are characteristic of this species; dorsum finely striated; spermatheca small, sausage-like and slightly constricted medially (Fig. 211).

Habitat and locality. This species is known from grass and soil, Potchefstroom, Tvl.

Neopetrobia glebulenta (Meyer)
(Fig. 212)

Anaplonobia glebulenta Meyer, 1974: 123-124.

This species is characterized by the dorsum bearing low tubercles or lumps, with striae in between; dorsal body setae broadly lanceolate; spermatheca elongate (Fig. 212).

Habitat and locality. This species was first described from grass, Potchefstroom, Tvl.

Neopetrobia eberlanziae (Meyer)
(Fig. 213)

Langella eberlanziae Meyer, 1974: 86.

This species may be separated from related

species by the first pair of spatulate, prodorsal setae (v_2), which are about 3 times as long as dorsocentral setae (c_1, d_1, e_1, f_1 and h_1); setal formula of female tibiae is; 8(1)-5-5-5; spermatheca broadly oval (Fig. 213).

Habitat and locality. *N. eberlanziae* is described from *Eberlanzia ferox* and *Pteronia glaucescens*, Knapdaar, C.P.

Neopetrobia leipoldtiae spec. nov.
(Fig. 214-221)

This species is distinctive in that tibiae II-IV of the female and male are each provided with 5 setae.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 633 μm (653); length (excluding gnathosoma) 553 μm (587); breadth 427 μm (453).

Dorsum (Fig. 214). Body setae (Fig. 216) spatulate and serrate; first (v_2) pair of prodorsal setae (Fig. 215) longer than other 2 pairs (sc_{1-2}), which are equal in length; opisthosomal setae (Fig. 216) about equal in length; members of fourth pair of dorsocentral setae (f_1) widely spaced; prodorsum punctulate; opisthosoma bears widely spaced, transverse striae; integument punctate.

Spermatheca. The sacculus is pear-shaped (Fig. 217).

Gnathosoma. Stylophore incised anteriorly; peritreme ends in a relatively large anastomosing chamber (Fig. 218).

Legs. Numbers of setae and solenidia (in parentheses) on podomeres of legs I-IV are: coxae 2-2-1-1; trochanters 1-1-1-1; femora 6-5 or 6-4-4; genua 6-6-4-3; tibiae 8(1)-5-5-5; tarsi 12+2 dupl.-13+1 dupl.-8 or 9+1 dupl.-10+1 dupl.; tarsus I with 6 tactile setae well proximal to duplex setae; tactile setae on tarsi III and IV slightly longer than associated solenidion (Fig. 219).

Male. Dimensions: length of body (including gnathosoma) 433 μm; length (excluding gnathosoma) 347 μm; breadth 233 μm.

Dorsum (Fig. 220). Body setae subspatulate and serrate; posterior opisthosomal setae set on small tubercles; dorsal integument punctulate; opisthosoma divided by transverse striae into 3 parts.

Gnathosoma. Stylophore rounded anteriorly; peritreme ends simply (Fig. 221).

Aedeagus. Distally the shaft of the aedeagus terminates in short stylets.

Legs. Counts of setae and solenidia (in parentheses) on legs I-IV are as follows: femora 9-6-4-4; genua 6-6-4-4; tibiae 4(1)+4 dupl.-5-5-5; tarsi 10(4)+4 dupl.-13+1 dupl.-9+1 dupl.-10+1 dupl.; tactile seta and associated solenidion on tarsi III and IV about equal in length.

Habitat and locality. Holotype female, 7 paratype females and 4 paratype males from *Leipoldtia constricta*, between Gamoep and Springbok, C.P., 16 September 1983 (M.K.P. Meyer).

Neopetrobia namaensis spec. nov.
(Fig. 222-229)

This species resembles *N. albiei* spec. nov. in that the first pair of dorsocentral setae (c_1) are about twice as long as the second (d_1) and third (e_1) pairs of dorsocentrals and in the shape of the peritremal anastomosis. However, it differs in that the members of the duplex setae on tarsus II are about equal in length; solenidia of duplex setae on tarsi III and IV about three quarters the length of the tactile members; spermatheca big and pear-shaped whereas that of *N. albiei* is more rounded.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 793 μm (787-840); length (excluding gnathosoma) 700 μm (694-747); breadth 526 μm (520-533).

Dorsum (Fig. 222). First (v_2) pair of prodorsal setae (Fig. 223) broadly lanceolate and twice as long as other 2 pairs (sc_{1-2}); rest of body setae spatulate; first (c_1) pair of dorsocentral setae (Fig. 224) about twice as long as second (d_1) and third (e_1) pairs of dorsocentrals (Fig. 225).

Spermatheca. It ends distally in a large pear-shaped sacculus (Fig. 226).

Gnathosoma. Stylophore rounded anteriorly; peritreme terminates in a large, more or less oval anastomosis (Fig. 227).

Legs. Setal formulae (solenidia in parentheses) for segments of legs are: coxae 2-2-1-1; trochanters 1-1-1-1; femora 6-5-4-4; genua 6-5-4-4; tibiae 9(1)-7 or 8-7-7; tarsi 14+2 dupl.-13+2 dupl.-9+1 dupl. -9+1 dupl.; members of duplex setae on tarsus II about equal in length (Fig. 228); solenidia of duplex setae of tarsi III and IV about three quarters the length of tactile setae (Fig. 229).

Male. Unknown.

Habitat and locality. Holotype female and 6 paratype females from *Galenia africana*, 4 km from Springbok (Kleinsee road), C.P., 17 September 1983 (E.A. Ueckermann).

Neopetrobia albiei spec. nov.
(Fig. 230-237)

As in *N. karasiensis* (Meyer), the first pair of dorsocentral setae (c_1) are about twice as long as the second (d_1) and third (e_1) pairs of dorsocentrals, but this species is different in that the dorsum of the male is striated and not punctated. It further differs in the shape of the peritremal enlargement of the male, the presence of duplex setae on male tibia I, 3 duplex setae on tarsus I of male and a spermatheca more rounded than that of *N. karasiensis*.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 600 μm (567-620); length (excluding gnathosoma) 533 μm (513-567); breadth 460 μm (389-465).

Dorsum (Fig. 230). First (v_2) pair of prodorsal setae (Fig. 231) broadly lanceolate and longer than other 2 pairs (sc_{1-2}); rest of body setae (Fig. 232) spatulate but sometimes tend to be subspatulate; first

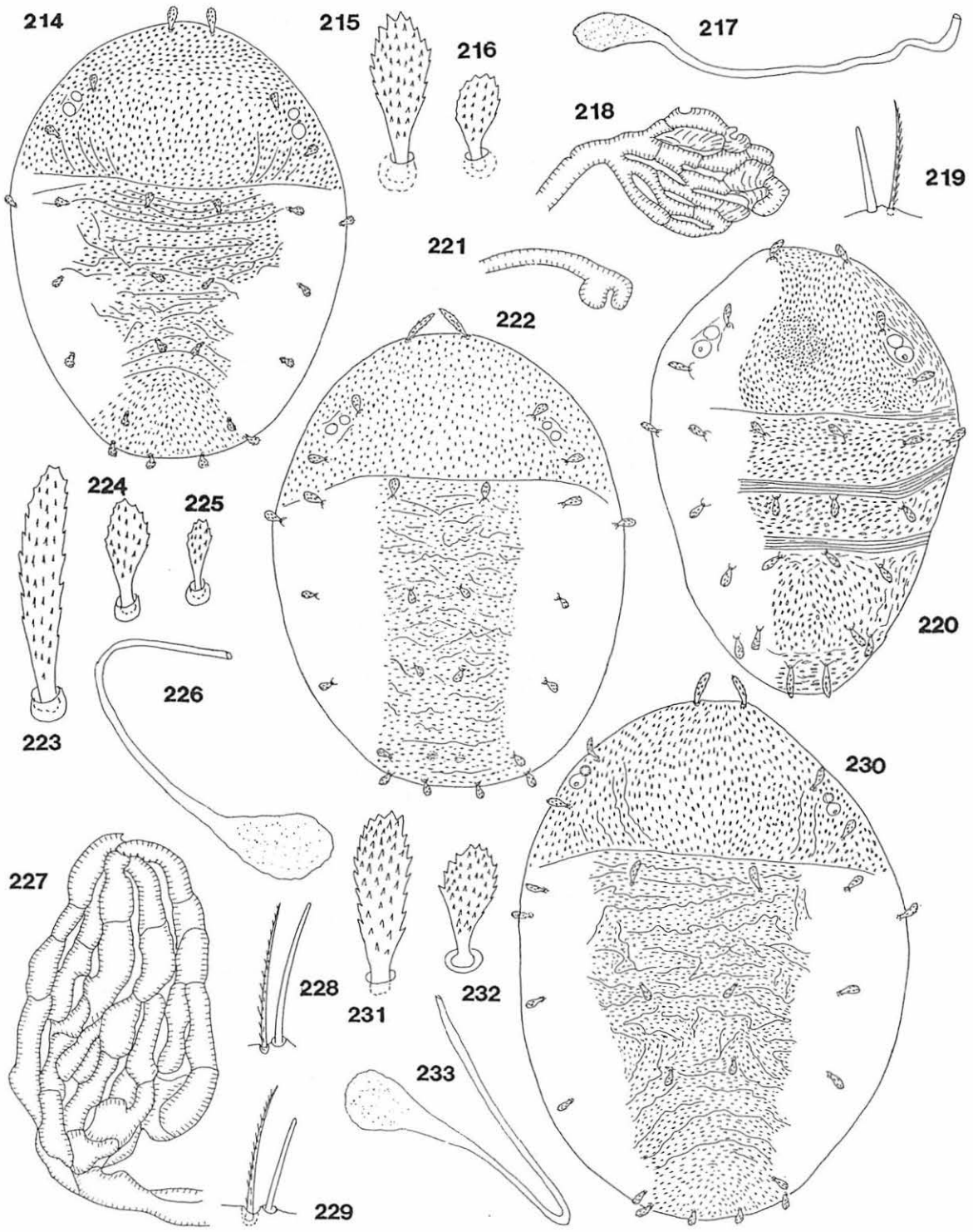

FIG. 214-221. *Neopetrobia leipoldtiae* spec. nov.
FIG. 214. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 215. First pair of prodorsal setae/ *Eerste paar prodorsale setas*
FIG. 216. Dorsal seta/ *Dorsale seta*
FIG. 217. Spermatheca/ *Spermateka*
FIG. 218. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 219. Duplex setae on tarsi III and IV of female/ *Dubbelhare op tarsi III en IV van wyfie*
FIG. 220. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 221. Termination of peritreme of male/ *Eindpunt van peritreem van mannetjie*
FIG. 222-229. *Neopetrobia namaensis* spec. nov. Female/ *Wyfie*
FIG. 222. Dorsal view/ *Dorsale aansig*
FIG. 223. First pair of prodorsal setae/ *Eerste paar prodorsale setas*
FIG. 224. First pair of dorsocentral setae/ *Eerste paar dorsosentrale setas*
FIG. 225. Second and third pairs of dorsocentral setae/ *Tweede en derde paar dorsosentrale setas*
FIG. 226. Spermatheca/ *Spermateka*
FIG. 227. Peritremal anastomosis/ *Peritremale anastomose*
FIG. 228. Duplex setae on tarsus II/ *Dubbelhare op tarsus II*
FIG. 229. Duplex setae on tarsi III and IV/ *Dubbelhare op tarsi III en IV*
FIG. 230-237. *Neopetrobia albiei* spec. nov.
FIG. 230. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 231. First pair of prodorsal setae/ *Eerste paar prodorsale setas*
FIG. 232. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 233. Spermatheca/ *Spermateka*

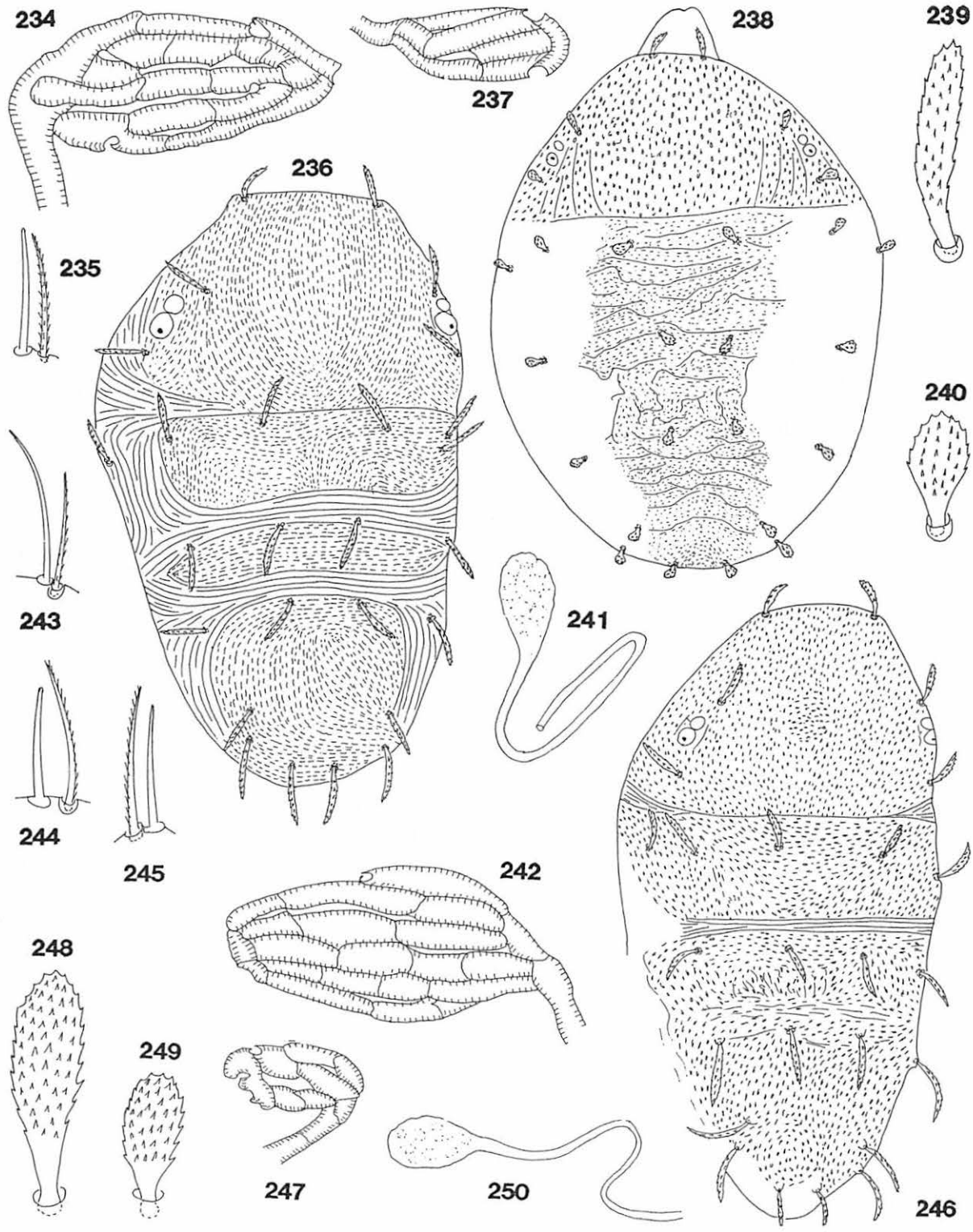

FIG. 234-237. *Neopetrobia albiei* (continued/*vervolg)*
FIG. 234. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 235. Duplex setae on tarsi III and IV of female/ *Dubbelhare op tarsi III en IV van wyfie*
FIG. 236. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 237. Peritremal anastomosis of male/ *Peritremale anastomose van mannetjie*
FIG. 238-247. *Neopetrobia africana* spec. nov.
FIG. 238. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 239. First pair of prodorsal setae of female/ *Eerste paar prodorsale setas van wyfie*
FIG. 240. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 241. Spermatheca/ *Spermateka*
FIG. 242. Peritremale anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 243. Duplex setae on tarsus II of female/ *Dubbelhare op tarsus II van wyfie*
FIG. 244. Duplex setae on tarsus III of female/ *Dubbelhare op tarsus III van wyfie*
FIG. 245. Duplex setae on tarsus IV of female/ *Dubbelhare op tarsus IV van wyfie*
FIG. 246. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 247. Peritremal anastomosis of male/ *Peritremale anastomose van mannetjie*
FIG. 248-254. *Neopetrobia galeniae* (Meyer)
FIG. 248. First pair of prodorsal setae of female/ *Eerste paar prodorsale setas van wyfie*
FIG. 249. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 250. Spermatheca/ *Spermateka*

pair of dorsocentral setae (c_1) about twice as long as second pair of dorsocentral setae (d_1); integument punctulate; opisthosoma covered with transverse to irregular, widely spaced striae.

Spermatheca. The sacculus of the spermatheca is rounded (Fig. 233).

Gnathosoma. Stylophore slightly incised anteriorly; peritreme ends in a large, more or less oval-shaped anastomosis (Fig. 234).

Legs. Setae and solenidia (in parentheses) disposed on legs I-IV as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 6-6-4-4; tibiae 9(1)-7-6 or 7-6 or 7; tarsi 13+2 dupl.-12+1 dupl.-9+1 dupl. -9+1 dupl.; tactile member of duplex setae on tarsus II about half as long as solenidion; members of duplex setae on tarsi III and IV about equal in length (Fig. 235).

Male. Dimensions: length of body (including gnathosoma) 340 μm; length (excluding gnathosoma) 330 μm; breadth 200 μm.

Dorsum (Fig. 236). Body setae narrowly lanceolate and serrate; prodorsum bears longitudinal striae; opisthosoma divided by transverse striae into 3 parts on which may occur transverse or longitudinal striae.

Gnathosoma. Stylophore rounded anteriorly; peritreme anastomoses distally and forms an oval chamber (Fig. 237).

Aedeagus. Distally, the shaft of the aedeagus terminates in short stylets.

Legs. Setal formulae for leg segments as follows: femora 8 or 9-6-4-4; genua 6-5-4-4; tibiae 8(3)+1 dupl.8-7-6; tarsi 11(3 or 4)+3 dupl.-13+1 dupl.-9+1 dupl.-9+1 dupl.

Nympha. Dorsum similar to that of female except dorsal body setae are slightly longer; posterior opisthosomal setae located on tubercles.

Habitat and locality. Holotype female, 4 paratype females, 1 paratype male and 5 paratype nymphae from *Galenia africana*, 7 km from Clanwilliam, C.P., 29 September 1982 (M.K.P. Meyer).

This species is named for Prof. Dr Albie van de Venter of the University of Pretoria.

Neopetrobia africana spec. nov.
(Fig. 238-247)

Neopetrobia africana is closely related to *N. galeniae* (Meyer) but can be distinguished from it by the males which have longer opisthosomal setae posteriorly and the shape of the peritremal anastomosis.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 567 μm (480-600); length (excluding gnathosoma) 507 μm (433-560); breadth 367 μm (300-373).

Dorsum (Fig. 238). First (v_2) pair of prodorsal setae (Fig. 239) broadly lanceolate and serrate; rest of body setae (Fig. 240) spatulate, serrate and about three quarters the length of first pair of prodorsals (v_2); first pair of dorsocentrals (c_1) may be somewhat longer than other dorsocentrals (d_1, e_1, f_1 and h_1); integument punctulate; opisthosoma covered with transverse to irregular, widely spaced striae.

Spermatheca. Duct distally ends in a pear-shaped sacculus (Fig. 241).

Gnathosoma. Stylophore slightly indented anteriorly; peritremal enlargement (Fig. 242) more or less pear-shaped.

Legs. Counts of setae and solenidia (in parentheses) on legs I-IV are as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 6-6-3 or 4-3 or 4; genua 6-5-4 or 5-4; tibiae 9(1)-7-7-7; tarsi 12 or 13+2 dupl.-11+1 dupl.-9+1 dupl.-9+1 dupl.; tactile member of duplex setae on tarsus II about two thirds the length of solenidion (Fig. 243); members of duplex setae on tarsi III and IV subequal in length, tactile members being the longest (Fig. 244-245).

Male. Dorsum (Fig. 246). Body setae narrowly lanceolate and serrate; fifth pair of dorsocentral setae (h_1) about two thirds the length of fourth pair of dorsocentrals (f_1) and fourth pair of dorsolaterals (f_2); third pair of dorsocentral setae (e_1) about half as long as distances to bases of fourth pair of dorsocentrals (f_1); dorsal body surface punctulate; opisthosoma with 2 transverse divisions.

Gnathosoma. Stylophore rounded anteriorly; peritreme ends in a small oval chamber (Fig. 247).

Aedeagus. Shaft of aedeagus narrows distally to form acicular stylets.

Legs. Chaetotaxy of legs: femora 8 or 9-6-4-4; genua 6-5-4 or 5-4; tibiae 5(1)+4 dupl.-7 to 9-7-7; tarsi 11(4)+4 dupl.-12+1 dupl.-9+1 dupl.9+1 dupl.

Nympha. Dorsal aspect resembles that of female except that the 3 pairs of opisthosomal setae caudally are longer and situated on tubercles.

Habitat and locality. Holotype female, 5 paratype females, 1 paratype male and 5 paratype nymphae from *Galenia africana*, Piketberg/Clanwilliam road (R364) junction, C.P., 29 September 1982 (S.C. Cruickshank); unidentified wild plant, Darling, C.P., 18 June 1981 (D.P. Keetch).

Neopetrobia galeniae (Meyer)
(Fig. 248-254)

Langella galeniae Meyer, 1974: 87.

The female of *N. galeniae* exhibits the following characters: first (v_2) pair of prodorsal setae (Fig. 248) broadly lanceolate to subspatulate; other dorsal body setae (Fig. 249) spatulate and tend to be subspatulate in some specimens; rest of the dorsal body setae about three quarters the length of first pair of prodorsal setae (v_2); spermatheca oval (Fig. 250); setae and solenidia (in parentheses) on legs: coxae 2-2-1-1: trochanters 1-1-1-1; femora 6 or 7-6-3 or 4-3 or 4; genua 6-5-5-4; tibiae 9(1)-7 to 9-7 or 8-7; tarsi 13+2 dupl.-11 or 12+1 dupl.-9+1 dupl.-9+1 dupl.; tactile member of duplex setae on tarsus II about half as long as solenidion (Fig. 251); tactile members of duplex setae on tarsi III and IV about three quarters the length of solenidia (Fig. 252).

The following is a description of the male of *N.*

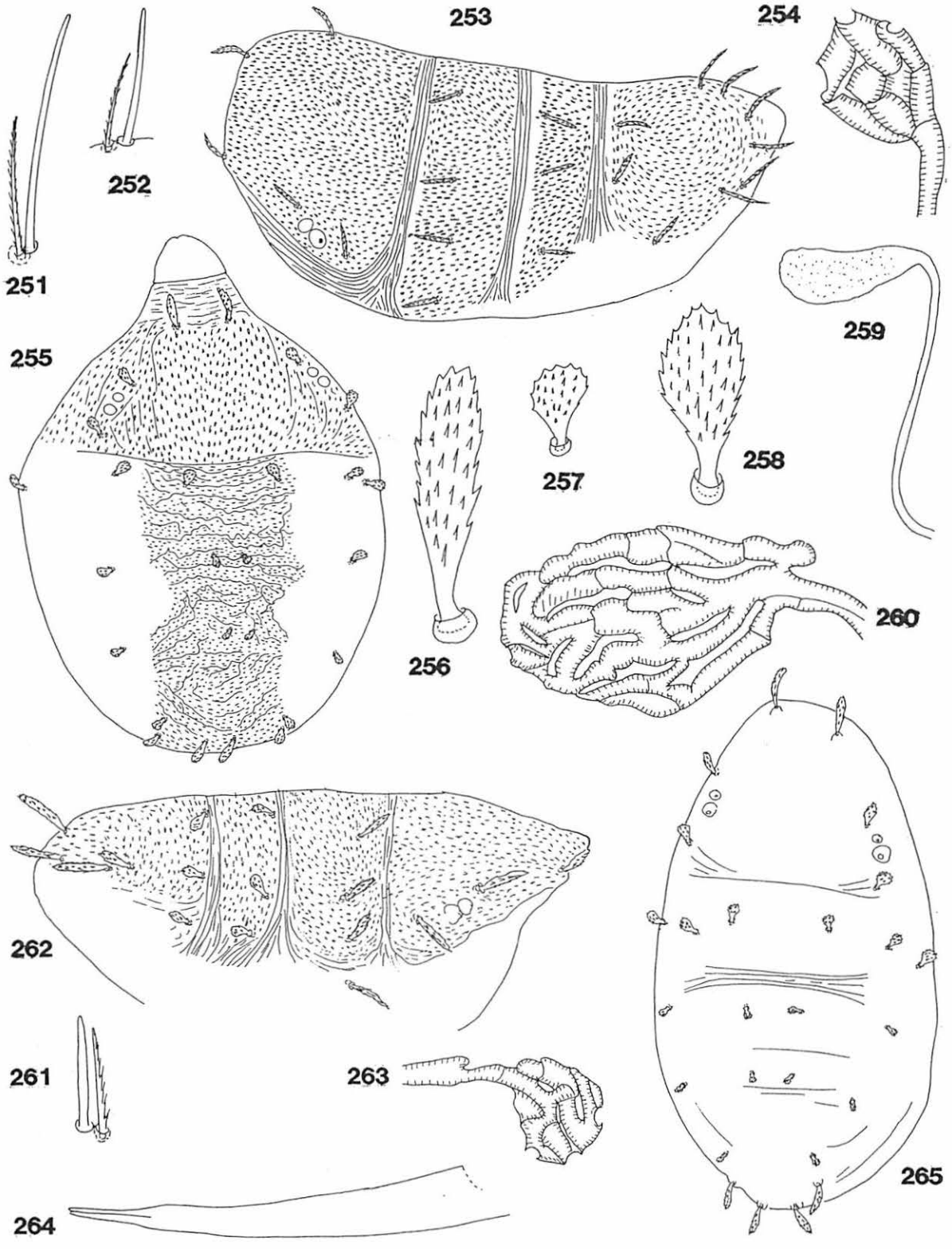

FIG. 251-254. *Neopetrobia galeniae* (continued/ *vervolg)*
FIG. 251. Duplex setae on tarsus II of female/ *Dubbelhare op tarsus II van wyfie*
FIG. 252. Duplex setae on tarsi III and IV of female/ *Dubbelhare op tarsi III en IV van wyfie*
FIG. 253. Dorsolateral view of male/ *Dorsolaterale aansig van mannetjie*
FIG. 254. Peritremal anastomosis of male/ *Peritremale anastomose van mannetjie*
FIG. 255-265. *Neopetrobia oryx* spec. nov.
FIG. 255. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 256. First pair of prodorsal setae of female/ *Eerste paar prodorsale setas van wyfie*
FIG. 257. Second and third pairs of dorsocentral setae of female/ *Tweede en derde dorsosentrale setas van wyfie*
FIG. 258. Fifth pair of dorsocentral setae of female/ *Vyfde paar dorsosentrale setas van wyfie*
FIG. 259. Spermatheca/ *Spermateka*
FIG. 260. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 261. Duplex setae on tarsi III and IV of female/ *Dubbelhare op tarsi III en IV van wyfie*
FIG. 262. Dorsolateral view of male/ *Dorsolaterale aansig van mannetjie*
FIG. 263. Peritremal anastomosis of male/ *Peritremale anastomose van mannetjie*
FIG. 264. Aedeagus
FIG. 265. Dorsal view of nympha/ *Dorsale aansig van nimf*

galeniae: Dorsal body setae narrowly lanceolate and serrate; the 3 pairs of opisthosomal setae (f_1, f_2 and h_1) are about equal in length; dorsum (Fig. 253) with punctulated striae; opisthosoma divided by transverse striae into 3 parts; distal anastomosis of peritreme (Fig. 254) smaller than that of female and more or less rounded; chaetotaxy of legs: femora 9-6-4-4; genua 6-5-5-4; tibiae 5(1)+4 dupl.-9-8-7; tarsi 13(4)+4 dupl.-13 or 14+1 dupl.-9+1 dupl.-9+1 dupl.; aedeagus narrows distally and ends in short stylets.

Habitat and locality. This species is known from *Galenia procumbens, G. namaensis, G. sarcophylla, G. africana, Rhus pyroides, Pentzia globosa* and *Aptosimum steingroeveri* in the Cape and South West Africa (Namibia).

A new record for this species is: *Galenia africana*, 20 km from Carnavon (Vosburg road), C.P., 22 September 1983 (E.A. Ueckermann).

Neopetrobia oryx spec. nov.
(Fig. 255-265)

As in *N. karasiensis* Meyer the first pair of female dorsocentral setae (c_1) are about twice as long as the second (d_1) and third (e_1) pairs of dorsocentrals; however, this species differs from *N. karasiensis* in that female tibiae III and IV are each provided with 6 setae and genu IV has 2 or 3 setae; second (d_1) and third (e_1) pairs of male dorsocentral and dorsolateral setae (c_2, d_2, e_2 and f_2) spatulate whereas those of *N. karasiensis* are narrowly lanceolate.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 613 μm (580-667); length (excluding gnathosoma) 533 μm (527-573); breadth 413 μm (400-467).

Dorsum (Fig. 255). Except for the first pair of prodorsal setae (v_2), which tend to be subspatulate (Fig. 256) body setae spatulate and serrate; first pair of prodorsal setae (v_2) about twice as long as other 2 pairs (sc_{1-2}), which are equal in length; first pair of dorsocentral setae (c_1) about twice as long as second (d_1) and third (e_1) pairs of dorsocentrals (Fig. 257) and about three quarters the length of fifth (h_1) pair of dorsocentrals (Fig. 258); dorsal integument punctulate; prodorsum bears a few longitudinal, widely spaced striae laterally whereas opisthosoma has many transverse to irregular widely spaced striae.

Spermatheca. Sacculus pear-shaped (Fig. 259).

Gnathosoma. Stylophore slightly incised anteriorly; peritreme ends in a relatively large anastomosing chamber (Fig. 260).

Legs. Numbers of setae and solenidia (in parentheses) on podomeres of legs I-IV are: coxae 2-2-1-1: trochanters 1-1-1-1; femora 6-6-4-3 or 4; genua 6-4-3-2; tibiae 9(1)-7 or 8-6-6; tarsi 13+2 dupl.-10+1 dupl.-8+1 dupl.-9+1 dupl.; tactile members of duplex setae on tarsi III and IV about equal in length to solenidia (Fig. 261); empodial pads about twice as long as true claws and bear 2 rows of ventrally directed tenent hairs.

Male. Dorsum (Fig. 262). Body setae long and narrowly lanceolate except for second to fourth pairs of dorsocentrals (d_1, e_1 and f_1) and second (d_2) and third (e_2) pairs of dorsolateral setae which are short and spatulate; dorsal integument punctulate; prodorsum bears punctate longitudinal striae; opisthosoma divided by transverse striae into 3 parts on which may occur transverse to irregular or longitudinal punctate striae.

Gnathosoma. Stylophore rounded anteriorly; peritreme anastomoses distally to form an oval chamber (Fig. 263).

Aedeagus (Fig. 264). Distally, the shaft of the aedeagus terminates in short stylets.

Legs. Counts of setae and solenidia (in parentheses) on legs I-IV: femora 9-6-4-4; genua 6-5-4-2 or 3; tibiae 7(1)+2 dupl.-8 or 9-7-7; tarsi 11(4)+4 dupl.-11+1 dupl.-9+1 dupl.-8 or 9+1 dupl.; tactile members of duplex setae on tarsi III and IV two thirds the length of solenidia.

Nympha (Fig. 265). First pair of prodorsals (v_2), fifth pair of dorsocentrals (h_1) and fourth pair of dorsolateral setae (f_2) relatively long and subspatulate; rest of dorsal body setae spatulate; second to fourth pairs of dorsocentrals (d_1, e_1 and f_1) and second (d_2) and third (e_2) pairs of dorsolateral setae minute.

Habitat and locality. Holotype female, 5 paratype females, 1 paratype male and 2 paratype nymphae from *Galenia fructicosa*, near Elandsbaai, C.P., 29 September 1982 (M.K.P. Meyer).

Neopetrobia amaranthae spec. nov.
(Fig. 266-276)

This species is related to *N. galeniae* (Meyer) but can be distinguished from it by fewer striation folds on the opisthosoma; 8 setae and 1 pair of associated setae on each of tarsi III and IV; spermatheca more rounded than that of *N. galeniae*.

Female. Dimensions of holotype: length of body (including gnathosoma) 707 μm; length (excluding gnathosoma) 640 μm; breadth 467 μm.

Dorsum (Fig. 266). Body setae spatulate and serrate (Fig. 267); first pair of prodorsal setae (v_2) the longest measuring 22 μm whereas the other body setae are 19 μm long and 9 μm broad; prodorsal shield composed of numerous rounded tubercles, forming a faint reticulum medially; laterally prodorsum with several tuberculate broad folds; opisthosomal striae broad tuberculate folds, transverse to irregular and broken.

Spermatheca. Distally, it ends in a rounded sacculus (Fig. 268).

Gnathosoma. Stylophore slightly incised anteriorly; peritreme terminates in a large oval, anastomosing chamber (Fig. 269).

Legs. Distribution of setae and solenidia (in parentheses) on leg segments: coxae 2-2-1-1; femora 7-6-4-4; genua 6-5-5-4; tibiae 9(1)-7-7-7; tarsi 12+2 dupl.-11+1 dupl.-8 or 9+1 dupl.-8 or 9+1 dupl.; tactile member of duplex setae on tarsus II half as long as solenidion (Fig. 270); tactile members of duplex setae of tarsi III (Fig. 271) and IV (Fig. 272) nearly as long as solenidia; empodial pads longer

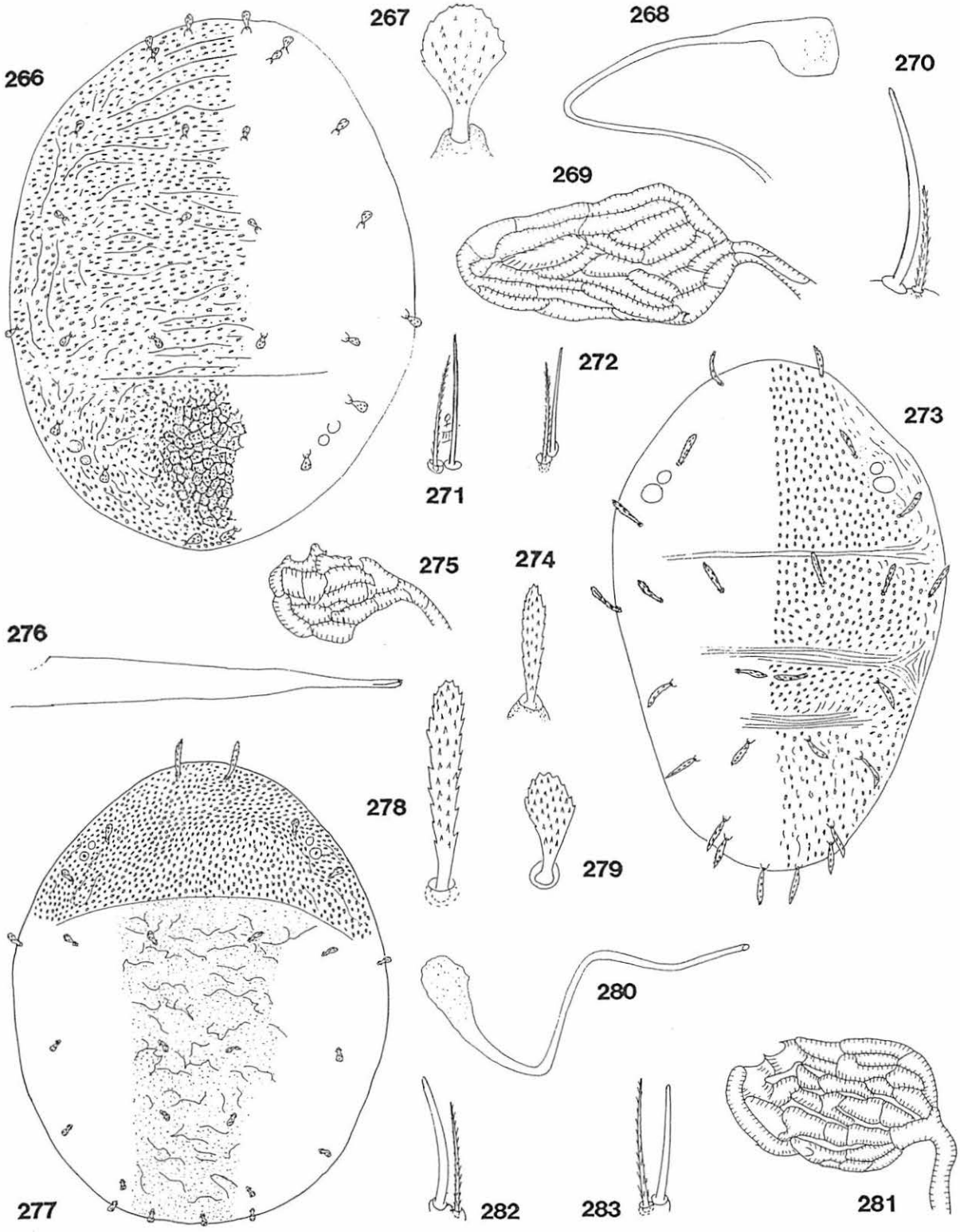

FIG. 266-276. *Neopetrobia amaranthae* spec. nov.
FIG. 266. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 267. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 268. Spermatheca/ *Spermateka*
FIG. 269. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 270. Duplex setae on tarsus II of female/ *Dubbelhare op tarsus II van wyfie*
FIG. 271. Duplex setae on tarsis III of female/ *Dubbelhare op tarsus III van wyfie*
FIG. 272. Duplex setae on tarsus IV of female/ *Dubbelhare op tarsus IV van wyfie*
FIG. 273. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 274. Dorsal seta of male/ *Dorsale seta van mannetjie*
FIG. 275. Peritremal anastomosis of male/ *Peritremale anastomose van mannetjie*
FIG. 276. Aedeagus
FIG. 277-285. *Neopetrobia dideltae* spec. nov.
FIG. 277. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 278. First pair of prodorsal setae of female/ *Eerste paar prodorsale setas van wyfie*
FIG. 279. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 280. Spermatheca/ *Spermateka*
FIG. 281. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 282. Duplex setae on tarsus II of female/ *Dubbelhare op tarsus II van wyfie*
FIG. 283. Duplex setae on tarsi II and IV of female/ *Dubbelhare op tarsi III en IV van wyfie*

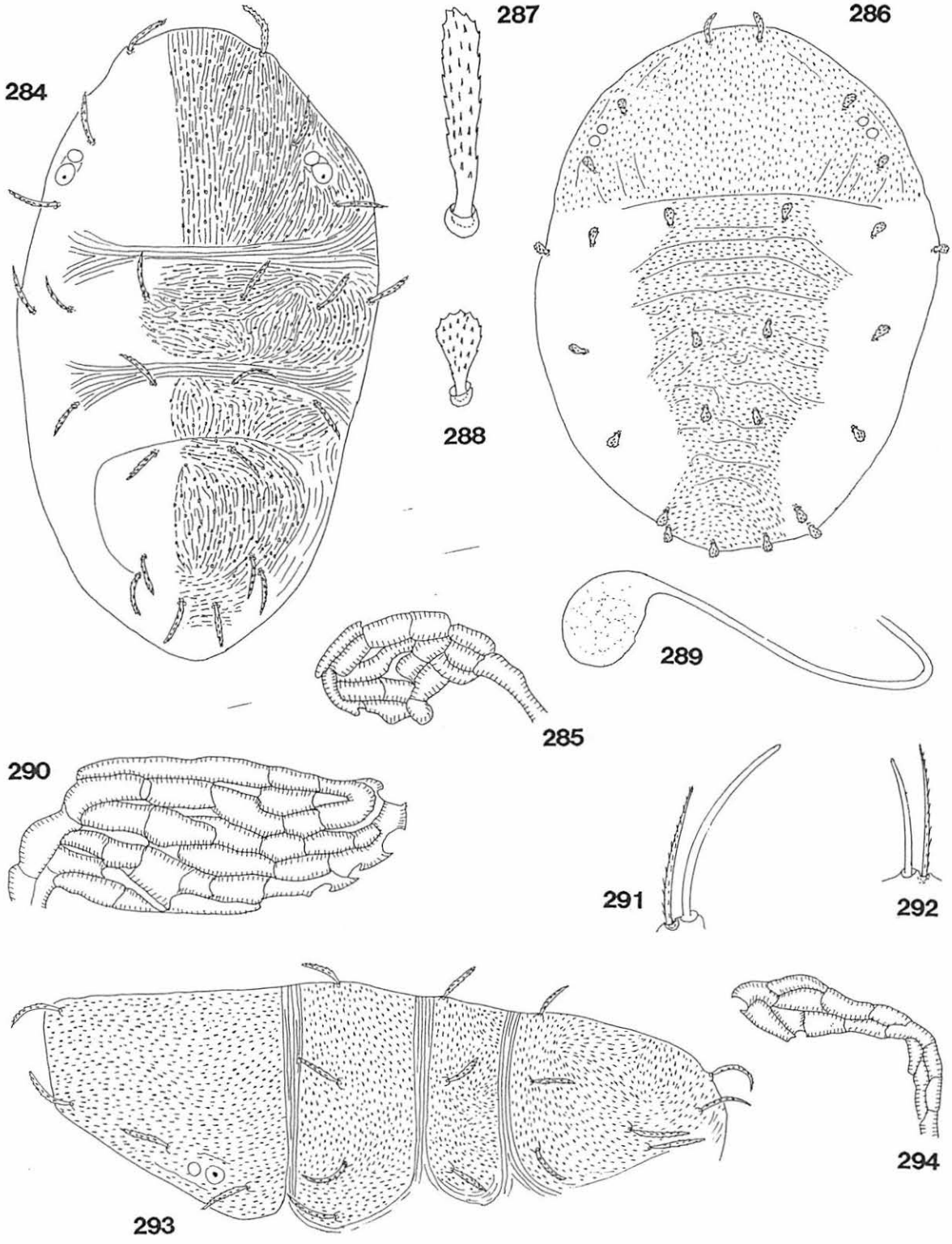

FIG. 284-285. *Neopetrobia dideltae* (continued/*vervolg)*
FIG. 284. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 285. Peritremal anastomosis of male/ *Peritremale anastomose van mannetjie*
FIG. 286-294. *Neopetrobia vulgata* spec. nov.
FIG. 286. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 287. First pair of prodorsal setae of female/ *Eerste paar prodorsale setas van wyfie*
FIG. 288. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 289. Spermatheca/ *Spermateka*
FIG. 290. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 291. Duplex seta on tarsus II of female/ *Dubbelhare op tarsus II van wyfie*
FIG. 292. Duplex setae on tarsi III and IV of female/ *Dubbelhare op tarsi III and IV van wyfie*
FIG. 293. Dorsolateral view of male/ *Dorsolaterale aansig van mannetjie*
FIG. 294. Peritremal anastomosis of male/ *Peritremale anastomose van mannetjie*

than pads of true claws and bear 2 rows of ventrally directed hairs.

Male (Fig. 273). Dimensions: length of body (including gnathosoma) 467 μm; length (excluding gnathosoma) 400 μm; breadth 233 μm.

Dorsal body setae (Fig. 274) of male subspatulate, serrate and relatively longer than those of female, measuring 19 to 23 μm in length and 3 μm broad; transverse sutures present immediately anterior and posterior to second pair of dorsocentral setae (d_1) on opisthosoma; dorsum punctulate; peritremal anastomosis illustrated in Fig. 275; chaetotaxy of legs; femora 9-5 or 6-4-3 or 4; genua 6-5-5-3; tibiae 7(1)+2 dupl.-9-7-7; tarsi 11(4)+4 dupl.-11+1 dupl.-8+1 dupl.-9+1 dupl.; tactile setae associated with solenidia of tarsi III and IV about half the length of solenidia; aedeagus (Fig. 276) relatively long, slender and terminates in short stylets.

Natural colour. This species is dark green.

Habitat and locality. Holotype female, 4 paratype females and 1 paratype male from *Amaranthus thunbergii*, Komga River (Grahamstown-Port Elizabeth road), C.P., 13 February 1974 (M.K.P. Meyer); 1 paratype female from *Capparis sepiaria*, Addo Elephant National Park C.P., 14 February 1974 (M.K.P. Meyer).

Neopetrobia dideltae spec. nov.
(Fig. 277-285)

Neopetrobia dideltae is distinctive in having very short spatulate dorsal body setae, except for the first pair of prodorsal setae (v_2) which are narrowly lanceolate and about 4 to 6 times longer than other dorsal setae; distal anastomosis of peritreme also characteristic for this species.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 867 μm (672-877); length (excluding gnathosoma) 734 μm (620-747); breadth 567 μm (500-592).

Dorsum (Fig. 277). Body setae (Fig. 279) spatulate and serrate except for first (v_2) pair of prodorsal setae (Fig. 278) which are narrowly lanceolate, serrate and about 4 to 6 times longer; integument punctulate; opisthosoma covered with transverse to irregular widely spaced striae.

Spermatheca. Distally ends in a small subovate sacculus (Fig. 280).

Gnathosoma. Stylophore rounded anteriorly; peritreme anastomoses distally, the enlargement being more or less oval (Fig. 281).

Legs. Numbers of setae and solenidia (in parentheses) distributed on leg segments: coxae 2-2-1-1; trochanters 1-1-1-1; femora 6 or 7-5-4-4; genua 6-5-5-4; tibiae 8(1)-8 or 9-8-7; tarsi 13+2 dupl.-11+1 dupl.-9+1 dupl.-9+1 dupl.; tactile seta of duplex setae on tarsus II about three quarters the length of solenidion (Fig. 282); tactile setae of duplex setae of tarsi III and IV about as long as solenidia (Fig. 283); true claws pad-like and about half as long as pad-like empodia which bear 2 rows of ventrally directed tenent hairs.

Male. Dimensions: length of body (including gnathosoma) 547 μm (507); length (excluding gnathosoma) 467 μm (433); breadth 233 μm (220).

Dorsum (Fig. 284). Body setae linear-lanceolate, serrate and shorter than intervals between consecutive setae; integument punctulate; opisthosoma divided by transverse striae into 3 parts.

Gnathosoma. Stylophore rounded anteriorly; peritreme anastomoses distally and forms a more or less rounded chamber (Fig. 285).

Aedeagus. Shaft of aedeagus straight and ends in short stylets.

Legs. Counts of setae and solenidia (in parentheses) on legs I-IV: femora 9-6-4-4; genua 6-5-4-4; tibiae 6 to 9(1 to 3)+2 or 3 dupl.-9-8-7; tarsi 13(3)+4 dupl.-13+1 dupl.-9+1 dupl.-9+1 dupl.; tactile member of duplex setae on tarsus III slightly longer than solenidion; tactile member of duplex setae on tarsus IV about three quarters the length of solenidion.

Habitat and locality. Holotype female, 12 paratype females and 8 paratype males from *Didelta spinosa*, 9 km from Kammieskroon (Springbok road), C.P., 18 September 1983 (E.A. Ueckermann).

Neopetrobia vulgata spec. nov.
(Fig. 286-294)

This species is closely related to *N. africana* spec. nov. but can be distinguished by the shape of the male peritremal anastomosis; male tibia I bearing 2 or 3 but not 4 duplex setae; female tibia II bearing 8 or 9 but not 7 setae.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 766 μm (667-790); length (excluding gnathosoma) 633 μm (613-694); breadth 467 μm (460-493).

Dorsum (Fig. 286). First (v_2) pair of prodorsal setae (Fig. 287) broadly lanceolate and serrate; rest of body setae (Fig. 288) spatulate, serrate and about two thirds to three quarters the length of first pair of prodorsal setae (v_2); first pair of dorsocentral setae (c_1) may be somewhat longer than other dorsocentrals (d_1, e_1, f_1 and h_1); integument punctulate; opisthosoma covered with transverse to irregular, widely spaced striae.

Spermatheca. Distally ends in a broadly, oval sacculus (Fig. 289).

Gnathosoma. Stylophore incised anteriorly; peritreme ends in a relatively large anastomosing chamber (Fig. 290).

Legs. Numbers of setae and solenidia (in parentheses) on leg podomeres of legs I-IV: coxae 2-2-1-1; trochanters 1-1-1-1; femora 6-6-3 or 4-4; genua 6-5-4-4; tibiae 9(1)-8 or 9-7 or 8-5 to 7; tactile member of duplex setae on tarsus II about half to two thirds the length of solenidion (Fig. 291); members of duplex setae on tarsi III and IV subequal in length (Fig. 292).

Male. Dorsum (Fig. 293). Body setae narrowly lanceolate and serrate; third pair of dorsolateral setae (e_2) about third as long as distances to bases of fourth pair of dorsolateral setae (f_2); the latter setae

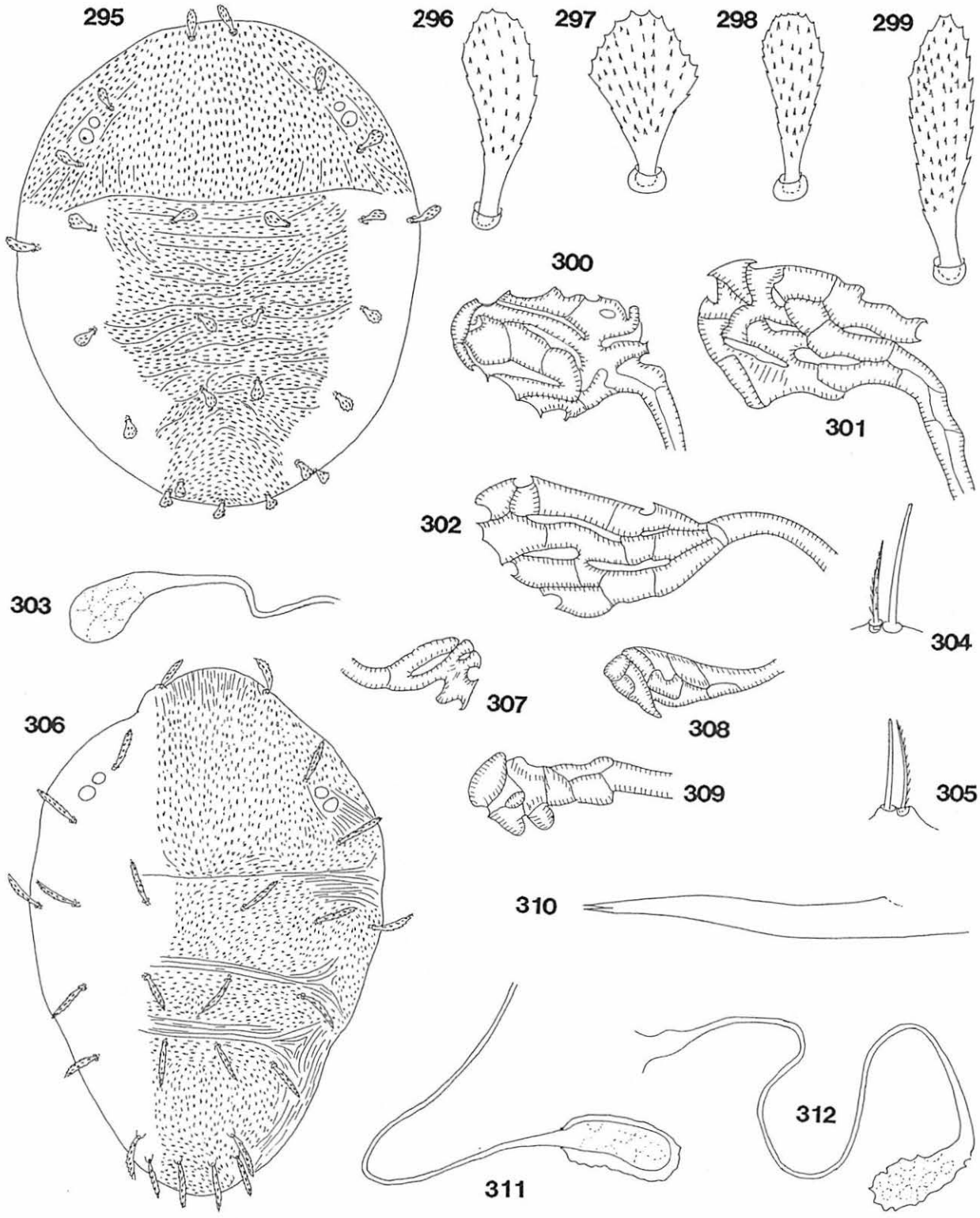

FIG. 295-310. *Neopetrobia karasiensis* (Meyer)
FIG. 295. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 296-299. Variations in dorsal setae of female/ *Variasies van dorsale setas van wyfie*
FIG. 300-302. Variations in peritremal anastomosis of female/ *Variasies van peritremale anastomose van wyfie*
FIG. 303. Spermatheca/ *Spermateka*
FIG. 304. Duplex setae on tarsus II of female/ *Dubbelhare op tarsus II van wyfie*
FIG. 305. Duplex setae on tarsi III and IV of female/ *Dubbelhare op tarsi III en IV van wyfie*
FIG. 306. Dorsal view of male/ *Dorsale aansig van mannetjie*
FIG. 307-309. Variations in peritremal anastomosis of male/ *Variasies van peritremale anastomose van mannetjie*
FIG. 310. Aedeagus
FIG. 311. *Neopetrobia hirta* (Meyer). Spermatheca/ *Spermateka*
FIG. 312. *Neopetrobia potchensis* (Meyer). Spermatheca/ *Spermateka*

and fourth pair of dorsocentral setae (f_1) slightly longer than fifth pair of dorsocentrals (h_1); integument punctulate; opisthosoma divided into 3 parts.

Gnathosoma. Stylophore rounded anteriorly; peritreme ends in a slender anastomosing chamber (Fig. 294).

Aedeagus. Distally, the shaft ends in 2 short stylets.

Legs. Setal formulae of leg segments: femora 9-6-4-4; genua 6-5-4-4; tibiae 5(1)+2 or 3 dupl. -9-8-7; tarsi 11(4)+4 dupl.-12 or 13(0 or 1)+1 dupl.-9+1 dupl.-9+1 dupl.

Habitat and locality. Holotype female, 10 paratype females and 1 paratype male from *Galenia africana*, 20 km from Van Rhynsdorp (Bonteheuwel road), C.P., 21 September 1983 (E.A. Ueckermann).

Neopetrobia karasiensis (Meyer)
(Fig. 295-310)

Langella karasiensis Meyer, 1974: 92.

The dorsum of the female is depicted in Fig, 295. In this species the shape and length of the dorsal body setae, the shape of the peritremal anastomosis and the number of leg setae vary among different collections and even among individuals of the same collection. The female dorsal body setae vary from long and subspatulate (Fig. 296) to short and distinctly spatulate (Fig. 297); first pair of prodorsal setae (v_2) longest of the dorsal setae and vary from more spatulate (Fig. 298) to subspatulate (Fig. 299); first pair of dorsocentral setae (c_1) longer than second (d_1) and third (e_1) pairs of dorsocentrals; peritremal anastomosis of female varies from more or less rounded (Fig. 300-301) to more or less oval-shaped (Fig. 302); spermatheca broadly oval (Fig. 303); setae and solenidia (in parentheses) distributed on female leg segments as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 6 or 9-6-3 or 4-4; genua 6-5-5-4; tibiae 9(1)-8 or 9-8 or 9-7 to 9; tarsi 13 or 14+2 dupl.-11 or 12+1 dupl.-9+1 dupl.-8 or 9+1 dupl.; tactile member of duplex setae on tarsus II about two thirds the length of solenidion (Fig. 304); members of duplex setae on tarsi III and IV about equal in length (Fig. 305).

The original description of this species was based solely on female specimens. Males were unknown. The following is a description of the male:

Male (Fig. 306). Dorsal body setae narrowly lanceolate, serrate and relatively longer than those of female; dorsum divided into 4 punctate areas, 1 on prodorsum and 3 on opisthosoma; distal anastomosis of peritreme smaller than that of female and varies in shape (Fig. 307-309); chaetotaxy of legs: Femora 8 or 9-6-4-4; genua 6-5-5-4; tibiae 9(1)+2 dupl.-8-8-8 or 9; tarsi 11(3)+4 dupl.-11+1 dupl.-9+1 dupl. -9+1 dupl; aedeagus (Fig. 310) narrows distally and ends in short stylets.

Habitat and locality. This species was reported on *Senecio glutinosus* and *Galenia africana*.

New records are from: *G. fructicosa*, 15 km from Soebatsfontein (Springbok road), C.P., 18 September 1983 (E.A. Ueckermann & M.K.P. Meyer); *G. sarcophylla*, 47 km from Port Nolloth (Steinkopf road), C.P., 19 September 1983 (M.K.P. Meyer & E.A. Ueckermann); *G. rigida*, Garies, C.P., 20 September 1983 (E.A. Ueckermann); *G. rigida*, 15 km from Bitterfontein (Garies road), C.P., 20 September 1983 (M.K.P. Meyer); unidentified wild herb, Spektakelberg Pass, C.P., 17 September 1983 (E.A. Ueckermann); *Cladoraphis cyperoides*, Mesklip (Springbok-Kamieskroon road), C.P., 18 September 1983 (N.C.J. Basson); *G. rigida*, 20 km from Nuwerus (Van Rhynsdorp road), C.P., 20 September 1983 (E.A. Ueckermann).

Neopetrobia hirta (Meyer)
(Fig. 311)

Langella hirta Meyer, 1974: 86.

Neopetrobia hirta has spatulate, dorsal body setae; prodorsum with a fine reticulate pattern dorsomedially; striae on opisthosoma punctate; only solenidion on tarsus IV associated with a tactile seta; setal formula for genua I-IV 4-4-3-3; tibia I with 7 tactile setae and 1 solenidion; spermatheca oval (Fig. 311).

Habitat and locality. *N. hirta* was first described from *Hyparrhenia hirta*, Aliwal North, C.P.

Neopetrobia potchensis (Meyer)
(Fig. 312)

Langella potchensis Meyer, 1974: 87-92.

This species may be separated from related species by the following combination of characters: dorsal body setae spatulate; shield of prodorsum with fine punctate to reticulate pattern; opisthosoma with irregular transverse, widely spaced striae, devoid of punctations; solenidia on tarsi III and IV not associated with tactile setae; setal formula of genua I-IV 5-5-4-4; tibia II with 15 tactile setae and 4 solenidia.

Habitat and locality. This species was first collected on *Eragrostis curvula*, Potchefstroom, Tvl.

A new record is from: Unidentified grass, Hartebees Research Station, near Brits, Tvl., 25 November 1984 (E.A. Ueckermann).

Neopetrobia summersi (Zaher, Gomaa & El-Enany)

Langella summersi Zaher, Gomaa & El-Enany, 1982: 97.

Neopetrobia summersi has the dorsal body setae broadly spatulate; prodorsal shield punctate; opisthosoma punctate and with a few widely spaced striae; setal formula for genua I-IV 3-3-3-3; tibia I with 12 setae.

Habitat and locality. This species is known form *Cynodon dactylon* in Egypt.

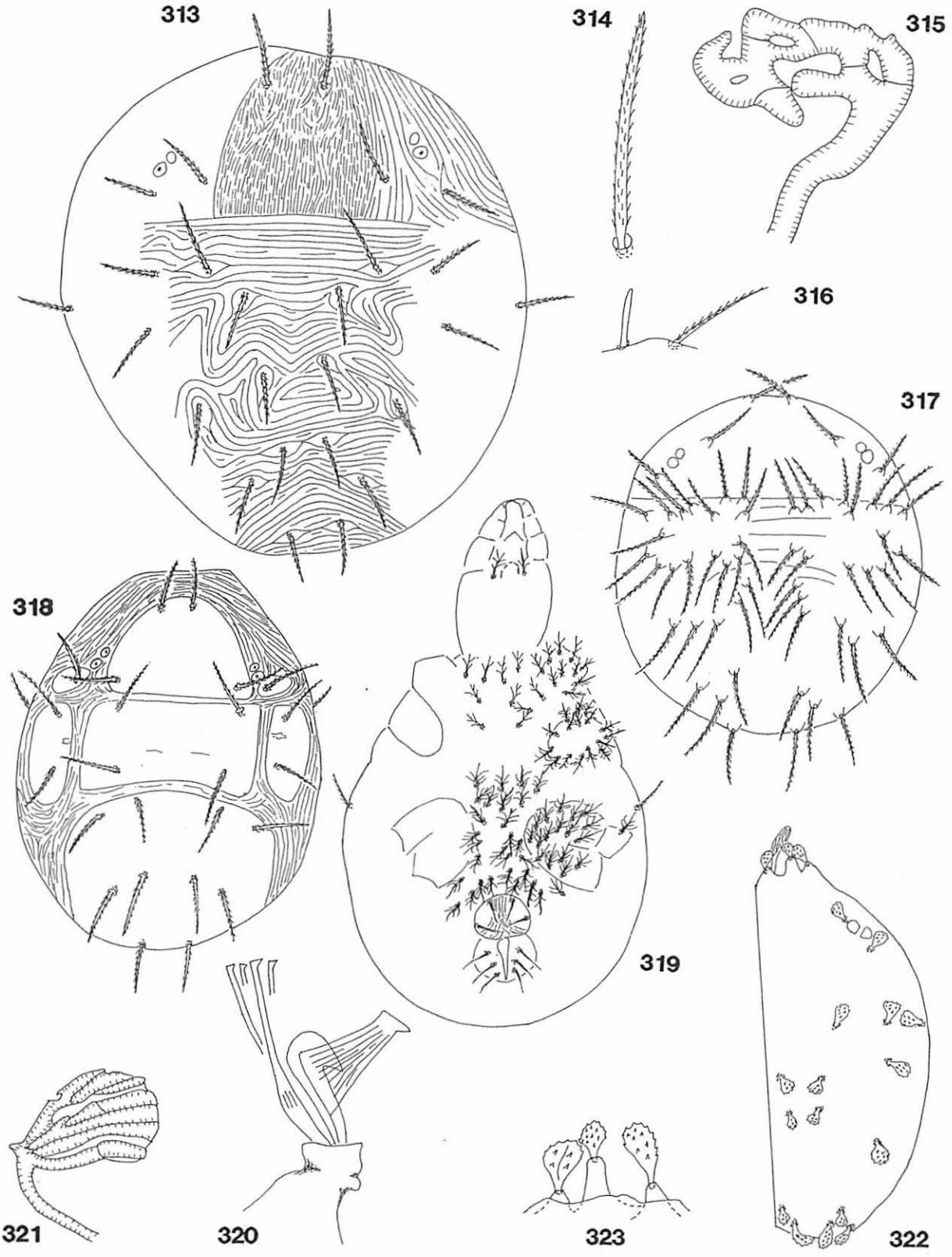

FIG. 313-316. *Neopetrobia inornata* spec. nov. Female/ *Wyfie*
FIG. 313. Dorsal view/ *Dorsale aansig*
FIG. 314. Dorsal seta/ *Dorsale seta*
FIG. 315. Peritremal anastomosis/ *Peritremale anastomose*
FIG. 316. Solenidion and tactile seta on tarsus IV well separated/ *Solenidion en tasseta op tarsus IV van wyfie geskei*
FIG. 317. *Dasyobia mitrofanovi* Strunkova. Dorsal view of female/ *Dorsale aansig van wyfie* (After Strunkova, 1971)
FIG. 318-319. *Neotrichobia arizonensis* Tuttle & Baker. Female/ *Wyfie* (After Tuttle & Baker, 1968)
FIG. 318. Dorsal view/ *Dorsale aansig*
FIG. 319. Ventral view/ *Ventrale aansig*
FIG. 320-321. *Schizonobiella aeola* Beer & Lang. Female/ *Wyfie* (After Beer & Lang, 1957)
FIG. 320. Tarsal appendages of tarsus II/ *Tarsale aanhangsels van tarsus II*
FIG. 321. Peritremal anastomosis/ *Peritremale anastomose*
FIG. 322-323. *Mezranobia vannatum* Athias-Henriot. Female/ *Wyfie* (After Athias-Henriot, 1961)
FIG. 322. Dorsal view/ *Dorsale aansig*
FIG. 323. Prodorsal lobes *Prodorsale lobbe*

Neopetrobia inornata spec. nov.
(Fig. 313-316)

Neopetrobia inornata is closely related to *N. ambrosiae* (Tuttle, Baker & Abbatiello) but can be separated from it by the longer dorsal body setae and the shape of the peritremal enlargement.

Female. Dimensions of holotype; length of body (including gnathosoma) 867 μm; length (excluding gnathosoma) 734 μm; breadth 533 μm.

Dorsum (Fig. 313). Body broadly rounded; body setae (Fig. 314) slender, serrate and taper distally; first pair of prodorsal setae (v_2) longer than other 2 pairs (sc_{1-2}) which are equal in length; members of fourth pair of dorsocentral setae (f_1) closer together than those of first 3 pairs of dorsocentral setae (c_1, d_1 and e_1); opisthosomal setae shorter than distances between bases of consecutive setae; shield area of prodorsum with finely dashed, longitudinal striae; remainder of prodorsum with coarse, longitudinal striae; opisthosoma provided with transverse striae dorsocentrally.

Gnathosoma. Stylophore broad and indented anteriorly; distal end of peritreme weakly anastomosed, consisting of a few branches (Fig. 315).

Legs. Setae and solenidia (in parentheses) on leg podomeres: coxae 2-2-1-1; trochanters 1-1-1-1; femora 9-6-4-4; genua 5-5-6-6; tibiae 13 (1)-9-9-9; tarsi 17 or 18(2)+2 dupl.-14+1 dupl.-14(1)-14(1); tarsus I bears 2 solenidia and 11 tactile setae well proximal to duplex setae; solenidia and tactile setae on tarsi III and IV well separated (Fig. 316); empodial pads about twice as long as pads of true claws and with 2 rows of ventrally directed hairs.

Male. Unknown.

Habitat and locality. Holotype female and 2 paratype females from *Petalidium setosum*, Onseepkans, C.P., 15 September 1984 (E.A. Ueckermann).

DASYOBIINI Strunkova

Dasyobiini Strunkova, 1971: 1250.

The tribe Dasyobiini is similar to Petrobiini in having a claw-like empodium, pad-like true claws and 3 pairs of ventral setae. However, it is distinctive in that neotrichy occurs in the first 3 transverse rows of opisthosomal setae.

This tribe is represented only by *Dasyobia*.

Dasyobia Strunkova
(Fig. 317)

Dasyobia Strunkova, 1971: 1250-1251; Meyer, 1974: 128.

Type-species: *Dasyobia mitrofanovi* Strunkova.

This genus is distinctive in that the dorsum has about 28 setae; peritreme anastomoses distally; true claws pad-like with tenent hairs; empodium uncinate with 2 rows of tenent hairs; tarsus I with 2 sets of duplex setae; coxal setal formula 2-2-1-1.

This genus is known only from the type-species collected in the USSR.

NEOTRICHOBIINI Tuttle & Baker

Neotrichobiini Tuttle & Baker, 1968: 73; Mitrofanov, 1972: 1173; Meyer, 1974: 125.

Neotrichobiini resembles Petrobiini in having a claw-like empodium and pad-like true claws but is characterized by neotrichy in the ventral body and coxal setae.

Neotrichobia is the only genus known in this tribe.

Neotrichobia Tuttle & Baker
(Fig. 318-319)

Neotrichobia Tuttle & Baker, 1968: 73; Meyer, 1974: 125.

Type-species: *Neotrichobia arizonensis* Tuttle & Baker.

Neotrichobia exhibits the following characteristics: dorsum (Fig. 318) with 3 pairs of prodorsals (v_2, sc_{1-2}) and 9 pairs of opisthosomal setae, distributed on 7 shields; ventrally, nymphs and adults (Fig. 319) provided with many setae; larva with only 3 pairs of ventral setae and 1 seta on coxa I; female bears 3 pairs of genital and 3 pairs of anal setae; male with only 5 pairs of genito-anal setae.

This genus is based on the type-species which is known only from Arizona, USA.

PETROBIINI Reck

Petrobiinae Reck, 1952: 423.

Petrobiini Reck, Pritchard & Baker, 1955: 42; Wainstein, 1960b: 131; Tuttle & Baker, 1968: 71; Mitrofanov, 1972: 1173; Meyer, 1974: 125.

The tribe Petrobiini can be recognized by the pad-like true claws and the uncinate empodia; there are 9 or 10 pairs of dorsal body setae on the opisthosoma and 3 pairs of ventral setae.

The following genera are assigned to this tribe: *Petrobia* Murray, *Tetranychina* Banks, *Schizonobia* Womersley, *Schizonobiella* Beer & Lang, *Mezranobia* Athias-Henriot, *Edella* Meyer, *Tenuicrus* Womersley and *Lindquistiella* Mitrofanov.

Schizonobiella Beer & Lang
(Fig. 320-321)

Schizonobiella Beer & Lang, 1957: 87; Wainstein, 1960b: 139; Tuttle & Baker, 1968: 70; Meyer, 1974: 128.

Type-species: *Schizonobiella aeola* Beer & Lang.

This genus exhibits the following characteristics: True claws pad-like, each provided with 1

pair of tenent hairs; empodium strongly hooked, bearing on each side a row of tenent hairs, anastomosing distally to form a single terminal tenent tip (Fig. 320); tarsi I and II of female each provided with 1 pair of duplex setae; tibia I of male with 6 to 8 pairs of duplex setae; peritreme anastomoses distally (Fig. 321).

Schizonobiella is known only from the type-species which was collected on grass, Texas, USA.

Mezranobia Athias-Henriot

Mezranobia Athias-Henriot, 1961: 2-4; Tuttle & Baker, 1968: 73; Meyer, 1974: 128.

Type-species: *Mezranobia vannatum* Athias-Henriot.

Prodorsum with 3 projections, each with a seta, over gnathosoma (Fig. 323); prodorsum also bears another 2 pairs of setae (sc_{1-2}); opisthosoma with 1 pair of humerals (c_3) and 9 pairs of opisthosomal setae; true claws pad-like, each with 2 tenent hairs; empodium uncinate and provided with tenent hairs; peritreme forms an anastomosis distally.

This is a monotypic genus that is only known from the type-species.

Mezranobia vannatum Athias-Henriot (Fig. 322-323)

Mezranobia vannatum Athias-Henriot, 1961: 4-6.

Dorsal body setae of *M. vannatum* broadly spatulate and serrate; leg setae are distributed on the segments of legs I-IV as follows: femora 6 or 7-5-2-3; genua 6-6-3-3; tibiae 10-8-5-3; tarsi 22+2 dupl.-15+1 dupl.-14-15 (Athias-Henriot, 1961).

Habitat and locality. This species was collected on *Quercus coccifera* in Algiers, North Africa.

Schizonobia Womersley

Schizonobia Womersley, 1940: 251; Pritchard & Baker,1955: 56-57; Wainstein, 1960b: 138-139; Tuttle & Baker, 1968: 73; Meyer, 1974: 128.

Type-species: *Schizonobia sycophanta* Womersley.

This genus can be recognized by the presence of 3 pairs of prodorsal, 1 pair of humeral and 9 pairs of opisthosomal setae, located on tubercles; pad-like true claws and uncinate empodia all bearing 1 pair of tenent hairs; distal end of peritreme distinctive in that the branches originate together and fan out to form a large complexly branched chamber.

Four species now belong to this genus: *S. sycophanta* Womersley, *S. bundi* Gutierrez, *S. hirsutellum* Athias-Henriot and *S. viticola* spec. nov.

KEY TO THE SPECIES OF *SCHIZONOBIA*

1. Second (d_1) and third (e_1) pairs of dorsocentral setae extending past bases of setae next behind 2
- Second d_1) and third (e_1) pairs of dorsocentral setae extending past bases of setae second behind ... *S. hirsutellum* Athias-Henriot, 1961
2. Including duplex setae and solenidia tarsus I of female with less than 40 setae; coxa I of female with 5 setae ..... *S. viticola* spec. nov.
- Including duplex setae and solenidia tarsus I of female with more than 40 setae 3
3. Including duplex setae and solenidia tarsus I of female with 43 setae; coxae I and II each with 3 setae ..... *S. sycophanta* Womersley, 1940
- Including duplex setae and solenidia tarsus I of female with 61 setae; coxa I with 10 setae and coxa II with 12 setae.. *S. bundi* Gutierrez, 1972

Schizonobia hirsutellum Athias-Henriot

Schizonobia hirsutellum Athias-Henriot, 1961: 6; Meyer, 1974: 128.

Schizonobia hirsutellum may be separated from *S. sycophanta* Womersley and *S. viticola* spec. nov. by the second (d_1) and third (e_1) pairs of dorsocentral setae which extend past bases of setae second behind in row.

Habitat and locality. *S. hirsutellum* is described from *Beta vulgaris*, *Cistus monspeliensis* and *Quercus robur* in Algiers, North Africa.

Schizonobia viticola spec. nov. (Fig. 324-330)

This species resembles *S. sycophanta* Womersley but the chaetotaxy of the legs is different.

Female. Dimensions of holotype: length of body (including gnathosoma) 967 μm; length (excluding gnathosoma) 800 μm; breadth 667 μm; length of leg I 867 μm; leg II 633 μm; leg III 647 μm; leg IV 720 μm.

Dorsum (Fig. 324). The 13 pairs of body setae (Fig. 325) are linear-lanceolate, serrate and unequal in length; most of the dorsal setae reach past bases of setae next behind; all dorsal setae located on tubercles; medially prodorsum indistinctly punctate and laterally prodorsum covered with undulating, longitudinal striae; opisthosoma provided with mostly transverse striae which are also undulating.

Gnathosoma. Mediodistally, the stylophore is rounded; peritreme ends in a large rounded enlargement (Fig. 326); palptarsus as illustrated in Fig. 327.

Legs. Setal formulae of legs are as follows (solenidia in parentheses): coxae 5-3-1-1; trochanters 1-1-2-2: femora 18-15-11-12; genua 14-11-10-10; tibiae 28(1)-18-18-20; tarsi 29(4)+2 dupl.-26(1)+1 dulp.-25(1)-29(2); empodia uncinate, about as long as pad of true claw; all bear 1 pair of tenent hairs (Fig. 328).

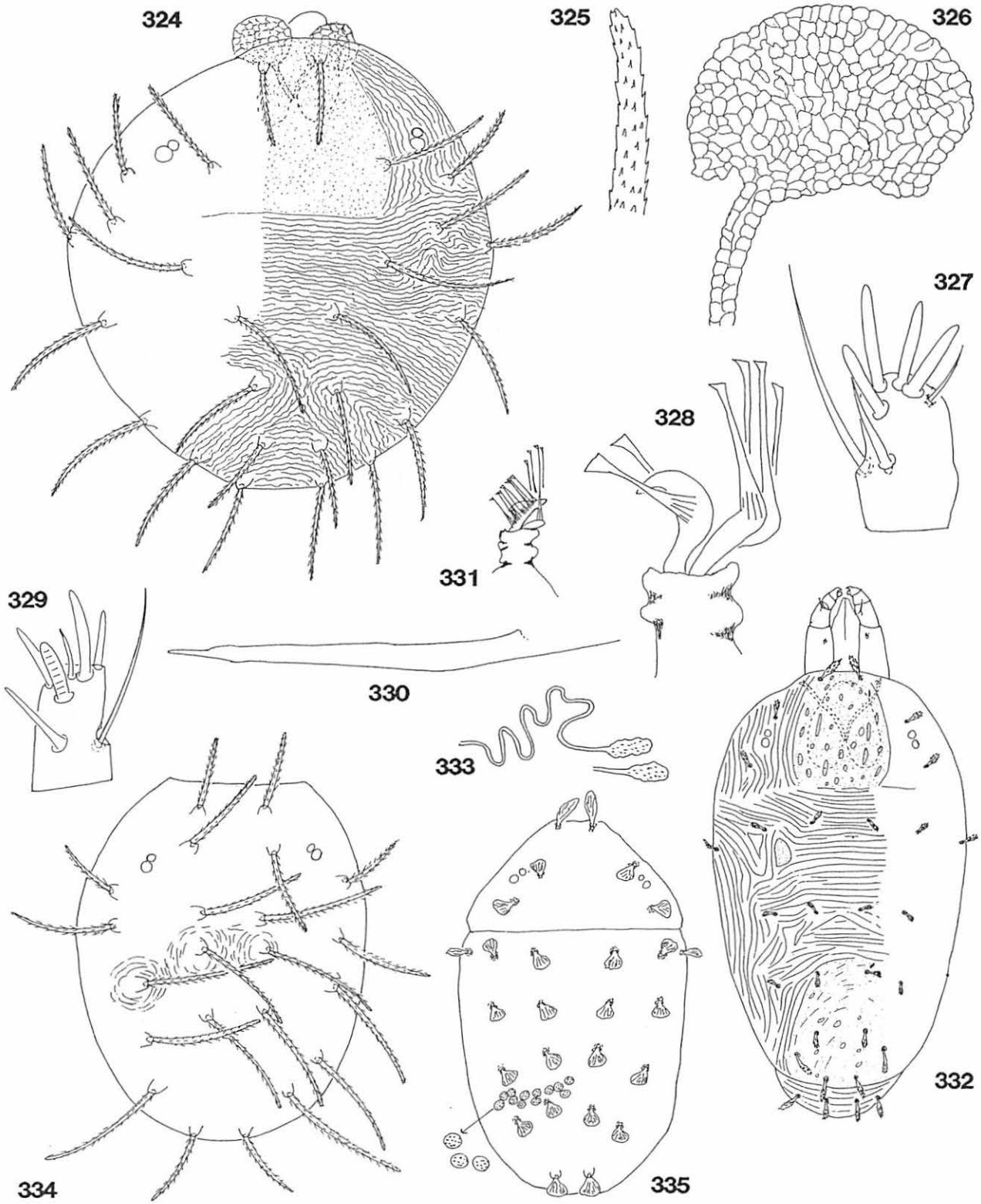

FIG. 324-330. *Schizonobia viticola* spec. nov.
FIG. 324. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 325. Tip of dorsal seta/ *Punt van dorsale seta*
FIG. 326. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 327. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 328. Tarsal appendages of female/ *Tarsale aanhangsels van wyfie*
FIG. 329. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 330. Aedeagus
FIG. 331-333. *Edella clava* Meyer. Female/ *Wyfie*
FIG. 331. Tarsal appendages/ *Tarsale aanhangsels*
FIG. 332. Dorsal view/ *Dorsale aansig*
FIG. 333. Spermatheca/ *Spermateka*
FIG. 334. *Tenuicrus errabundus* Womersley. Dorsal view of female/ *Dorsale aansig van wyfie* (After Womersley, 1940)
FIG. 335. *Lindquistiella canadensis* Mitrofanov. Dorsal view of female/ *Dorsale aansig van wyfie* (After Mitrofanov, 1976)

Male. Except for 2 punctate areas on opisthosoma, the male resembles the female; distribution of setae (solenidia in parentheses) on leg podomeres as follows: femora 17-13-10-11; genua 14-11-12-11; tibiae 20(9)+1 dupl.-22-21-23; tarsi 22(9)+4 dupl.-27(2)+1 dupl.-29-33(1); palptarsus as depicted in Fig. 329; aedeagus (Fig. 330) long, slender and narrows distally forming a thin stylet-like tip.

Habitat and locality. Holotype female, 3 paratype females and 2 paratype males from *Vitis vinifera*, Rosendal, near Worcester, C.P., 18 August 1980 (S.C. Cruickshank).

Edella Meyer

Edella Meyer, 1974: 128-129.

Type-species: *Edella clava* Meyer.

Edella is characterized by 3 pairs of prodorsal setae and 10 pairs of opisthosomal setae (including a pair of humeral setae); dorsal body setae not set on tubercles; para-anal setae (h_{2-1}) situated in a dorsal position; peritremes terminate simply; true claws pad-like and provided with tenent hairs; empodium pad-like distally but with a hook on midventral surface, bearing 2 rows of tenent hairs (Fig. 331); legs not elongated; coxal setae formula 2-2-1-1.

Edella clava Meyer
(Fig. 331-333)

Edella clava Meyer, 1974: 129.

Dorsum of female as illustrated in Fig. 332; spermatheca small, oval and with a coarse pattern on surface (Fig. 333); duct fine.

Habitat and locality. *E. clava* is the only species in *Edella* and was collected on *Scolopia zeyheri* and *Nellozia retinervis,* Nelspruit, Tvl.

Tenuicrus Womersley
(Fig. 334)

Tenuicrus Womersley, 1940: 250; Wainstein, 1960a: 219.

Type-species: *Tenuicrus errabundus* Womersley.

Pritchard & Baker (1955) considered *T. errabundus* a synonym of *Tetranychina harti* (Ewing). Wainstein (1960a) admitted that these 2 species were very similar, but pointed out that even if Womersley (1940) has overlooked the humeral setae (which are not shown in his figure), the opisthosomal setae of *Tenuicrus errabundus* are still fewer in number than those of *Tetranychina harti.* If the drawings of Womersley are accurate then the coxae of *Tenuicrus errabundus* possess 1 seta each and the coxal setal formula of *Tetranychina harti* is 2-2-1-1. Wainstein (1960a) considered this a further reason to revive the genus *Tenuicrus* although its taxonomic status is uncertain.

On the available information *Tenuicrus* can be defined as follows: Prodorsum with 3 pairs of setae; opisthosoma with 8 pairs of dorsal setae and 1 pair of humeral setae (omitted in the original description and figure); dorsal body setae set on strong tubercles; according to Womersley (1940) the peritreme ends in a "small compound globular process"; true claws pad-like, each bearing 1 pair of tenent hairs; empodium uncinate, with 2 rows of tenent hairs; coxal setae formula 1-1-1-1; legs very long and slender; leg I and IV about 3 times as long as body.

This monotypic genus was described from New South Wales, Australia.

Lindquistiella Mitrofanov
(Fig. 335)

Lindquistiella Mitrofanov, 1976: 1256.

Type-species: *Lindquistiella canadensis* Mitrofanov.

Lindquistiella is distinctive in that the prodorsum has 3 pairs of setae and opisthosoma with 10 pairs of dorsal setae (including humerals); dorsal body setae short, broadly spatulate and not set on tubercles, except for the fifth pair of dorsocentral setae (h_1) on posterior part of opisthosoma; peritremes terminate simply; dorsal integument ornamented with a reticulate pattern consisting of tuberculate groups of striae; true claws pad-like and each with 1 compound pair of tenent hairs; empodia uncinate distally and each provided with 2 rows of tenent hairs which are not knob-tipped.

This genus is known only by the type-species collected from saltmarsh on the coast of New-Brunswick, Canada.

Petrobia Murray

Petrobia Murray, 1877: 118; Womersley, 1940; 254; McGregor, 1950: 363; Pritchard & Baker, 1955: 42-44: Meyer & Ryke, 1959: 358; Wainstein 1960b: 133; Baker & Pritchard, 1960: 458; Tuttle & Baker, 1968: 71; Meyer, 1974: 129; Tuttle, Baker & Abbatiello, 1976: 26-28.

Type-species: *Trombidium lapidum* Hammer = *Petrobia latens* (Müller), by monotypy.

This genus possesses 3 pairs of prodorsal setae and 10 pairs of opisthosomal setae, not set on tubercles; dorsal integument simply striate; true claws pad-like and empodia uncinate, both with tenent hairs.

The genus *Petrobia* is divided into 2 subgenera on the basis that the peritreme ends simply or anastomoses distally.

KEY TO THE SPECIES OF *PETROBIA*

1. Peritreme anastomoses distally ..... *Petrobia* s. str. 2

- Peritreme ends simply .. *Mesotetranychus* .. 6
2. Body with dorsal setae shorter or as long as longitudinal intervals between them 3
- Body with dorsal setae much longer than longitudinal intervals between them .... *P. (P.) phaceliae* Tuttle & Baker, 1964
3. Leg I considerably shorter than body 4
- Leg I longer than body 5
4. Including solenidia and duplex setae tarsus I with 18 setae .... *P. (P.) brevipes* Reck & Bagdasarian, 1949
- Including solenidia and duplex setae tarsus I with 13 or 14 setae .... *P. xerophila* Mitrofanov, 1975
- Including solenidia and duplex setae tarsus I with 23 setae ..... *P. haematoxylon* spec. nov.
5. Non-lobed striation pattern on prodorsal shield; tarsi III and IV with duplex setae; spermatheca sausage-like ..... *P. (P.) latens* (Müller, 1776)
- Lobed striation pattern on prodorsal shield; tarsi III and IV without duplex setae; spermatheca sub-bulbous in shape .... *P. (P.) mexicana* Baker & Tuttle, 1983
6. First pair or prodorsal setae (v_2) at least twice as long as other 2 pairs (sc_{1-2}) 7
- First pair of prodorsal setae (v_2) about as long as other 2 pairs (sc_{1-2}) .... *P. (M.) vachustii* (Reck, 1948)
7. Dorsal body setae narrowly lanceolate 8
- Dorsal body setae broadly lanceolate ..... *P. (M.) waltheriae* Tuttle, Baker & Abbatiello, 1976
8. Opisthosoma with lobed striae; tarsi III and IV without duplex setae 9
- Opisthosoma with smooth striae; tarsi III and IV with duplex setae .... *P. (M.) enodis* spec. nov.
9. First pair of prodorsal setae (v_2) more than twice as long as other 2 pairs ($sc_{1\ 2}$); setal formula of femora I-IV 9-6-4-4 .... *P. (M.) tunisiae* Manson, 1964
- First pair of prodorsal setae (v_2) 1,5 times as long as other 2 pairs ($sc_{1\ 2}$); setal formula of femora I-IV 10-6-5-4 ..... *P. (M.) lycopersici* Zaher, Gomaa & El-Enany, 1982

Subgenus *Petrobia (Petrobia)* Murray

Petrobia (Petrobia) Murray, Wainstein, 1960b: 133-134; Tuttle & Baker, 1968: 71; Meyer, 1974: 130.

Type-species: *Trombidium lapidum* Hammer = *Acarus latens* Müller, by original designation.

In this subgenus the peritremes are enlarged, protrude and anastomose distally.

Petrobia (P.) haematoxylon spec. nov.
(Fig. 336-340)

This species closely resembles *P. enodis* spec. nov. but can be distinguished from it by an anastomosing peritreme.

Female. Dimensions: length of body (including gnathosoma) 670 μm; length (excluding gnathosoma) 592 μm; breadth 407 μm; length of leg I 406 μm.

Dorsum (Fig. 336). Body setae (Fig. 337) short, lanceolate and subequal in length; first pair of prodorsal setae (v_2) the longest, about half to two thirds the length of other 2 pairs (sc_1-$_2$); opisthosomal setae much shorter than distances to bases of next row; prodorsum with shield area punctulate; integument on prodorsum with solid non-lobed striae on lateral margins; non-lobed striae on opisthosoma arranged in transverse pattern dorsally.

Spermatheca (Fig. 338). Duct very fine, long and ending in an oblong sacculus; surface with coarse pattern.

Gnathosoma. Stylophore broadly rounded, longer than wide; peritremes anastomosing distally, more or less rounded (Fig. 339).

Legs. Setal formula for leg segments are: coxae 2-2-1-1; trochanters 1-1-1-1; femora 9-6-4-4; genua 5-5-4-4; tibiae 13(1)-9-7 or 8-8 or 9; tarsi 18(1)+2 dupl.-14+1 dupl.-13+1 dupl.-13+1 dupl.; tactile setae on tarsi III and IV about two thirds the length of accompanying solenidia (Fig. 340); true claws pad-like and about half as long as empodial claws which bear 2 rows of ventrally directed hairs.

Male. Unknown.

Habitat and locality. Holotype female from *Acacia haematoxylon*, 30 km from Severn (Kuruman road), C.P., 6 February 1979 (E.A. Ueckermann).

Petrobia (P.) latens (Müller)
(Fig. 341-342)

Acarus latens Müller, 1776: 187.

Petrobia latens (Müller) Oudemans, 1929: 285; Womersley, 1940: 254; McGregor, 1950: 364; Pritchard & Baker, 1955: 51; Ehara, 1956a: 246-247; Meyer & Ryke, 1959: 360-362; Wainstein, 1960b: 134-136; Baker & Pritchard, 1960: 458; Tuttle & Baker, 1968: 71; Meyer, 1974: 130.

Dorsal body setae *P. (P.) latens* not set on tubercles and shorter than intervals between consecutive setae; anterior legs much longer than body; dorsal striae without lobes; peritreme ends in a slender enlargement which is longer than broad; tarsi III and IV with duplex setae; spermatheca ablong and somewhat constricted medially (Fig. 341-342). Chromosome numbers n=4.

Habitat and locality. This species has a world wide distribution and an extensive host range of which monocotyledonous plants are the most important. Sayed (1946a) recorded it under the name *P. cepae* from onions in Egypt; Zaher, Gomaa & El-Enany (1982) found it on *Saccharum officinarum, Artemisia herba alba* and *Triticum aestivum* (wheat) in Egypt. Baker & Pritchard (1960) reported it on wheat from Zimbabwe. In South Africa it was collected on wheat, onions, grass, *Morus japonica, Medicago sativa, Oxalis* sp., *Cineraria lyrata, Chenopodium album, Hiliophila deserticola,*

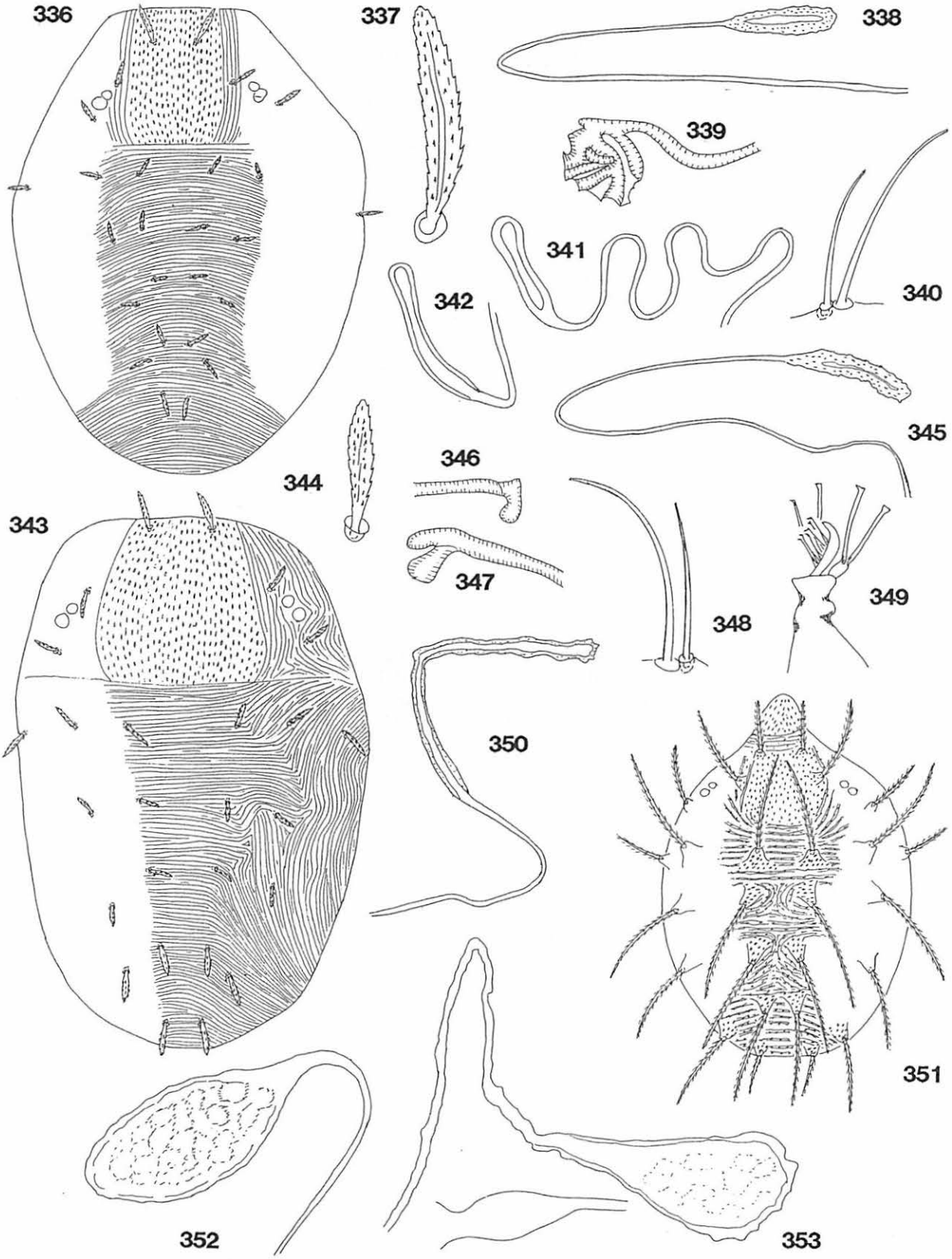

FIG. 336-340. *Petrobia (P.) haematoxylon* spec. nov. Female/ *Wyfie*
FIG. 336. Dorsal view/ *Dorsale aansig*
FIG. 337. Dorsal seta/ *Dorsale seta*
FIG. 338. Spermatheca/ *Spermateka*
FIG. 339. Peritremal anastomosis/ *Peritremale anastomose*
FIG. 340. Duplex setae on tarsi III and IV/ *Dubbelhare op tarsi III en IV*
FIG. 341-342. *Petrobia (P.) latens* (Müller). Spermathecae/ *Spermatekas*
FIG. 343-349. *Petrobia (M.) enodis* spec. nov. Female/ *Wyfie*
FIG. 343. Dorsal view/ *Dorsale aansig*
FIG. 344. Dorsal seta/ *Dorsale seta*
FIG. 345. Spermatheca/ *Spermateka*
FIG. 346-347. Variations in termination of peritreme/ *Variasies van*
FIG. 348. Duplex setae on tarsi III and IV/ *Dubbelhare op tarsi III en IV*
FIG. 349. Tarsal appendages/ *Tarsale aanhangsels*
FIG. 350. *Petrobia (M.) tunisiae* Manson. Spermatheca/ *Spermateka*
FIG. 351-353. *Tetranychina harti* (Ewing). Female/ *Wyfie*
FIG. 351. Dorsal view/ *Dorsale aansig*
FIG. 352-353. Spermathecae/ *Spermatekas*

Hordeum vulgare (barley) and *Bromus willdenowii*.

New records are: *Rumex* sp. and *Bromus willdenowii*, Kroonstad, O.F.S., 28 September 1976 (E.A. Ueckermann); *Hyparrhenia hirta*, 5 km from Fochville (Parys road), O.F.S., 29 September 1976 (E.A. Ueckermann); *Medicago sativa*, Parys, O.F.S., 29 September 1976 (M.K.P. Meyer); *Eragrostis curvula*, Hardap Dam, South West Africa (Namibia), 12 March 1980 (P.D. Theron); *Acacia* erioloba, Kamkwa, Kalahari Gemsbok National Park, C.P., 14 March 1980 (P.D. Theron); *Commelina africana* and *Imperata cylindrica*, Oudestad, near Groblersdal, Tvl., 5 December 1979 (E.A. Ueckermann); *Bromus* sp. and *Pentzia suffruticosa*, Donkergat-Langebaan road fork, C.P., 28 September 1982 (M.K.P. Meyer & S.C. Cruickshank).

Subgenus *Petrobia (Mesotetranychus)* Reck

Mesotetranychus Reck, 1948; 178.
Petrobia (Mesotetranychus) Reck, Wainstein, 1960b:137; Tuttle & Baker, 1968:71; Meyer, 1974: 131.

Type-species: *Mesotetranychus vachustii* Reck.

In *Mesotetranychus* the peritreme is hooked or knobbed distally.

Petrobia (M.) enodis spec. nov.
(Fig. 343-349)

The smooth opisthosomal striae and 1 pair of duplex setae on each of tarsi III and IV are characteristic for this species.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 573 μm (547); length (excluding gnathosoma) 480 μm (440); breadth 300 μm (267); length of leg I 367 μm.

Dorsum (Fig. 343). The 13 pairs of body setae (Fig. 344) are broadly lanceolate, serrate and subequal in length; first pair of prodorsal setae (v_2) the longest, about twice as long as other 2 pairs (sc_{1-2}); integument punctulate medially on prodorsum, with smooth striae on rest of dorsum.

Spermatheca. Sacculus oblong and with surface ornamented (Fig. 345).

Gnathosoma. Stylophore rounded anteriorly; peritreme ends in a simple hook (Fig. 346-347).

Legs. Setae and solenidia (in parentheses) on leg podomeres as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 9-6-4-4; genua 4 or 5-4 or 5-4-5; tibiae 13(1)-8 or 9-6 or 7-9; tarsi 18(1)+2 dupl.-13+1 dupl.-13+1 dupl.-13+1 dupl.; associated tactile setae on tarsi III and IV about two thirds as long as solenidia (Fig. 348); true claws pad-like, about a third the length of empodial claws (Fig. 348) bearing 2 rows of ventrally directed hairs.

Male. Unknown.

Habitat and locality. Holotype female from *Lactuca capensis*, Vaal River at Parys, O.F.S., 29 September 1976 (M.K.P. Meyer); 1 paratype female from *Themeda triandra*, Potchefstroom, Tvl., October 1969 (P.D. Theron).

Petrobia (M.) tunisiae Manson
(Fig. 350)

Petrobia tunisiae Manson, 1964: 73-74.; Meyer, 1974: 131.

Dorsum of *P. (M.) tunisiae* with lobed striae; first pair of prodorsal setae (v_2) more than twice as long as other 2 pairs (sc_{1-2}); fourth pair of dorsolateral setae (f_2) longer than other opisthosomal setae; setal formula (solenidia in parentheses) of female legs is: coxae 2-2-1-1; trochanters 1-1-1-1; femora 9-6-4-4; genua 5-5-4-4; tibiae 13(1)-9-9-9; tarsi 17(2)+2 dupl.-14+1 dupl.-14(1)-14(1); solenidia on tarsi III and IV not associated with tactile setae; spermatheca with sacculus elongate (Fig. 350).

According to Manson (1964) males of this species were unknown but among specimens collected by Dr U. Gerson from grass at Rehovot, Israel were 3 males. As in the female, the male also has lobed striae on the dorsum; setae and solenidia (in parenthheses) on leg podomeres are: femora 9-6-4-4; genua 4 or 5-5-4-4; tibiae 11(24)-9-9-9; tarsi 15 (13)+4 dupl.-14(40)+1 dupl.-14(1)-14(1); aedeagus stylet-like.

Habitat and locality. This species is now known from grass in Tunisia, North Africa and Rehovot, Israel.

Petrobia (M.) lycopersici Zaher, Gomaa & El-Enany

Petrobia (M.) lycopersici Zaher, Gomaa & El-Enany, 1982: 98-99.

This species is similar to *P. (M.) tunisiae* Manson but can be separated from the latter by the first pair of prodorsal setae (v_2) which are 1,6 times as long as the other 2 pairs (sc_{1-2}) and the setal formula of femora I-IV which is 10-6-5-4.

Habitat and locality. *P. (M.) lycopersici* is described from *Lycopersicon lycopersicum* in Egypt.

***Tetranychina* Banks**

Tetranychina Banks, 1917: 195; McGregor, 1950: 360; Meyer, 1974: 131; Tuttle, Baker & Abbatiello, 1976: 29.

Tetranychina exhibits the following combination of characters: Prodorsum bears 3 pairs of setae and opisthosoma with 10 pairs of dorsal setae; some or all opisthosomal setae set on tubercles; true claws pad-like, each with a pair of tenent hairs; empodia uncinate, bearing 2 rows of tenent hairs; peritremes hooked distally, ending simply or branched.

KEY TO THE AFRICAN SPECIES OF *TETRANYCHINA*

Females

1. All dorsal body setae set on tubercles 2
- Opisthosoma with only 2 or 3 pairs of caudal setae set on tubercles ..... *T. marsai* Manson
2. Empodial claw long, bent well beyond distal end of pad of true claw; opisthosomal integument transversely striate; dorsal body setae acutely tapering distally; fifth pair of dorsocentral setae (h_1) shorter than other opisthosomal setae ..... *T. harti* (Ewing)
- Empodial claw short, sharply bent at distal end of pad of true claw; opisthosomal integument irregularly rugose; dorsal body setae filiform; fifth pair of dorsocentral setae (h_1) about same length as other opisthosomal setae .... *T. moutiai* (Baker & Pritchard)

Tetranychina marsai (Manson)

Petrobia marsai Manson, 1964: 75-76; Meyer, 1974: 132.

This species is distinctive in that the fourth (f_1) and fifth (h_1) pairs of dorsocentral setae and fourth pair of dorsolateral setae (f_2) are situated on tubercles; these setae are much longer than other opisthosomal setae; peritreme terminates in a simple bulb; legs shorter than body.

Habitat and locality. Manson (1964) described this species from grass in Tunisia, North Africa. Zaher, Gomaa & El-Enany (1982) recorded it from *Duranta repens* in Egypt.

Tetranychina harti (Ewing)
(Fig. 351-353)

Neophyllobius harti Ewing, 1909: 405.
Petrobia harti (Ewing) Pritchard & Baker, 1955: 45-47; Reck, 1959: 101; Ehara, 1959: 192-195; Meyer & Ryke, 1959: 359-361; Baker & Pritchard, 1960: 458.
Tetranychina (Ewing) Banks, 1917: 195; McGregor, 1950: 363; Meyer, 1974: 132; Tuttle, Baker & Abbatiello, 1976: 29.

Female (Fig. 351) with dorsal body setae much longer than intervals between consecutive setae and set on strong tubercles; fifth pair of dorsocentral setae (h_1) about half as long as other dorsocentral setae (c_1, d_1, e_1 and f_1); first pair of legs about twice as long as body; spermatheca from oval to more rounded in shape and with an irregular outline (Fig. 352); beginning of spermathecal duct wide and swollen (Fig. 353); male with dorsal body setae shorter than distances between consecutive setae; first pair of dorsocentral setae (c_1) about twice as long as other dorsocentrals; first pair of legs about 3 times as long as body; peritreme ends simply; chromosome numbers n=2.

Habitat and locality. *T. harti* was reported from the following host plants and countries in Africa: *Ageratum conyzoides, Petunia hybrida, Artemisia herba alba, Conyza aegyptiaca, Atropa belladonna* and *Mentha pulegium* in Egypt; *Oxalis* sp. in Malawi; *O. corymbosa* and *O. latifolia* in Mocambique; *Oxalis* sp. and *Pelargonium* sp. in the Transvaal and Cape Province.

New records are: *Oxalis corniculata*, 2,5 km from Thomas Baines Nature Reserve (Grahamstown/Port Elizabeth road), C.P., 13 February 1974 (M.K.P. Meyer); *Medicago sativa*, Buffelspoort, Tvl., 15 March 1977 (E.A. Ueckermann); unidentified weed, Tabankulu, Swaziland, 22 August 1978 (A. Schwartz); *Plantago lanceolata*, Roodeplaat, Tvl., 24 June 1969 (T.J. Coates); *Gnaphalium pensylvanicum*, Nelspruit, Tvl., 27 August 1981 (E.A. Ueckermann).

Tetranychina moutiai (Baker & Pritchard)

Petrobia moutiai Baker & Pritchard, 1960: 458; Meyer, 1974: 131.

Tetranychina moutiai exhibits the following combination of characters: Dorsal body setae of female filiform rather than acutely tapering from base, serrate and set on strong tubercles; anterior prodorsal setae (v_2) and humeral setae (c_3) the shortest; other dorsal body setae much longer than intervals between them; dorsal integument irregularly rugose; peritreme ends distally in a complex enlargement; leg I shorter than body; empodium represented by a short, strong claw bearing 7 pairs of tenent hairs; empodial claw sharply bent at end of pad of true claw; chromosome numbers; n=4; male similar to female except that leg I is about as long as body and second pair of prodorsal setea (sc_1) and sacral setae ($f_{1\ 2}$) are shorter.

Habitat and locality. This species was described from *Verbena bonariensis* in Mauritius.

TETRANYCHINAE Berlese

Tetranychinae Reck, 1950: 123; Pritchard & Baker, 1955: 96; Wainstein, 1960b: 145; Meyer, 1974: 132.

This subfamily is distinctive in that the empodium is devoid of tenent hairs; female with 2 pairs of anal setae; male with 4 pairs of genito-anal setae.

The Tetranychinae comprises the tribes Eurytetranychini, Tenuipalpoidini and Tetranychini.

EURYTETRANYCHINI Reck

Eurytetranychinae Reck, 1950: 123; Wainstein, 1960b: 223; Tuttle & Baker, 1968: 81; Meyer, 1974: 132.

The members of the tribe Eurytetranychini have either no duplex setae on tarsi I and II or a

single pair of loosely associated setae on tarsus I; empodia either claw-like or rudimentary.

Synonychus Miller
(Fig. 354)

Synonychus Miller, 1966: 57; Meyer, 1974: 132-133.

Type-species: *Synonychus eucalypti* Miller.

This species is closely related to *Eurytetranychus* but differs in that the claw-like empodium is stout and about half as long as the tenent hairs of the true claws; tarsi I and II without duplex setae; prodorsum with 3 pairs of setae and opisthosoma with 10 pairs of setae.

The type is the only species in this genus and was found on *Eucalyptus ovata* in Tasmania.

Eurytetranychus Oudemans

Eurytetranychus Oudemans, 1931b: 224; Pritchard & Baker, 1955: 101; Wainstein, 1960b: 223; Tuttle & Baker, 1968: 82; Meyer, 1974: 133.

Type-species: *Tetranychus latus* Oudemans = *Neotetranychus* buxi Garman.

The empodium of *Eurytetranychus* is small and claw-like; tarsus I bears a pair of loosely associated setae that are probably homologous with the duplex setae.

KEY TO THE AFRICAN SPECIES OF *EURYTETRANYCHUS*

1. Dorsal body setae tapering 2
- Dorsal body setae spatulate .... *E. spathatus* Meyer
2. Setae proximal to proximodorsal sensillum on palptarsus strongly furcate and longer than proximodorsal sensillum; first pair of dorsocentral setae (c_1) a third as long as distances to bases of setae next behind .... *E. acaciae* spec. nov.
- Setae proximal to proximodorsal sensillum on palptarsus slightly furcate and about as long as proximodorsal sensillum; first pair of dorsocentral setae (c_1) more than a third as long as distances to bases of setae next behind ... 3
3. Dorsal body setae about half as long as longitudinal intervals between them; palptarsus with proximodorsal sensillum about four fifths the length of terminal one .... *E. madagascariensis* Gutierrez
- Dorsal body setae nearly as long as intervals between them; palptarsus with proximodorsal sensillum about two thirds the length of terminal one ..... *E. neobuxi* Meyer

Eurytetranychus spathatus Meyer

Eurytetranychus spathatus Meyer, 1974: 133.

Eurytetranychus spathatus is characterized by the dorsal body setae of the female which are spatulate and less than half as long as longitudinal intervals between them; dorsal body setae of male more tapered.

Habitat and locality. This species was found on an unidentified wild plant at Malelane, Tvl.

Eurytetranychus acaciae spec. nov.
(Fig. 355-356)

Eurytetranychus acaciae resembles *E. furcisetus* Wainstein in that the 2 setae proximal to the proximodorsal sensillum on the palptarsus are strongly furcate but differs in that the dorsal body setae are relatively longer.

Female. Dimensions of holotype: length of body (including gnathosoma) 500 μm; length (excluding gnathosoma) 400 μm; breadth 295 μm.

Dorsum (Fig. 355). Body setae lanceolate and serrate; first pair of dorsocentral setae (c_1) about a third the length of longitudinal distances to bases of second pair (d_1); fourth pair of dorsocentral setae (f_1) longest, reaching beyond bases of fifth pair (h_1); prodorsum bears longitudinal striae provided medially with distinct lobes; striae on opisthosoma mostly transverse and provided with obscure lobes.

Gnathosoma. Stylophore broad and rounded mediodistally; terminal sensillum on palptarsus (Fig. 356) relatively slender and about 4 times as long as broad; proximodorsal sensillum about two thirds the length of terminal sensillum; setae proximal to proximodorsal sensillum furcate and longer than the latter sensillum.

Legs. Setal formula of legs segments (solenidia follow in parentheses): coxae 2-1-1-1; trochanters 1-1-1-1; femora 4-4-2-1; genua 4-4-1-1; tibiae 6(1)-5-4-4; tarsi 15(2)-12(1)-10(1)-10(1); empodium small and claw-like.

Male. Unknown.

Habitat and locality. Holotype female and 2 paratype females from *Acacia kraussiana*, Charter's Creek, Lake St Lucia, Natal, 15 September 1972 (M.K.P. Meyer).

Eurytetranychus madagascariensis Gutierrez

Eurytetranychus madagascariensis Gutierrez, 1966: 594-597; Meyer, 1974: 133.

Dorsal body setae lanceolate, serrate and about half as long as longitudinal intervals between them; terminal sensillum on female palpus about 5 times as long as broad; proximodorsal sensillum about four fifths the length of terminal one; tibia I of female bears 8 tactile setae and 1 solenidion; tibia II has 6 tactile setae; tibia I of male provided with 8 tactile setae and 6 solenidia; male tibia II has 6 tactile setae and 2 solenidia; chromosome numbers n=3.

Habitat and locality. Gutierrez (1966) described this species from *Calotropis procera* (Asclepiadaceae) in the Malagasy Republic.

Eurytetranychus neobuxi Meyer
(Fig. 357-358)

Eurytetranychus neobuxi Meyer, 1974: 136.

Female of *E. neobuxi* with dorsal body setae lanceolate, serrate and nearly as long as longitudinal intervals between them; palptarsus with proximodorsal sensillum about two thirds the length of terminal sensillum and about as long as the 2 setae proximal to it; setal formulae of legs of 2 collections from Gansbaai and Danger Point differ from those of type series e.g. coxae 2-2-1-1; femora 6-5 or 6-2-1; genua 4-4-1-1; tibiae 9(1)-6 or 7-4 or 5-5 or 6; tarsi 14 or 15(2)-14(1)-10(1)-10(1). It was observed that variations occur among different collections and even among different individuals in the same collection. The other characters conform with the diagnostic characters of this species and so they are considered to be conspecific. The male was not previously known but has been found since the description of the species.

Male. Dorsal body setae resemble those of female; terminal sensillum of palpus (Fig. 357) about 3 times as long as broad; chaetotaxy of legs: femora 9-7-3-1; genua 5-5-2-2; tibiae 9(4)-5(3)-6-5; tarsi 15(3)-13(3)-10(1)-10(1); aedeagus (Fig. 358) turns dorsad distally at a right angle.

Habitat and locality. This species was described from *Diplorhynchus condylocarpon* in the Transvaal.

New records are: *Tabernaemontana elegans*, False Bay, Lake St Lucia, Natal, 20 August 1980 (E.A. Ueckermann); *Elytropappus scaber*, Cape Point Nature Reserve, 4 March 1976 (S.C. Cruickshank); *Psoralea fructicans*, Simonstad, C.P., 4 March 1976 (M.K.P. Meyer); *Psoralea* sp. and *Euclea racemosa*, Gansbaai, C.P., 10 March 1983 (S.C. Cruickshank & D.P. Keetch); *E. racemosa* and *Myrica cordifolia*, Danger Point, C.P., 10 March 1983 (S.C. Cruickshank & D.P. Keetch).

Eutetranychus Banks

Neotetranychus (Eutetranychus) Banks, 1917: 197.
Eutetranychus Banks, McGregor, 1950: 267; Pritchard & Baker, 1955: 111; Meyer & Ryke, 1959: 352; Baker & Pritchard, 1960: 460; Wainstein, 1960b: 226-227; Tuttle & Baker, 1968: 82; Meyer, 1974: 136; Tuttle, Baker & Abbatiello, 1976:31.

Type-species: *Tetranychus banksi* McGregor.

Eutetranychus has a rudimentary empodium consisting of a small rounded knob; true claws pad-like; tarsi I and II each bear a pair of loosely associated setae which are probably homologous with 1 pair of duplex setae, the alveoli of these setae, however are not coalescent; two pairs of anal (ps_{1-2}) and 2 pairs of para-anal setae (h_{2-3}) present in female; opisthosoma with 10 pairs of dorsal setae.

Because there is wide interspecific variation in the striation pattern and the lengths and forms of the dorsal body setae, it is extremely difficult to identify species. Van Eyndhoven (1972) studied the spermathecae (receptaculum seminis) of *E. orientalis* and *E. banksi* and found them to be quite different in shape. He concluded that this "offers a good additional character for identification." I examined 10 African species and also found differences in the shape of their spermathecae. This character together with leg chaetotaxy can be used as additional taxomonic evidence for species separation.

KEY TO THE AFRICAN SPECIES OF *EUTETRANYCHUS*

1. Idiosoma with most or all dorsal body setae set on tubercles 2
- Idiosoma with none of dorsal body setae set on tubercles; prodorsum with mediodorsal striae slightly twisted and with obvious lobes; spermatheca sharply pointed distally ..... *E. palmatus* Attiah
2. Fourth pair of dorsocentral setae (f_1) in normal position; opisthosoma without wart-like elevations between dorsocentral setae 3
- Fourth pair of dorsocentral setae (f_1) marginal; opisthosoma with wart-like elevations between dorsocentrals .... *E. cratis* Baker & Pritchard
3. Tibia II with 5 tactile setae 4
- Tibia II with 6 or 7 tactile setae 8
4. Most opisthosomal setae shorter than distances between consecutive setae 5
- Opisthosomal setae longer than distances between consecutive setae ..... *E. pantopus* (Berlese)
5. Dorsal body setae relatively slender and slightly enlarged distally 6
- Dorsal body setae spatulate 7
6. Dorsocentral setae (c_1, d_1, e_1, f_1 and h_1) relatively long, reaching to bases of setae next behind; prodorsum with mediodorsal striae tortuous, forming crescentic figures ..... *E. pyri* Attiah
- Dorsocentral setae (c_1, d_1, e_1, f_1 and h_1) very short, not reaching to bases of setae next behind; prodorsum with mediodorsal striae irregularly anastomosing ..... *E. bredini* Baker & Pritchard
7. Dorsolateral setae (c_2, d_2, e_2 and f_2) short and strongly spatulate, slightly longer than dorsocentrals (c_1, d_1, e_1, f_1 and h_1); stylophore indentate anteriorly; spermatheca small and rounded ..... *E. clastus* Baker & Pritchard
- Dorsolateral setae (c_2, d_2, e_2 and f_2) relatively long, considerably longer than dorsocentrals (c_1, d_1, e_1, f_1 and h_1); stylophore rounded anteriorly ..... *E. citri* Attiah
8. Genu III with 2 setae 9
- Genu III with more than 2 setae 14
9. Tibia III with 5 setae 10
- Tibia III with 6 setae 12
10. Tibia IV with 6 setae; femur III with 2 setae .. 11
- Tibia IV with 7 setae; femur III with 3 setae; spermatheca elongate ..... *E. enodes* Baker & Pritchard

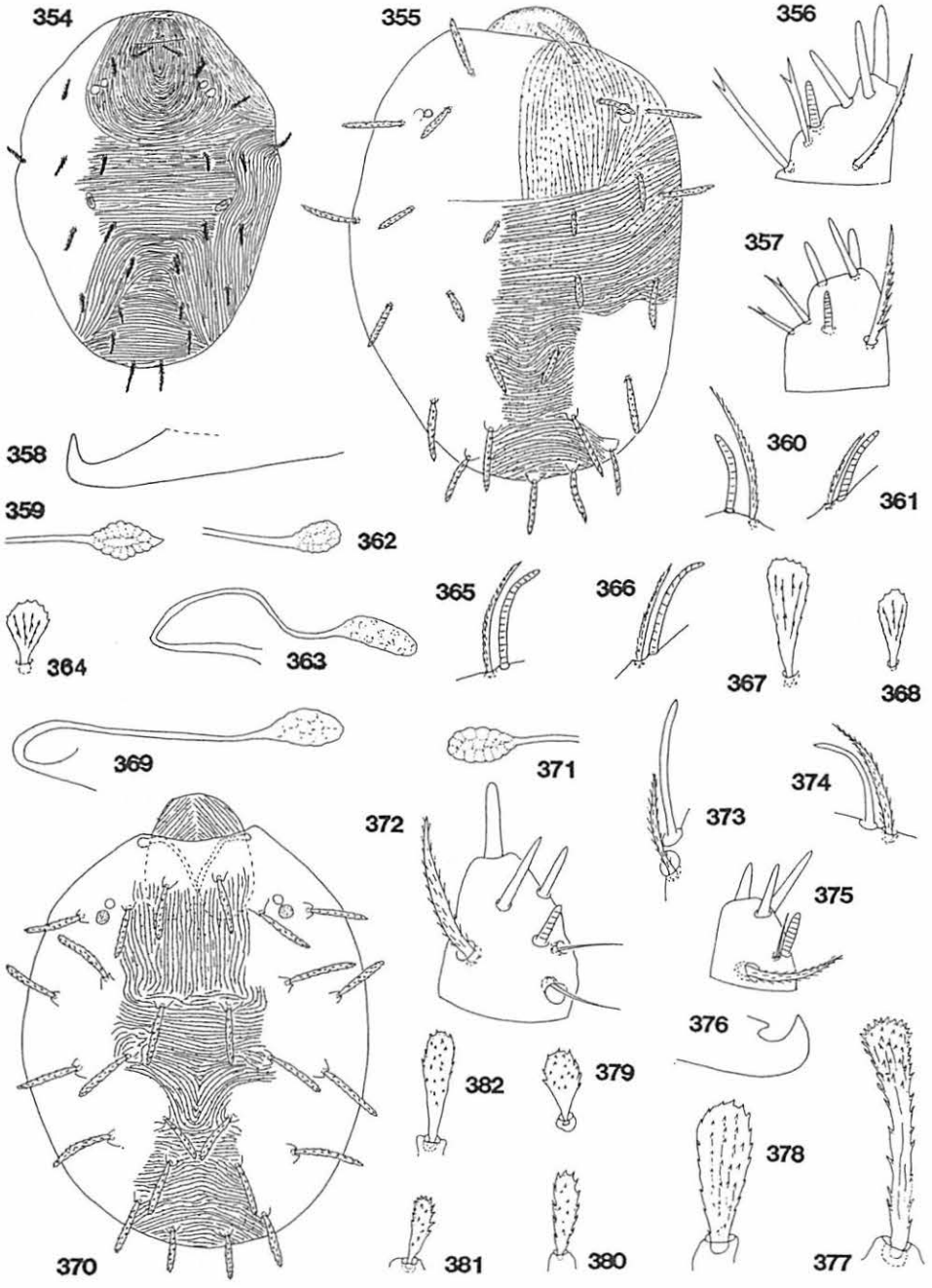

FIG. 354. *Synonychus eucalypti* Miller. Dorsal view of female/ *Dorsale aansig van wyfie* (After Miller, 1966)
FIG. 355-356. *Eurytetranychus acaciae* spec. nov. Female/ *Wyfie*
FIG. 355. Dorsal view/ *Dorsale aansig*
FIG. 356. Palptarsus/ *Palptarsus*
FIG. 357-358. *Eurytetranychus neobuxi* Meyer. Male/ *Mannetjie*
FIG. 357. Palptarsus
FIG. 358. Aedeagus
FIG. 359. *Eutetranychus palmatus* Attiah. Spermatheca/ *Spermateka*
FIG. 360-361. *Eutetranychus cratis* Baker & Pritchard. Female/ *Male*
FIG. 360. Associated setae on tarsus I/ *Geassosieerde hare op tarsus I*
FIG. 361. Associated setae on tarsus II/ *Geassosieerde hare op tarsus II*
FIG. 362. *Eutetranychus clastus* Baker & Pritchard. Spermatheca/ *Spermateka*
FIG. 363-366. *Eutetranychus enodes* Baker & Pritchard. Female/ *Wyfie*
FIG. 363. Spermatheca/ *Spermateka*
FIG. 364. Dorsal seta/ *Dorsale seta*
FIG. 365. Associated setae on tarsus I/ *Geassosieerde hare op tarsus I*
FIG. 366. Associated setae on tarsus II/ *Geassosieerde hare op tarsus II*
FIG. 367-369. *Eutetranychus carinae* Meyer. Female/ *Wyfie*
FIG. 367. Fourth pair of dorsocentral setae/ *Vierde paar dorsosentrale setas*
FIG. 368. Third pair of dorsocentral setae/ *Derde paar dorsosentrale setas*
FIG. 369. Spermatheca/ *Spermateka*
FIG. 370-376. *Eutetranychus fici* spec. nov.
FIG. 370. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 371. Spermatheca/ *Spermateka*
FIG. 372. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 373. Associated setae on tarsus I of female/ *Geassosieerde hare op tarsus I van wyfie*
FIG. 374. Associated setae on tarsus II of female/ *Geassosieerde hare op tarsus II van wyfie*
FIG. 375. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 376. Aedeagus
FIG. 377-390. *Eutetranychus orientalis* (Klein)
FIG. 377-378. Variations in dorsolateral setae of female/ *Variasies van dorsolaterale setas van wyfie*
FIG. 379-380. Variations in dorsocentral setae of female/ *Variasies van dorsosentrale setas van wyfie*
FIG. 381. Dorsolateral seta of male/ *Dorsolaterale seta van mannetjie*
FIG. 382. Dorsocentral seta of male/ *Dorsosentrale seta van mannetjie*

11. Tarsus I with solenidion of loosely associated setae about two thirds as long as proximal tactile seta; tarsus II with this solenidion slightly longer than proximal tactile seta; spermatheca oval-shaped ... *E. carinae* Meyer
- Tarsus I with solenidion of loosely associated setae less than half as long as proximal tactile seta; tarsus II with this solenidion about two thirds as long as proximal tactile setae .... *E. eliei* Gutierrez & Helle
12. Coxa II with 1 seta 13
- Coxa II with 2 setae; spermatheca oval-shaped ..... *E. africanus* (Tucker)
13. Dorsocentral setae (c_1, d_1, e_1, f_1 and h_1) extend to bases of consecutive setae and only slightly spatulate distally; terminal sensillum of female palpus 4 times as long as broad; spermatheca rounded distally ..... *E. fici* spec. nov.
- Dorsocentral setae (c_1, d_1, e_1, f_1 and h_1) shorter than distances between consecutive setae and subspatulate to spatulate; terminal sensillum of female palpus 3 times as long as broad; spermatheca pointed distally .... *E. orientalis* (Klein)
14. Genu III with 3 setae; dorsal body setae subspatulate and about half as long as intervals between them 15
- Genu III with 5 setae; dorsal body setae lanceolate and about as long as intervals between them or only slightly shorter; femur I with 7 tactile setae; spermatheca oval-shaped .. .. *E. concertativus* Meyer
15. Femur I with 7 setae; femur IV with 1 seta; spermatheca small and egg-shaped ....*E. namibianus* spec. nov.
- Femur I with 8 setae; femur IV with 2 setae; spermatheca longer and oval-shaped .... *E. swazilandicus* Meyer

Eutetranychus palmatus Attiah (Fig. 359)

Eutetranychus palmatus Attiah, 1967a: 12-13; Meyer, 1974: 137.

Prodorsum with mediodorsal striae longitudinal and slightly undulating; striae between second (d_1) and third (e_1) pairs of dorsocentral setae form a V-pattern; striae with lobes; dorsal body setae lanceolate, serrate and not set on tubercles; prodorsal setae (v_2, sc_{1-2}), fourth (f_1) and fifth (h_1) pairs of dorsocentral setae and fourth pair of dorslateral setae (f_2) tend to be longer than other dorsal body setae; third pair of dorsocentral setae (e_1) forms a slight rectangle with fourth pair of dorsocentral setea (f_1); spermatheca sharply pointed distally (Fig. 359); setal formula (solenidia in parentheses) of legs of a female specimen collected on data fronds in Israel is as follows: coxae 2-1-1-1; femora 8-6-2-1; genua 5-5-2-2; tibiae 9(2)-6(2)-6-7; tarsi 15(3)-13(2)-10(1)-10(1).

Habitat and locality. *E. palmatus* was described from date palms (*Phoenix dactylifera*) in Egypt.

Eutetranychus cratis Baker & Pritchard (Fig. 360-361)

Eutetranychus cratis Baker & Pritchard, 1960: 461; Meyer, 1974: 137.

The female is distinctive in that the integument between the dorsocentral setae (c_1, d_1 and e_1) has elliptical, wart-like elevations that give a peculiar basketweave appearance; dorsal body setae borne on strong granulated tubercles; most dorsal setae relatively long, nearly rod-like and serrate; humerals (c_3), fourth pair of dorsocentrals (f_2) and fifth pair of dorsocentrals (h_1) the shortest; humerals (c_3), fourth (f_1) and fifth (h_1) pairs of dorsocentrals and dorsolaterals (c_2, d_2, e_2 and f_2) situated marginally; members of second pair of dorsocentral setae (d_1) much wider apart than other dorsocentrals; fourth pair of dorsocentrals (f_1) more widely spaced than first (c_1) and third (e_1) pairs of dorsocentrals; first pair of dorsocentrals (c_1) closest together; striae between second (d_1) and third (e_1) pair of dorsocentrals form a V-pattern; stylophore with a pair of strong lobes anteriorly; setae and solenidia (in parentheses) distributed on legs I-IV of female as follows: coxae 2-2-1-1; femora 8-6-3-2; genua 3-3-2-2; tibiae 6(1)-5-4-5; tarsi 14(3)-13(1)-10-10(1); solenidion of loosely associated setae on tarsus I about two thirds as long as tactile seta (Fig. 360); solenidion and tactile seta of loosely associated setae on tarsus II about equal in length (Fig.361).

Habitat and locality. Baker & Pritchard (1960) described this species from Zaïre, collected on *Bixa* sp., *Macaranga* sp. and an orange leaf. It was also collected in Ibadan, Nigeria on *Trema orientalis*, 16 February 1975 (J.G. Matthysse).

Eutetranychus pantopus (Berlese)

Tetranychus pantopus Berlese, 1910: 242.
Anychus latus (Canestrini & Fanzago), Sayed, 1946b: 143-148.
Eutetranychus pantopus (Berlese), Baker & Pritchard, 1960: 464; Meyer, 1974: 152.

As the type specimens of this species in the Berlese collection consist only of 2 males the identity of this species is not clear. The similarity of Berlese's type males to Sayed's drawings of the males of *Anychus latus* lead Pritchard & Baker (1955) and Baker & Pritchard (1960) to conclude that *A. latus* was a misidentification of *Eutetranychus pantopus*. The latter species has relatively long and acutely tapering dorsocentral setae (c_1, d_1, e_1, f_1 and h_1); dorsal body setae located on small tubercles.

Habitat and locality. Sayed (1946b) collected *Anychus latus* from citrus, *Ricinus communis, Melia azedarach* and *Albizia lebbeck* in Egypt and Sudan.

Eutetranychus pyri Attiah

Eutetranychus pyri Attiah, 1967: 14-15; Meyer, 1974: 152.

The serrate rod-like dorsal body setae of *E.*

pyri are, except for the third pair of prodorsal setae (sc_2) and humerals (c_3), borne on strong tubercles; third pair of dorsocentral setae (e_1) form a square with fourth pair of dorsocentrals (f_1). Dorsal integument with fine striae, bearing widely spaced conspicuous lobes; mediodorsal striae on prodorsum tortuous, forming crescentic figures; striae between second (d_1) and third (e_1) pairs of dorsocentral setae longitudinal. Tibia II with 5 setae.

Habitat and locality. This species was collected on *Pyrus communis, Ricinus communis, Cynodon dactylon, Citrus aurantium, Solanum melongena* and *Dalbergia sisso* in Egypt.

Eutetranychus bredini Baker & Pritchard

Eutetranychus bredini Baker & Pritchard, 1960: 467; Meyer, 1974: 153.

This species is recognized by the anastomosing striae mediodorsally on prodorsum; lobes on dorsal striae strong; striae between second (d_1) and third (e_1) pairs of dorsocentrals longitudinal; dorsal body setae set on small tubercles; marginal setae all relatively long, slender, serrate and slightly enlarged distally; dorsocentral setae (c_1, d_1, e_1, f_1 and h_1) shorter and more spatulate; fourth pair of dorsocentrals (f_1) form a square with third pair of dorsocentrals (e_1) and are relatively longer than the latter; members of third (e_1) and fourth (f_1) pairs of dorsocentrals closer together than those of first (c_1) and second (d_1) pairs of dorsocentrals; second pair of dorsocentrals (d_1) wider apart than first pair (c_1); tibia II with 5 setae.

Habitat and locality. Baker & Pritchard (1960) described this species from *Phoenix dactylifera*, Rwanda Burundi.

Eutetranychus clastus Baker & Pritchard (Fig. 362)

Eutetranychus clastus Baker & Pritchard, 1960: 469; Meyer, 1974: 153.

Dorsal striae with strongly rounded lobes; striae on prodorsum more or less parallel and those between second (d_1) and third (e_1) pairs of dorsocentral setae longitudinal; dorsolateral setae (c_2, d_2, e_2 and f_2) relatively short, strongly spatulate and serrate; a specimen examined from Nigeria had marginal setae longer than those depicted for *E. clastus* by Baker & Pritchard (1960); some dorsal body setae borne on small tubercles; spermatheca small and rounded (Fig. 362); setal formula (solenidia in parentheses) for female legs is: coxae 2-2-1-1; femora 8-6-3-1; genua 5-5-2-2; tibiae 9(1)-5-5-6; tarsi 15(3)-13(1)-10(1)-10(1).

Habitat and locality. This species was first described from specimens collected on *Cassia tora* and frangipani in Zaïre. A collection made by J.G. Matthysse from *Cissampelos mucronata* in Ibadan, Nigeria (1 February 1975) was also studied.

Eutetranychus citri Attiah

Eutetranychus citri Attiah, 1967a: 15-16; Meyer, 1974: 153.

This species is closely related to *E. orientalis* (Klein) but differs from the latter species in that the first pair of dorsolaterals (c_2) and humerals (c_3) are situated anterior to first pair of dorsocentrals (c_1); third pair of dorsocentrals (e_1) form a slight rectangle with fourth pair of dorsocentrals (f_1); all setae spatulate, dorsolaterals (c_2, d_2, e_2 and f_2) being relatively longer; dorsocentrals (c_1, d_1, e_1, f_1 and h_1), humerals (c_3) and third pair of prodorsals (sc_2) not set on tubercles but other dorsal body setae borne on small tubercles; prodorsum with longitudinal striae, bearing obvious lobes; striae between second (d_1) and third (e_1) pairs of dorsocentral setae longitudinal; tibia II has 5 setae.

Habitat and locality. This species was first described from lime trees (*Tilia platyphyllos*) in Egypt.

Eutetranychus enodes Baker & Pritchard (Fig. 363-366)

Eutetranychus enodes Baker & Pritchard, 1960: 469; Meyer, 1974: 138.

The drawing by Baker & Pritchard (1960) indicates no lobes on the medial, weak striae on the prodorsum of this species. However, examination of some paratypes revealed that these striae do have poorly developed lobes as in *E. carinae* Meyer. Both *E. carinae* and *E. enodes* have smooth striae on the opisthosoma and a V-pattern between the third (e_1) and fourth (f_1) pairs of dorsocentral setae. These 2 species differ in that femur III of *E. enodes* has 3 setae and tibia IV 7 setae; spermatheca (Fig. 363) of *E. enodes* is longer and more elongate than that of *E. carinae*; setal formula (solenidia in parentheses) for female legs of *E. enodes* is: coxae 2-2-1-1; femora 8-6-3-1; genua 5-5-2-2; tibiae 9(1)-6-5-7; tarsi 15(2)-13(2)-10(1)-10(1); solenidia and associated tactile setae on tarsi I (Fig. 365) and II (Fig. 366) about equal and subequal in length respectively; dorsal body setae (Fig. 364) of female of *E. enodes* more spatulate and shorter than those of *E. carinae*. However, in material collected in Cameroun, the dorsolateral setae (c_2, d_2, e_2 and f_2) of some females tend to be more slender and subspatulate; dorsolateral setae of male *E. enodes* are more slender and subspatulate than those of the female; dorsolaterals, third (e_1) and fourth (f_1) pairs of dorsocentral setae of nymphs more slender and longer than those of females; chromosome numbers n=2.

Habitat and locality. This species was described from *Raphia ruffia, Vigna* sp., *Ficus polita, Ficus* sp., *Manihot esculenta* and peach in Zaïre. In Nigeria it was found on *Elaeis guineensis, Heliconia*

sp. and *Cola nitida*. In Cameroun it was collected from *Vernonia amygdalina* and an unidentified plant.

Eutetranychus carinae Meyer
(Fig. 367-369)

Eutetranychus carinae Meyer, 1974: 139-144.

This species resembles *E. eliei* Gutierrez & Helle and *E. enodes* Baker & Pritchard, but can be distinguished from *E. eliei* by the solenidion of the loosely associated setae on tarsus I, which is about two thirds the length of the proximal tactile seta; solenidia on tarsi I and II of *E. eliei* are considerably shorter; dorsal margin of aedeagal shaft straight in *E. carinae* and not concave as in *E. eliei*. *E. carinae* can be separated from *E. enodes* by the presence of 2 setae on femur III and 6 setae on tibia IV; setal formula (solenidia in parentheses) of female legs of *E. carinae* as follows: coxae 2-2-1-1; femora 8-6-2-1; genua 5-5-2-2; tibiae 9(1)-6-5-6; tarsi 15(2)-13(1) -10(1)-10(1); dorsal body setae of female may vary from long and subspatulate (Fig. 367) to short and more spatulate (Fig. 368); spermatheca oval (Fig. 369).

Habitat and locality. It was collected on *Ficus* sp., *F. capraefolia*, *F. burkei* and *Morus japonica* in the Transvaal.

New records are: *Ficus capensis*, Nelspruit, Tvl., 29 November 1979 (E.C.G. Bedford); *F. sycomorus*, Pongola River, near Golela, Natal, 19 August 1980 (E.A. Ueckermann).

Eutetranychus eliei Gutierrez & Helle

Eutetranychus eliei Gutierrez & Helle, 1971: 51-54; Meyer, 1974: 144-145.

Females of *E. eliei* and *E. carinae* Meyer are very similar but the median striae and lobes on the prodorsum of *E. eliei* are more pronounced than those of *E. carinae;* striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae form a V-pattern; first pair of dorsocentral setae (c_1) a third the length of first pair of dorsolateral setae (c_2); as in *E. carinae* dorsal body setae spatulate and of different lengths, first 3 pairs of dorsocentrals (c_1, d_1 and e_1) the shortest; some dorsal body setae set on small tubercles; stylophore more slender than that of *E. carinae*, about 1,5 times as long as broad and slightly indended anteriorly; solenidion of loosely associated setae on tarsus I considerably shorter than that of *E. carinae*, being less than half as long as proximal tactile seta; on tarsus II this solenidion is about two thirds the length of proximal tactile seta instead of being longer than tactile seta, as in *E. carinae*; setal formula (solenidia in parentheses) for female legs I-IV as follows: coxae 2-2-1-1; femora 8-6-2-1; genua 5-5-2-2; tibiae 9(1)-6-5-6; tarsi 15(1)-13(1)-10(1)-10(1); male aedeagus differs from that of *E. carinae* in that distal part forms an angle of less than 90° with axis of shaft; dorsal margin of shaft concave and twice as long as distal bent portion; chromosome numbers n=4.

Habitat and locality. This species was described from *Plumeria alba*, Malagasy Republic.

Eutetranychus fici spec. nov.
(Fig. 370-376)

In *E. fici* the dorsocentral setae are only slightly spatulate distally and extend to bases of setae next behind; terminal sensillum of female palpus 4 times as long as broad; spermatheca relatively small and rounded distally.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 443 μm (315-529); length (excluding gnathosoma) 345 μm (274-400); breadth 263 μm (229-350).

Dorsum (Fig. 370). Body setae vary from pointed to only slightly spatulate distally, subequal in length and set on small tubercles; dorsocentral setae (c_1, d_1, e_1, f_1 and h_1) extend to bases of setae next behind; all setae serrate; striae on prodorsum longitudinal and form a V-pattern between second (d_1) and third (e_1) pairs of dorsocentral setae; all the striae bear low, rounded lobes.

Spermatheca. Sacculus small and rounded (Fig. 371).

Gnathosoma. Stylophore rounded anteriorly; peritreme ends in a simple bulb; terminal sensillum on palptarsus (Fig. 372) about 4 times as long as its greatest breadth.

Legs. Setae and solenidia (in parentheses) on legs I-IV as follows: coxae 2-1-1-1; trochanters 1-1-1-1; femora 8-6-3-2; genua 5-5 or 6-2-2; tibiae 9(1)-6-6-7; tarsi 15(1 to 3)-13(1)-10(1)-10(1); proximal tactile seta of loosely associated setae (Fig. 373) on tarsus I about two thirds as long as solenidion; on tarsus II they are of equal length (Fig. 374).

Male. Dimensions: length (including gnathosoma) 250-270 μm; length (excluding gnathosoma) 180-210 μm; breadth 140-160 μm.

Dorsal aspect resembles that of female; chaetotaxy of legs as follows; coxae 2-1-1-1; femora 8-7-4-2; genua 5-5-2-2; tibiae 9(4)-6 or 7(1)-6(1)-7; tarsi 14 or 15 (3)-13(2)-10(1)-10(1); palptarsus with terminal sensillum about 3 times as long as its greatest breadth (Fig. 375); aedeagus (Fig. 376) bends dorsad at a right angle, bent portion shorter and more robust than that of *E. orientalis*.

Nympha. Similar to female but dorsal body setae longer and more slender.

Habitat and locality. Holotype female, 7 paratype females, 13 paratype males and 2 paratype nymphae from *Ficus gnaphalocarpus*, Sao Jorge, Cape Verde Islands, 8 June 1983 (A. van Harten).

Eutetranychus orientalis (Klein)
(Fig. 377-390)

Anychus orientalis Klein, 1936: 3; Sayed, 1946b: 143.
Eutetranychus orientalis (Klein), Baker & Pritchard, 1960: 464; Meyer & Rodrigues, 1966: 14;

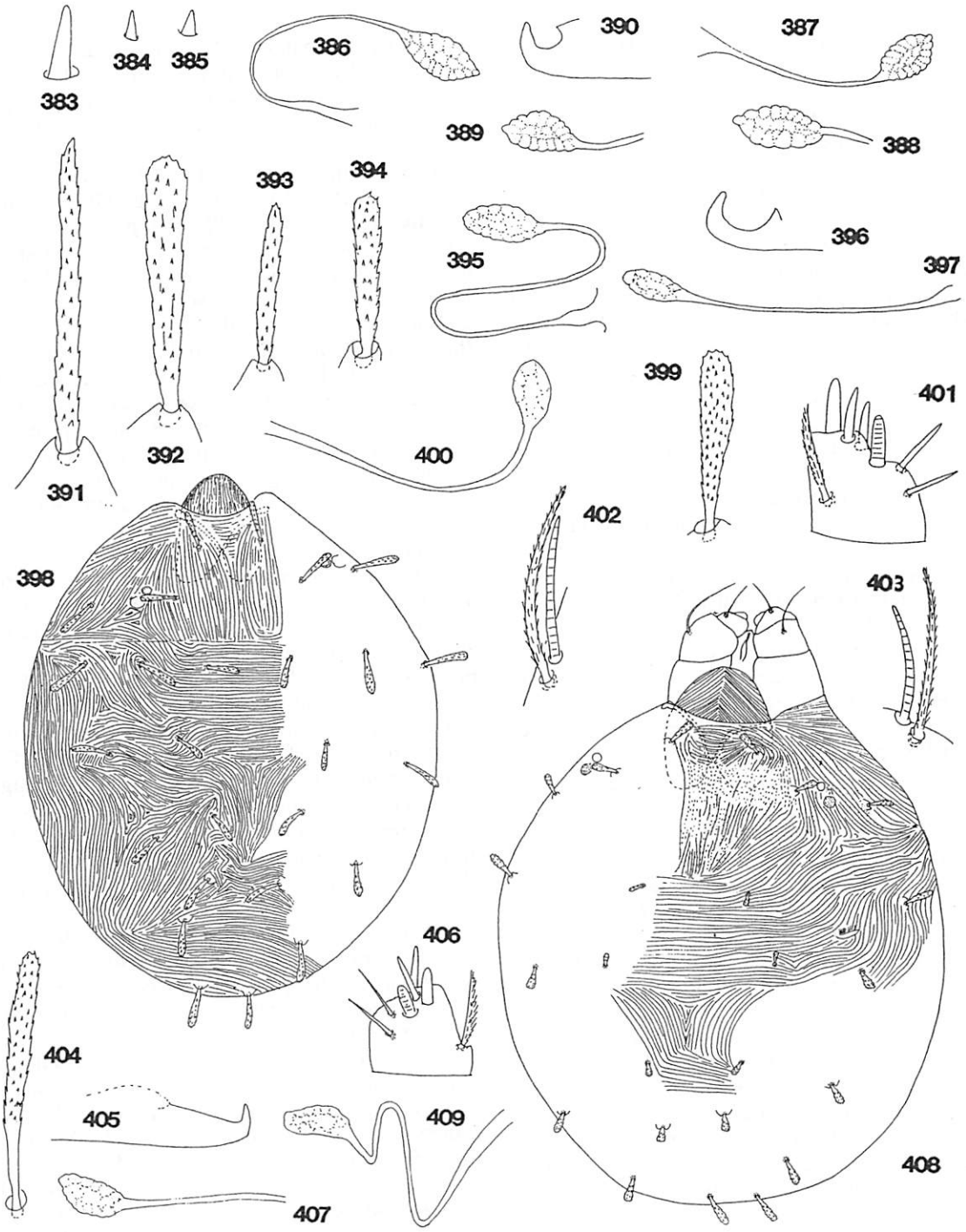

FIG. 383-390. *Eutetranychus orientalis* (continued/ *vervolg)*
FIG. 383. Terminal sensillum on female palpus/ *Terminale sensillum op palpus van wyfie*
FIG. 384-385. Variations in terminal sensillum on male palpus/ *Variasies van terminale sensillum van mannetjie*
FIG. 386. Spermatheca/ *Spermateka*
FIG. 387-388. Variations in the spermathecae of *E. anneckei* Meyer/ *Variasies van die spermatekas van E. anneckei* Meyer
FIG. 389. Spermatheca of *E. monodi* André/ *Spermateka van E. monodi* André
FIG. 390. Aedeagus
FIG. 391-396. *Eutetranychus africanus* (Tucker)
FIG. 391-392. Variations in dorsolateral setae of female/ *Variasies van dorsolaterale setas van wyfie*
FIG. 393-394. Variations in dorsocentral setae of female/ *Variasies van dorsosentrale setas van wyfie*
FIG. 395. Spermatheca/ *Spermateka*
FIG. 396. Aedeagus
FIG. 397. *Eutetranychus concertativus* Meyer. Spermatheca/ *Spermateka*
FIG. 398-406. *Eutetranychus namibianus* spec. nov.
FIG. 398. Dorsal view of female/ *Dorsale aansig van wyfie*
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FIG. 400. Spermatheca/ *Spermateka*
FIG. 401. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 402. Associated setae on tarsus I of female/ *Geassosieerde hare op tarsus I van wyfie*
FIG. 403. Associated setae on tarsus II of female/ *Geassosieerde hare op tarsus II van wyfie*
FIG. 404. Dorsal seta of male/ *Dorsale seta van mannetjie*
FIG. 405. Aedeagus
FIG. 406. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 407. *Eutetranychus swazilandicus* Meyer. Spermatheca/ *Spermateka*
FIG. 408-409. *Meyernychus emeticae* (Meyer). Female/ *Wyfie*
FIG. 408. Dorsal view/ *Dorsale aansig*
FIG. 409. Spermatheca/ *Spermateka*

Attiah, 1967a: 15; Gutierrez & Helle, 1971: 45-48; Meyer, 1974: 138-139.

Eutetranychus monodi André, 1954: 859; Gutierrez, 1977: 476-481. Syn. nov.

Eutetranychus anneckei Meyer, 1974: 148-149. Syn. nov.

Eutetranychus sudanicus Elbadry, 1970: 301-305. Syn. nov.

Gutierrez & Helle (1971) and other authors used the striation pattern between the second (d_1) and third (e_1) pairs of dorsocentral setae to separate different species in the genus *Eutetranychus*. In doing so *E. anneckei* was described by Meyer (1974) and *E. monodi* André was revived by Gutierrez (1977). These 2 species were distinguished from *E. orientalis* by the longitudinal pattern of striae between the second (d_1) and third (e_1) pairs of dorsocentral setae. However, in populations of both species, individuals occur which tend to have a V-shaped striation pattern like that of *E. orientalis*. As this character is variable it cannot be used for species characterization. The dorsal body setae of *E. anneckei* tend to be more spatulate than those of *E. monodi* and *E. orientalis* (Meyer, 1974; Gutierrez, 1977) but as there is a wide variation in the length and shape of the dorsal body setae within populations, these characters are also considered insufficient for species identification.

I examined a collection of *E. orientalis* made by Prof. W. Helle (Netherlands) from *Malus* sp. in Egypt. These mites like *E. anneckei* and *E. monodi* have longitudinal striae between the second (d_1) and third (e_1) pairs of dorsocentral setae and were considered to be conspecific with *E. anneckei*. Cross-mating experiments of these mites with *E. orientalis* from citrus in Israel were done by Mr H. Bolland (Netherlands). He found that these 2 populations were conspecific because they produced fertile F_2-females (Helle, in correspondence). I also studied the morphology and spermathecae (Fig. 386-389) of these 3 species and found no marked differences. Their spermathecae resemble that of *E. orientalis* as depicted by Van Eyndhoven (1972). The similarity of this character in the 3 species further support the contention that they are conspecific.

Elbadry (1970) described *E. sudanicus* from *Citrus aurantifolia* in the Sudan and separated it from *E. orientalis* on the basis that the second (sc_1) and third (sc_2) prodorsal setae, humerals (c_3) and dorsolateral setae (c_2, d_2, e_2 and f_2) are long, tapering and densely pubescent whereas the dorsocentral setae (c_1, d_1, e_1, f_1 and h_1) are short and spatulate. However, he did not illustrate the dorsal striae or aedeagus, nor did he record the number of setae on the leg podomeres. As mentioned earlier, the length and shape of the dorsal body setae are not reliable characters for species identification. The dorsal body setae of *E. sudanicus* resemble those of *E. monodi* in shape and length, therefore this species is also synonymized with *E. orientalis*.

Eutetranychus orientalis is characterized as follows: Striae on prodorsum longitudinal and tuberculate; striation pattern between second (d_1) and third (e_1) pairs of dorsocentral setae vary from longitudinal to V-shaped; the 13 pairs of dorsal body setae are located on tubercles and vary in length and shape; dorsolateral setae (c_2, d_2, e_2 and f_2) long and lanceolate, subspatulate (Fig. 377) or broadly spatulate (Fig. 378); dorsocentral setae (c_1, d_1, e_1, f_1 and h_1) short and spatulate (Fig. 379) or lanceolate or subspatulate (Fig. 380); first pair of dorsocentral setae (c_1) more or less in a line with first pair of dorsolaterals (c_2) and humeral setae (c_3); first pair of dorsocentrals (c_1) form a square with fourth pair of dorsocentrals (f_1); dorsal body setae of male shorter than those of female and more lanceolate or subspatulate (Fig. 381-382); terminal sensillum on female palpus about 3 times as long as broad (Fig. 383) and terminal sensillum on male palpus about twice or nearly twice as long as broad (Fig. 384-385). *E. orientalis* belongs to a species group having 8 setae on femur I, 3 on femur IV, 2 on each of genua III and IV, 6 on each of tibiae II and III and 7 on tibia IV; chromosome numbers n=3.

It can be separated from the related *E. africanus* (Tucker) by the presence of only 1 seta on coxa II, a spermatheca which is pointed distally (Fig. 386) and an aedeagus (Fig. 390) of which the bent portion is longer than the dorsal margin of the shaft.

Habitat and locality. This species is widely distributed in Africa where it is a pest of citrus. It has been collected from *Gossypium* sp. at Chitala, Malawi and *Citrus* sp. at Thika, Kenya. In Nigeria it was recorded from *Melia azedarach* at Kano and from *Trema orientalis* at Ibadan (23 February 1976) and on *Carica papaya* at Zaria (10 December 1975), all collected by J.G. Matthysse. In Egypt it is known to occur on *Citrus* sp., *C. aurantium*, *Gossypium* sp., *Ricinus communis*, *Morus alba*, *Solanum melongena*, *Punica granatum*, *Annona squamosa*, *Eucalyptus globulus*, *Dalbergia sisso*, *Chenopodium vulgaris*, *Sorbus domestica* and *Phragmites australis*.

The following are new records in South Africa: *Grewia villosa*, Kaap Muiden, Tvl., 9 February 1978 (M.K.P. Meyer); *Carica papaya*, 30 km from Pongola (Golela road), Natal, 22 August 1980 (M.K.P. Meyer); *Citrus* sp., Mkuze-hlangwarne Estates, Natal, 20 April 1983 (S. Kamburov); *Citrus* sp., Komatipoort, Tvl., July 1984 (P.F. Fourie). Collections studied from Cape Verdi Islands are: *Ananas comosus*, *Carica papaya* and *Ricinus communis*, Sao Jorge, May-August 1983 (A. van Harten).

Eutetranychus africanus (Tucker)
(Fig. 391-396)

Anychus africanus Tucker, 1926: 5.

Eutetranychus africanus (Tucker), Baker & Pritchard, 1960: 464; Meyer & Rodrigues, 1966: 14; Attiah, 1967a: 13-14; Meyer, 1974: 149-152.

Eutetranychus sambiranensis Gutierrez & Helle, 1971: 48-51; Meyer, 1974: 152. Syn. nov.

Gutierrez & Helle (1971) described a new species, *E. sambiranensis* on the basis of the dorsal

body setae being more spatulate than those of *E. africanus*. Meyer (1974) however, figured similarly shaped dorsal body setae for *E. africanus*, therefore *E. sambiranensis* is considered to be a synonym of *E. africanus*.

A female specimen named *Anychus africanus* was recently discovered on an old slide dated 1923 and remounted. The slide bears the same collection data as that given by Tucker (1926) in his original description of this species. Although the slide is not designated as a type, it was probably used by Tucker for his description of *A. africanus*. The specimen has long, slender dorsolateral setae (c_2, d_2, e_2 and f_2) and lanceolate to subspatulate dorsocentral setae (c_1, d_1, e_1, f_1 and h_1); the latter setae are half to three quarters the length of the dorsolaterals. In other female specimens studied, the dorsolateral setae vary from relatively long, slender and tapering (Fig. 391) to long and subspatulate (Fig. 392); the dorsocentral setae are tapered (Fig. 393) or subspatulate (Fig. 394) and vary in length from half as long to as long as the dorsolateral setae; dorsal body setae arise from tubercles; dorsal body setae of male more slender, shorter and tapering than those of female. Longitudinal striae on the prodorsum of the female bear weaker lobes than those of *E. orientalis*; striae on opisthosoma also with weakly developed lobes; striae longitudinal between second (d_1) and third (e_1) pairs of dorsocentral setae; spermatheca oval (Fig. 395); chromosome numbers n=2. Unfortunately most of the legs of the old specimen are missing but it bears 2 setae on coxa II, which contrasts with the 1 seta on coxa II of *E. orientalis*. However, the setal formulae of many other female specimens were studied and are as follows: coxae 2-2-1-1; femora 8-6-3-1; genua 5-5-2-2; tibiae 9(1)-6-6-7; tarsi 15(2 to 3)-13(1)-10(1)-10(1); chaetotaxy of male legs is: coxae 2-2-1-1; femora 8-6-4-1; genua 5-5-2-2; tibiae 9(4)-6(2)-6-7; tarsi 15(2)-13(2)-10(1)-10(1); distal bent portion of aedeagus (Fig. 396) shorter than dorsal margin of shaft, which is relatively straight.

Habitat and locality. In Africa *E. africanus* has been recorded from oranges, lemons, frangipani, *Tectona grandis, Bauhinia candida, Pterospermum semisagitatum* and *Cryptostegia madagascariensis* in South Africa and from peach, loquat and citrus in Mauritius. Under the name *E. sambiranensis* it has been collected from *Plumeria alba, Vitis labrusca, Cordia utilissima, Ricinus communis, Artocarpus integrifolia, A. incisa* and *Citrus* sp. in the Malagasy Republic. In Egypt is was found on eggplant, cotton, fig, prune, apple, orange, *Dalbergia sisso, Morus alba, Psidium guajava* and *Eucalyptus globulus*.

Eutetranychus concertativus Meyer (Fig. 397)

Eutetranychus concertativus Meyer, 1974: 145.

Dorsal body setae of female lanceolate and as long as or slightly shorter than longitudinal intervals between them; striae devoid of lobes and form a V-pattern between second (d_1) and third (e_1) pairs of dorsocentral setae; spermatheca oval (Fig. 397); setal counts and solenidia (in parentheses) on female leg segments as follows: coxae 2-2-1-1; femora 7-6-2-2; genua 5-5-5-3; tibiae 9(1)-7-8-8; tarsi 15(2)-13(2)-10(1)-10(1); solenidion of loosely associated setae on tarsus I nearly as long as tactile seta but on tarsus II the solenidion of this pair of setae about two thirds the length of tactile seta; male dorsal body setae longer and more linear than those of female; length of male setae greater than longitudinal intervals between them; shaft of aedeagus curves dorsad at almost 90°; distal part relatively short with a blunt tip.

Habitat and locality. This species was collected 65 km from Vioolsdrif (Karasburg road), South West Africa (Namibia) on *Indigofera spinescens*.

New records are: *Indigofera heterotricha*, Moon rock, Aughrabies Falls National Park, C.P., 15 September 1983 (M.K.P. Meyer).

Eutetranychus namibianus spec. nov. (Fig. 398-406)

This species is similar to *E. swazilandicus* Meyer, but can be distinguished by the presence of 7 setae on femur I and 1 seta on femur IV of female.

Female. Dimensions of holotype (measurements following in parentheses are variations in paratypes): length of body (including gnathosoma) 547 μm (520-533); length (excluding gnathosoma) 447 μm (427-433); breadth 389 μm (340-353); length of leg I 367 μm; leg II 333 μm; leg III 327 μm; leg IV 373 μm.

Dorsum (Fig. 398). Body setae (Fig. 399) vary slightly in length; in different collections they also vary in lengths among different specimens; setal shape varies from lanceolate to subspatulate; setae serrate and some set on small tubercles; anteriorly, longitudinal striae on prodorsum bear low, broad, semicircular lobes, which are sometimes hardly more than an occasional incision in the striae; striae between second (d_1) and third (e_1) pairs of dorsocentral setae form a V-pattern; striae on opisthosoma devoid of lobes.

Spermatheca. Small and egg-shaped (Fig. 400).

Gnathosoma. Stylophore rounded anteriorly and longer than broad; peritreme ends in a simple bulb; terminal sensillum on palptarsus (Fig. 401) about 3 times as long as its greatest thickness; proximodorsal sensillum about two thirds the length of terminal one.

Legs. Formulae for leg setae and solenidia (in parentheses) as follows: coxae 2-2-1-1; femora 7-6-2-1; genua 5-5-3-3; tibiae 9(1)-7-8-8; tarsi 15(2)-13(1)-10(1)-10(1); solenidion of loosely associated setae (Fig. 402) on tarsus I about three quarters the length of proximal tactile seta; on tarsus II solenidion shorter than proximal tactile seta (Fig. 403).

Male. Dimensions: length of body (including gnathosoma) 433 μm: length (excluding gnathosoma) 340 μm; breadth 240 μm.

Dorsal body setae longer and more slender than those of female and vary from subspatulate to tapered; first pair of dorsocentrals (c_1) may vary in

length from half to nearly one third the length of dorsolateral setae (Fig. 404); setal formulae for legs I-IV as follows: coxae 2-2-1-1; femora 9 or 10-7-3-3; genua 5-5-4-4; tibiae 9(4)-7(3)-8-8; tarsi 15(3)-13(2)-10(1)-10(1); aedeagus (Fig. 405) bends dorsad at an angle of about 90° and is blunt distally; dorsal margin of shaft straight; terminal sensillum on palptarsus (Fig. 406) about 3 times as long as its greatest thickness; proximodorsal sensillum slightly shorter than terminal one.

Nympha. Similar to female but dorsal body setae relatively longer, slender and lanceolate.

Habitat and locality. Holotype female, 5 paratype females, 1 paratype male and 6 paratype nymphae from *Salvadora persica*, Gobabis, S.W.A. (Namibia), 16 February 1978 (P.D. Theron); 4 paratype females and 1 paratype male from Twee Rivieren, C.P., 14 March 1980 (P.D. Theron); 2 paratype females from *Adenolobus pechuelii*, 15 km East of Gobabeb, S.W.A. (Namibia), 8 February 1980 (P.D. Theron); 1 paratype female from *Celosia spathulifolia*, 15 km East of Gobabeb, S.W.A., 8 February 1980 (P.D. Theron).

Eutetranychus swazilandicus Meyer
(Fig. 407)

Eutetranychus swazilandicus Meyer, 1974: 145.

This species is characterized by smooth dorsal striae, except for a small area anteriorly on prodorsum, which bears low, broad, semicircular lobes; the lobes become more obscure posteriorly until they are little more than an occasional incision in the striae; striae between second (d_1) and third (e_1) pairs of dorsocentral setae form a V-pattern; dorsal body setae subspatulate, serrate, set on small tubercles and about half as long as longitudinal intervals between them; spermatheca oval (Fig. 407); setae and solenidia (in parentheses) disposed on legs I-IV as follows: coxae 2-2-1-1; femora 8-6-2-2; genua 5-5-3-3; tibiae 9(1)-7-8-8; tarsi 15(3)-13(2)-10(1)-10(1); solenidion of loosely associated setae on both I and II nearly as long as proximal tactile seta.

Habitat and locality. This species has been collected at Big Bend, Swaziland on *Indigofera schimperi*.

Meyernychus Mitrofanov

Meyernychus Mitrofanov, 1977; 1799.

Type-species: *Eutetranychus emeticae* Meyer.

Mitrofanov (1977) created the genus *Meyernychus* with *Eutetranychus emeticae* Meyer, as type-species, because the latter species and *E. apheles* Baker & Pritchard possesed 9 pairs of dorsal opisthosomal setae; first pair of dorsolaterals (c_2) absent; fourth pair of dorsocentral setae (f_1) in normal position; true claws pad-like and empodium lacking; tarsi I and II with a pair of loosely associated setae; female with 2 pairs of anal setae (ps_{1-2}).

KEY TO THE SPECIES OF *MEYERNYCHUS*

1. Tibia II with 6 setae; dorsal integumentary striae with lobes ..... *M. emeticae* (Meyer)
- Tibia II with 5 setae; dorsal integumentary striae smooth .. *M. apheles* (Baker & Pritchard)

Meyernychus emeticae (Meyer)
(Fig. 408-409)

Eutetranychus emeticae Meyer, 1974: 153-156.

This species differs from *M. apheles* (Baker & Pritchard) by the presence of 6 setae on tibia II and distinctly lobed dorsal striae on prodorsum (Fig. 408); medially, the striae on the prodorsum are broken; dorsal body setae short and vary from subspatulate to spatulate; third (e_1) and fourth (f_1) pairs of dorsocentrals form a rectangle; some dorsal body setae borne on small tubercles; setae and solenidia (in parentheses) disposed on leg podomeres as follows: coxae 2-2-1-1; femora 8-6-3-1; genua 5-5-2-2; tibiae 9(1)-6-5-6 or 7; tarsi 15(2)-13(1)-10(1)-10(1); solenidion and proximal tactile seta of loosely associated setae both on tarsi I and II about equal in length; spermatheca depicted in Fig. 409.

Habitat and locality. This species was collected on *Citrus sinensis, C. limon, C. reticulatus, C. nobilis, Malus sylvestris* and *Plumeria* sp. in Angola. In South Africa it was collected on *Trichilia emetica*.

Meyernychus apheles (Baker & Pritchard)

Eutetranychus apheles Baker & Pritchard, 1960: 471; Meyer, 1974: 153.

In this species the dorsolateral setae (c_2, d_2, e_2 and f_2) are short, broadly spatulate and strongly serrate; dorsocentrals (c_1, d_1, e_1, f_1 and h_1) smaller and narrower; dorsal body setae set on small tubercles; dorsal striae smooth, those medially on prodorsum broken and more or less longitudinal; striae between second (d_1) and third (e_1) pairs of dorsocentrals form a V-pattern; stylophore strongly declivate anteriorly; palpus with a tubercle exterior to dorsal seta on first segment; tibia II bears 5 tactile setae.

Habitat and locality. *M. apheles* was first described from frangipani (*Plumeria* sp.) in Zaïre.

Aponychus Rimando

Aponychus Rimando, 1966: 105; Tuttle & Baker, 1968: 82; Meyer, 1974: 156; Chaudhri, 1974: 135.

Type-species: *Aponychus corpuzae* Rimando.

Rimando (1966) separated *Aponychus* from *Eutetranychus* by the presence of 1 instead of 2 pairs of anal setae; the type-species possesses 13 pairs of dorsal body setae, of which the fourth pair of dorsocentrals ($_1$), the third (e_2) and fourth (f_2) pairs of dorsolateral setae are situated marginally;

empodium reduced to a knob-like protuberance. Ma & Yuan (1982) insinuated that *Aponychus* has 2 setae on each of coxae II, but there is no indication as to the coxal setal numbers in the description of *A. corpuzae* by Rimando (1966).

Prasad (1975) divided *Aponychus* into the subgenera *Aponychus* s.str. and *Stylophoronychus* with 5 other species having 13 pairs of dorsal body setae and a deeply indented stylophore. He placed *A. baghensis* Prasad in the subgenus *Stylophoronychus* with 5 other species having a deeply indented stylophore. Under *Aponychus* s.str. he classified only those species that have a slightly indented stylophore. Here I gave generic status to *Stylophoronychus*.

Gonzalez & Flechtmann (1977) separated those species that have 12 pairs of dorsal body setae and created a new genus *Paraponychus*. Ma & Yuan (1980) also described a new genus *Sinotetranychus* characterized by 12 pairs of dorsal body setae, a single pair of duplex setae on tarsus I, tarsus II being without duplex setae and coxae II each with 1 seta. Ma & Yuan (1982) further separated those species with 13 pairs of dorsal body setae and 1 seta on each of coxae and placed them in another new genus *Chinotetranychus*.

In my opinion Prasad (1975), Gonzalez & Flechtmann (1977) and Ma & Yuan (1980, 1982) assign subgeneric and generic value to slight morphological differences which result in an unsatisfactory classification. However, at present I feel that our knowledge of these genera does not allow us to comment on their taxonomic validity and that such a decision will have to be postponed until further knowledge of their species is gathered. As *Aponychus* is currently characterized, no species of this genus have been found in Africa.

Chinotetranychus Ma & Yuan

Chinotetranychus Ma & Yuan, 1982: 109, 113-114.

Type-species: *Eutetranychus firmianae* Ma & Yuan.

This genus is similar to *Aponychus*, except for the presence of 1 seta on each of coxae II. Ma & Yuan (1982) used the lengths of the dorsocentral setae (c_1, d_1, e_1, f_1 and h_1) which are equal to that of the dorsolateral setae (c_1, d_2, e_2 and f_2) for further separation of the 2 genera. However, the variable lengths of the dorsal setae on individuals of the same population in a new species described below invalidate this character for genus characterization. This genus is represented by 4 species in Africa.

KEY TO THE AFRICAN SPECIES OF *CHINOTETRANYCHUS*

Females

1. First 2 pairs of prodorsal setae (v_2 and sc_1) or dorsocentral setae (c_1, d_1, and e_1) not set on tubercles or on weak tubercles 2
   - All dorsal body setae borne on prominent tubercles ... *C. imperatus* (Hafez & El-Badry)
2. Tibiae III and IV without solenidia; stylophore deeply cleft 3
   - Tibiae III and IV each with 1 solenidion; stylophore shallowly cleft .... *C. solimani* (Zaher, Gomaa & El-Enany)
3. Opisthosoma with caudal setae broadly lanceolate ..... *C. parydrus* spec. nov.
   - Opisthosoma with caudal setae narrowly lanceolate ..... *C. grandidieri* (Gutierrez)

Chinotetranychus imperatus (Hafez & El-Badry)

Aponychus imperatus Hafez & El-Badry, 1980: 1-12; Zaher, Gomaa & El-Enany, 1982: 101-102.

The 13 pairs of subspatulate, serrate, dorsal body setae are of different lengths and borne on promineht tubercles; tibiae III and IV without solenidia; female tarsi I and II each with 2 solenidia; male tarsus I with 2 solenidia and tarsus II with 4 solenidia.

Habitat and locality. This species was found on *Imperata cylindrica* in Egypt.

Chinotetranychus solimani
(Zaher, Gomaa & El-Enany)

Aponychus solimani Zaher, Gomaa & El-Enany, 1982: 101.

This species has the first (v_2) and second (sc_1) pairs of prodorsal setae and first 3 pairs of dorsocentral setae (c_1, d_1 and e_1) spatulate whereas the other dorsal body setae are subspatulate; stylophore shallowly cleft; tibiae III and IV each with a solenidion.

Habitat and locality. *C. solimani* was described from *Arundo donax* and *Phragmites australis* in Egypt.

Chinotetranychus parydrus spec. nov.
(Fig. 410-417)

This species is similar to *C. expansus* (Chaudhri) but differs because the fifth pair of dorsocentral setae (h_1) are about two thirds instead of half the length of fourth pair of dorsocentral setae (f_1).

Female. Dimensions of holotype (measurements in paratheses are variations in paratype): length of body (including gnathosoma) 567 μm (533-567); length (excluding gnathosoma) 467 (433-467); breadth 307 μm; length of leg I 473 μm; leg II 367 μm; leg III 400 μm; leg IV 467 μm.

Dorsum (Fig. 410). The 13 pairs of body setae (Fig. 411) spatulate to subspatulate and serrate; prodorsum with 3 pairs of setae (v_2, sc_{1-2}) measuring 40-43 μm, 25-28 μm and 60-63 μm respectively; humeral setae (c_3) about as long as third (sc_2) pair of prodorsal setae (60 μm); first pair of dorsocentral

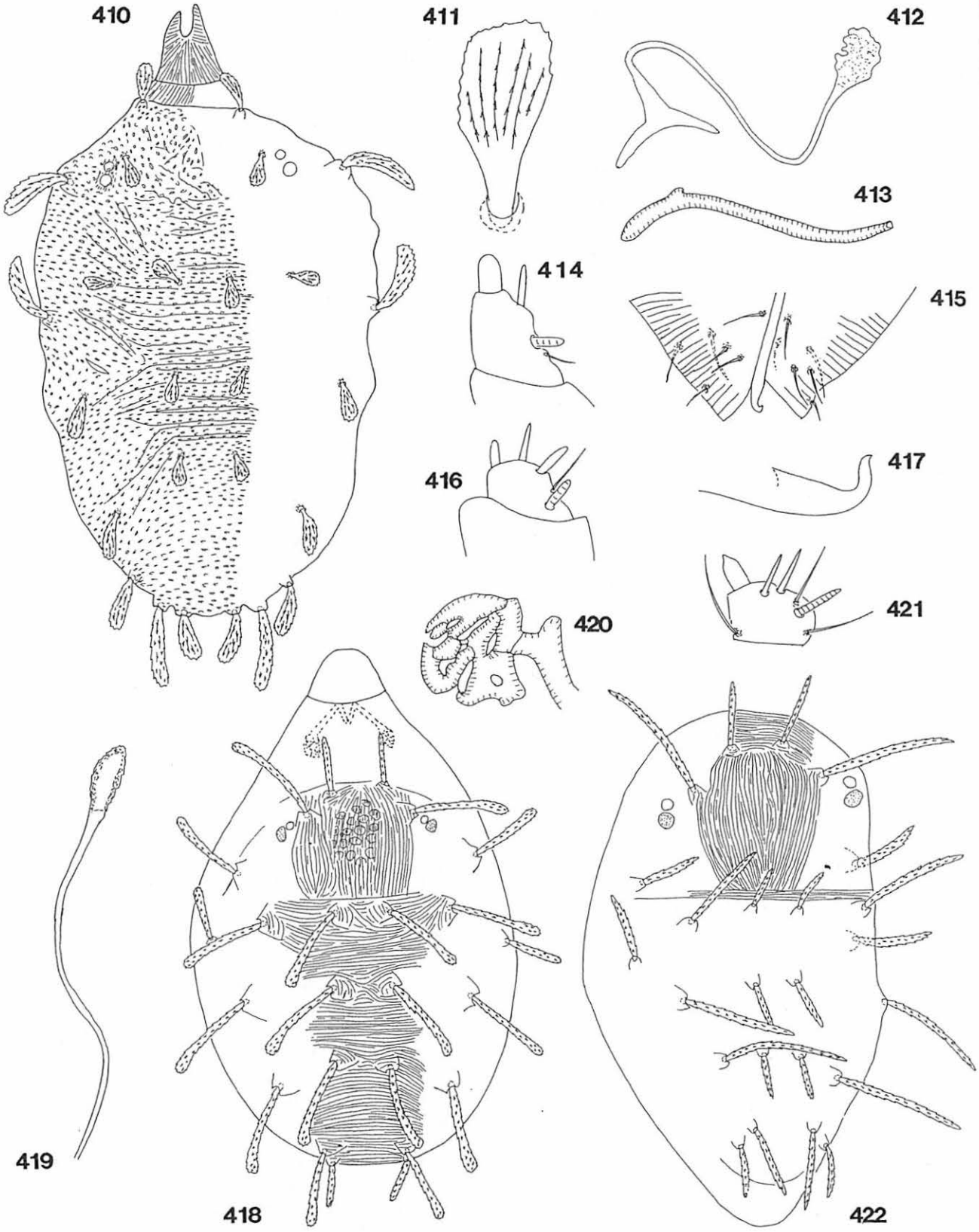

FIG. 410-417. *Chinotetranychus parydrus* spec. nov.
FIG. 410. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 411. Dorsal seta of female/ *Dorsale seta van wyfie*
FIG. 412. Spematheca/ *Spermateka*
FIG. 413. Peritreme of female/ *Peritreem van wyfie*
FIG. 414. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 415. Genito-anal area of male/ *Genito-anaalarea van mannetjie*
FIG. 416. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 417. Aedeagus
FIG. 418-422. *Eonychus subspathulatae* spec. nov.
FIG. 418. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 419. Spermatheca/ *Spermateka*
FIG. 420. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 421. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 422. Dorsal view of male/ *Dorsale aansig van mannetjie*

setae (c_1) longer (22-27 μm) than second (d_1) and third (e_1) pairs (18-22 μm); fifth pair of dorsocentrals (h_1) 44-54 μm in length; fourth pair of dorsocentrals (f_1) the longest (70-73 μm) and located marginally; length of first to fourth pairs of dorsolateral setae (c_2, d_2, e_2 and f_2) 16-21 μm, 34-38 μm, 30-53 μm and 49-57 μm respectively; among specimens of an individual collection third pair of dorsolaterals (e_2) may be shorter or longer than second pair of dorsolaterals (d_2); fifth pair of dorsocentrals (h_1) also located marginally; all dorsal setae in marginal position borne on tubercles; prodorsum tuberculate; in some specimens an inconspicuous reticulum can be observed medially on prodorsum; opisthosomal striae consist of broad, tuberculate, transverse folds.

Spermatheca (Fig. 412). Short spermathecal duct originates in a funnel-shaped structure but ends in an irregularly-shaped, ornamented sacculus; chromosome numbers n=2.

Gnathosoma. Stylophore deeply incised mediodistally and bears striae; peritreme ends simply (Fig. 413); terminal sensillum on palptarsus 1,5 times as long as broad (Fig. 414).

Legs. Setae and solenidia (in parentheses) distributed on leg podomeres as follows: coxae 2-1-1-1; femora 6-5-3-1; genua 3-3-2-2; tibiae 5(1)-3-2-2; tarsi 12(1)+1 dupl.-11+1 dupl.-8-8(1).

Male. Dimensions: length of body (including gnathosoma) 500 μm; length (excluding gnathosoma) 400 μm; breadth 220 μm; leg I 467 μm; leg II 389 μm; leg III 333 μm; leg IV 400 μm.

Dorsum with same characteristics as female; ventrally, opisthosoma (Fig. 415) bears 3 pairs of genital (g_{1-3}) and 1 pair of anal setae (ps_1); 2 pairs of para-anal setae (h_{2-3}) located dorsally; leg setal formula as follows: coxae 2-1-1-1; femora 9-6-3-1; genua 3-3-2-2; tibiae 5(1)-3(1)-2-2; tarsi 12(3)+1 dupl.-11(2)+1 dupl.-8-8(1); terminal sensillum of palptarsus (Fig. 416) about 2,5 times as long as broad; aedeagus (Fig. 417) bent dorsad at an angle of 90 °C.

Natural colour. This species is yellowish green.

Habitat and locality. Holotype female, 13 paratype females and 3 paratype males from *Phragmites mauritianus*, Roodeplaat Dam, near Pretoria, Tvl., 15 January 1980 (M.K.P. Meyer); 4 paratype females from *Phragmites* sp., Rietspruit, near Pongola, Natal. 19 August 1980 (M.K.P. Meyer); 15 paratype females and 1 paratype male from *Phragmites* sp., Pongola River, near Golela, Natal, 19 August 1980 (M.K.P. Meyer).

Chinotetranychus grandidieri (Gutierrez)

Eutetranychus grandidieri Gutierrez, 1966: 597-600.
Aponychus grandidieri (Gutierrez) Meyer, 1974: 156.

The 13 pairs of dorsal body setae are subspatulate to narrowly lanceolate; second pair of dorsolaterals (d_2) about 1,5 times as long as first pair of dorsolaterals (c_2) and first 3 pairs of dorsocentrals (c_1, d_1 and e_1); chromosome numbers n=2.

Habitat and locality. Gutierrez (1966) described this species from *Phragmites australis,* Malagasy Republic.

Paraponychus Gonzalez & Flechtmann

Paraponychus Gonzalez & Flechtmann, 1977: 67-71.

Type-species: *Paraponychus incanus* Gonzalez & Flechtmann.

According to Gonzalez & Flechtmann (1977) *Paraponychus* is similar to *Aponychus* Rimando in that tarsi I bears a pair of duplex setae, empodium absent and female bears a single pair of anal setae. According to this authors this genus differs from *Aponychus* in that the type-species has only 9 pairs of opisthosomal setae (humeral? (c_3 or c_2) absent) and 2 pairs of para-anal setae (h_{1-2}). However, Rimando (1966) also described 2 pairs of para-anal setae for *Aponychus corpuzae*. So the only remaining character by which *Paraponychus* can be separated from *Aponychus* is the number of dorsal body setae. *Paraponychus* differs from the other 2 related genera, *Sinotetranychus* Ma & Yuan and *Stylophoronychus* Prasad in that the opisthosoma bears 4 pairs of caudo-dorsal setae in a marginal position.

Paraponychus comprises 2 species, the type-species from Peru and *P. corderoi* (Baker & Pritchard) from Costa Rica. It is not known from Africa.

KEY TO THE SPECIES OF *PARAPONYCHUS*

1. Opisthosoma granulate ..... *P. incanus* (Gonzalez & Flechtmann, 1977)
- Opisthosoma with coarse transverse striae ..... *P. corderoi* (Baker & Pritchard, 1962)

Sinotetranychus Ma & Yuan

Sinotetranychus Ma & Yuan, 1980: 441-442.

Type-species: *Sinotetranychus guangzhouensis* Ma & Yuan.

Sinotetranychus is distinctive in that the opisthosoma has 9 pairs of dorsal setae, of which 3 pairs of caudal setae are located in a marginal position; opisthosomal setae, or at least dorsocentral setae (c_1, d_1 and e_1) longer than longitudinal intervals between them; tarsus I bears 1 set of duplex setae; tarsus II without duplex setae; stylophore with 2 rounded projections distally.

This genus contains 2 species, the type-species from China and *S. insularis* (Flechtmann) from Brazil. So far it was not found in Africa.

KEY TO THE SPECIES OF *SINOTETRANYCHUS*

1. Coxae each with 1 seta ..... *S. guangzhouensis* Ma & Yuan, 1980
- Coxae II each with 2 setae ..... *S. insularis* (Flechtmann, 1981)

Stylophoronychus Prasad

Aponychus (Stylophoronychus) Prasad, 1975: 1-4.

Type-species: *Aponychus (S.) baghensis* Prasad.

This genus may be distinguished by the presence of 9 pairs of dorsal setae on opisthosoma; 3 pairs of caudal setae in marginal position; dorsal body setae mostly shorter than longitudinal distances between them; stylophore with 2 pointed cone-like projections distally.

Stylophoronychus comprises the following species: *S. baghensis* Prasad from India, *S. vannus* (Rimando) from the Philippines and *S. nakaoi* (Ehara & Wongsiri).

KEY TO THE SPECIES OF *STYLOPHORONYCHUS*

1. Body with caudo-dorsal setae longer than wide 2
- Body with caudo-dorsal seate palmate, subcircular ..... *S. vannus* (Rimando, 1966)
2. Dorsocentral setae (c_1, d_1 and e_1) about equal in length ..... *S. baghensis* Prasad, 1975
- Dorsocentral setae (c_1, d_1 and e_1) decrease in size successively ..... *S. nakaoi* (Ehara & Wongsiri, 1975)

TENUIPALPOIDINI Pritchard & Baker

Tenuipalpoidini Pritchard & Baker, 1955: 97; Wainstein, 1960b: 145-146; Tuttle & Baker, 1968: 83; Meyer, 1974: 159.

The tribe Tenuipalpoidini is characterized by an uncinate empodium, which is devoid of ventral hairs; fourth pair of dorsocentral setae (f_1) marginal.

This tribe comprises 4 genera, namely *Tenuipalpoides* Reck & Bagdasarian, *Eonychus* Gutierrez, *Crotonella* Tuttle, Baker & Abbatiello and *Tenuipalponychus* Channabasavanna & Lakkundi.

Eonychus Gutierrez

Eonychus Gutierrez, 1969: 44-45; Meyer, 1974: 162.

Type-species: *Eonychus grewiae* Gutierrez.

This genus resembles *Tenuipalpoides* Reck & Bagdasarian as the fourth pair of dorsolateral setae (f_2) are located marginally and the empodium is a simple hook without ventral hairs. However, *Eonychus* can be differentiated from related genera by the presence of 9 instead of 10 pairs of opisthosomal setae; all set on strong tubercles; fourth pair of dorsocentral setae (f_1) absent. In contrast to *Tenuipalpoides* where the distal member of the duplex setae on tarsus II is short and peg-like, the duplex setae on tarsus II are long and tapering in *Eonychus*; peritreme anastomoses distally.

KEY TO THE SPECIES OF *EONYCHUS*

Females

1. Dorsal body setae subspatulate distally ..... *E. subspathulatae* spec. nov.
- Dorsal body setae not subspatulate distally .. 2
2. Dorsal body setae blunt distally; third pair of dorsocentral setae (e_1) as long as other dorsocentral setae (c_1 and d_1) 3
- Dorsal body setae tapering distally; third pair of dorsocentral setae (e_1) two thirds the length of other dorsocentral setae (c_1 and d_1) ..... *E. grewiae* Gutierrez
3. Third pair of dorsocentral setae (e_1) about as long as distances to bases of fourth pair of dorsolateral setae (f_2); terminal sensillum on palptarsus slightly longer than proximodorsal sensillum ..... *E. flavae* spec. nov.
- Third pair of dorsocentral setea (e_1) distinctly shorter than distances to bases of fourth pair of dorsolateral setae (f_2); terminal sensillum on palptarsus about two thirds the length of proximodorsal sensillum ... *E. krugeri* Meyer

Eonychus subspathulatae spec. nov.
(Fig. 418-422)

The female of this species is distinctive in that the dorsal body setae are subspatulate distally; male characterized by first pair of prodorsal setae (v_2) which are half the length of second pair (sc_1).

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 846 μm (700-867); length (excluding gnathosoma) 667 μm (533-700); breadth 480 μm (433-493).

Dorsum (Fig. 418). Body setae subspatulate distally, serrate and mostly longer than longitudinal distances between bases of consecutive setae; medially prodorsum with an indistinct reticulum, covered by fine longitudinal striae; opisthosoma mostly provided with transverse striae.

Spermatheca. Sacculus as depicted in Fig. 419.

Gnathosoma. Peritreme anastomoses distally (Fig. 420); terminal sensillum on palptarsus about twice as long as broad (Fig. 421).

Legs. Formulae for leg setae and solenidia (in parentheses) as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 6-5-3-2; genua 5-5-3-3; tibiae 7(1)-6-5-5; tarsi 8(1)+2 dupl.-8(1)+1 dupl.-7(1)-7(1).

Male (Fig. 422). Dimensions: length of body (including gnathosoma) 667 μm; length (excluding gnathosoma) 533 μm; breadth 333 μm.

Dorsal body setae of male differ from those of female in that they are pointed distally; first pair of prodorsal setae (v_2) half the length of second pair (sc_1); first 3 pairs of dorsolateral setae (c_2, d_2 and e_2) about twice as long as rest of opisthosomal setae; dorsal integument striated; prodorsum with longitudinal striae; striae on opisthosoma transverse to irregular; aedeagus gradually narrows distally to form a long slender stylet; chaetotaxy of legs: femora 7-5-3-2; genua 5-5-3-3; tibiae 7(5)-6-5-5; tarsi 9(3)+2 dupl.-8(1)+1 dupl.-7(1)-7(1).

Habitat and locality. Holotype female, 7 paratype females and 1 paratype male from *Grewia subspathulata*, Die Eiland, Hans Merensky Nature Reserve, Tvl., 25 May 1983 (M.K.P. Meyer).

Eonychus grewiae Gutierrez

Eonychus grewiae Gutierrez, 1969: 46-48; Meyer, 1974: 162.

The female of this species is characterized by dorsal body setae which taper distally and are mostly longer than distances between bases of consecutive setae; dorsal setae set on strong tubercles which are contiguous in first (c_1), second (d_1) and third (e_1) pairs of dorsocentral setae; second pair of prodorsal setae (sc_1) about twice as long as first pair (v_2) and characteristic of both female and male; third pair of dorsocentral seate (e_1) about two thirds the length of other dorsocentral setae (c_1 and d_1); terminal sensillum on palptarsus of female about as long as broad but on male twice as broad as long; female prodorsum with reticulated pattern medially; female genua I and II each bears 4 setae; femora with 3 setae; chromosome numbers n=2.

Habitat and locality. This species was described from *Grewia flavescens* in the Malagasy Republic.

Eonychus flavae spec. nov.
(Fig. 423-427)

The strong, rod-like, dorsal body setae which are mostly as long as distances between consecutive setae, separate the female of this species from that of *E. krugeri* Meyer. In the male the first pair of prodorsal setae (v_2) are about two thirds the length of second pair (sc_1).

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 467 μm (447-493); length (excluding gnathosoma) 413 μm (393-400); breadth 307 μm (300-320).

Dorsum (Fig. 423). The 12 pairs of finely serrate, rod-like setae about as long as distances between consecutive setae; all setae borne on tubercles; first pair of prodorsal setae (v_2) about half as long as second pair (sc_1); mediodorsally, prodorsum with few incomplete reticulate elements, integument finely striated inside elements of reticulum; opisthosoma with transverse to irregular striae.

Spermatheca. Sacculus pear-shaped and ornamented (Fig. 424).

Venter. Two pairs of anals (ps_{1-2}) and 2 pairs of para-anal setae (h_{2-3}) are present on opisthosoma.

Gnathosoma. Stylophore rounded anteriorly; peritreme ends in a distal sac formed by branches with a common origin flaring out to form a rounded enlargement (Fig. 425); terminal sensillum on palptarsus (Fig. 426) about twice as long as broad and about as long as mediodorsal sensilla; proximodorsal sensillum shorter than mediodorsal sensilla.

Legs. Chaetotaxy (solenidia in parentheses) as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 7-5-3-2; genua 5-5-3-3; tibiae 7(1)-5-5-5; tarsi 9(1)+2 dupl.-8(1)+1 dupl.-7(1)-7(1); true claws short, pad-like and each bearing a pair of tenent hairs; empodium a simple claw without any appendages.

Male. Posteriorly, the body is narrower and more pointed than in the female; dorsal body setae resemble those of female in shape; first pair of prodorsal setae (v_2) about two thirds the length of second pair (sc_1); dorsolateral setae (c_2, d_2, e_2 and f_2) about twice as long as dorsocentral setae (c_1, d_1 and e_1) and humeral setae (c_3); dorsal integument finely striated; striae on prodorsum longitudinal but those on opisthosoma transverse to irregular; aedeagus (Fig. 427) gradually narrows distally to form a long, slender stylet.

Habitat and locality. Holotype female, 6 paratype females and 1 paratype male from *Grewia flava*, Kuruman, C.P., 7 February 1979 (E.A. Ueckermann).

Eonychus krugeri Meyer
(Fig. 428-431)

Eonychus krugeri Meyer, 1974: 162-163.

The rod-like dorsal body setae are shorter than distances between bases of consecutive setae; variations in the shape of the peritremal anastomosis are depicted in Fig. 428-429; terminal sensillum about two thirds the length of proximodorsal sensillum (Fig. 430); spermatheca of female as shown in Fig. 431; male with first pair of prodorsal setae (v_2) about as long as second pair (sc_1).

Habitat and locality. This species was collected from *Maerua angolensis, Thylacium africanum, Grewia caffra* and *Dombeya autumnalis* in the Transvaal and *Maclura africana* in Zimbabwe.

***Crotonella* Tuttle, Baker & Abbatiello**
(Fig. 432)

Crotonella Tuttle, Baker & Abbatiello, 1974: 8.

This genus is distinctive in that the dorsal integument is striate-spiculate; 13 pairs of dorsal body setae, only first pair of dorsocentral setae (c_1) not located marginally; peritreme simple and hooked distally; tarsus II with normal set of duplex setae, its distal member is a long, tapered solenidion; true claws pad-like, each with 1 pair of tenent hairs; empodia split distally; 2 pairs of para-anal setae (h_{2-3}) present.

Crotonella is not typical of the Tenuipalpoidini because of the split empodial claws and the normal duplex setae on tarsus II. The type-species was collected on *Croton mazatlana* in Mexico.

***Tenuipalpoides* Reck & Bagdasarian**

Tenuipalpoides Reck & Bagdasarian, 1948: 183; Pritchard & Baker, 1955: 97; Meyer, 1974: 159.

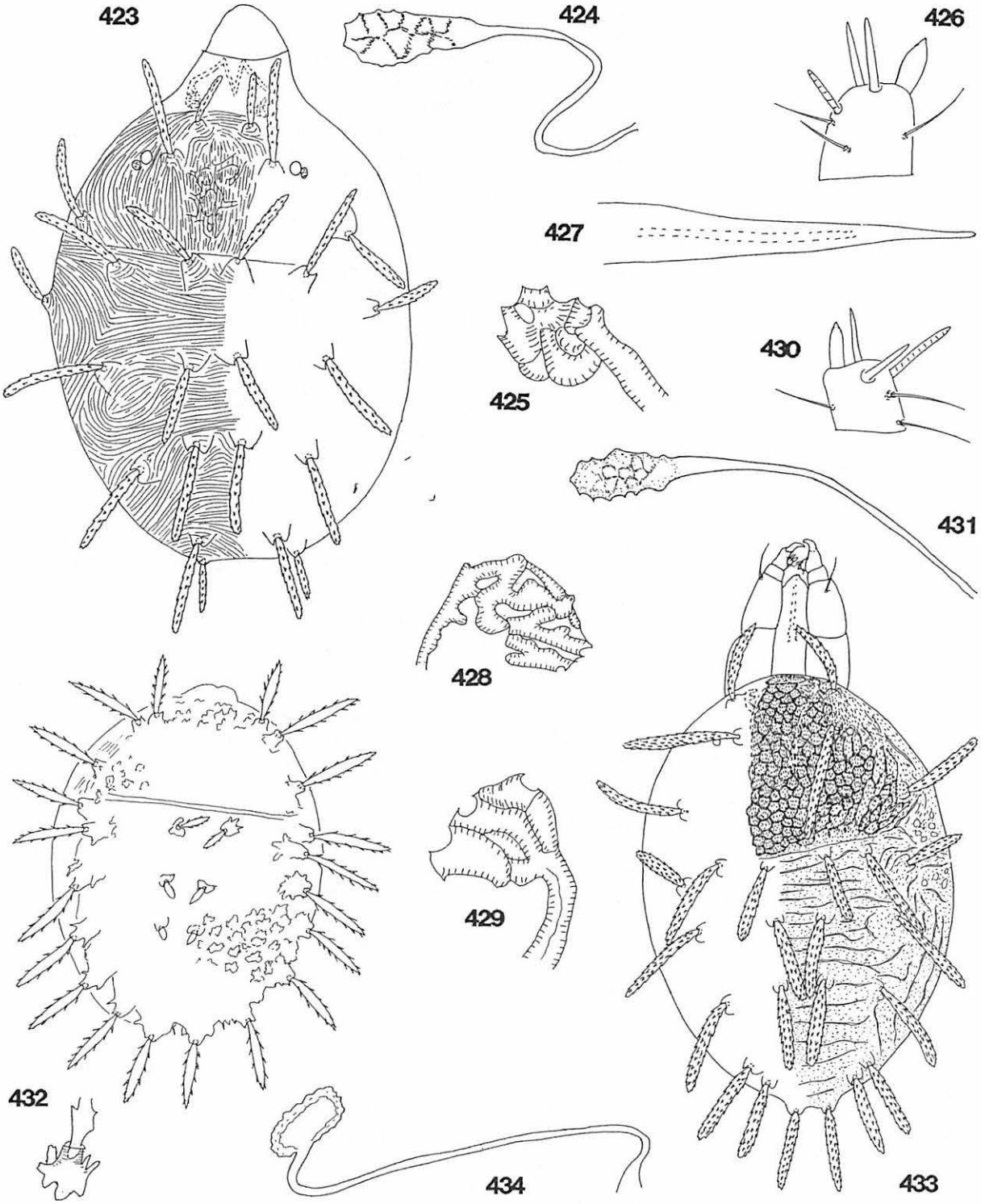

FIG. 423-427. *Eonychus flavae* spec. nov.
FIG. 423. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 424. Spermatheca/ *Spermateka*
FIG. 425. Peritremal anastomosis of female/ *Peritremale anastomose van wyfie*
FIG. 426. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 427. Aedeagus
FIG. 428-431. *Eonychus krugeri* Meyer. Female/ *Wyfie*
FIG. 428-429. Variations in peritremal anastomosis/ *Variasies van peritremale anastomose*
FIG. 430. Palptarsus
FIG. 431. Spermatheca/ *Spermateka*
FIG. 432. *Crotonella mazatlana* Tuttle, Baker & Abbatiello. Dorsal view of female/ *Dorsale aansig van wyfie* (After Tuttle, Baker & Abbatiello, 1974)
FIG. 433-434. *Tenuipalpoides sebakwensis* Meyer. Female/ *Wyfie*
FIG. 433. Dorsal view/ *Dorsale aansig*
FIG. 434. Spermatheca/ *Spermateka*

Type-species: *Tenuipalpoides zizyphus* Reck & Bagdasarian.

The genus *Tenuipalpoides* may be recognized by the presence of 10 pairs of opisthosomal setae [including humerals (c_3)]; fourth pair of dorsocentral setae (f_1) marginal so that posterior margin of body bears 3 pairs of setae (f_{1-2} and h_2); dorsal body setae long, serrate, broadly lanceolate and set on tubercles; integument striate-reticulate; peritreme hooked or with branches; tarsus II with distal member of duplex setae short and peg-like; true claws pad-like, each with 1 pair of tenent hairs; empodia uncinate, entire and devoid of proximoventral hairs.

This genus contains 3 species, namely *T. zizyphus* Reck & Bagdasarian, *T. dorychaeta* Pritchard & Baker and *T. sebakwensis* Meyer.

KEY TO THE SPECIES OF *TENUIPALPOIDES*

1. Tarsus I with setae proximal to duplex setae . . . 2
- Tarsus I without any setae proximal to duplex setae .. *T. zizyphus* Reck & Bagdasarian, 1948
2. Tarsus I with 1 tactile seta and 1 solenidion proximal to duplex setae; peritreme with a number of irregular, pectinate branches .... *T. dorychaeta* Pritchard & Baker, 1955
- Tarsus I with 2 tactile setae and 1 solenidion proximal to duplex setae; peritreme hooked distally and with a single branch .... *T. sebakwensis* Meyer, 1974

Tenuipalpoides sebakwensis Meyer
(Fig. 433-434)

Tenuipalpoides sebakwensis Meyer, 1974: 159-162.

Tenuipalpoides sebakwensis may be differentiated from *T. zizyphus* Reck & Bagdasarian and *T. dorychaeta* Pritchard & Baker, by the presence of 2 tactile setae and 1 solenidion proximal to duplex setae; peritreme hooked distally and with a single branch; spermatheca as depicted in Fig. 434.

Habitat and locality. *T. sebakwensis* was first found on an unidentified wild bush in Zimbabwe.

Tenuipalponychus Channabasavanna & Lakkundi
(Fig. 435)

Tenuipalponychus Channabasavanna & Lakkundi, 1977: 23.

Type-species: *Tenuipalponychus citri* Channabasavanna & Lakkundi.

This genus is similar to *Tenuipalpoides* Reck & Bagdasarian in the dorsal aspect of the body and the tarsal appendages. However, it differs in that tarsus II bears a normal set of duplex setae, its distal member is a long, tapered solenidion and the peritreme ends in a simple bulb.

This genus is known only from the type-species which was found on *Citrus sinensis* in India.

Duplanychus Meyer

Duplanychus Meyer, 1974: 157.

Type-species: *Duplanychus rivulus* Meyer.

As in *Eutetranychus* the empodium is a rudimentary knob and to all appearances absent; true claws pad-like and each with a single pair of tenent hairs. It differs from *Eutetranychus* in that tarsus I has 2 pairs of duplex setae but tarsus II is devoid of duplex setae; these mites have 13 pairs of dorsal body setae which are thick, serrate, mostly long and set on strong tubercles; first pair of dorsocentral setae (c_1) contiguous; fourth pair of dorsocentral setae (f_1) more widely spaced than preceding 3 pairs (c_1, d_1 and e_1) but not marginal in position; female with 2 pairs of anal setae (ps_{1-2}); peritreme ends in a simple bulb.

KEY TO THE SPECIES OF *DUPLANYCHUS*

Females

1. Dorsal body setae expanded distally; tibia II with 7 setae and tibiae III and IV each with 4 setae ..... *D. sanctiluciae* Meyer
- Dorsal body setae not expanded distally; tibia II with 8 setae 2
2. Second pair of dorsocentral setae (d_1) nearly reaching bases of fourth pair of dorsocentral setae (f_1); second pair of prodorsal setae (sc_1) slightly more than twice as long as first (v_2) and third pairs (sc_2) ..... *D. rivulus* Meyer
- Second pair of dorsocentral setae (d_2) extending past posterior margin of body; second pair of prodorsal setae (sc_1) 3 times as long as first (v_2) and third pairs (sc_2) .... *D. ranjatoi* (Gutierrez)

Duplanychus sanctiluciae Meyer

Duplanychus sanctiluciae Meyer, 1974: 157.

This species is distinctive in that the dorsal body setae are expanded distally; tibia II with 7 setae; tibiae III and IV each with 5 setae.

Habitat and locality. This species was first described from *Scutia myrtina*, Charter's Creek, Lake St Lucia, Natal.

A new record is: *Grewia caffra*, Farm near Lake St Lucia, Natal, 21 August 1980 (E.A. Ueckermann).

Duplanychus rivulus Meyer
(Fig. 436)

Duplanychus rivulus Meyer, 1974: 157-158.

Duplanychus rivulus is characterized by the second pair of dorsocentral setae (d_1) that extends to bases of fourth pair of dorsocentral setae (f_1); second

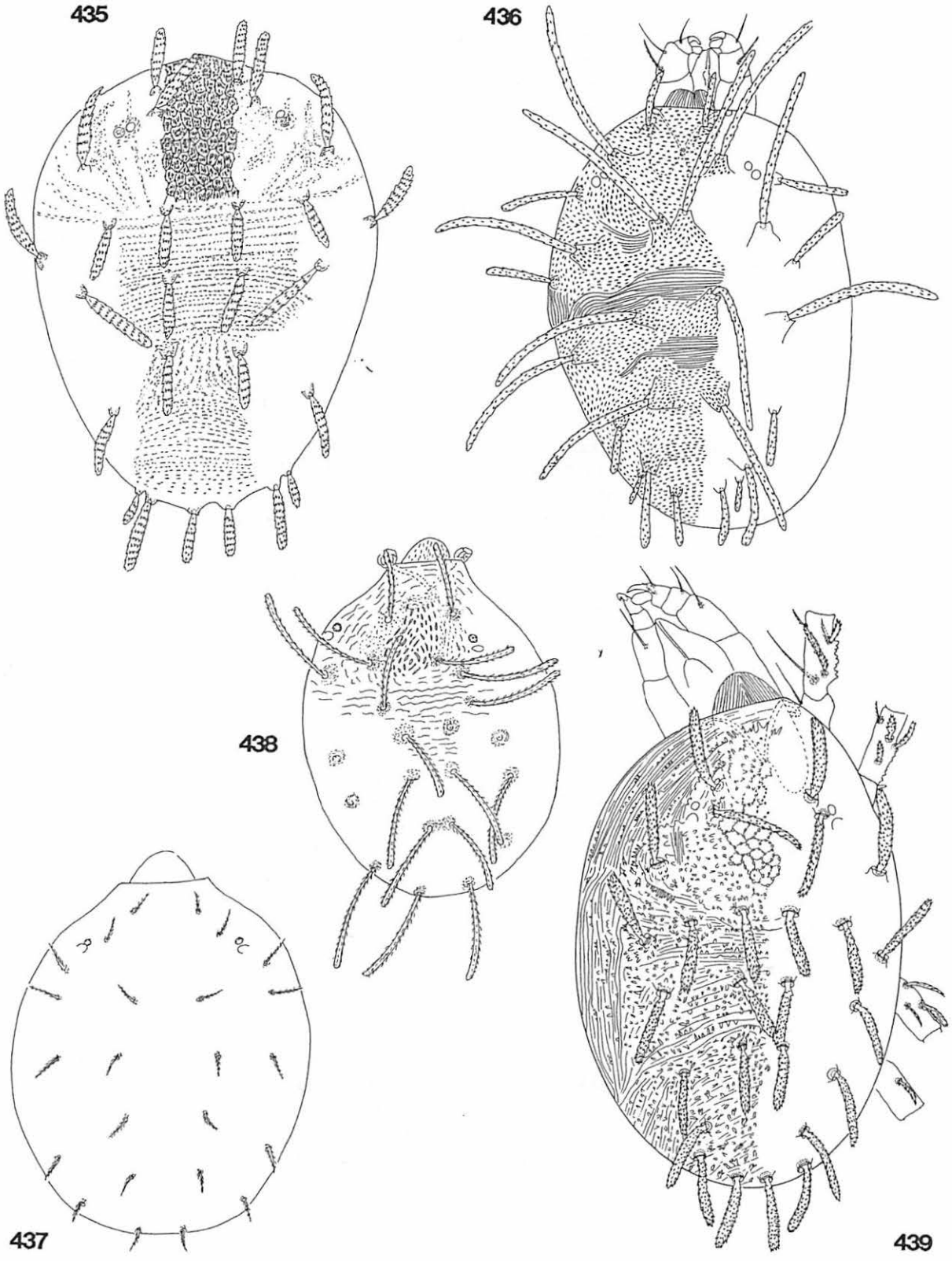

FIG. 435. *Tenuipalponychus citri* Channabasavanna & Lakkundi. Dorsal view of female/ *Dorsale aansig van wyfie* (After Channabasavanna & Lakkundi, 1977)

FIG. 436. *Duplanychus rivulus* Meyer. Dorsal view of female/ *Dorsale aansig van wyfie*

FIG. 437. *Anatetranychus hakea* Womersley. Dorsal view of female/ *Dorsale aansig van wyfie* (After Womersley, 1940)

FIG. 438. *Atetranychus estebanesae* Tuttle, Baker & Abbatiello. Dorsal view of female/ *Dorsale aansig van wyfie* (After Tuttle, Baker & Abbatiello, 1974)

FIG. 439. *Tylonychus transvaalensis* Meyer. Dorsal view of female/ *Dorsale aansig van wyfie*

pair of prodorsal setea (sc_1) more than twice as long as first (v_2) and third (sc_2) pairs.

Habitat and locality. This species was first recorded from *Acacia rehmanniana* in Zimbabwe.

A new record is: *Grewia flavescens*, Strydom Tunnel, Tvl., 22 February 1978 (M.K.P. Meyer).

Duplanychus ranjatoi (Gutierrez)

Eutetranychus ranjatoi Gutierrez, 1967b: 566-567; Meyer, 1974: 158.

This species has the second pair of dorsocentral setae (d_1) extending past the posterior margin of the body; second pair of prodorsal setae (sc_1) 3 times as long as first (v_2) and third (sc_2) pairs; chromosome numbers n=3.

Habitat and locality. *D. ranjatoi* was collected on *Rinorea greveanna* in the Malagasy Republic.

Anatetranychus Womersley
(Fig. 437)

Anatetranychus Womersley, 1940: 261; Wainstein, 1960b: 200; Tuttle & Baker, 1968: 107; Meyer, 1974: 158-159.

Type-species: *Anatetranychus hakea* Womersley.

This genus is characterized by the presence of 2 sets of duplex setae on tarsus I, proximal tactile member nearly as long as solenidion; tarsus II without duplex setae; empodium a long, slender claw, more than half as long as tenent hairs of true claw and without proximoventral hairs; 3 pairs of prodorsal setae (v_2, sc_{1-2}) and 10 pairs of opisthosomal setae shorter than longitudinal intervals between them and usually not set on tubercles; dorsal integument simply striate; 2 pairs of para-anal setae (h_{2-3}) on venter.

Anatetranychus comprises the type-species and *A. hapsis* (Davis) from Australia. This genus is not known to occur in Africa.

Atetranychus Tuttle, Baker & Abbatiello
(Fig. 438)

Atetranychus Tuttle, Baker & Abbatiello, 1974: 13.

Type-species: *Atetranychus estebanesae* Tuttle, Baker & Abbatiello.

This genus may be recognized by having a single set of duplex setae on tarsus I; lateral striae on prodorsum and dorsal opisthosomal striae widely spaced and irregular; prodorsum with shield pebbled; dorsal body setae long and set on tubercles; empodia claw-like and devoid of proximoventral hairs; true claws pad-like; peritreme ends in a large anastomosed ball; 2 pairs of para-anal setae (h_{2-3}) on venter.

Atetranychus is represented by the type-species from Mexico.

Tylonychus Miller

Tylonychus Miller, 1966: 59-60; Tuttle & Baker, 1968: 116, Meyer, 1974: 183-186.

Type-species: *Tylonychus tasmaniensis* Miller.

Tylonychus can be defined as follows: Dorsal integument bearing numerous irregularly shaped spinules; dorsal body setae stout, serrate and borne on tubercles; fourth pair of dorsocentral setae (f_1) located further apart than other 3 pairs of dorsocentral setae (c_1, d_1 and e_1); gnathosoma elongate; true claws pad-like and provided with tenent hairs; empodium claw-like and without proximoventral hairs; 2 pairs of para-anal setae (h_{2-3}).

The genus is represented by 2 species, *T. tasmaniensis* Miller and *T. transvaalensis* Meyer, collected in Tasmania and South Africa respectively.

KEY TO THE SPECIES OF *TYLONYCHUS*

1. Only male prodorsum with reticulate pattern; distal part of aedeagus tapering evenly .... *T. tasmaniensis* Miller, 1966
- Female and male prodorsum with reticulate pattern; aedeagus with an anterior and a posterior projection on distal part .... *T. transvaalensis* Meyer, 1974

Tylonychus transvaalensis Meyer, 1974
(Fig. 439)

Tylonychus transvaalensis Meyer, 1974: 183-186.

The 13 pairs of stout dorsal body setae of the female are rod-shaped and serrate; each seta barely exceeds the distance to base of seta next behind and each arises from a small tubercle; fourth pair of dorsocentral setae (f_1) more widely spaced than other dorsocentral setae (c_1, d_1 and e_1) and situated in a line with dorsolateral setae (c_2, d_2, e_2 and f_2); dorsal integument with fine striae and covered with numerous irregularly shaped spinules; spinules on median part of prodorsum arranged in a reticulate pattern; dorsal integument of male finely striate but no spinules on opisthosoma; reticulate pattern on shield of prodorsum much more marked than in female; less spinules on prodorsum than in female; aedeagus with knob axis parallel to shaft axis; anterior projection acute, posterior projection slender, acute and bending downwards.

Habitat and locality. This species was collected on *Dichrostachys cinerea* and *D. cinerea* subsp. *africana* in the Transvaal, *D. cinerea* in Zimbabwe and *D. cinerea* var. *africana* in Malawi.

A new record is: *Acacia gerrardii*, Farm Belle Ombré (Eiland road), Tvl., 25 May 1983 (E.A. Ueckermann).

Brevinychus Meyer

Brevinychus Meyer, 1974: 174-175.

Type-species: *Brevinychus mbandu* Meyer.

This genus is distinctive in that the empodial

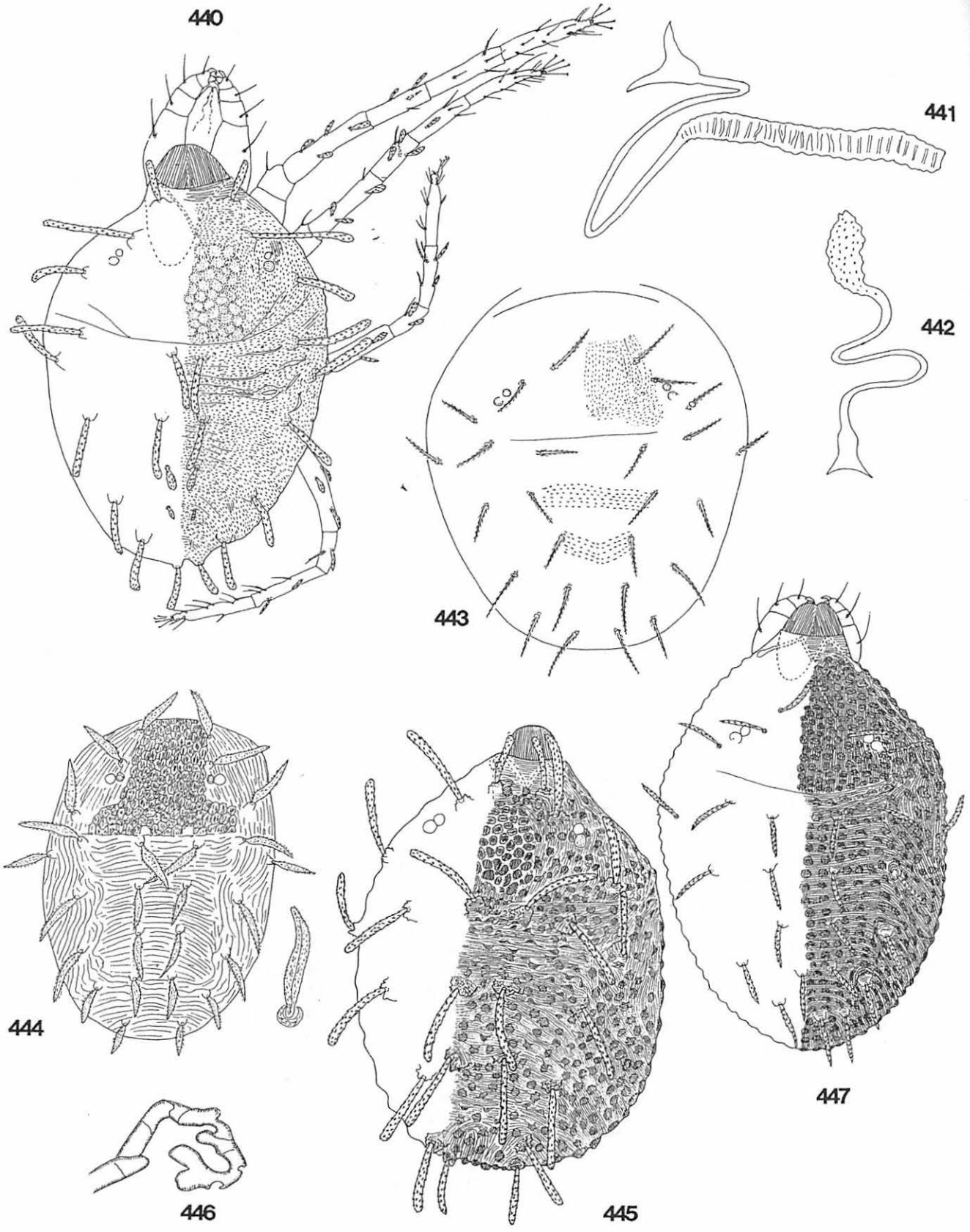

FIG. 440-441. *Brevinychus mbandu* Meyer. Female/ *Wyfie*
FIG. 440. Dorsal view/ *Dorsale aansig*
FIG. 441. Spermatheca/ *Spermateka*
FIG. 442. *Brevinychus parvulus* Meyer. Spermatheca/ *Spermateka*
FIG. 443. *Sonotetranychus daleae* (Tuttle & Baker). Dorsal view of female/ *Dorsale aansig van wyfie* (After Tuttle & Baker, 1968)
FIG. 444. *Bakerina lepidus* Chaudhri. Dorsal view of female/ *Dorsale aansig van wyfie* (After Chaudhri, 1971)
FIG. 445-446. *Evertella koegasensis* (Meyer). Female/ *Wyfie*
FIG. 445. Dorsal view/ *Dorsale aansig*
FIG. 446. Termination of peritreme/ *Eindpunt van peritreem*
FIG. 447. *Mixonychus acaciae* Ryke & Meyer. Dorsal view of female/ *Dorsale aansig van wyfie*

claw is without proximoventral hairs; empodial claw very short, about the same length as pads of true claws; duplex setae distal and approximate; prodorsum with 3 pairs of setae and opisthosoma with 10 pairs of setae; most dorsal setae borne on tubercles; there may be a large variation in the length of the dorsal setae; some dorsocentral setae may be much shorter than other dorsal setae; dorsal integument punctulate; ventrally, 2 pairs of anal (ps_{1-2}) and 2 pairs of para-anal (h_{2-3}) setae present.

KEY TO THE SPECIES OF *BREVINYCHUS*

Females

1. Opisthosoma with third (e_1) and fourth (f_1) pairs of dorsocentral setae much shorter than other body setae; prodorsum with distinct reticulate pattern medially .. *B. mbandu* Meyer
- Opisthosoma with first to fourth pairs of dorsocentral setae (c_1, d_1, e_1 and f_1) much shorter than other body setae; prodorsum without reticulate pattern medially .... *B. parvulus* Meyer

Brevinychus mbandu Meyer
(Fig. 440-441)

Brevinychus mbandu Meyer, 1974: 175-176.

This species is easily recognized by the third (e_1) and fourth (f_1) pairs of dorsocentral setae of the female which are much shorter than other dorsal body setae; reticulate pattern on prodorsal shield area; spermatheca (Fig. 441) sausage-like with ornamented surface; spermathecal duct originates in a funnel-shaped structure; male dorsal opisthosomal setae shorter than those of female; reticulum on prodorsum indistinct; punctulate striae on prodorsum longitudinal and transverse on opisthosoma; shaft of aedeagus short, curves strongly dorsad and tapers to an acute tip; curved portion about as long as shaft.

Habitat and locality. This species is known from *Lonchocarpus capassa* in the Kruger National Park and the Soutpansberg, Tvl.

New records are: unidentified wild herb, 5 km from Kaap Muiden, Tvl., 28 August 1981 (M.K.P. Meyer); unidentified wild plant, Noordkaap, near Barberton, Tvl., 8 February 1978 (M.K.P. Meyer).

Brevinychus parvulus Meyer
(Fig. 442)

Brevinychus parvulus Meyer, 1974: 176.

This species is distinctive in that first to fourth pairs of female dorsocentral setae (c_1, d_1, e_1 and f_1) are minute whereas the rest of the body setea are long; shield area of prodorsum covered with punctulate reticulations; rest of body with punctulate striae, longitudinal on prodorsum but mostly transverse on opisthosoma; first (v_2) and third (sc_2) pairs of prodorsal setae, third (e_2) and fourth (f_2) pairs of dorsolaterals and fifth pair of dorsocentrals (h_1) of male shorter than those of female and spatulate; second pair of prodorsal setae (sc_1) longest and about 3 times as long as third pair (sc_2); first (c_2) and second (d_2) pairs of dorsolaterals about equal in length and about three quarters the length of second pair of prodorsal setae (sc_1); as in female first to fourth pairs of dorsocentrals (c_1, d_1, e_1 and f_1) are very short and spatulate; spermatheca irregularly oval-shaped and ornamented (Fig. 442); spermathecal duct originated in a funnel-shaped structure; aedeagus turns dorsad at about a right angle and tapers to an acute tip; curved portion longer than shaft.

Habitat and locality. *B. parvulus* was described from *Neorautanenia* sp. and *Diospyros zombensis* in Malawi.

***Sonotetranychus* Tuttle, Baker & Abbatiello**
(Fig. 443)

Sonotetranychus Tuttle, Baker & Abbatiello, 1976: 69.

Type-species: *Anatetranychus daleae* Tuttle & Baker.

Sonotetranychus is provided with 2 sets of duplex setae on tarsus I, the proximal member being one fourth or less the length of distal member; tarsus II with 1 pair of similar duplex setae; empodial claw long and devoid of proximoventral hairs; 13 pairs of slender, dorsal body setae and 2 pairs of para-anal setae (h_{2-3}) present; dorsal integument striate.

This genus comprises 2 species, the type-species and *S. albiflorae* (Tuttle & Baker) from Mexico.

***Bakerina* Chaudhri**
(Fig. 444)

Bakerina Chaudhri, 1971: 195; Meyer, 1974: 183.

Type-species: *Bakerina lepidus* Chaudhri.

The genus *Bakerina* may be recognized by the dorsal body integument which is reticulated on prodorsum and striated on opisthosoma; 12 or 13 pairs of long, thick, finely pilose or sometimes lanceolate to subspatulate dorsal body setae present; fourth pair of dorsocentral setae (f_1) located in a normal or almost marginal position; female dorsal body setae set on small tubercles; 2 pairs of para-anal setae (h_{2-3}) on venter; peritreme slightly hooked and simple; empodial claw uncinate and longer than pad of true claw; tarsus II with distal member of duplex setae long and tapering.

This genus comprises 4 species from Pakistan, namely *B. lepidus* Chaudhri, *B. aculus* Chaudhri, *B. normalis* Chaudhri and *B. carracis* Chaudhri. One species, *B. orissaensis* Prasad is known from India and 1, *B. nanchangensis* Ma & Yuan from China.

Evertella gen. nov.

Type-species: *Mixonychus koegasensis* Meyer.

Evertella is closely related to *Mixonychus* in that the dorsal integumentary striae are also clustered into lumps and the claw-like empodia are devoid of proximoventral hairs. However, it can be separated from *Mixonychus* in that the opisthosoma bears 9 pairs of dorsal setae [fourth pair of dorsolaterals (f_1) absent] and the peritreme is branched distally; male aedeagus long, straight, ending in a slender stylet.

This genus is named for Dr Evert Lindquist, Biosystematic Research Institute, Ottawa, Canada.

Evertella koegasensis (Meyer) (Fig. 445-446)

Mixonychus koegasensis Meyer, 1974: 177.

Dorsal body setae of female lanceolate, serrate and slightly expanded distally, set on strong tubercles and reach to bases of setae next behind; opisthosoma (Fig. 445) with 9 pairs of dorsal setea (fourth pair of dorsolaterals (f_1) absent); prodorsum with a true reticulum medially but rest of dorsal integument with lumps giving whole dorsum a reticulate appearance; integument finely striate; stylophore rounded anteriorly; peritreme ends in a lobulate diverticula (Fig. 446); dorsal body setae of male relatively shorter than those of female; dorsal skin pattern absent; prodorsum with longitudinal striae and opisthosoma has transverse to irregular striae; aedeagus long narrowing to form a relatively long, slender terminal stylet.

Habitat and locality. This species was first described from *Boscia albitrunca*, Koegasburg, C.P.

New records are: *B. albitrunca*, Aughrabies Falls National Park, C.P., 13 September 1983 (N.C.J. Basson); *B. foetida* and *Pappea capensis*, Aughrabies Falls National Park, C.P., 13 September 1983 (E.A. Ueckermann); *Hermannia stricta*, Pella, C.P., 15 September 1983 (E.A. Ueckermann).

Mixonychus Ryke & Meyer

Mixonychus Ryke & Meyer, 1960: 559-560; Tuttle & Baker, 1968: 116; Meyer, 1974: 176.

Type-species: *Mixonychus acaciae* Ryke & Meyer.

This genus is distinctive in that the dorsal integument appears reticulate due to clustering of striae; all or some female dorsal body setae set on tubercles; 10 pairs of opisthosomal setae present on dorsum; fourth pair of dorsocentral setae (f_1) located nearer to each other than other 3 pairs of dorsocentrals (c_1, d_1 and e_1) or may be similarly spaced as other dorsocentrals; 2 pairs of para-anal setae (h_{2-3}) present; peritreme ends simple; true claws pad-like and provided with tenent hairs; empodium claw-like and devoid of proximoventral hairs; duplex setae on tarsus I distal and approximate; male aedeagus curved dorsad ending in a sigmoid tip.

KEY TO THE SPECIES OF *MIXONYCHUS*

Females

1. Dorsal body setae longer than half the longitudinal distances between them; opisthosomal setae set on tubercles; fourth pair of dorsocentral setae closer together than first 3 pairs of dorsocentrals (c_1, d_1 and e_1) .... *M. acaciae* Ryke & Meyer
- Dorsal body setae much shorter than half the longitudinal distances between them; only dorsocaudal pairs of setae (f_{1-2} and h_1) set on small tubercles ..... *M. dulcis* Meyer

Mixonychus acaciae Ryke & Meyer (Fig. 447)

Mixonychus acaciae Ryke & Meyer, 1960: 560-561; Meyer, 1974: 177-182.

Distinctive of this species are the female dorsal opisthosomal setae which are set on tubercles; members of fourth pair of dorsocentral setae (f_1) nearer to each other than members of other 3 pairs of dorsocentral setae (c_1, d_1 and e_1); dorsum (Fig. 447) exhibits a reticulate pattern formed by lumps on whole integument; integument provided with lobed striae; peritreme ends in a simple bulb; dorsal body setae of male resemble those of female and opisthosomal setae also borne on tubercles; characteristic skin pattern of female absent in male; dorsum with fine striae, longitudinal on prodorsum but mostly transverse on opisthosoma; aedeagus bends dorsad to form a sigmoid distal end.

Habitat and locality. This species has a wide distribution in the Transvaal, Cape and Natal. It was collected on *Acacia karroo, A. xanthophloea, A. tortilis. A. nigrescens, A. erioloba, Boscia transvaalensis, Dichrostachys cinerea, Lycium austrinum, Rhus pyroides, R. leptodictya* and *Sclerocarya birrea.*

New records for this species in South Africa are: *Hibiscus calyphyllus*, 20 km from Kaap Muiden (Barberton road), Tvl., 9 February 1978 (M.K.P. Meyer); *Rhynchosia sp., Blydepoort Nature Reserve, Tvl., 21 February 1978 (M.K.P. Meyer); Acacia* sp., 15 km from Bloemfontein, O.F.S., 31 October 1978 (E.A. Ueckermann); *A. hebeclada*, 10 km from Kuruman, C.P., 5 February 1979 (E.A. Ueckermann); *Tarchonanthus camphoratus*, near Kuruman, C.P., 4 October 1979 (L.C. Jordaan); *Dichrostachys cinerea* subsp. *nyassana*, Nelspruit, Tvl., 23 February 1983 (E.A. Ueckermann); *D. cinerea* subsp. *africana*, Gravelotte River, Tvl., 25 May 1983 (M.K.P. Meyer); *Acacia karroo*, Hartebeespoort Research Station, near Brits, Tvl., 28 November 1984 (M.K.P. Meyer).

Elsewhere in Africa it was recorded on

Dichrostachys cinerea in Swaziland; on *Acacia* sp. in Zimbabwe and on *Dichrostachys cinerea* in Malawi.

Mixonychus dulcis Meyer

Mixonychus dulcis Meyer, 1974: 182-183.

This species is closely related to *M. acaciae* Ryke & Meyer but has shorter body setae; members of fourth pair of dorsocentral setae (f_1) situated about as far apart as those of other 3 pairs of dorsocentral setae (c_1, d_1 and e_1) or else a little further apart; only fourth (f_1) and fifth (h_1) pairs of dorsocentral setae and fourth pair of dorsolateral setae (f_2) located on small tubercles; chromosome numbers n=3; dorsal body setae of male resemble those of female; dorsal skin pattern absent and prodorsum with longitudinal striae but those on opisthosoma transverse; aedeagus similar to that of *M. acaciae*.

Habitat and locality. Meyer (1974) reported this species from *Acacia erubescens*, *A. caffra* and *A. mellifera*.

The following additional collections were also studied: *A. karroo*, Katberg Mountains near Fort Beaufort, C.P., 7 February 1974 (M.K.P. Meyer); *Rhus pyroides*, Loskop Dam, near Groblersdal, Tvl., 27 February 1975 (L.C. Smit); *Dichrostachys cinerea*, Montrose, Tvl., 25 March 1976 (L. Venter); *Acacia mellifera*, Postmasburg, C.P., 3 February 1979 (E.A. Ueckermann); *Dichrostachys cinerea*, Papatso, near Hammanskraal, Bophuthatswana, 30 January 1980 (D.P. Keetch); *D. cinerea*, farm near Lake St. Lucia, Natal, 21 August 1980 (E.A. Ueckermann); *D. cinerea*, 10 km from Pongola (Piet Retief road), Tvl., 19 August 1980 (E.A. Ueckermann); *Acacia* sp., Pelindaba, Tvl., 25 November 1982 (E.A. Ueckermann).

Panonychus **Yokoyama**

Panonychus Yokoyama, 1929: 531; Meyer & Ryke, 1959: 350, Baker & Pritchard, 1960: 471; Tuttle & Baker, 1968: 84; Meyer, 1974: 186.

Metatetranychus Oudemans, 1931a: 199; Pritchard & Baker, 1955: 127.

Type-species: *Panonychus mori* Yokoyama = *Panonychus citri* (McGregor).

The genus *Panonychus* may be recognized by the dorsal body setae which are borne on strong tubercles; dorsal striae longitudinal on prodorsum but mostly transverse on opisthosoma; empodium claw-like and with 3 pairs of proximoventral hairs (Fig. 448); 2 pairs of para-anal setae (h_{2-3}) on venter.

Panonychus citri McGregor) and *P. ulmi* (Koch) are the best known species in this genus and both occur in Africa. Other species are *P. elongatus* Manson collected on citrus from Burma and *P. caglei* Mellott on low-growing plants in the U.S.A. Recently Hatzinikolis (1984) described *P. caricae* from figs in Greece.

KEY TO THE SPECIES OF *PANONYCHUS*

1. Genu IV with 3 setae 2
- Genu IV with 2 setae; female genital flap with longitudinal striae anterior to genital setae (g_1) ..... *P. caglei* Mellott, 1968
2. Fifth pair of dorsocentrals (h_1) and fourth pair of dorsolaterals (f_2) equal in length; pest of citrus 3
- Fifth pair of dorsocentrals (h_1) about a third the length of fourth pair of dorsocentrals (f_1); fourth pair of dorsolaterals (f_2) about two thirds the length of fourth pair of dorsocentrals (f_1); pest of deciduous fruits .... *P. ulmi* (Koch, 1836)
3. Aedeagus with distal sigmoid part about 1,5 times as long as dorsal margin of shaft .... *P. citri* (McGregor, 1919)
- Aedeagus with distal sigmoid part about twice as long as dorsal margin of shaft .... *P. elongatus* Manson, 1968

Panonychus ulmi (Koch)
(Fig. 448-449)

Tetranychus ulmi Koch, 1836: 11.

Metatetranychus ulmi (Koch), Pritchard & Baker, 1955: 128-132.

Panonychus ulmi (McGregor), Wainstein, 1960b: 202-203; Meyer, 1974: 187.

The females and males of this species can be separated from those of *P. citri* (McGregor) by having fifth pair of dorsocentral setae (h_1) about a third the length of fourth pair of dorsocentral setae (f_1); fourth pair of dorsolateral setae (f_2) about two thirds the length of fourth pair of dorsocentrals (f_1); spermatheca sausage-like (Fig. 449); chromosome numbers n=3.

Habitat and locality. *P. ulmi* is a well-known pest of deciduous fruit trees in most parts of the world. This species is a pest of apples in the Western Cape and was also collected on *Lonicera japonica*, Elgin, C.P., 25 January 1980 (E.A. Ueckermann)

Panonychus citri (McGregor)
(Fig. 450-451)

Tetranychus citri McGregor, 1916: 284.

Metatetranychus citri (McGregor), Pritchard & Baker, 1955: 133.

Panonychus citri (McGregor), Ehara, 1956b: 500; Meyer & Ryke, 1959: 350-351; Baker & Pritchard, 1960: 471-473; Wainstein, 1960b: 202; Tuttle & Baker, 1968: 84; Meyer, 1974: 187.

The dorsal body setae of the female are longer than the longitudinal distances between them and are borne on strong tubercles. *Panonychus citri* resembles *P. ulmi* (Koch) and can only be separated from the latter species by the relative lengths of the

fourth pair of dorsolaterals (f_2) and the fifth pair of dorsocentral setae (h_1) which are similar in length and about a third as long as the fourth pair of dorsocentrals (f_1) in *P. citri*; in *P. ulmi* fourth pair of dorsolateral setae (f_2) about two thirds the length of fourth pair of dorsocentrals (f_1) and about a third the length of fifth pair of dorsocentrals (h_1); opisthosomal striae on *P. citri* transverse and with narrow, conical lobes; spermatheca sausage-like (Fig. 451); chromosome numbers n=3; shaft of aedeagus narrows distally and the distal part curves dorsad.

Habitat and locality. *P. citri* is a world wide pest of citrus and in Africa occurs in the most important citrus-producing areas. Other host plants are roses, almonds, pears, mulberry, *Cedrela toona, Glycine wightii, Calodendrum capense, Fagara capensis* and *Clausena anisata.*

A new host record is: *Acacia* sp., Pretoria, Tvl., 26 January 1978 (E.A. Ueckermann).

Allonychus Pritchard & Baker
(Fig. 452-453)

Allonychus Pritchard & Baker, 1955: 137; Baker & Pritchard, 1962: 312; Wainstein, 1960b: 200; Tuttle & Baker, 1968: 84; Meyer, 1974: 18; Tuttle, Baker & Abbatiello, 1976: 35.

Type-species: *Septanychus braziliensis* McGregor.

The members of this genus have 2 pairs of para-anal setae (h_{2-3}); empodium consists of a large mediodorsal spur with 3 pairs of proximoventral hairs, being of dissimilar length and set at an angle of less than 45° with spur (Fig. 453); palpal claw bifurcate; lobes on dorsal striae much longer than broad and pointed distally.

In this genus the following species have been found in Mexico, Central America, South America and Taiwan: *Allonychus querci* Baker & Pritchard, *A. dorestei* Baker & Pritchard, *A. littoralis* (McGregor), *A. braziliensis* (McGregor), *A. reisi* Paschoal and *A. bambusae* Lo.

Yezonychus Ehara

Yezonychus Ehara, 1978: 90.

Type-species: *Yezonychus sapporensis* Ehara.

Yezonychus is distinctive in that the opisthosoma bears 9 pairs of dorsal setae, fourth pair of dorsolateral setae (f_2) absent; dorsal striae longitudinal on prodorsum and transverse on opisthosoma; striae on female genital flap transverse on anterior part and longitudinal on posterior part; with 2 pairs of para-anal setae (h_{2-3}) on venter; duplex setae of tarsus I distal and adjacent to each other; empodia strong, split into 2 claws distally and without proximoventral hairs.

This genus is known only from the type-species collected on sasa bamboo in Japan.

Schizotetranychus Trägårdh

Schizotetranychus Trägårdh, 1915: 277; Pritchard & Baker, 1955: 225-227; Baker & Pritchard, 1960: 486; Gutierrez, 1968a: 22-23; Meyer, 1974: 163; Tuttle, Baker & Abbatiello, 1976: 64.

Type-species: *Tetranychus schizopus* Zacher.

Ehara (1978) created a genus, *Yezonychus* which is similar to *Schizotetranychus* and separated it from the latter on the presence of 9 instead of 10 opisthosomal setae; striae longitudinal on prodorsum but those on opisthosoma usually transverse although may be longitudinal on the anterior portion of opisthosoma; striae anterior to female genitalia either transverse or longitudinal; 2 pairs of para-anal setae (h_{2-3}) present on venter; duplex setae on tarsus I distal and adjacent to each other; empodia strong, claw-like, split and appendant hairs may be present; peritremes mostly simple distally but fingering, anastomosing or hooked peritremes occasionally present in some species.

KEY TO THE AFRICAN SPECIES OF *SCHIZOTETRANYCHUS*

1. Female prodorsum with longitudinal striae . 2
- Female prodorsum with a reticulate pattern medially ..... *S. reticulatus* Baker & Pritchard
2. Dorsal opisthosomal setae shorter than distances between consecutive setae 3
- All or most dorsal opisthosomal setae as long as or longer than distances between consecutive setae 10
3. Opisthosoma with fourth pair of dorsocentral setae (f_1) considerably further apart than second pair of dorsocentral setae (d_1) 4
- Opisthosoma with fourth pair of dorsocentral setae (f_1) not further apart than second pair of dorsocentral setae (d_1) 5
4. Opisthosoma with transverse striae between first (c_1) and second (d_1) pairs of dorsocentral setae ..... *S. spiculus* Baker & Pritchard
- Opisthosoma with longitudinal striae between first (c_1) and second (d_1) pairs of dorsocentral setae ..... *S. sacrales* Baker & Pritchard
5. Distal part of aedeagus directed slightly dorsocaudad 6
- Distal part of aedeagus strongly bent dorsad or ventrad 7
6. Stylophore convex mediodistally; aedeagal shaft short and broad, distal part much shorter than shaft ..... *S. gausus* Baker & Pritchard
- Stylophore edentate mediodistally; aedeagal shaft broad at base but narrowing distally, distal part about as long as shaft .... *S. rhodanus* Baker & Pritchard
7. Aedeagus bent ventrad; female prodorsum with setae nearly equal in length and terminal sensillum on palptarsus slightly longer than broad ..... *S. asparagi* (Oudemans)
- Aedeagus bent dorsad 8

8. Peritreme terminating in a rounded loop; aedeagus gradually tapering and forming a sigmoid distal part, without a distinct knob ... . *S. pennamontanus* spec. nov.
- Peritreme ending in a simple bulb; aedeagus terminating in a distinct knob 9
9. Female with opisthosomal setae about a third the length of distances between bases of consecutive setae; male with rudimentary terminal sensillum on palptarsus .... *S. umtaliensis* Meyer
- Female with opisthosomal setae mostly about half or two thirds the length of distances between bases of consecutive setae; male with sensillum more than twice as long as broad ... .*S. protectus* Meyer
10. Opisthosoma with first 3 pairs of dorsocentral setae (c_1, d_1 and e_1) nearly or about as long as intervals between consecutive setae 11
- Opisthosoma with first 3 pairs of dorsocentral setae (c_1, d_1 and e_1) longer than intervals between consecutive setae 12
11. Aedeagus with distal part evenly tapering, sigmoid; peritreme hooked distally .... *S. australis* Gutierrez
- Aedeagus with small, acute anterior projection on distal part, forming a knob; peritreme straight distally, ending in a simple bulb ....*S. dalbergiae* Meyer
12. Aedeagus with distal part evenly tapering .. 13
- Aedeagus with small, acute anterior projection on distal part forming a knob, shaft very long; dorsal striae of female with tiny, narrow dorsal lobes sharply pointed at their tips .... *S. tephrosiae* Gutierrez
13. Aedeagal shaft nearly straight; distal end of aedeagus abruptly narrowed and drawn out like an elongated triangle .. *S. triquetrus* spec. nov.
- Aedeagal shaft bent ventrad or dorsad 14
14. Aedeagus bent dorsad 15
- Aedeagus bent ventrad forming a sigmoid, caudally directed distal end .. *S. sayedi* Attiah
15. Aedeagus with distal part much shorter than dorsal margin of shaft 16
- Aedeagus with distal part about as long as or longer than dorsal margin of shaft 18
16. Aedeagus with dorsal margin of shaft concave; peritreme retrorse distally; tibia I with 7 tactile setae ..... *S. arcuatus* Meyer
- Aedeagus with dorsal margin straight; peritreme dilated into a bulb or chamber .. 17
17. Striae anterior to female genital flap transverse; tibia III with 5 tactile setae . *S. nesbitti* Meyer
- Striae anterior to female genital flap longitudinal; tibia III with 4 tactile setae ....*S. tuttlei* Zaher, Gomaa & El-Enany
18. Aedeagus with distal part sigmoid; terminal sensillum on male palptarsus rudimentary ....*S. miyatahus* (Meyer)
- Aedeagus with distal part nearly straight; terminal sensillum on male palptarsus well-developed 19
19. Aedeagus broadly curved dorsad at an obtuse angle; distal curved part about as long as dorsal margin of shaft .... *S. filifolius* Meyer
- Aedeagus bent dorsad at about a right angle; distal curved part longer than dorsal margin of shaft ..... *S. setariae* spec. nov.

Schizotetranychus reticulatus Baker & Pritchard (Fig. 454)

Schizotetranychus reticulatus Baker & Pritchard, 1960: 487-489; Meyer, 1974: 164-165.

Females of *S. reticulatus* may be easily identified by reticulations on prodorsum; dorsal body setae awl-shaped and reach almost to bases of setae next behind; fourth pair of dorsocentral setae (f_1) more widely spaced than anterior 3 pairs (c_1, d_1 and e_1); chromosome numbers n=3; shaft of aedeagus (Fig. 454) gradually narrows and curves dorsad to form a sigmoid, acuminate tip.

Habitat and locality. Baker & Pritchard (1960) described this species from *Grewia* sp. in Zaïre.

Schizotetranychus spiculus Baker & Pritchard

Schizotetranychus spiculus Baker & Pritchard, 1960: 493-494; Meyer, 1974: 165.

The female of *S. spiculus* has short dorsal body setae, a little more than half as long as longitudinal distances between their bases; dorsal setae subequal in length, broad at their bases and narrow distally; longitudinal striae extend to first pair of dorsocentral setae (c_1); striae between first (c_1) and second (d_1) pairs of dorsocentral setae transverse, between second (d_1) and third (e_1) pairs of dorsocentrals form a V-pattern; fourth pair of dorsocentral setae (f_1) situated further apart than other 3 pairs of dorsocentral setae (c_1, d_1 and e_1).

Habitat and locality. This species, known only from the female, was first described from citrus collected in Kenya.

Schizotetranychus sacrales Baker & Pritchard

Schizotetranychus sacrales Baker & Pritchard, 1960: 495-496; Meyer, 1974: 165.

According to Baker & Pritchard (1960) the female of this species closely resembles that of *S. spiculus* Baker & Pritchard, except that the striae between first pair of dorsocentral setae (c_1) are longitudinal; stylophore not cleft; fourth pair of dorsocentral setae (f_1) much more widely spaced than second pair of dorsocentral setae (d_1).

Habitat and locality. This species was first collected by Baker & Pritchard (1960) on a papilionaceous plant in Zaïre.

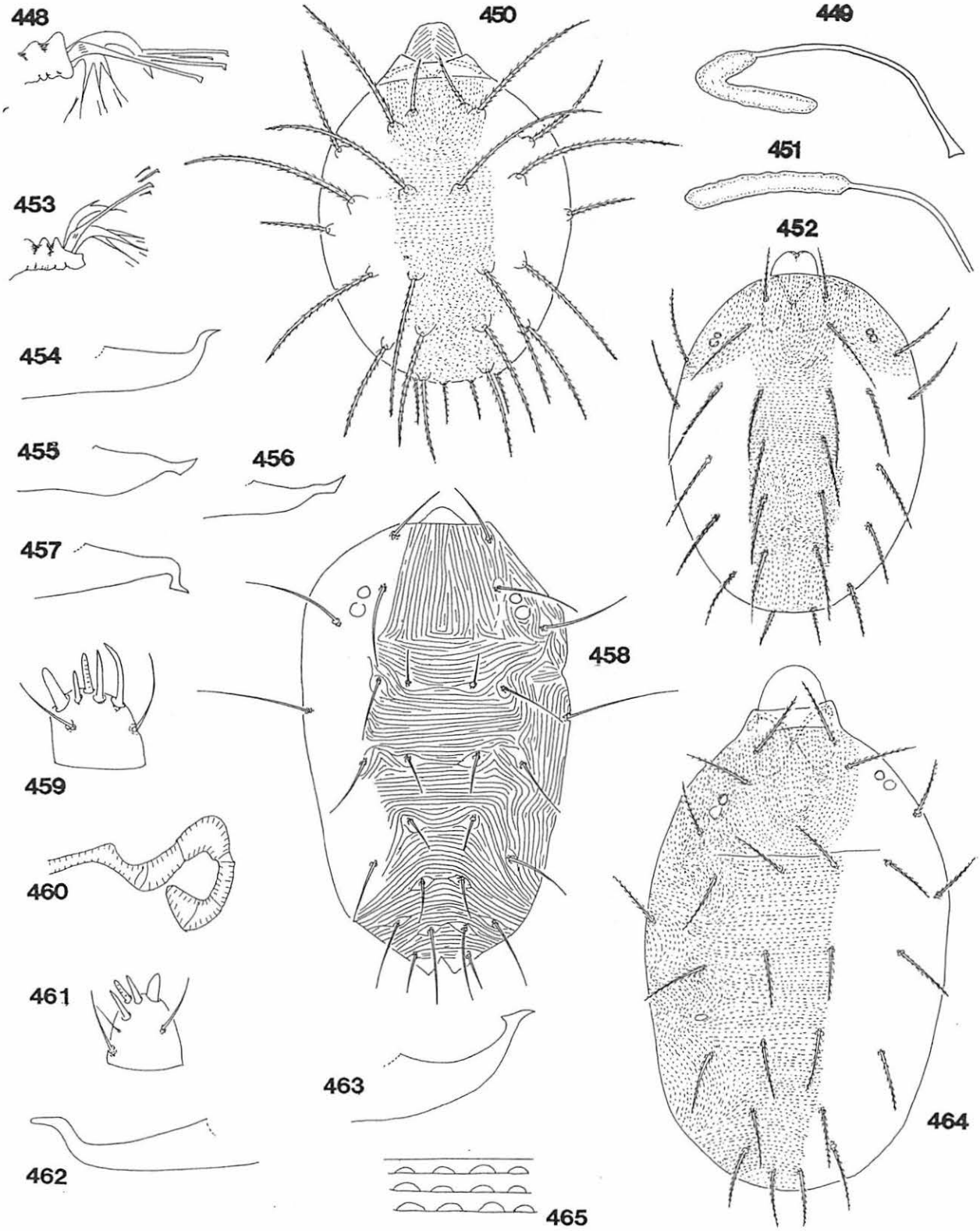

FIG. 448-449. *Panonychus ulmi* (Koch). Female/ *Wyfie*
FIG. 448. Tarsal appendages/ *Tarsale aanhangsels*
FIG. 449. Spermatheca/ *Spermateka*
FIG. 450-451. *Panonychus citri* (McGregor). Female/ *Wyfie*
FIG. 450. Dorsal view/ *Dorsale aansig*
FIG. 451. Spermatheca/ *Spermateka*
FIG. 452-453. *Allonychus braziliensis* (McGregor). Female/ *Wyfie*
FIG. 452. Dorsal view/ *Dorsale aansig*
FIG. 453. Tarsal appendages/ *Tarsale aanhangsels*
FIG. 454. *Schizotetranychus reticulatus* Baker & Pritchard. Aedeagus
FIG. 455. *Schizotetranychus gausus* Baker & Pritchard. Aedeagus
FIG. 456. *Schizotetranychus rhodanus* Baker & Pritchard. Aedeagus
FIG. 457. *Schizotetranychus asparagi* (Oudemans). Aedeagus
FIG. 458-462. *Schizotetranychus pennamontanus* spec. nov.
FIG. 458. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 459. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 460. Termination of peritreme/ *Eindpunt van peritreem*
FIG. 461. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 462. Aedeagus
FIG. 463. *Schizotetranychus umtaliensis* Meyer. Aedeagus
FIG. 464-470. *Schizotetranychus protectus* Meyer
FIG. 464. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 465. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*

Schizotetranychus gausus Baker & Pritchard
(Fig. 455)

Schizotetranychus gausus Baker & Pritchard, 1960: 497-500; Meyer, 1974: 165.

Schizotetranychus gausus exhibits the following characteristics: dorsal body setae awl-shaped and nearly nude; dorsocentral setae (c_1, d_1, e_1 and f_1) slightly more than the length of distances between consecutive setae; dorsolateral setae (c_2, d_2, e_2 and f_2) slightly longer than dorsocentrals; members of fourth pair of dorsocentral setae (f_1) located slightly wider apart than third pair of dorsocentrals (e_1); dorsal striae with small, elongate lobes; striae irregular between anterior 3 pairs of dorsocentral setae (c_1, d_1 and e_1); stylophore rounded anteriorly; shaft of aedeagus (Fig. 455) short and broad but narrowing abruptly from venter; narrow distal part obtusely angulate with tip directed dorsocaudad.

Habitat and locality. Baker & Pritchard (1960) described this species from a tree legume in Zaïre.

Schizotetranychus rhodanus Baker & Pritchard
(Fig. 456)

Schizotetranychus rhodanus Baker & Pritchard, 1960: 500-502; Meyer, 1974: 165-166.

According to Baker & Pritchard (1960) this species is closely allied to *S. gausus* but the female has a cleft stylophore and end of aedeagus more drawn out and undulate; dorsal awl-shaped body setae nearly nude; dorsocentral setae (c_1, d_1, e_1 and f_1) shorter than longitudinal distances between their bases; dorsal striae bear small elongate lobes; shaft of aedeagus (Fig. 456) broad at base but narrowing distally; distal part about as long as shaft and undulate, with tip directed slightly dorsocaudad.

Habitat and locality. This species is described from a shade tree, Zaïre.

Schizotetranychus asparagi (Oudemans)
(Fig. 457)

Epitetranychus asparagi Oudemans, 1928: 288.
Schizotetranychus asparagi Oudemans, 1931b: 229; Geijskes, 1939: 29; Pritchard & Baker, 1955: 237-240; Meyer, 1974: 166.

Dorsal body setae of female serrate, subequal in length but about half as long as distances between bases of consecutive setae; striae longitudinal on prodorsum but transverse on opisthosoma; aedeagus bends abruptly ventrad, distal end nearly sigmoid and with an anterior angulation (Fig. 457).

Habitat and locality. This species has a wide distribution in Africa and infests a number of *Prota sparagus* spp.

A new record is from: *Protasparagus capensis*, 30 km from Van Rhynsdorp (Douse the Glim road), C.P., 20 September 1983 (E.A. Ueckermann).

Schizotetranychus pennamontanus spec. nov.
(Fig. 458-462)

The dorsal body setae of this species resemble those of *S. celtidis* Tuttle & Baker but medially the prodorsum bears longitudinal striae and not transverse striae as in the latter species; it is further distinctive in that the peritreme forms a loop distally.

Female. Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 400 μm (333-413); length (excluding gnathosoma) 333 μm (253-347); breadth 200 μm (160-207).

Dorsum (Fig. 458). Body setae sparsely setose; second (sc_1) and third (sc_2) pairs of prodorsal setae subequal in length and longer than first pair (v_2); first to fourth pairs of dorsocentral setae (c_1, d_2, e_1 and f_1) short, not as long as longitudinal distances between their bases and shorter than first 3 pairs of dorsolateral setae (c_2, d_2 and e_2); humeral setae (c_3) the longest of dorsal setae; prodorsum bears longitudinal striae and opisthosoma generally has transverse striae; medially striae on opisthosoma bear a few low, rounded lobes.

Venter. Striae of genital area transverse; medially, venter with low, rounded lobes.

Gnathosoma. Stylophore rounded anteriorly; terminal sensillum of palptarsus (Fig. 459) about 2,5 times longer than broad; peritreme ends in a rounded loop distally (Fig. 460).

Legs. Numbers of setae and solenidia (in parentheses) on leg podomeres: coxae 1-1-1-1; femora 10-7-2-2; genua 5-5-3-3; tibiae 8(1)-5-5-5; tarsi 10(1)+2 dupl.-9(1)+1 dupl.-7(1)-7(1); tarsi I and II each with 3 tactile setae and 1 solenidion proximal to duplex setae; solenidia on tarsi I and II and tibia I short, less than the width of the segment on which they occur; tarsi III and IV each with a long slender solenidion, longer than segments on which they occur; empodium with a pair of dorsal hairs on each claw-like section.

Male. Dimensions: length of body (including gnathosoma) 307 μm; length (excluding gnathosoma) 233 μm; breadth 153 μm.

Dorsum. Dorsal aspect resembles that of female.

Gnathosoma. Terminal sensillum on palptarsus (Fig. 461) about as long as broad.

Legs. Chaetotaxy of legs as follows: femora 10-7-2-2; genua 5-5-3-3; tibiae 8(3)-5-5-5; tarsi 10(3)+2 dupl.-9(1)+1 dupl.-7(1)-7(1); tarsus I bears 3 tactile setae and 1 gently spindle-shaped solenidion proximal to duplex setae; solenidia on tarsi I and II as well as tibia I shorter than segments on which they occur.

Aedeagus (Fig. 462). Aedeagus bends dorsad to form a sigmoid distal portion that is about half as long as shaft.

Nympha. As far as the diagnostic characters are concerned the nympha is similar to the female.

Habitat and locality. Holotype female, 12 paratype females, 1 paratype male and 1 paratype nympha from *Lebeckia linearifolia*, Vogelvederberg, South West Africa (Namibia), 6 February 1980 (P.D. Theron).

Schizotetranychus umtaliensis Meyer
(Fig. 463)

Schizotetranychus umtaliensis Meyer, 1974: 167.

Dorsal opisthosomal setae of female short, serrate and about a third the length of distances between bases of consecutive setae; second pair of prodorsal setae (sc_1) about two thirds the length of third pair (sc_2) and about three quarters the length of first pair (v_2); shaft of aedeagus (Fig. 463) bends dorsad; distal end forms a knob with an acute projection anteriorly and a slender projection posteriorly; knob about half the length of dorsal margin of shaft; terminal sensillum on male palptarsus rudimentary.

Habitat and locality. This species is known only from *Acacia* sp. in Zimbabwe.

Schizotetranychus protectus Meyer
(Fig. 464-470)

Schizotetranychus protectus Meyer, 1965: 90-91; Meyer, 1974: 167-170.

Meyer (1965) described only the male and nymph of this species. Since then the female, which is described below, has also been found.

Female. Dimensions: length of body (including gnathosoma) 420-480 μm; length (excluding gnathosoma) 320-420 μm; breadth 167-240 μm.

Dorsum (Fig. 464). Opisthosomal setae short, serrate, most about half as long as distances between bases of consecutive setae; prodorsum with serrate setae subequal in length; fourth pair of dorsocentral setae (f_1) about as far apart as second pair of dorsocentral setae (d_1) but slightly more widely spaced than other 2 pairs of dorsocentrals (c_1 and e_1); striae of prodorsum form a U-pattern; opisthosomal striae mostly transverse; lobes on striae low and rounded (Fig. 465).

Venter. Genital flap and area immediately anterior to it with transverse striae.

Gnathosoma. Stylophore more or less rounded anteriorly; terminal sensillum on palptarsus (Fig. 466) about twice as long as broad; peritreme ends in a simple bulb (Fig. 467).

Legs. Setal formula (solenidia in parentheses) of legs: coxae 2-2-1-1; trochanters 1-1-1-1; femora 9-7-4-3; genua 5-5-4-4; tibiae 9(1)-7-6-6 or 7; tarsi 13(1)+2 dupl.-12(1)+1 dupl.-9(1)-9(1); tarsus I bears 4 tactile setae and 1 solenidion proximal to duplex setae; empodial claws (Fig. 468) each with 1 accessory hair.

Male. Terminal sensillum on palptarsus (Fig. 469) slightly more than twice as long as broad; setal formula for legs: femora 9-7-4-3; genua 5-5-4-4; tibiae 9(4)-7-6-7; tarsi 13(1)+2 dupl.-12(1)+1 dupl.-9(1)-9(1); shaft of aedeagus (Fig. 470) gradually narrows and bends dorsad at an angle of about 45° to form an acute anterior angulation, posterior angulation drawn out to an acuminate tip, directed dorsally; dorsal margin of shaft convex.

Habitat and locality. Meyer (1965) reported this species from *Cliffortia linearifolia* in the Golden Gate Highlands National Park, O.F.S.

A new record is from Giant's Castle Nature Reserve, Natal, found on *C. linearifolia* and *C. repens*, 3 March 1982 (E.A. Ueckermann & M.K.P. Meyer).

Schizotetranychus australis Gutierrez
(Fig. 471)

Schizotetranychus australis Gutierrez, 1968a: 23-24; Meyer, 1974: 167.

This species is distinctive in that the dorsal body setae reach to bases of setae next behind; fourth pair of dorsocentral setae (f_1) slightly more widely spaced than anterior 3 pairs of dorsocentral setae (c_1, d_1 and e_1); lobed striae on prodorsum longitudinal but those on opisthosoma transverse; chromosome numbers n=6; aedeagal shaft narrows abruptly and turns upward to form a sigmoid acuminate tip (Fig. 471).

Habitat and locality. *S. australis* was described by Gutierrez (1968) from *Tephrosia striata*, Malagasy Republic.

Schizotetranychus dalbergiae Meyer
(Fig. 472)

Schizotetranychus dalbergiae Meyer, 1974: 170.

Dorsal body setae of female about equal to or slightly shorter than intervals between bases of consecutive setae; striae on prodorsum longitudinal but those on opisthosoma generally transverse; dorsal lobes on striae rounded; terminal sensillum on palpus of female about twice as long as broad; terminal sensillum of male palpus rudimentary; shaft of aedeagus (Fig. 472) bends dorsad at a right angle and forms a distal knob, provided with a very small anterior projection and a longer posterior projection, directed dorsally.

Habitat and locality. This species is known from *Dalbergia melanoxylon* collected in Zimbabwe.

Schizotetranychus tephrosiae Gutierrez
(Fig. 473)

Schizotetranychus tephrosiae Gutierrez, 1968a: 24-28; Meyer, 1974: 170-171.

This species is distinctive in that the shaft of the aedeagus is very long, straight, curves dorsad and has a small anterior angulation, with a longer dorsocaudally directed angulation (Fig. 473); dorsal body setae of female linear-lanceolate, serrate and extend past bases of setae next behind; prodorsum bears longitudinal striae but opisthosoma generally has transverse striae; dorsal lobes tiny, narrow, sharply pointed at tips and separated by spaces at bases; chromosome numbers n=3.

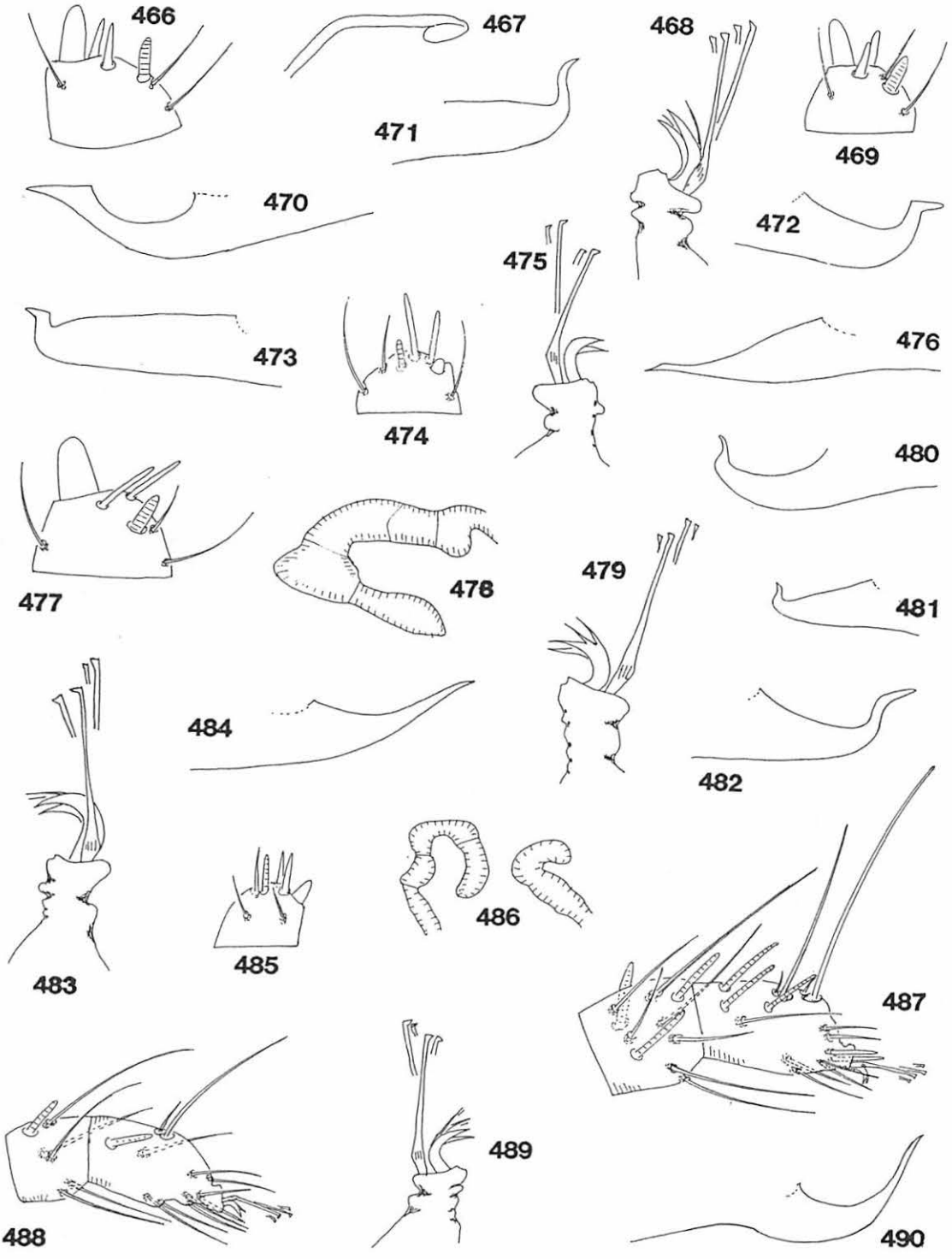

FIG. 466-470. *Schizotetranychus protectus* (continued/*vervolg)*
FIG. 466. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 467. Termination of peritreme/ *Eindpunt van peritreem*
FIG. 468. Tarsal appendages of female/ *Tarsale aanhangsels van wyfie*
FIG. 469. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 470. Aedeagus
FIG. 471. *Schizotetranychus australis* Gutierrez. Aedeagus
FIG. 472. *Schizotetranychus dalbergiae* Meyer. Aedeagus
FIG. 473. *Schizotetranychus tephrosiae* Gutierrez. Aedeagus
FIG. 474-479. *Schizotetranychus triquetrus* spec. nov.
FIG. 474. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 475. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 476. Aedeagus
FIG. 477. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 478. Termination of peritreme of female/ *Eindpunt van peritreem van wyfie*
FIG. 479. Tarsal appendages of female/ *Tarsale aanhangsels van wyfie*
FIG. 480. *Schizotetranychus arcuatus* Meyer. Aedeagus
FIG. 481. *Schizotetranychus nesbitti* Meyer. Aedeagus
FIG. 482-483. *Schizotetranychus miyatahus* (Meyer). Male/ *Mannetjie*
FIG. 482. Aedeagus
FIG. 483. Tarsal appendages/ *Tarsale aanhangsels*
FIG. 484. *Schizotetranychus filifolius* Meyer. Aedeagus
FIG. 485-490. *Schizotetranychus setariae* spec. nov. Male/ *Mannetjie*
FIG. 485. Palptarsus/ *Palptarsus*
FIG. 486. Variations in termination of peritreme/ *Variasies van eindpunt van peritreem*
FIG. 487. Tibia and tarsus I/ *Tibia en tarsus I*
FIG. 488. Tibia and tarsus II/ *Tibia en tarsus II*
FIG. 489. Tarsal appendages/ *Tarsale aanhangsels*
FIG. 490. Aedeagus

Habitat and locality. *S. tephrosiae* was first described by Gutierrez (1968a) from *Tephrosia striata*, Malagasy Republic. Meyer (1974) reported this species from *Mundulea sericea* in Natal and the Transvaal.

New records are: *Balanites pedicellaris*, Farm Welkom, near St. Lucia, Natal, 21 August 1980 (G. Petty); *Mikania cordata*, Farm Welkom, near St. Lucia, Natal, 21 August 1980 (E.A. Ueckermann).

Schizotetranychus triquetrus spec. nov. (Fig. 474-479)

This species is distinctive in that the shaft of the aedeagus is nearly straight, its distal end abruptly narrows and is drawn out; general shape resembles an elongated triangle.

Male. Gnathosoma. Palpus (Fig. 474) with a terminal sensillum slightly longer than broad and a longer proximodorsal sensillum.

Legs. Setae and solenidia (in parentheses) on leg podomeres: femora 9-7-3-2; genua 5-5-4-3; tibiae 7(4)-5-5-5; tarsi 13(3)+2 dupl.-9(1)+1 dupl.-9(1)-9(1); empodium I consists of 2 claws (Fig. 475); 4 tactile setae and 2 solenidia situated well proximal to duplex setae.

Aedeagus (Fig. 476). Shaft of aedeagus long, nearly straight and abruptly narrows distally; aedeagus shaped like an elongated triangle.

Female. Dimensions: length of body (including gnathosoma) 487-560 μm; length (excluding gnathosoma) 400-480 μm; breadth 300-333 μm.

Dorsum. The linear-lanceolate, serrate body setae longer than distances between bases of consecutive setae; fourth pair of dorsocentral setae (f_1) closer together than other 3 pairs of dorsocentral setae (c_1, d_1 and e_1); striae on prodorsum longitudinal but generally transverse on opisthosoma; striae devoid of lobes.

Venter. Genital flap and area immediately anterior to it with transverse striae.

Gnathosoma. Stylophore rounded anteriorly; palptarsus (Fig. 477) with a terminal sensillum that is about 1,5 times as long as broad; peritreme terminates in a hook (Fig. 478).

Legs. Tarsus I bears a single long, slender solenidion and 4 tactile setae proximal to duplex setae; tibia II with 6 tactile setae and a short, slender solenidion; tarsus II with a solenidion and 3 tactile setae proximal to duplex setae; tibia II with 5 tactile setae; empodial claws each with 2 accessory hairs (Fig. 479).

Nympha. Similar to female.

Habitat and locality. Holotype male, 1 paratype male, 2 paratype females and 1 paratype nympha from *Pentzia incana*, Jansenville, C.P., 5 February 1974 (L.C. Smit).

Schizotetranychus sayedi Attiah

Schizotetranychus sayedi Attiah, 1967b: 3-5.

Dorsal body setae of female longer than distances between bases of consecutive setae; prodorsum bears longitudinal and opisthosoma transverse striae; lobes on striae widely spaced and triangular in shape; genital flap with transverse striae; area immediately anterior to flap with longitudinal striae; peritreme hooked distally; terminal sensillum on female palpus 1,5 times as long as broad, whereas that of male is rudimentary; shaft of aedeagus narrows gradually, distal part curves ventrad, ending in a slender, sigmoid distal part, which is directed caudally.

Habitat and locality. Attiah (1967b) reported this species from *Ficus carica* (fig) in Egypt.

Schizotetranychus arcuatus Meyer (Fig. 480)

Schizotetranychus arcuatus Meyer, 1974: 174.

This species is distinctive in that the dorsal margin of the shaft of the aedeagus (Fig. 480) is concave; shaft bends dorsad at a right angle and distal portion tapers abruptly to a slender, sigmoid tip; female dorsal body setae linear-lanceolate, serrate and longer than distances between consecutive setae; striae on dorsum smooth, longitudinal on prodorsum and mostly transverse on opisthosoma; peritreme retrorse distally; tibia I bears 7 tactile setae and tibia III with 4 tactile setae.

Habitat and locality. This species was described from *Euclea crispa* var. *crispa* collected in Natal.

Schizotetranychus nesbitti Meyer (Fig. 481)

Schizotetranychus nesbitti Meyer, 1965: 92-93; Meyer, 1974: 174.

This species has the following diagnostic characters: aedeagus (Fig. 481) bends upwards at less than a right angle to form a sigmoid, acuminate tip; dorsal margin of shaft straight; female dorsal body setae very long and reach nearly to bases of second setae caudad; dorsal striae devoid of lobes and longitudinal on prodorsum but transverse on opisthosoma; terminal sensillum of female palptarsus about twice as long as broad; peritreme ends in a simple bulb; tibia I bears 8 tactile setae and tibia III with 5 tactile setae.

Habitat and locality. This species was described from grass collected in the Golden Gate Highlands National Park, O.F.S.

Schizotetranychus tuttleii Zaher, Gomaa & El-Enany

Schizotetranychus tuttleii Zaher, Gomaa & Ell-Enany, 1982: 102.

According to Zaher, Gomaa & El-Enany (1982) this species exhibits the following diagnostic characteristics: dorsal body setae of female longer than longitudinal intervals between them; striae longitudinal between first (v_2) and second (sc_1) pairs

of prodorsal setae; dorsocentral opisthosomal area with transverse striae; female genital flap with transverse striae and area anterior to it with longitudinal striae; tibia I of female with 8 or 9 (?) tactile setae (authors mentioned both numbers for the female tibia I in their description); tibia II with 5 tactile setae and tibia III with 4; shaft of aedeagus bends dorsad at less than a right angle to form a sigmoid tip.

Habitat and locality. This species was described from *Oryza sativa* in Egypt.

Schizotetranychus miyatahus (Meyer)
(Fig. 482-483)

Eotetranychus miyatahus Meyer, 1974: 196.

Dorsal body setae of female linear-lanceolate, serrate and about a fourth longer than longitudinal intervals between their bases; prodorsum bears longitudinal striae but opisthosoma has transverse striae; opisthosoma provided with rounded lobes; peritreme terminates in a simple bulb; terminal sensillum on palpus of female about twice as long as broad but that of male rudimentary; shaft of aedeagus (Fig. 482) narrows gradually, distal part curves dorsad ending in a slender, sigmoid distal part, which is directed dorsocaudally; empodia with 2 pairs of fine hairs on each claw-like division (Fig. 483).

Habitat and locality. Meyer (1974) described this species from *Pterocarpus rotundifolius*, Karino, Tvl.

Schizotetranychus filifolius Meyer
(Fig. 484)

Schizotetranychus filifolius Meyer, 1974: 171.

Aedeagus (Fig. 484) curves broadly dorsad at an obtuse angle; bent portion about as long as shaft; dorsal body setae of female linear-lanceolate, serrate and slightly longer than longitudinal intervals between them; dorsal striae smooth, longitudinal on prodorsum but generally transverse on opisthosoma.

Habitat and locality. This species was recorded from *Aster filifolius* in the Cape Province.

Schizotetranychus setariae spec. nov.
(Fig. 485-490)

The aedeagus of the male of *S. setariae* is distinctive in that it curves distally dorsad at a right angle; curved part longer than dorsal margin of shaft; dorsal body setae longer than longitudinal intervals between them; female unknown.

Male. Dorsum. Body setae slender, tapering and longer than longitudinal distances between them.

Gnathosoma. Terminal sensillum of palpus (Fig. 485) about 1,5 times as long as broad; proximodorsal sensillum about as long as mediodorsal sensilla; peritreme hooked distally (Fig. 486).

Legs. Setal formula for segments of legs (solenidia in parentheses): femora 9 or 10-6-2-2; genua 5-5-3-3; tibiae 7(3)-5(1)-4-5; tarsi 9(3)+2 dupl.-9(1)+1 dupl.-7(1)-7(1); 1 tactile seta and 3 solenidia located proximal to duplex setae on tarsus I (Fig. 487); tibia and tarsus II are depicted in Fig. 488; empodia with 2 pairs of fine hairs dorsally, 1 on each claw-like division (Fig. 489); tarsus III with a solenidion about three quarters the length of tarsus; solenidion on tarsus IV about two thirds the length of tarsus.

Aedeagus (Fig. 490). Aedeagus bends dorsad at a right angle and tapers abruptly to form a slender, acuminate tip; distal curved part longer than dorsal margin of shaft that is slightly concave.

Female. Unknown.

Habitat and locality. Holotype male and 3 paratype males from *Setaria sphacelata*, 13 km from Delmas (Devon road), Tvl., 9 November 1973 (M.K.P. Meyer).

***Acanthonychus* Wang**
(Fig. 491-492)

Acanthonychus Wang, 1982: 59-60.

Type-species: *Acanthonychus jianfengensis* Wang.

In *Acanthonychus* the 13 pairs of dorsal body setae are very long and borne on strong tubercles; striae on female dorsum (Fig. 491) transverse; 2 sets of duplex setae on tarsus I distal and adjacent; tibia II with 1 set of duplex setae; true claws pad-like and with tenent hairs; empodium split into 3 pairs of ventrally directed hairs (Fig. 492); female with 1 pair of anals (ps_1) and 2 pairs of para-anal setae (h_{2-3}); peritreme anastomosing distally.

Only the type-species is known. It was collected on *Citrus sinensis* in China.

***Neotetranychus* Trägårdh**

Neotetranychus Trägårdh, 1915: 23; Meyer, 1974: 189; Tuttle, Baker & Abbatiello, 1976: 62.

Type-species: *Neotetranychus rubi* Trägårdh.

This genus can readily be recognized by the following characteristics; dorsal body setae long and set on tubercles; female opisthosoma bears mostly transverse striae which may form a basket-weave pattern or grouped into reticulated clusters; 2 pairs of para-anal (h_{2-3}) and 2 pairs of anal setae (ps_{1-2}) present on venter; empodia split distally.

Neotetranychus decorus Meyer & Bolland
(Fig. 493)

Neotetranychus decorus Meyer & Bolland, 1984: 210-211.

The female dorsal striae, which are grouped into reticulated clusters, are distinctive for this

species (Fig. 493); dorsal body setae set on tubercles and reach past bases of setae next behind; shaft of aedeagus turns ventrad at an angle of about 90°; bent portion narrows distally forming a knob which is provided with a small acute anterior and a longer posterior projection; chromosome numbers n=2.

Habitat and locality. This species was found on an unidentified plant of the family Labiatae in the Cameroun.

Mononychellus Wainstein

Mononychus Wainstein, 1960b: 198 (nom. praeoc.); Tuttle & Baker, 1968: 105; Meyer, 1974: 188.
Mononychellus Wainstein, 1971: 587; Tuttle, Baker & Abbatiello, 1976: 50; Doreste, 1981: 119-128.

Type-species: *Tetranychus planki* McGregor.

Mononychellus was characterized by regular, longitudinal striae between the third (e_1) pair of dorsocentral setae (Tuttle & Baker, 1968; Meyer, 1974) but Tuttle, Baker & Abbatiello (1976) described a number of new species in which the striation patterns between the third pair of dorsocentral setae (e_1) were distinctly irregular, V-shaped or transverse. The transverse striae of these species strongly resemble those on the opisthosoma of the genus *Eotetranychus* and this makes the separation of these 2 genera very difficult.

Tuttle, Baker & Abbatiello (1976) identified *Mononychellus* on the following features: 2 pairs of para-anal setae (h_{2-3}); duplex setae on tarsus I distal and adjacent; empodium split distally; striae of opisthosoma with different patterns and usually with prominent lobes; dorsal body setae strongly serrate and sometimes borne on small tubercles.

KEY TO THE AFRICAN SPECIES OF *MONONYCHELLUS*

1. Tibia II with 6 tactile setae . *M. lippiae* Meyer
- Tibia II with 7 tactile setae 2
- Tibia II with 8 tactile setae 5
2. Aedeagus turns ventrad and has distal angulations 3
- Aedeagus turns dorsad and tapering distally 4
3. First 2 pairs of dorsocentral setae (c_1 and d_1) about equal in length and slightly shorter than distances to bases of setae next behind; third pair of dorsocentral setae (e_1) at least half as long as distances to bases of fourth pair of dorsocentral setae (f_1); dorsal body setae broadened distally ..... *M. tanajoa* (Bondar)
- First to third pairs of dorsocentral setae (c_1, d_1 and e_1) progressively longer towards rear; dorsal body setae tapering or slightly widened.. ..... *M. progresivus* Doreste
4. Opisthosoma of female with longitudinal striae between third pair of dorsocentral setae (e_1); peritreme terminating in a hook; male empodium I with 3 pairs of long proximoventral hairs .... *M. cactorum* (Baker & Pritchard)
- Opisthosoma of female with striae forming a V-pattern between third pair of dorsocentral setae (e_1); peritreme ending in a simple bulb; male empodium I with 3 pairs of teeth, middle pair being the strongest .. *M. virosus* (Meyer)
5. Dorsal body setae almost as long as distances between bases of consecutive setae; peritreme hooked distally 6
- Dorsal body setae much longer than distances between bases of consecutive setae; peritreme ending in a bulb ... *M. heteromniae* spec. nov.
6. Distal part of aedeagus curves ventrad; knob with small, acute anterior projection and longer posterior projection; lobes on dorsal striae of female low and broadly rounded .... *M. vaalensis* spec. nov.
- Aedeagus curves dorsad to a blunt tip, directed anterodorsally; lobes on dorsal striae of female narrowly triangular ..... *M. tunstalli* (Meyer)

Mononychellus lippiae (Meyer) (Fig. 494)

Mononychus lippiae Meyer, 1974: 188.

This species can be distinguished by the serrate, dorsal body setae which are much longer than longitudinal intervals between them and which arise from weak tubercles; opisthosomal striae mostly transverse, except for irregular, longitudinal striae between third pair of dorsocentral setae (e_1); lobes on striae broadly rounded and are mostly hardly more than an occasional incision in the striae; aedeagus (Fig. 494) strongly bends ventrad, bent portion tapers distally and has a small, acute anterior projection; chromosome numbers n=3.

Habitat and locality. This species was described from *Lippia javanica* collected in Zimbabwe.

New records are: *L. javanica*, 40 km from Peddie (East London road), C.P., 12 February 1974 (C.J. Colijn); *L. javanica*, Rustenburg Nature Reserve, Tvl., 5 February 1980 (M.K.P. Meyer); *L. javanica*, Moria, Lebowa, 6 May 1981 (E. Kassimatis).

Mononychellus tanajoa (Bondar) (Fig. 495-498)

Tetranychus tanajoa Bondar, 1938: 443.
Mononychus tanajoa (Bondar), Flechtmann & Baker, 1970: 160.
Mononychellus tanajoa (Bondar), Tuttle, Baker & Sales, 1977: 2-3; Flechtmann, 1978: 148-149.

The dorsal body setae are broadened distally (Fig. 495); prodorsal (v_2, sc_{1-2}), humeral (c_3) and dorsolateral (c_2, d_2, e_2 and f_2) setae as long as longitudinal intervals between their bases; first 2 pairs of dorsocentral setae (c_1 and d_1) of equal length and slightly shorter than half the distances to bases of setae next behind; third pair of dorsocentral setae (e_1) longer than previous 2 pairs (c_1 and d_1) and

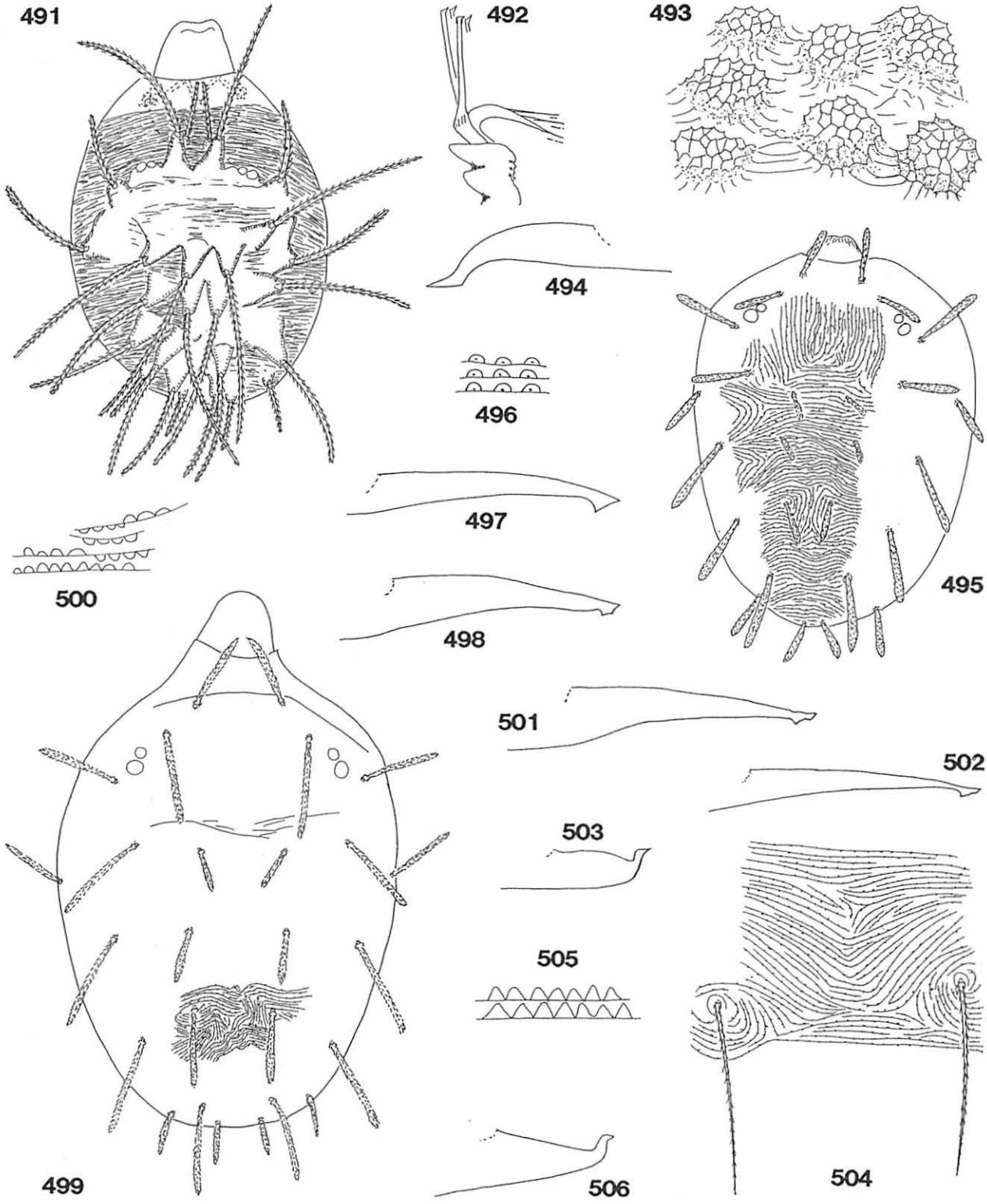

FIG. 491-492. *Acanthonychus jianfengensis* Wang. Female/ *Wyfie*
FIG. 491. Dorsal view/ *Dorsale aansig*
FIG. 492. Tarsal appendages/ *Tarsale aanhangsels*
FIG. 493. *Neotetranychus decorus* Meyer & Bolland. Dorsal integument of female showing reticulated clusters/ *Dorsale integument van wyfie met netwerk in groepies gerangskik*
FIG. 494. *Mononychellus lippiae* (Meyer). Aedeagus
FIG. 495-498. *Mononychellus tanajoa* (Bondar)
FIG. 495. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 496. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*
FIG. 497-498. Variations in aedeagus/ *Variasies van aedeagus*
FIG. 499-502. *Mononychellus progresivus* Doreste
FIG. 499. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 500. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*
FIG. 501-502. Variations in aedeagus/ *Variasies van aedeagus*
FIG. 503. *Mononychellus cactorum* (Baker & Pritchard). Aedeagus
FIG. 504-506. *Mononychellus virosus* (Meyer)
FIG. 504. Striation pattern between third pair of dorsocentrals of female/ *Patroon van strias tussen derde paar dorsosentrale setas*
FIG. 505. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*
FIG. 506. Aedeagus

reach about half way to bases of fourth pair of dorsocentral setae (f_1); lobes on dorsal striae of female rounded and with basal spots (Fig. 496); aedeagus (Fig. 497-498) turns ventrad at a slight angle and has angulations distally.

Habitat and locality. *M. tanajoa*, also known as the green cassava mite, was described as a serious pest of cassava in Brazil. According to Matthysse (1978) the mite has invaded Tanzania, Kenya, Uganda and Zaïre to become a foremost pest of cassava. Tuttle, Baker & Sales (1977) also reported it from *Cucurbita pepo* and *Lycopersicon lycopersicum* in Brazil. Flechtmann (1982) first recorded this species from cassava in Mocambique.

A mite collection from *Manihot* sp. in Gabon was studied as well as material from Zaïre: *M. esculenta*, Kimvula and Benga, Bas Zaïre, 5 February 1983 (Anota Tomu); *Manihot* sp., Walemba-Shaba, 7 July 1983 (R.D. Hennessey); *Manihot* sp., Kiyanika, Bas Zaïre, 20 July 1983 (K.A. Muimbu); *Manihot* sp., Fungalune-Shaba, 6 July 1983 (R.D. Hennessey); *Manihot* sp., Zones Kihemba and Tschikapa, Kasai Oriental Zaïre, 14 June 1983 (J. Campbell); *Manihot* sp., Kapiri Zone Lubudi, Shaba, 24 September 1983 (R.D. Hennessey); *Manihot* sp., Kiyaka, Plateau de Musila Bandundu Zaïre, 8 September 1983 (M.T. Muaka).

Mononychellus progresivus Doreste (Fig. 499-502)

Mononychellus progresivus Doreste, 1981: 123-124.

The female (Fig. 499) is characterized by the first to third pairs of dorsocentral setae (c_1, d_1, and e_1) which are progressively longer towards the rear; first pair (c_1) about half as long as distances to bases of second pair (d_1); the latter pair reach about three quarters of distances to bases of third pair (e_1); dorsal body setae generally long, setose and tapering but in some cases tend to be somewhat widened; shaft of aedeagus (Fig. 501-502) more slender than that of *M. tanajoa*.

Habitat and locality. Doreste (1981) first described this species from *Manihot* sp. in Venezuela. Flechtmann (1982) first recorded it from Africa, collected on cassava leaves in Gabon and Nigeria.

A new record is from: *Manihot* sp., M'Vuazi, Bas Zaïre, 7 October 1983 (R.D. Hennessey).

Mononychellus cactorum (Baker & Pritchard) (Fig. 503)

Eotetranychus cactorum Baker & Pritchard, 1960: 473-475; Meyer, 1974: 199.

Baker & Pritchard (1960) described the opisthosoma of the female as having longitudinal striae between the third pair of dorsocentral setae (e_1). According to the present definition of the genera *Eotetranychus* and *Mononychellus* this species must be classified under the latter genus. The aedeagus (Fig. 503) has a broad, straight shaft; distal part tapers and bends at a right angle to form a small knob with a dorsocaudally directed projection.

Habitat and locality. Baker & Pritchard (1960) described this species from cactus in Zaïre.

Mononychellus virosus (Meyer) (Fig. 504-506)

Eotetranychus virosus Meyer, 1974: 198.

This species is classified under *Mononychellus* because there is a V-pattern (Fig. 504) between the third pair of dorsocentral setae (e_1); lobes (Fig. 505) on striae broadly triangular with an occasional rounded one; dorsal body setae linear-lanceolate, very finely pubescent and longer than longitudinal intervals between their bases; shaft of aedeagus (Fig. 506) narrows gradually towards its distal end and bends dorsad, with end directed dorsocaudally.

Habitat and locality. This species was described from *Securinega virosa* and *Maytenus heterophylla* in the Transvaal and Natal.

Mononychellus heteromniae spec. nov. (Fig. 507-510)

This species has long, slender dorsal body setae and an irregular striation pattern between the third pair of dorsocentral setae (e_1), consisting of elongate, incomplete reticulate elements.

Female. Dimensions of holotype (measurements following in parentheses are variations in the paratype): length of body (including gnathosoma) 413 μm (467); length (excluding gnathosoma) 333 μm (367); breadth 240 μm (280).

Dorsum (Fig. 507). Body setae slender, tapering distally and much longer than distances between bases of consecutive setae; striae of prodorsum longitudinal and those of opisthosoma transverse, except for an irregular pattern (Fig. 508) between third pair of dorsocentral setae (e_1); elongate, incomplete reticulate elements occur in the striae; all striae with low, rounded lobes, bearing basal spots (Fig. 509).

Gnathosoma. Stylophore slightly indented anteriorly; peritreme terminates in a bulb (Fig. 510); terminal sensillum of palptarsus about twice as long as broad.

Legs. Tibia I bears 9 tactile setae and 1 solenidion; tibia II with 8 tactile setae; 5 tactile setae and 1 solenidion located proximal to duplex setae on tarsus I; tarsus II with 3 tactile setae and 1 solenidion well proximal to duplex setae; stem of empodium about as long as distal proximoventral hairs.

Male. Unknown.

Habitat and locality. Holotype and 1 paratype female from *Heteromnia decurrens*, Golden Gate Highlands National Park, O.F.S., 11 February 1982 (M.K.P. Meyer).

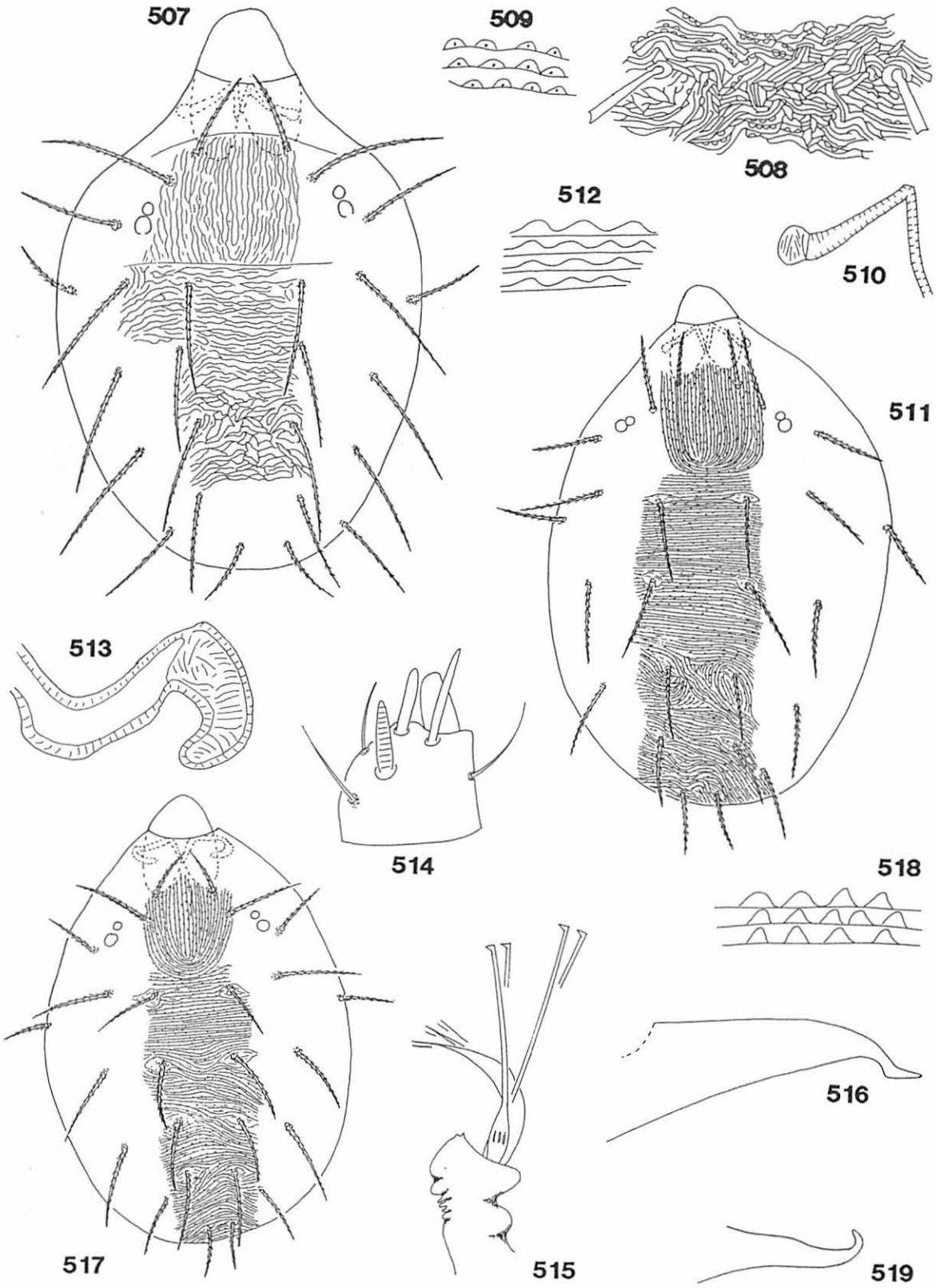

FIG. 507-510. *Mononychellus heteromniae* spec. nov. Female/ *Wyfie*
FIG. 507. Dorsal view/ *Dorsale aansig*
FIG. 508. Striation pattern between third pair of dorsocentrals/ *Patroon van strias tussen derde paar dorsosentrale setas*
FIG. 509. Lobes on dorsal striae/ *Lobbe op dorsale strias*
FIG. 510. Peritreme/ *Peritreem*
FIG. 511-516. *Mononychellus vaalensis* spec. nov.
FIG. 511. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 512. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*
FIG. 513. Termination of peritreme of female/ *Eindpunt van peritreem van wyfie*
FIG. 514. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 515. Tarsal appendages of tarsus I of female/ *Tarsale aanhangsels van tarsus I van wyfie*
FIG. 516. Aedeagus
FIG. 517-519. *Mononychellus tunstalli* (Meyer)
FIG. 517. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 518. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*
FIG. 519. Aedeagus

Mononychellus vaalensis spec. nov.
(Fig. 511-516)

The aedeagus is similar to that of *M. lippiae* Meyer, except that the shaft is longer and broader. The female dorsal striae, however, bear distinct broadly rounded lobes, whereas the lobes of *M. lippiae* are generally little more than an occasional incision in the striae. Dorsal body setae shorter than those of the latter species.

Female. Dimensions of holotype (measurements following in parentheses are variations in paratypes): length of body (including gnathosoma) 807 μm (667-734); length (excluding gnathosoma) 667 μm (553-600); breadth 440 μm (430-433).

Dorsum (Fig. 511). The serrate body setae are strong, tapering distally and about as long as longitudinal distances between their bases; second pair of prodorsal setae (sc_1) longer than first (v_2) and third (sc_2) pairs; striae on prodorsum longitudinal and those on opisthosoma generally transverse; striae between third pair of dorsocentral setae (e_1) of holotype female distinctly irregular whereas those of the paratype females are more transverse, except for a slight irregular pattern in one or 2 striae; lobes on striae low and broadly rounded (Fig. 512).

Gnathosoma. Stylophore slightly indented anteriorly; peritreme hooked distally (Fig. 513); terminal sensillum on palptarsus (Fig. 514) 1,5 times as long as broad.

Legs. Setae and solenidia (in parentheses) disposed on leg segments as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-7-5-4; genua 5-5-4-4; tibiae 9(1)-8-6-7; tarsi 13(1)+2 dupl.-11+1 dupl.-9(1)-9(1); tarsus I with 4 tactile setae and 1 solenidion proximal to duplex setae; stem of empodium about as long as distal proximoventral hairs (Fig. 515).

Male. Dorsal aspect similar to that of female; palptarsus with a rudimentary terminal sensillum; counts of setae and solenidia (in parentheses) of legs I-IV as follows: femora 10-7-4-4; genua 5-5-4-4; tibia 9(4)-8-6-7; tarsi 13(3)+2 dupl.-12(2)+1 dupl.-9(1)-9(1); empodia I and II each with 2 spurs whereas empodia III and IV each with 3 pairs of proximoventral hairs; aedeagus (Fig. 516) directed ventrad and distal knob with a small, acute anterior projection and a longer posterior projection; knob axis parallel to shaft axis.

Habitat and locality. Holotype female, 2 paratype females and 2 paratype males from an unidentified wild plant, Vaal River at Parys, O.F.S., 29 September 1976 (L.C. Jordaan).

Mononychellus tunstalli (Meyer)
(Fig. 517-519)

Eotetranychus tunstalli Meyer, 1974: 194.

This species is transferred to *Mononychellus* because the striae between the second (d_1), third (e_1) and fourth (f_1) pairs of dorsocentral setae are irregular (Fig. 517); lobes (Fig. 518) on dorsal striae of female mostly narrow, triangular and separated at bases; anteriorly lobes tend to be more rounded; shaft of aedeagus relatively long turns dorsad at a right angle, blunt tip directed anterodorsally (Fig. 519).

Habitat and locality. *M. tunstalli* was collected in Malawi on *Sterculia africanum*.

Platytetranychus Oudemans

Platytetranychus Oudemans, 1931b: 224: Wainstein, 1960b: 228; Tuttle & Baker, 1968: 105-106; Meyer, 1974: 189; Tuttle, Baker & Abbatiello, 1976: 61.

Type-species: *Tetranychus gibbosus* Canestrini.

Platytetranychus is distinctive in that the dorsal body setae are much shorter than longitudinal intervals between their bases; striae on opisthosoma transverse; duplex setae on tarsus I distal and adjacent; true claws pad-like and provided with tenent hairs; empodial claws split distally; 2 pairs of para-anal setae (h_{2-3}) present on venter. This genus is represented by *P. rhusi* in South Africa.

Platytetranychus rhusi (Meyer)
(Fig. 521)

Eotetranychus rhusi Meyer, 1974: 195.

This species is transferred to *Platytetranychus* because the dorsal body setae of the female are shorter than intervals between bases of consecutive setae (Fig. 520); male empodium I consists of 2 tridigitate claw-like structures; shaft of aedeagus (Fig. 521) narrows gradually towards its distal end, curves dorsad, with distal part sigmoid, tapering and directed dorsocaudally.

Habitat and locality. This species was reported from *Rhus lancea* and *R. undulata* in the Transvaal and Orange Free State.

Eotetranychus Oudemans

Eotetranychus Oudemans, 1931b: 224; Pritchard & Baker, 1955: 138; Meyer & Ryke, 1959: 348; Baker & Pritchard, 1960: 473; Gutierrez, 1967a: 370-372; Meyer, 1974: 189; Tuttle, Baker & Abbatiello, 1976: 37.

Type-species: *Trombidium tiliarum* Hermann.

This genus can readily be recognized by 2 pair of anal (ps_{1-2}) and 2 pairs of para-anal setae (h_{2-3}) present in female; striae on opisthosoma transverse, usually with small lobes; duplex setae on tarsus I distal and adjacent; tarsus I bears 3 to 5 tactile setae proximal to duplex setae; true claws pad-like and with tenent hairs; empodia (except for leg I and sometimes leg II in male) with 3 pairs of ventrally directed hairs, dorsal body setae at least as long as distances between bases of consecutive setae.

Tuttle, Baker & Abbatiello (1976) recognized

the following species-groups in the genus *Eotetranychus:*

E. SEXMACULATUS GROUP

In this group the striae on the female genital flap are longitudinal on the anterior portion and transverse posteriorly; striae anterior to flap longitudinal. This group is not represented in Africa.

E. WILLAMETTEI GROUP

This species-group of *Eotetranychus* contains those species which have transverse striae on genital flap and the area anterior to it.

E. HICORIAE GROUP

This group of species is characterized by transverse striae on genital flap and longitudinal striae anterior to flap.

E. PALLIDUS GROUP

Species which belong here have the striae on the genital flap transverse whereas those anterior to the flap are irregular.

KEY TO THE AFRICAN SPECIES OF *EOTETRANYCHUS*

1. Unassigned species 2
- Species-groups determined 3
2. Shaft of aedeagus curved dorsad, with dorsal margin straight; aedeagus with distal part half the length of dorsal margin of shaft .... *E. capricorni* Gutierrez
- Shaft of aedeagus curved ventrad, distal part tapering, with a small anteroventral angulation and a longer dorsocaudally directed angulation ..... *E. cernuus* Baker & Pritchard
3. Striae anterior to flap transverse ..... *E. willamettei* group 4
- Striae anterior to flap not transverse 25
4. Shaft of aedeagus either curved dorsad or ventrad 5
- Shaft of aedeagus straight 23
5. Shaft of aedeagus curved distally dorsad ... 6
- Shaft of aedeagus curved distally ventrad .. 12
6. Tibia II with 6 tactile setae; aedeagus tapering distally, sigmoid tip directed dorsocaudally ... . *E. paarlensis* Meyer
- Tibia II with 7 tactile setae 7
- Tibia II with 8 tactile setae 8
7. Aedeagus with knob about two thirds the length of dorsal margin of shaft; posterior angulation directed caudally .... *E. broodryki* Meyer
- Aedeagal knob about as long as dorsal margin of shaft; posterior angulation directed dorsally ..... *E. ancora* Baker & Pritchard
8. Aedeagus sigmoid and tapers towards its posteriorly directed tip ....*E. botryanthae* Gutierrez
- Aedeagus ending in a knob with angulations or a bulb 9
9. Aedeagal knob a fourth or less the length of dorsal margin of shaft 10
- Aedeagal knob about a third the length of dorsal margin of shaft 11
10. Male empodium I consists of 3 pairs of nearly equally strong digits . *E. greveannae* Gutierrez
- Male empodium I with middle pair of hairs strong, dorsal and ventral pairs weak ....*E. borbonensis* Gutierrez
- Male empodium I consists of 2 claw-like structures ..... *E. xylopiae* Gutierrez
11. Axis of aedeagal knob forming a rectangle with axis of shaft; male empodium I with middle pair of digits strongest, other 2 pairs weak ....*E. mollis* Meyer
- Axis of aedeagal knob forming an obtuse angle with axis of shaft; male empodium I with 3 pairs of more or less equally strong teeth ....*E. reduncus* spec. nov.
12. Aedeagal shaft curves medially slightly dorsad and then turns strongly ventrad ending in a slender deflexed, distal part .... *E. lewisi* (McGregor)
- Aedagal shaft curves evenly ventrad 13
13. Aedeagus with distal part evenly tapered .. 14
- Aedeagus with an anterior projection on distal part forming a knob 18
14. Aedeagus curving abruptly ventrad and ending in a short deflexed distal part, with a blunt tip .....*E. hellei* Meyer & Bolland
- Aedeagus with bent portion tapering and sigmoid and with tip directed caudally 15
15. Aedeagus with distal part strongly sigmoid and with tip directed dorsocaudally 16
- Aedeagus with distal part slightly sigmoid and with tip directed caudally 17
16. Tarsus I with 4 proximal tactile setae; aedeagus bent at about distal quarter of shaft .... *E. savanae* Gutierrez
- Tarsus I with 5 proximal tactile setae; aedeagus bent at about middle of shaft ....*E. deflexus* (McGregor)
17. Aedeagal shaft slightly longer than its greatest thickness; tarsi III and IV each with 10 tactile setae and 1 solenidion ..... *E. obtusus* Meyer
- Aedeagal knob about twice as long as its greatest thickness; tarsi III and IV each with 9 tactile setae and 1 solenidion .... *E. roedereri* Gutierrez
18. Aedeagal knob not less than half as long as dorsal margin of shaft 19
- Aedeagal knob not more than a third the length of dorsal margin of shaft 21
19. Dorsal margin of aedeagal shaft concave; distal knob longer than greatest thickness of shaft ... . *E. mucronatae* spec. nov.
- Dorsal margin of aedeagal shaft straight ... 20
20. Aedeagal knob shorter than greatest thickness of shaft; terminal sensillum on female

palptarsus about twice as long as broad .... *E. arborarius* Meyer

- Aedeagal knob slightly longer than greatest thickness of shaft; terminal sensillum on female palptarsus 3 times as long as broad .... *E. tokaiensis* spec. nov.

21. Tibiae III and IV of male and female each with 6 tactile setae 22
- Tibiae III and IV of male and female with 6 and 7 tactile setae respectively .... *E. strychnosi* Meyer

22. Female with dorsal striae smooth; male empodium I and II bifid, each side with 3 equally strong digits ..... *E. karooicus* Meyer
- Female with dorsal striae bearing rounded lobes; male empodia I and II tridigitate with median pair strongest, dorsal and ventral pairs weak ..... *E. passerinae* Meyer

23. Aedeagal knob about two thirds the length of dorsal margin of shaft and directed dorsally .. .. *E. imerinae* Gutierrez
- Aedeagal knob smaller, less than two thirds the length of dorsal margin of shaft and directed caudally 24

24. Aedeagal knob about one eighth the length of dorsal margin of shaft .... *E. edi* Meyer
- Aedeagal knob one fifth the length of dorsal margin of shaft ..... *E. paraedi* Meyer

25. Striae anterior to genital flap longitudinal ....*E. hicoriae* group 26
- Striae anterior to genital flap irregular .... *E. pallidus* group..... 35

26. Shaft of aedeagus curved distally dorsad .. 27
- Shaft of aedeagus curved distally ventrad .. 31

27. Tibia II with 6 tactile setae; aedeagus with distal part very small and tapering .... *E. tulearensis* Gutierrez
- Tibia II with 7 tactile setae 28
- Tibia II with 8 tactile setae; distal part of aedeagus is a long, slender stylet, directed caudally but slightly undulate .... *E. smithi* Pritchard & Baker

28. Peritreme hooked distally; terminal sensillum on palptarsus of male and female very broad, twice as broad as long .. *E. grandis* Gutierrez
- Peritreme ending in a simple bulb 29

29. Aedeagal shaft with dorsal margin straight, distally with angulations 30
- Aedeagal shaft with dorsal margin curved; aedeagus with distal part a third the length of dorsal margin of shaft, without angulations ... . *E. befandrianae* Gutierrez

30. Female tarsus I with 4 tactile setae and 1 solenidion proximal to duplex setae; aedeagal shaft about 3 times as long as broad .... *E. natalensis* Meyer
- Female tarsus I with 5 tactile setae and 1 solenidion proximal to duplex setae; aedeagal shaft about twice as long as broad .....

31. ..... *E. sakalavensis* Gutierrez
- Tibia II with 7 tactile setae; aedeagus with a small anterior angulation and a longer posterior angulation, directed ventrally .... *E. lonchocarpi* Meyer
- Tibia II with 8 tactile setae 32

32. Aedeagus with bent portion tapering and strongly sigmoid 33
- Aedeagus bent obtusely ventrad and tapering to tip; slightly sigmoid; distal portion long and straight ..... *E. africanus* spec. nov.

33. Aedeagal shaft straight 34
- Aedeagal shaft curved dorsad from base, distal part deflexed, sigmoid and narrowly tapering to a blunt tip ..... *E. cyphus* Baker & Pritchard

34. Aedeagal shaft very short, deflexed, sigmoid and with distal part longer than shaft .... *E. rinoreae* Gutierrez
- Aedeagal shaft of moderate length, deflexed, sigmoid and with distal part shorter than shaft ..... *E. camerounensis* Meyer & Bolland

35. Aedeagus bent obtusely dorsad 36
- Aedeagus bent ventrad 37

36. Tibia II with 6 tactile setae; peritreme strongly retrorse distally; female dorsum with smooth striae ..... *E. pentziae* Meyer
- Tibia II with 8 tactile setae; peritreme ending in a simple bulb; female dorsum with lobed striae ..... *E. flavescens* Meyer

37. Aedeagus terminating in a knob, with anterior and posterior angulations 38
- Aedeagus without angulations distally 40

38. Aedeagus bent ventrad at an obtuse angle to shaft 39
- Aedeagus bent ventrad at a right angle to shaft ..... *E. zaheri* Zaher, Gomaa & El-Enany

39. Aedeagal knob about a fourth the length of dorsal margin of shaft; male empodium I consisting of 3 pairs of ventrally directed hairs of which the middle pair are the strongest .... *E. friedmanni* Gutierrez
- Aedeagal knob a fifth the length of dorsal margin of shaft which is slender; male empodium I with 3 pairs of short teeth .... *E. portaureus* Meyer

40. Male empodium I with 3 pairs of digits of which middle pair are the strongest 41
- Male empodium I with 3 pairs of equally strong digits ... *E. cybebus* Baker & Pritchard

41. Aedeagus with deflexed part shorter than shaft and falciform 42
- Aedeagus with deflexed part about as long as shaft and stylet-like ..... *E. pauliani* Gutierrez

42. Aedeagus with dorsal margin of shaft about twice as long as its greatest thickness, with distal falciform end directed caudodorsally and about as long as deflexed part .... *E. falcatus* Meyer & Rodrigues
- Aedeagus with dorsal margin of shaft about 2,5 times as long as its greatest thickness, with distal end directed caudally and slightly more than half the length of deflexed part .... *E. paracybelus* Gutierrez

UNASSIGNED SPECIES

Eotetranychus capricorni Gutierrez
(Fig. 522)

Eotetranychus capricorni Gutierrez, 1967a: 378-382; Meyer, 1974: 195.

Aedeagal shaft with dorsal margin straight; anterodorsally directed bent portion of shaft half the length of dorsal margin of shaft (Fig. 522). Only the male of this species is known.

Habitat and locality. This species was reported from *Abrus precatorius* in the Malagasy Republic.

Eotetranychus cernuus Baker & Pritchard
(Fig. 523)

Eotetranychus cernuus Baker & Pritchard, 1960: 478-479; Meyer, 1974: 208.

The slender shaft of the aedeagus (Fig. 523) nearly straight, turns slightly ventrad, tapers distally and bends ventrad; knob provided with a small anteroventral angulation and a longer dorsocaudally directed angulation; terminal sensillum on male palptarsus tiny and conical; middle pair of hairs on male empodium I very strong but dorsal and ventral pairs very weak; dorsal body setae of female longer than longitudinal intervals between them; opisthosoma bears transverse striae between third pair of dorsocental setae (e_1); female palpus with terminal sensillum twice as long as broad; peritreme ends in a simple bulb; 4 tactile setae and 1 solenidion situated proximal to duplex setae on female tarsus I.

Habitat and locality. *E. cernuus* was collected on *Annona senegalensis* in Zaïre.

E. WILLAMETTEI GROUP

Eotetranychus paarlensis Meyer
(Fig. 524)

Eotetranychus paarlensis Meyer, 1974: 197.

Female dorsal body setae thin, serrate and vary in length from longer to about as long as longitudinal distances between their bases; dorsal striae smooth, longitudinal on prodorsum but transverse on opisthosoma; genital flap and area immediately anterior to it with transverse striae; terminal sensillum of female palpus 1,5 times as long as broad; male empodium I strongly tridigitate; proximal solenidia on tarsi II-IV longer than respective tarsi; tibia II bears 6 tactile setae; tibiae III and IV each with 5 tactile setae; aedeagus (Fig. 524) bends dorsad at approximately a right angle to form a sigmoid, acuminate tip which is directed dorsocaudally.

Habitat and locality *E. paarlensis* was recorded from *Leucadendron plumosum* and *Restio gaudichaudianus* at Paarl Rock, Cape.

Eotetranychus broodryki Meyer
(Fig. 525)

Eotetranychus broodryki Meyer, 1974: 201.

Shaft of aedeagus (Fig. 525) gradually narrows distally and curves dorsad to form a distal knob, with a small anterior projection and a much longer posterior projection directed dorsally; dorsal margin of shaft convex and about 1,5 times as long as width of knob; terminal sensillum on male palptarsus inconspicuous and rudimentary; male empodium I bifid and each part with 2 short teeth; female dorsal body setae linear-lanceolate, serrate and extend to bases of setae next behind; lobed striae on prodorsum longitudinal but those on opisthosoma mostly transverse; terminal sensillum on female palptarsus about 1,5 times as long as broad; peritreme terminates in a simple bulb.

Habitat and locality *E. broodryki* was collected from an unidentified wild tree in Zimbabwe.

Eotetranychus ancora Baker & Pritchard
(Fig. 526)

Eotetranychus ancora Baker & Pritchard, 1960: 476-478; Meyer, 1974:202; Jeppson, Keifer & Baker, 1975: 167.

The aedeagus (Fig. 526) of *E. ancora* is distinctive in that the shaft curves strongly dorsad and tapers distally; distal part provided with 2 projections, 1 short and ventrally directed and 1 longer and dorsally directed; terminal sensillum on male palpus very small, being longer than broad; middle pair of hairs of male empodium I strong but dorsal and ventral pairs weak; dorsal setae on female idiosoma longer than longitudinal intervals between their bases; striae between third pair of dorsocentral setae (e_1) transverse; striation pattern of female genital flap and area anterior to flap transverse; female palpus with a strong terminal sensillum which is longer than broad; peritreme terminates in a simple bulb.

Habitat and locality. *E. ancora* was collected on apple in Mauritius.

Eotetranychus botryanthae Gutierrez
(Fig. 527)

Eotetranychus botryanthae Gutierrez, 1970: 720-722; Meyer, 1974: 197.

Shaft of aedeagus (Fig. 527) narrows distally, turns dorsad with distal part sigmoid, tapering and directed dorsocaudally; male palptarus with rudimentary terminal sensillum; empodium I of male consists of 3 pairs of proximoventral hairs; female dorsal body setae longer than longitudinal intervals between their bases; striae on prodorsum longitudinal whereas those on opisthosoma mostly transverse; striae on genital flap and area anterior to it transverse; female palptarsus with terminal sensillum about twice as long as broad.

Habitat and locality. This species was recorded from *Grewia botryantha* in the Malagasy Republic.

Eotetranychus greveanae Gutierrez (Fig. 528)

Eotetranychus greveanae Gutierrez, 1970: 722; Meyer, 1974: 203.

Shaft of aedeagus (Fig. 528) turns dorsad, tapering and ending in a small knob which is directed posteriorly; terminal sensillum on male palpus very small; empodium I of male with 3 pairs of hairs which are nearly equally strong; dorsal body setae of female extend past bases of consecutive setae; prodorsum with longitudinal striae and opisthosoma with transverse striae; transverse striae on genital flap and area immediately anterior to it; female palptarsus bears a terminal sensillum which is about twice as long as broad; peritreme terminates in a simple bulb.

Habitat and locality *E. greveanae* was collected on *Diospyros greveana* in the Malagasy Republic.

Eotetranychus borbonensis Gutierrez (Fig. 529)

Eotetranychus borbonensis Gutierrez, 1968b: 444-446; Meyer, 1974: 200.

The male of *E. borbonensis* may be recognized by the shaft of the aedeagus (Fig. 529) which is bent dorsad at about a right angle to form a sigmoid distal end which terminates in a small bulb directed posteriorly; male palptarsus with a minute terminal sensillum; empodium I of male with middle pair of hairs strong and dorsal and ventral pairs weak; striae on genital flap of female and area immediately anterior to it transverse; terminal sensillum of female palptarsus more than twice as long as broad; distally, the peritreme is dilated into a simple bulb.

Habitat and locality. Gutierrez (1968b) reported this species from *Desmodium* sp. on the Island of Reunion.

Eotetranychus xylopiae Gutierrez (Fig. 530)

Eotetranychus xylopiae Gutierrez, 1970: 722-724; Meyer, 1974: 202-203.

Shaft of aedeagus (Fig. 530) narrows abruptly distally, turns dorsad at a slight angle and forms a distal knob which is at a right angle to shaft; knob provided with small, acute dorsally and ventrally directed projections; male palptarsus with very small terminal sensillum; empodium I of male with 2 claw-like structures; female dorsal body setae extend past bases of setae next behind; striae on prodorsum longitudinal but on opisthosoma transverse; striae on genital flap and area immediately anterior to it transverse; terminal sensillum on female palptarsus about twice as long as broad; peritreme terminally dilated into a bulb.

Habitat and locality. This species was studied from *Xylopia* sp. in the Malagasy Republic.

Eotetranychus mollis Meyer (Fig. 531)

Eotetranychus mollis Meyer, 1974: 201-202.

Shaft of aedeagus (Fig. 531) narrows distally and curves strongly dorsad; distal knob with a short ventrally directed projection and a sightly longer dorsally directed projection; aedeagal knob about a third the length of dorsal margin of shaft; terminal sensillum on male palptarsus rudimentary; empodium I of male bifid, each part consisting of 3 pairs of hairs, middle pair the strongest; female dorsal body setae linear-lanceolate, serrate and reaching past bases of setae next behind; striae on prodorsum longitudinal but those on opisthosoma transverse; lobes on striae rounded; female genital flap and area anterior to flap with transverse striae; female palptarsus with terminal sensillum twice as long as broad; peritreme ends in a simple bulb.

Habitat and locality. This species was described from *Bridelia mollis* collected in Zimbabwe and *Annona senegalensis* in Malawi.

Eotetranychus reduncus spec. nov. (Fig. 532-536)

Aedeagus resembles that of *E. mollis* Meyer but the axis of the knob forms an obtuse angle with axis of shaft and not a rectangle; in *E. reduncus* the male empodium I bears 3 pairs of more or less equally strong hairs whereas in *E. mollis* the middle pair are strong but the dorsal and ventral pairs are weak.

Male. Gnathosoma. Terminal sensillum on palptarsus (Fig. 532) rudimentary.

Legs. Setal pattern (solenidia in parentheses) of legs: femora 9-7-4-4; genua 5-5-4-4; tibiae 9(3)-8-6-6; tarsi 13(3)+2 dupl.-13(1)+1 dupl.-10(1)-10(1); tarsus I bears 4 tactile setae and 2 solenidia well proximal to duplex setae; tarsus II with 3 tactile setae and 1 solenidion proximal to duplex setae; empodia I (Fig. 533) and II bifid and each part has 3 short teeth, which are about equal in length.

Aedeagus (Fig. 534). Aedeagal shaft narrows distally and bends obtusely dorsad to end in a knob provided with a dorsocaudally directed and a ventrally directed projection; knob about a third the length of dorsal margin of shaft.

Female. Dimensions: length of body (including gnathosoma) 433-453 μm; length (excluding gnathosoma) 367-380 μm; breadth 240-267 μm.

Dorsum. Body setae longer than distances between consecutive setae; striae on prodorsum longitudinal but those on opisthosoma transverse; lobes on striae rounded with basal spots.

Venter. Striae of genital area transverse.

Gnathosoma. Stylophore rounded anteriorly; terminal sensillum of palpus about twice as long as

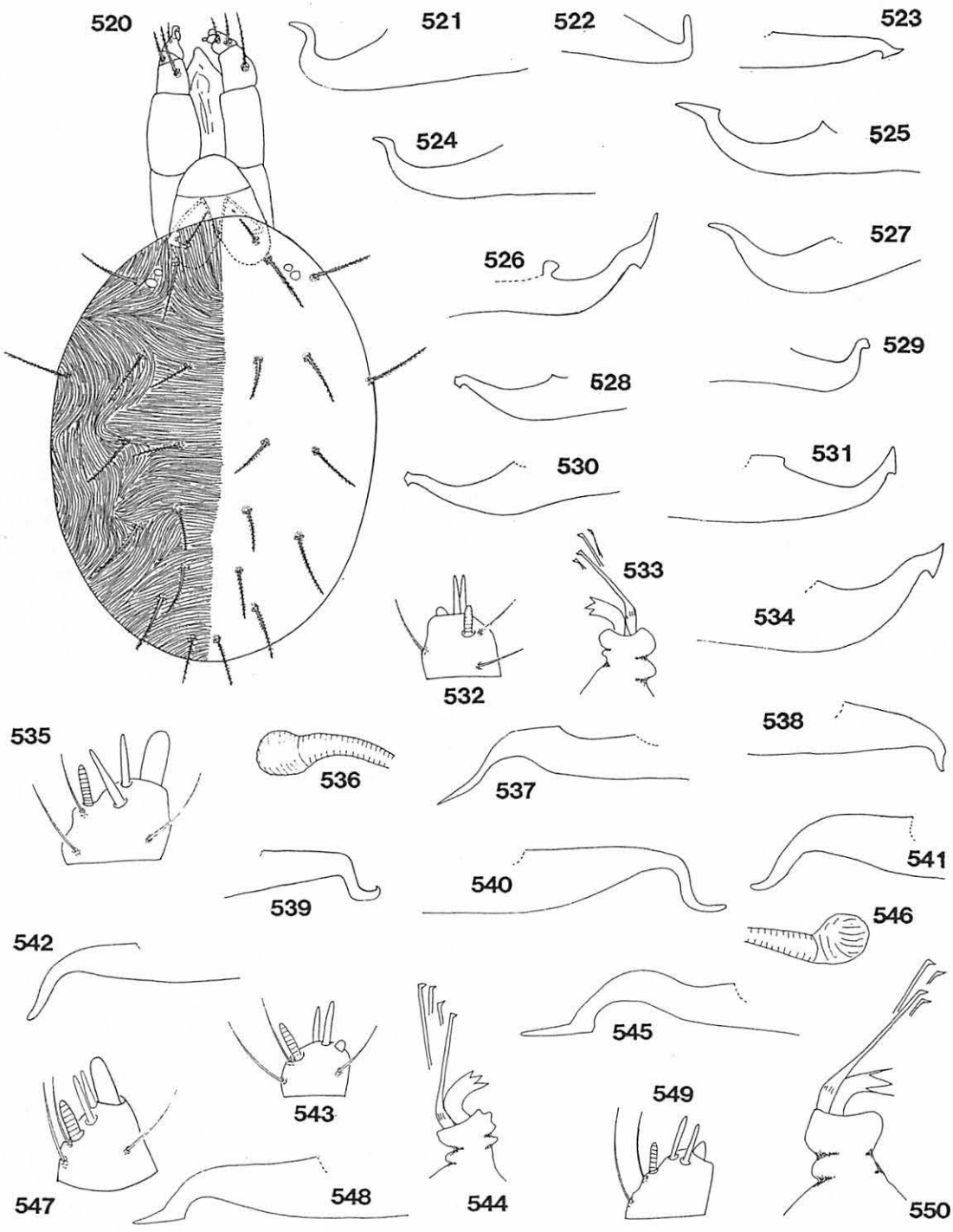

FIG. 520-521. *Platytetranychus rhusi* (Meyer)
FIG. 520. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 521. Aedeagus
FIG. 522. *Eotetranychus capricorni* Gutierrez. Aedeagus
FIG. 523. *Eotetranychus cernuus* Baker & Pritchard. Aedeagus
FIG. 524. *Eotetranychus paarlensis* Meyer. Aedeagus
FIG. 525. *Eotetranychus broodryki* Meyer. Aedeagus
FIG. 526. *Eotetranychus ancora* Baker & Pritchard. Aedeagus
FIG. 527. *Eotetranychus botryanthae* Gutierrez. Aedeagus
FIG. 528. *Eotetranychus greveanae* Gutierrez. Aedeagus
FIG. 529. *Eotetranychus borbonensis* Gutierrez. Aedeagus
FIG. 530. *Eotetranychus xylopiae* Gutierrez. Aedeagus
FIG. 531. *Eotetranychus mollis* Meyer. Aedeagus
FIG. 532-536. *Eotetranychus reduncus* spec. nov.
FIG. 532. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 533. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 534. Aedeagus
FIG. 535. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 536. Termination of peritreme of female/ *Eindpunt van peritreem van wyfie*
FIG. 537. *Eotetranychus lewisi* (McGregor). Aedeagus
FIG. 538. *Eotetranychus hellei* Meyer & Bolland. Aedeagus
FIG. 539. *Eotetranychus savanae* Gutierrez. Aedeagus
FIG. 540. *Eotetranychus deflexus* (McGregor). Aedeagus
FIG. 541. *Eotetranychus obtusus* (Meyer. Aedeagus
FIG. 542. *Eotetranychus roedereri* Gutierrez. Aedeagus
FIG. 543-547. *Eotetranychus mucronatae* spec. nov.
FIG. 543. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 544. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 545. Aedeagus
FIG. 546. Termination of peritreme of female/ *Eindpunt van peritreem van wyfie*
FIG. 547. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 548. *Eotetranychus arborarius* Meyer. Aedeagus
FIG. 549-553. *Eotetranychus tokaiensis* spec. nov.
FIG. 549. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 550. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*

broad (Fig. 535); peritreme ends in a simple bulb (Fig. 536).

Legs. Chaetotaxy of legs (solenidia in parentheses): coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-7-4-4; genua 5-5-4-4; tibiae 9(1)-8-6-7; tarsi 14(1)+2 dupl.-13(1)+1 dupl.-10(1)-10(1); tarsus I bears 5 tactile setae well proximal to duplex setae; tarsus II with 3 tactile setae and 1 solenidion proximal to duplex setae.

Habitat and locality. Holotype male, 3 paratype males and 6 paratype females from *Acalypha ecklonii,* East London, C.P., 11 February 1974 (L.C. Smit).

Eotetranychus lewisi (McGregor) (Fig. 537)

Tetranychus lewisi McGregor, 1943: 127.
Eotetranychus lewisi (McGregor), Pritchard & Baker, 1955: 205-206; Baker & Pritchard, 1962: 318; Tuttle & Baker, 1964: 21; Tuttle & Baker, 1968: 91; Estébanes & Baker, 1966 (1968): 82-83; Meyer, 1974: 203-206; Jeppson, Keifer & Baker, 1975: 171-173.

The aedeagus (Fig. 537) of *E. lewisi* is distinctive in that it gradually tapering and forming a broad, sigmoid ventral bend without a distinct distal tip or knob; dorsal margin of shaft concave; terminal sensillum of male palpus very small and about as long as broad; terminal sensillum on female palpus about one and a third times as long as broad; tibia I of female and male each with 9 tactile setae; tibia II of both sexes with 8 tactile setae; female tarsus I with 5 tactile setae proximal to duplex setae; peritreme hooked distally; striation pattern transverse on genital flap of female and area anterior to flap; chromosome numbers n=2.

Habitat and locality. Meyer (1974) recorded this species from *Euphorbia pulcherrima* Pretoria, Tvl.

New records are: *Ricinus communis* , Pretoria, Tvl., 18 July 1973 (C.J. Colijn); *Bauhinia* sp., Pretoria, Tvl., 25 November 1976 (M.K.P. Meyer); *Euphorbia pulcherrima*, Duiwelskloof, Tvl., 7 May 1981 (E.A. Ueckermann); *E. pulcherrima*, Nelspruit, Tvl., July 1984 (P.F. Fourie).

Eotetranychus hellei Meyer & Bolland (Fig. 538)

Eotetranychus hellei Meyer & Bolland, 1984: 211.

The aedeagus (Fig. 538) resembles that of *E. guaymas* Tuttle, Baker & Abbatiello, in bending ventrad distally but has a blunt end; tibia II bears 8 instead of 7 tactile setae; terminal sensillum on male palpus small and conical; male empodium I with 3 pairs of hairs, middle pair being the strongest; empodia with tiny, inconspicuous mediodorsal spurs; female dorsal body setae longer than longitudinal distances between them; prodorsum bears longitudinal striae and opisthosoma transverse striae; lobes on striae rounded; striae of genital area transverse; terminal sensillum on female palptarsus about twice as long as broad; peritreme terminates in a simple bulb; female empodia bear tiny mediodorsal spurs; chromosome numbers n=4.

Habitat and locality. This species was first collected on *Asystasia* sp., Cameroun.

Eotetranychus savanae Gutierrez (Fig. 539)

Eotetranychus savanae Gutierrez, 1967b: 567-571; Meyer, 1974: 214.

Shaft of aedeagus (Fig. 539) bends ventrad; distally with a relatively strong end having a dorsocaudally directed projection; sigmoid distal end about one third the length of dorsal margin of shaft; terminal sensillum on male palptarsus rudimentary; empodium I of male bears 3 pairs of hairs, middle pair being the strongest; dorsal body setae of female extend past bases of setae next behind; striae on prodorsum longitudinal but those on opisthosoma generally transverse; striae on genital flap and area immediately anterior to it transverse; terminal sensillum on female palpus about 2,5 times as long as broad; peritreme ends in a simple bulb; tibia II with 8 tactile setae.

Habitat and locality. This species was collected on *Vernonia poissonii* in the Malagasy Republic.

Eotetranychus deflexus (McGregor) (Fig. 540)

Tetranychus deflexus McGregor, 1950: 284.
Eotetranychus deflexus (McGregor), Pritchard & Baker, 1955: 206-208; Beer & Lang, 1958: 1241; Jeppson, Keifer & Baker, 1975: 169-170.

The male of *E. deflexus* may be recognized by the aedeagus (Fig. 540) strongly bent ventrad near middle, the bent portion tapering and sigmoid; male palptarsus with a rudimentary terminal sensillum; peritreme straight distally, terminating in a simple bulb; striae on genital flap of female and area immediately anterior transverse; tibia II bears 8 tactile setae.

Habitat and locality. According to Jeppson, Keifer & Baker (1975) this species has been reported as a pest of cotton in Uganda.

Eotetranychus obtusus Meyer (Fig. 541)

Eotetranychus obtusus Meyer. 1965: 88-90; Meyer, 1974: 215.

Aedeagus (Fig. 541) bends obtusely ventrad, tapering and ending in a slight falciform distal end; ventral margin of shaft straight, relatively short and slightly longer than its greatest thickness; terminal sensillum on male palptarsus tiny; empodium I of

male with 3 pairs of hairs, middle pair being the strongest whereas other 2 pairs are fine; dorsal body setae of female longer than longitudinal intervals between setae; prodorsum with longitudinal striae but opisthosoma generally with transverse striae; lobes on striae semicircular; striae on genital flap and area immediately anterior to it transverse; peritreme ends in a simple bulb; female palpus bears a terminal sensillum which is about 2,5 times as long as broad; tarsi III and IV each bear 10 tactile setae and 1 solenidion; tibia II with 8 tactile setae.

Habitat and locality. Meyer (1965) described this species from *Ficus sycomorus*, collected in the Kruger National Park, Tvl.

Eotetranychus roedereri Gutierrez (Fig. 542)

Eotetranychus roedereri Gutierrez, 1967a: 391-394; Meyer, 1974: 215.

Aedeagus (Fig. 542) bent obtusely ventrad and tapering towards its tip, bent portion slightly sigmoid; male palptarsus with small terminal sensillum, about as long as broad; male empodium I consists of 3 pairs of hairs, middle pair the strongest; female dorsal body setae longer than longitudinal intervals between their bases; prodorsum bears longitudinal striae but opisthosoma with transverse striae; striae on genital flap and area anterior to it transverse; female palptarsus with terminal sensillum about twice as long as broad; peritreme ends in a simple bulb; tarsi III and IV each bear 9 tactile setae and 1 solenidion; tibia II with 8 tactile setae; chromosome numbers n=3.

Habitat and locality. Gutierrez (1967a) found this species on *Isachne mauritiana* in the Malagasy Republic.

Eotetranychus mucronatae spec. nov. (Fig. 543-547)

The aedeagus of *E. mucronatae* is similar to that of *E. abutilon* Tuttle, Baker & Abbatiello but differs in that female tarsi I and II bear 5 and 2 tactile setae proximal to duplex setae respectively whereas there are only 4 and 1 setae in *E. abutilon*.

Male. Gnathosoma. Terminal sensillum on palptarsus (Fig. 543) small and about as long as broad.

Legs. Setae and solenidia (in parentheses) on leg podomeres: femora 10-6-4-4; genua 5-5-4-4; tibiae 8 or 9(2)-8-6-6; tarsi 12(3)+2 dupl.-11(1)+1 dupl.-9(1)-9(1); tarsus I bears 4 (3 on one leg) tactile setae and 2 solenidia proximal to duplex setae; empodium I (Fig. 544) bifid and each side provided with 3 equally strong teeth; other empodia with free hairs.

Aedeagus (Fig. 545). Aedeagus sharp sigmoid, curving ventrally and has a straight, caudally directed tip.

Female. Dimensions: length of body (including gnathosoma) 413-473 μm; length (excluding gnathosoma) 353-389 μm; breadth 213-273 μm.

Dorsum. Body setae slender, one third longer than longitudinal distances between their bases; prodorsum has longitudinal striae but opisthosoma has transverse striae; lobes on striae semicircular with basal spots.

Venter. Genital area has transverse striae.

Gnathosoma. Stylophore rounded anteriorly; peritreme ends in a simple bulb (Fig. 546); palptarsus (Fig. 547) bears a terminal sensillum that is about 2,5 times longer than broad.

Legs. Chaetotaxy of legs I-IV: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-7-4-4; genua 5-5-4-4; tibiae 9(1)-8-6-7; tarsi 13(1)+2 dupl.-11(1)+1 dupl.-9(1)-9(1); tarsus I with 5 tactile setae proximal to duplex setae; tarsus II with 2 tactile setae and 1 solenidion proximal to duplex setae.

Habitat and locality. Holotype male and 5 paratype females from *Ziziphus mucronata*, 10 km from Pongola, Tvl., 19 August 1980 (M. Samways).

Eotetranychus arborarius Meyer (Fig. 548)

Eotetranychus arborarius Meyer, 1974: 208.

Aedeagal shaft (Fig. 548) tapers slightly distally and curves ventrad to form a distal knob providing with a small anterior projection and a longer posterior projection; axis of knob parallel to shaft axis; terminal sensillum on palptarsus of male rudimentary; male empodium I consists of 3 pairs of short teeth, median pair being the strongest; female dorsal body setae serrate and longer than distances between bases of consecutive setae; prodorsum bears longitudinal striae, whereas opisthosoma has transverse striae which are provided with rounded lobes; striae on genital flap and those immediately anterior to it transverse; anteriorly stylophore slightly incised; peritreme terminates in a simple bulb; terminal sensillum on female palpus twice as long as broad; tarsus I with 5 tactile setae and 1 solenidion proximal to duplex setae; tibia II with 8 tactile setae.

Habitat and locality. This species was described from *Kiggelaria africana*, Krugersdorp, Tvl.

Eotetranychus tokaiensis spec. nov. (Fig. 549-553)

The aedeagus is similar to that of *E. mucronatae* spec. nov. but differs from the latter in that the tridigitate empodia I and II have weak dorsal and ventral hairs.

Male. Gnathosoma. Terminal sensillum on palptarsus (Fig. 549) triangular and about as long as broad.

Legs. Counts of setae and solenidia (in parentheses) on leg segments: femora 10-7-4-4; genua 5-5-4-4; tibiae 9(2)-7-6-7; tarsi 13(3)+2 dupl.-11(1)+1 dupl.-9(1)-9(1); tarsus I bears 4 (3 on one leg) tactile setae and 2 solenidia well proximal to duplex setae; tarsus II with 2 tactile and 1 solenidion well proximal to duplex setae; empodia I and II

tridigitate, middle pair of hairs the strongest (Fig. 550).

Aedeagus (Fig. 551). Aedeagus bent ventrad with straight, caudally directed tip.

Female. Dimensions: length of body (including gnathosoma) 660-767 μm; length (excluding gnathosoma) 540-653 μm; breadth 307-407 μm.

Dorsum. Body setae about as long as intervals between bases of consecutive setae; prodorsum with longitudinal striae whereas opisthosoma bears transverse striae; lobes on striae semicircular and with basal spots.

Venter. Genital area has transverse striae.

Gnathosoma. Peritreme terminates in a simple bulb (Fig. 552); terminal sensillum (Fig. 553) on palptarsus 3 times as long as broad.

Legs. Setal pattern of legs I-IV: coxae 2-2-1-1; trochanters 1-1-1-1; femora 9-7-4-4; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-12(1)+1 dupl.-9(1)-9(1); tarsus I bears 4 tactile setae proximal to duplex setae; tarsus II with 2 tactile setae and 1 solenidion proximal to duplex setae.

Habitat and locality. Holotype male, 1 paratype male and 6 paratype females from an unidentified wild shrub, Tokai State Forest Reserve, near Cape Town, 8 March 1983 (D.P. Keetch).

Eotetranychus strychnosi Meyer
(Fig. 554)

Eotetranychus strychnosi Meyer, 1974: 208-209.

Shaft of aedeagus (Fig. 554) slender, tapers distally and bends ventrad to form a knob providing with a small anterior projection and a postero-ventrally directed projection that tapers towards its tip; terminal sensillum of male palptarsus rudimentary; empodium I of male with 3 pairs of teeth, median pair the strongest; female dorsal body setae linear-lanceolate, serrate and extend for about half of their lengths beyond bases of consecutive setae; prodorsum bears longitudinal striae but opisthosoma generally with transverse striae; lobes on striae rounded; genital flap and area immediately anterior to it with transverse striae; peritreme ends in a simple bulb; female palpus with terminal sensillum 2,5 times as long as broad; 5 tactile setae and 1 solenidion situated proximal to duplex setae on tarsus I of female; tibia II with 8 tactile setae; tibiae III and IV bear 6 and 7 tactile setae respectively, together with 1 solenidion.

Habitat and locality. This species was found on *Strychnos spinosa* in Nelspruit, Tvl.

Eotetranychus karooicus Meyer
(Fig. 555)

Eotetranychus karooicus Meyer, 1974: 206-207.

Aedeagal shaft (Fig. 555) thick and straight; distal part bends ventrad, with posterior angulation directed dorsally and small, acute anterior angulation directed ventrally; terminal sensillum on palptarsus of male tiny, about as long as broad; male empodium I bifid with each side strongly tridigitate; female dorsal body setae linear-lanceolate, serrate and about one fourth of their lengths longer than longitudinal distances between their bases; prodorsum bears smooth, longitudinal striae whereas the opisthosoma has smooth, transverse striae; genital flap and area immediately anterior to it with transverse striae; stylophore slightly incised anteriorly; peritreme ends in a simple bulb; palptarsus of female with terminal sensillum about 2,5 times as long as broad; tibia II bears 8 tactile setae.

Habitat and locality. This species was found on *Plinthus karooicus*, Grootfontein, C.P.

Eotetranychus passerinae Meyer
(Fig. 556)

Eotetranychus passerinae Meyer, 1974: 209.

Aedeagal shaft (Fig. 556) gradually narrows distally and bends ventrad to form a distal knob, with a small anterior and longer posterior angulation; terminal sensillum of male palpus small, conical and about as long as broad; male empodium I with 3 pairs of short teeth; female dorsal body setae linear-lanceolate, serrate and longer than distances between bases of consecutive setae; prodorsum with longitudinal striae but opisthosoma with transverse striae; lobes on striae semicircular; genital flap and are immediately anterior to it bear transverse striae; female palpus with terminal sensillum about twice as long as broad; peritreme ends in a single-chambered bulb; tibia II with 8 tactile setae; tibiae III and IV each bear 6 tactile setae and 1 solenidion.

Habitat and locality. *E. passerinae* was collected on *Passerina filiformis, P. galpinii* and *Galenia africana* in the Cape.

New records for this species are: *Salsola henriciae*, 4 km from Griekwastad, C.P., 8 October 1979 (E.A. Ueckermann); *Passerina vulgaris*, 3 km from Mamre, C.P., 18 June 1981 (D.P. Keetch); *P. vulgaris*, near Pearly Beach (Elim road), C.P., 10 March 1983 (M.K.P. Meyer); *Passerina* sp., Cape Agulhas, C.P., 10 March 1983 (M.K.P. Meyer).

Eotetranychus imerinae Gutierrez
(Fig. 557)

Eotetranychus imerinae Gutierrez, 1967a: 385-388; Meyer, 1974: 202.

Aedeagal knob (Fig. 557) about two thirds the length of dorsal margin of shaft and directed dorsocaudad; terminal sensillum of male palpus tiny; 4 tactile setae and 3 solenidia situated proximal to duplex setae on male tarsus I; male empodium I with 3 pairs of short hairs, middle pair the strongest; dorsal body setae of female extend past bases of setae next behind; striae on prodorsum longitudinal but those on opisthosoma generally transverse; terminal sensillum on palptarsus 3 times as long as broad; distally peritreme dilated into a simple bulb; chromosome numbers n=3.

Habitat and locality. *E. imerinae* was recorded from *Erythrina orophylla, Bauhinia* sp. and *Dombeya cacuminum* in the Malagasy Republic.

Eotetranychus edi Meyer
(Fig. 558)

Eotetranychus edi Meyer, 1964: 678-680; Meyer, 1974; 215-216.

The male may be readily recognized by the aedeagus (Fig. 558) flaring at the distal end to form a knob which is about one eight the length of dorsal margin of shaft; terminal sensillum on male palptarsus tiny, conical and about as long as broad; empodium I of male with middle pair of hairs strong, dorsal and ventral pairs of hairs very weak; dorsal body setae of female longer than longitudinal distances between them; striae between third pair of dorsocentral setae (e_1) transverse and dorsal lobes broadly triangular to rounded; striae on and anterior to genital flap transverse; terminal sensillum of female palpus twice as long as broad; peritreme ends in a bulb.

Habitat and locality. *E. edi* was recorded from *Rhus* sp., *R. leptodictya, R. lancea, R. pyroides, Pterocarpus angolensis, Populus canescens, Prunus armeniaca* and *Ziziphus mucronata* in the Transvaal and Cape Province.

Eotetranychus paraedi Meyer
(Fig. 559)

Eotetranychus paraedi Meyer, 1974: 216.

Shaft of aedeagus (Fig. 559) long, strong and nearly straight; knob about one fifth the length of dorsal margin of shaft, with distal margin angulate and forming anterodorsally and posteroventrally directed projections; terminal sensillum on male palptarsus small, conical and about as long as broad; male empodium I with middle pair of short teeth strong, dorsal and ventral pairs weak; female dorsal body setae linear-lanceolate, serrate and reaching past bases of setae next behind; striae on prodorsum longitudinal but those on opisthosoma transverse; lobes on striae broadly triangular to rounded; striae on genital flap and those on area immediately anterior to it transverse; terminal sensillum on female palptarsus twice as long as broad; peritreme ends in a simple bulb.

Habitat and locality. This species was collected on *Parkinsonia africana* and *Ziziphus mucronata* in the Cape.

E. HICORIAE GROUP

Eotetranychus tulearensis Gutierrez
(Fig. 560)

Eotetranychus tulearensis Gutierrez, 1967a: 372-375; Meyer, 1974: 199.

Distal part of aedeagus (Fig. 560) bends dorsad at slightly less than a right angle and tapering, with the small tip directed dorsocaudally; terminal sensillum on male palpus about 1,5 times as long as broad; male empodium I bifid and with middle pair of hairs strong, dorsal and ventral pairs of hairs very weak; dorsal body setae of female extend past bases of consecutive setae; striae on prodorsum longitudinal but on opisthosoma transverse; striae on genital flap transverse whereas those anterior to it longitudinal; terminal sensillum on female palptarsus about as long as broad; peritreme hooked distally; chromosome numbers n=2.

Habitat and locality. This species was collected on *Bauhinia* sp. in the Malagasy Republic.

Eotetranychus smithi Pritchard & Baker
(Fig. 561)

Eotetranychus smithi Pritchard & Baker, 1955: 192-196.
Eotetranychus ranomafanae Gutierrez, 1967a: 382-385; Meyer, 1974: 206.

Helle, Bolland & Heitmans (1981) treated *E. ranomafanae* as a synonym of *E. smithi.*

They determined the chromosome numbers of this species as n=5.

Aedeagal shaft curved dorsad, median portion abruptly narrowed and distal portion very slender and slightly undulate; tip directed caudally (Fig. 561); terminal sensillum on male palpus almost 3 times as long as broad; male empodium I with 3 pairs of hairs, dorsal pair being the shortest; idiosoma of female bears dorsal, body setae longer than longitudinal intervals between them; prodorsum with longitudinal but opisthosoma generally with transverse striae; genital flap bears transverse striae but area immediately anterior to it with longitudinal striae; female palpus bears a terminal sensillum that is slightly longer than broad; peritreme hooked at distal end; chromosome numbers n=5.

Habitat and locality. This species was collected on *Rosa* sp. in the Malagasy Republic.

Eotetranychus grandis Gutierrez
(Fig. 562-566)

Eotetranychus grandis Gutierrez, 1969: 48-50; Meyer, 1974: 197-198.

Aedeagus (Fig. 562) bends dorsad at about a right angle to form a slender, sigmoid distal end, directed dorsocaudally; terminal sensillum of male palptarsus (Fig. 563) very broad, about twice as broad as long at its base; empodium I of male bifid and each side tridigitate (Fig. 564); dorsal body setae of female longer than longitudinal intervals between them; striae on opisthosoma transverse; area immediately anterior to genital flap with longitudinal striae but genital flap with transverse striae; terminal sensillum of female palpus very broad, base about twice as broad as long (Fig. 565); peritreme (Fig. 566) retrorse distally; chromosome numbers n=3.

Habitat and locality. This species was recorded from *Hippocratea* sp. in the Malagasy Republic.

New records for *E. grandis* are from: Abeokuta, Nigeria, 10 December 1975 (J.G. Matthysse) collected on *H. indica*; Ibadan, Nigeria, 4 January 1976 (J.G. Matthysse) on *H. indica*.

Eotetranychus befandrianae Gutierrez
(Fig. 567)

Eotetranychus befandrianae Gutierrez, 1967a: 378; Meyer, 1974: 194-195.

Distal part of aedeagal shaft (Fig. 567) curves dorsad to form an acute angle with shaft, about one third the length of dorsal margin of shaft, distal end directed anterodorsally; dorsal margin of thick shaft curved; terminal sensillum on male palpus rudimentary; dorsal body setae of female longer than longitudinal intervals between them; prodorsum bears longitudinal striae but striae on opisthosoma transverse; striae on genital flap transverse but those immediately anterior to it longitudinal; chromosome numbers n=2.

Habitat and locality. This species was collected on *Croton* sp. in the Malagasy Republic.

Eotetranychus natalensis Meyer
(Fig. 568)

Eotetranychus natalensis Meyer, 1974: 200-201.

Shaft of aedeagus (Fig. 568) broad and straight, with distal part tapering and bending dorsad to form a knob about twice as long as its stem; posterior angulation of knob tapers and reaches well beyond level of bend but anterior angulation small and acute; male palptarsus with terminal sensillum about 1,5 times as long as broad; empodium I of male bifid, each side with 3 short teeth, middle one being the strongest; female dorsal body setae linear-lanceolate, serrate and one third longer than distances to bases of setae next behind; prodorsum bears longitudinal striae but opisthosoma with transverse striae; dorsal striae bear rounded lobes with basal spots, sometimes broader or smaller lobes may be found; genital flap bears transverse striae but area immediately anterior has longitudinal striae; peritreme simple at distal end; terminal sensillum of female palpus conical and about as long as broad.

Habitat and locality. This species was collected on *Tephrosia polystachya* var. *hirta* in the Mkuze Game Reserve, Kwazulu.

A new record for *E. natalensis* is: *Mikania cordata*, farm near Lake St. Lucia, Natal, 21 August 1980 (E.A. Ueckermann).

Eotetranychus sakalavensis Gutierrez
(Fig. 569)

Eotetranychus sakalavensis Gutierrez, 1967a: 375-377; Meyer, 1974: 198-199.

Aedeagal shaft (Fig. 569) tapers distally, turns dorsad at about a right angle and is rostelliform distally; axis of beak-like knob parallel to that of shaft; terminal sensillum on male palpus slightly longer than broad; middle pair of hairs on empodium I of male strong but dorsal and ventral pairs weak; dorsal body setae of female extend past bases of setae next behind; prodorsum bears longitudinal striae but opisthosoma transverse striae; genital flap with transverse striae but striae immediately anterior to it longitudinal; terminal sensillum on female palptarsus stronger than that of male and slightly longer than broad; chromosome numbers n=2.

Habitat and locality. This species was found on *Phyllanthus* sp. in the Malagasy Republic.

Eotetranychus lonchocarpi Meyer
(Fig. 570)

Eotetranychus lonchocarpi Meyer, 1974: 207.

Shaft of aedeagus (Fig. 570) slender, straight and bends distally ventrad to form a knob; anterior angulation of knob small but posterior angulation longer and directed ventrally; terminal sensillum of male palpus small, conical and about as long as broad; male empodium I with 3 pairs of short teeth; female dorsal body setae linear-lanceolate, serrate and extend for about one third of their lengths past bases of setae next behind; prodorsum bears longitudinal striae but opisthosoma with transverse striae; lobes on striae semicircular; striae on genital flap transverse whereas those anterior to flap longitudinal; peritreme ends in a simple bulb; female palptarsus with terminal sensillum about one and two thirds as long as broad.

Habitat and locality. *E. lonchocarpi* was collected on *Lonchocarpus capassa* in the Kruger National Park, Tvl.

Eotetranychus africanus spec. nov.
(Fig. 571-576)

The aedeagus is similar to that of *E. neolewisi* Tuttle, Baker & Abbatiello but the peritreme is hooked distally and not straight as in the latter species; tibia II of male bears 8 tactile setae instead of 7.

Male. Dimensions: length of body (including gnathosoma) 360 μm; length (excluding gnathosoma) 247 μm; breadth 160 μm.

Gnathosoma. Terminal sensillum on palptarsus (Fig. 571) rudimentary.

Legs. Distribution of setae and solenidia (in parentheses) on leg segments: femora 10-7-4-4; genua 5-5-4-4; tibiae 9(3)-8-6-7; tarsi 13(3)+ dupl.-12(1)+1 dupl.-10(1)-10 (1); tarsus I bears 4 tactile setae and 3 solenidia proximal to duplex setae; tarsus II with 3 tactile setae and 1 solenidion well proximal to duplex setae; empodia I (Fig. 572) and II consist of 3 pairs of teeth, middle pair being the strongest; empodia of all the legs bear small mediodorsal spurs.

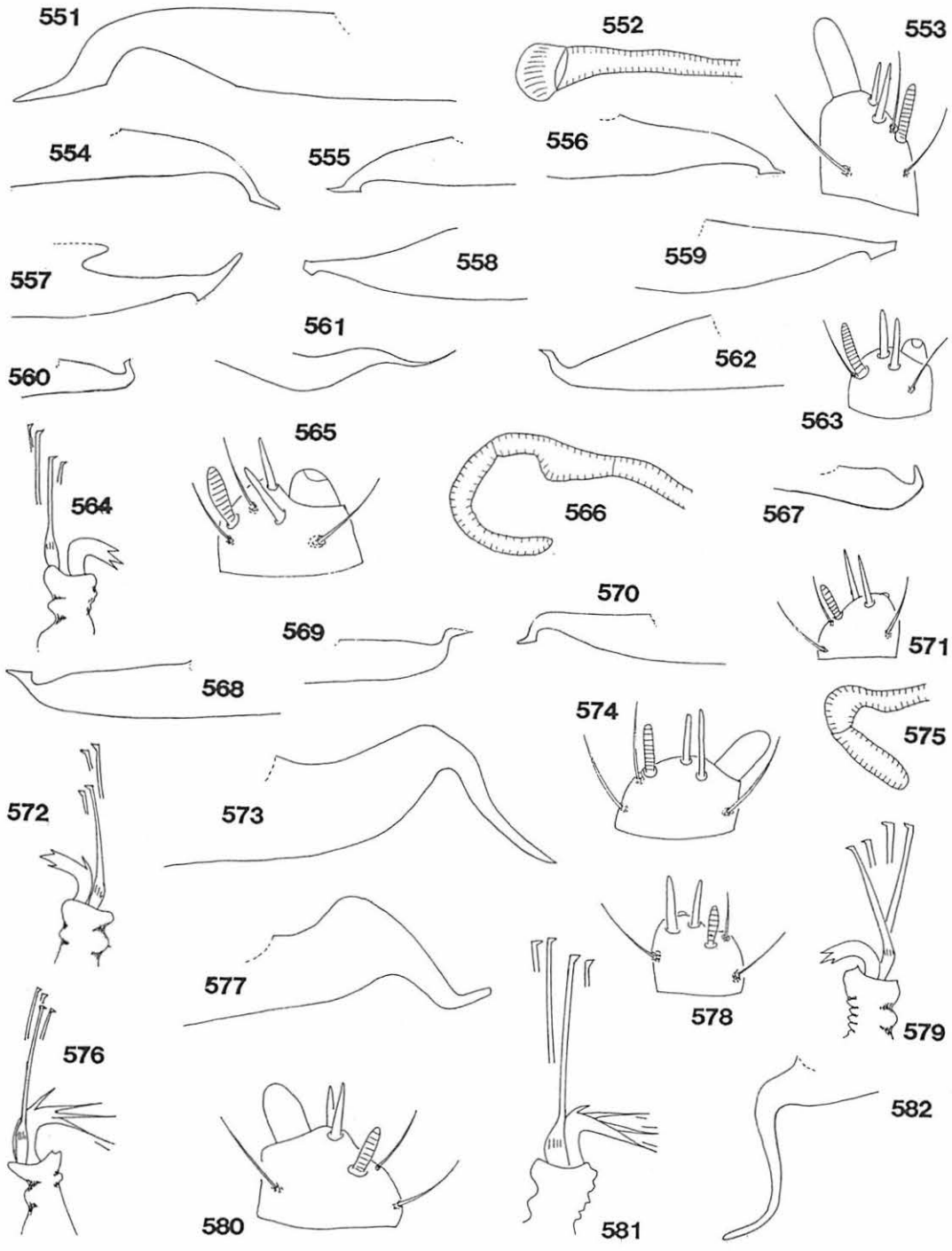

FIG. 551-553. *Eotetranychus tokaiensis* (continued/*vervolg*)
FIG. 551. Aedeagus
FIG. 552. Termination of peritreme of female/*Eindpunt van peritreem van wyfie*
FIG. 553. Palptarsus of female/*Palptarsus van wyfie*
FIG. 554. *Eotetranychus strychnosi* Meyer. Aedeagus
FIG. 555. *Eotetranychus karooicus* Meyer. Aedeagus
FIG. 556. *Eotetranychus passerinae* Meyer. Aedeagus
FIG. 557. *Eotetranychus imerinae* Gutierrez. Aedeagus
FIG. 558. *Eotetranychus edi* Meyer. Aedeagus
FIG. 559. *Eotetranychus paraedi* Meyer. Aedeagus
FIG. 560. *Eotetranychus tulearensis* Gutierrez. Aedeagus
FIG. 561. *Eotetranychus smithi* Pritchard & Baker. Aedeagus
FIG. 562-566. *Eotetranychus grandis* Gutierrez
FIG. 562. Aedeagus
FIG. 563. Palptarsus of male/*Palptarsus van mannetjie*
FIG. 564. Tarsal appendages of tarsus I of male/*Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 565. Palptarsus of female/*Palptarsus van wyfie*
FIG. 566. Termination of peritreme of female/*Eindpunt van peritreem van wyfie*
FIG. 567. *Eotetranychus befandrianae* Gutierrez. Aedeagus
FIG. 568. *Eotetranychus natalensis* Meyer. Aedeagus
FIG. 569. *Eotetranychus sakalavensis* Gutierrez. Aedeagus
FIG. 570. *Eotetranychus lonchocarpi* Meyer. Aedeagus
FIG. 571-576. *Eotetranychus africanus* spec. nov.
FIG. 571. Palptarsus of male/*Palptarsus van mannetjie*
FIG. 572. Tarsal appendages of tarsus I of male/*Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 573. Aedeagus
FIG. 574. Palptarsus of female/*Palptarsus van wyfie*
FIG. 575. Termination of peritreme of female/*Eindpunt van peritreem van wyfie*
FIG. 576. Tarsal appendages of female/*Tarsale aanhangsels van wyfie*
FIG. 577-581. *Eotetranychus cyphus* Baker & Pritchard
FIG. 577. Aedeagus
FIG. 578. Palptarsus of male/*Palptarsus van mannetjie*
FIG. 579. Tarsal appendages of tarsus I of male/*Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 580. Palptarsus of female/*Palptarsus van wyfie*
FIG. 581. Tarsal appendages of female/*Tarsale aanhangsels van wyfie*
FIG. 582. *Eotetranychus rinoreae* Gutierrez. Aedeagus

Aedeagus (Fig. 573). Shaft bends ventrad at an obtuse angle and tapers distally; slightly sigmoid; distal portion long and straight.

Female. Dimensions: length of body (including gnathosoma) 400-433 μm; length (excluding gnathosoma) 293-300 μm; breadth 207-233 μm.

Dorsum. Body setae extend past bases of setae next behind; striae on prodorsum longitudinal but those on opisthosoma transverse; lobes on striae rounded with basal spots.

Venter. Striae on genital flap transverse, area anterior to flap with longitudinal striae.

Gnathosoma. Stylophore rounded anteriorly; terminal sensillum on palptarsus (Fig. 574) about twice as long as broad; peritreme (Fig. 575) hooked distally.

Legs. Setae and solenidia (in parentheses) on legs I-IV as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-7-4-4; genua 5-5-4-4; tibiae 9(1)-8-6-7; tarsi 13 or 14 (1 to 3)+2 dupl.-13(1)+1 dupl.-10(1)-10(1); tarsus I with 5 tactile setae and 1 solenidion proximal to duplex setae; tarsus II with 4 tactile setae and 1 solenidion proximal to duplex setae; empodia with mediodorsal spurs (Fig. 576).

Nympha. Similar to female.

Habitat and locality. Holotype male, 6 paratype males and 12 paratype females from *Antiaris africana,* Ibadan, Nigeria, November-December 1975 and 12 January 1976 (J.G. Matthysse); 4 paratype females, 1 paratype male and 1 paratype nympha from *africana,* Ibadan, Nigeria, 5 December 1975 and 14 February 1976 (Y. Yakub).

Eotetranychus cyphus Baker & Pritchard (Fig. 577-581)

Eotetranychus cyphus Baker & Pritchard, 1960: 480-481; Meyer, 1974: 203.

The aedeagus (Fig. 577) is distincitive in that the short, broad shaft curves strongly dorsad from its base, tapers distally, bends ventrad and ends in a sigmoid tip, which narrows towards a blunt point; terminal sensillum of male palpus rudimentary (Fig. 578); male empodium I (Fig. 579) with 3 pairs of teeth, middle pair the strongest; dorsal body setae of female longer than longitudinal distances between their bases; opisthosoma with transverse striae; dorsal lobes on striae rounded; genital flap bears transverse striae but those immediately anterior to flap longitudinal; female palpus with strong terminal sensillum, about twice as long as broad (Fig. 580); all female empodia and empodia II-IV of male with mediodorsal spurs, about a fourth the length of proximoventral hairs (Fig. 581); chromosome numbers n=2.

Habitat and locality. This species was first described from *Bixa?* sp., Zaïre. Meyer & Bolland (1984) recorded *E. cyphus* from an unidentified plant, Bafut, Cameroun.

Specimens which I have studied from Nigeria were collected on *Morus mesozygia*, Ibadan, 21 December 1975 (J.G. Matthysse).

Eotetranychus rinoreae Gutierrez (Fig. 582)

Eotetranychus rinoreae Gutierrez, 1970: 724-727; Meyer, 1974:211.

Shaft of aedeagus (Fig. 582) very short and narrowing slightly before deflexed, sigmoid distal part, which is much longer than shaft; male palptarsus with inconspicuous, rudimentary terminal sensillum; male empodium I bifid and each part bearing 3 short teeth; female dorsal body setae extend past bases of setae next behind; prodorsum bears longitudinal striae but opisthosoma with transverse striae; striae on genital flap transverse but those immediately anterior to it longitudinal; terminal sensillum on female palptarsus about 1,5 times as long as broad; peritreme hooked distally; chromosome numbers n=3.

Habitat and locality. This species was collected on *Rinorea arborea* in the Malagasy Republic.

Eotetranychus camerounensis Meyer & Bolland (Fig. 583-584)

Eotetranychus camerounensis Meyer & Bolland, 1984: 211.

Aedeagal shaft (Fig. 583) bent strongly ventrad near middle, bent protion tapering and sigmoid, male palpus with terminal sensillum rudimentary; male empodium I with 3 pairs of teeth, middle pair strongest; other empodia with free hairs; all empodia with tiny mediodorsal spurs; female dorsal body setae much longer than longitudinal intervals between consecutive setae; striae on prodorsum longitudinal but those on opisthosoma generally transverse; lobes on striae rounded, with basal spots; striae of genital flap transverse and those anterior to flap longitudinal; female palpus with terminal sensillum about twice as long as broad; peritreme hooked distally; female empodia with tiny mediodorsal spurs (Fig. 584); chromosome numbers n=3.

Habitat and locality. This species was first described from *Acalypha* sp., *Sida* sp. and *S. rhombifolia*, Cameroun.

E. PALLIDUS GROUP

Eotetranychus pentziae Meyer (Fig. 585)

Eotetranychus pentziae Meyer, 1974: 199-200.

Aedeagus (Fig. 585) bends dorsad at an obtuse angle, tapering distally and slightly sigmoid at tip; terminal sensillum of male palpus rudimentary; empodium I of male bifid; female dorsal body setae linear-lanceolate, serrate and slightly longer than longitudinal intervals between them; dorsal striae smooth, longitudinal on prodorsum but tansverse on opisthosoma; genital flap bears transverse striae,

striae immediately anterior to flap irregular; terminal sensillum on female palptarsus 1,5 times as long as broad; peritreme strongly retrorse distally.

Habitat and locality. This species was collected on *Pentzia incana* in the Cape Province and *Chrysocoma tenuifolia* in the Orange Free State.

Eotetranychus flavescens Meyer
(Fig. 586)

Eotetranychus flavescens Meyer, 1974: 196.

Aedeagus (Fig. 586) bends sharply dorsad to form a slender, sigmoid distal end, directed dorsocaudally; terminal sensillum of male palpus about 4 times as long as broad; female dorsal body setae linear-lanceolate, serrate and extend for about one third of their lengths beyond bases of setae next behind; striae on prodorsum longitudinal but those on opisthosoma transverse; lobes on striae somewhat rounded, interspersed with a few triangular lobes; genital flap bears transverse striae, area anterior to flap with irregular longitudinal striae; terminal sensillum on female palptarsus about 2,5 times as long as broad.

Habitat and locality. This species was collected from *Grewia flavescens* at Messina, Tvl.

Eotetranychus zaheri Zaher, Gomaa & El-Enany

Eotetranychus zaheri Zaher, Gomaa & El-Enany, 1982: 105.

Shaft of aedeagus slender, tapers distally and bends ventrad to form a knob, with an acute, anterior projection and a posteroventrally directed projection which tapers towards its tip; palptarsus of male with small, terminal sensillum; dorsal body setae of female longer than distances between consecutive setae; prodorsum bears longitudinal striae but striae on opisthosoma generally transverse; genital flap with transverse striae but area anterior to flap with irregular longitudinal striae; peritreme straight and terminates in a simple bulb; terminal sensillum on female palptarsus about twice as long as broad.

Habitat and locality. *E. zaheri* was collected on *Rosa canina* in Egypt.

Eotetranychus friedmanni Gutierrez
(Fig. 587)

Eotetranychus friedmanni Gutierrez, 1968a: 17-20; Meyer, 1974: 210.

Distal part of aedeagus (Fig. 587) bends ventrad and bears a small anteroventrally directed ventrally; shaft of aedeagus thick, with small distal angulations; terminal sensillum of male palpus minute; male empodium I consists of 3 pairs of hairs, middle pair stronger than others; dorsal body setae of female longer than intervals between bases of consecutive setae; striae between dorsocentral setae (c_1, d_1, e_1, f_1, and h_1) transverse; genital flap with transverse striae but area immediately anterior to it with irregular longitudinal striae; terminal sensillum of female palpus slightly more than twice as long as broad; peritreme ends in a simple bulb; chromosome numbers n=3.

Habitat and locality. This species was recorded from *Tephrosia* sp., *Solanum auriculatum, Rubus* sp., *Triumfetta rhomboidea, Helichrysum cordifolium* and *Myrica* sp. in the Malagasy Republic.

Eotetranychus portaureus Meyer
(Fig. 588)

Eotetranychus portaureus Meyer, 1974: 210.

The slender shaft of the aedeagus (Fig. 588) is long, straight and turns ventrad distally to form a knob, with a posteroventrally directed projection and a small anterior projection; terminal sensillum on male palpus about 1,3 times as long as broad; male empodium I has 3 pairs of very short teeth, third pair being the weakest; female dorsal body setae linear-lanceolate, serrate and extend more or less to bases of second pair of setae next behind; striae on prodorsum longitudinal but those on opisthosoma transverse; dorsal lobes on striae semicircular; genital flap with transverse striae but area anterior to flap with irregular longitudinal striae; peritreme ends in a simple bulb; terminal sensillum of female twice as long as broad.

Habitat and locality. This species was collected on *Helichrysum callicomum* in the Golden Gate Highlands National Park, O.F.S.

A new record for *E. portaureus* is: *Helichrysum splendidum*, Whisky Spruit, 21 km from Lydenburg, Tvl., 20 February 1978 (M.K.P. Meyer).

Eotetranychus cybebus Baker & Pritchard
(Fig. 589)

Eotetranychus cybebus Baker & Pritchard, 1960: 484-486 ; Meyer, 1974: 211.

Shaft of aedeagus (Fig. 589) long and broad, narrowing slightly before abruptly sloping downward into a sigmoid curve; ventral margin of shaft straight; male palpus with a very small terminal sensillum; male empodium I bifid, each side with 3 equally strong digits; dorsal body setae on idiosoma of female longer than distances between bases of consecutive setae; opisthosoma with transverse striae; dorsal lobes on striae rounded; striae on genital flap and area immediately anterior to it irregular longitudinal; terminal sensillum on female palpus about twice as long as broad; peritreme ends in a bulb.

Habitat and locality. This species was found on *Vernonia* sp. in Zaïre.

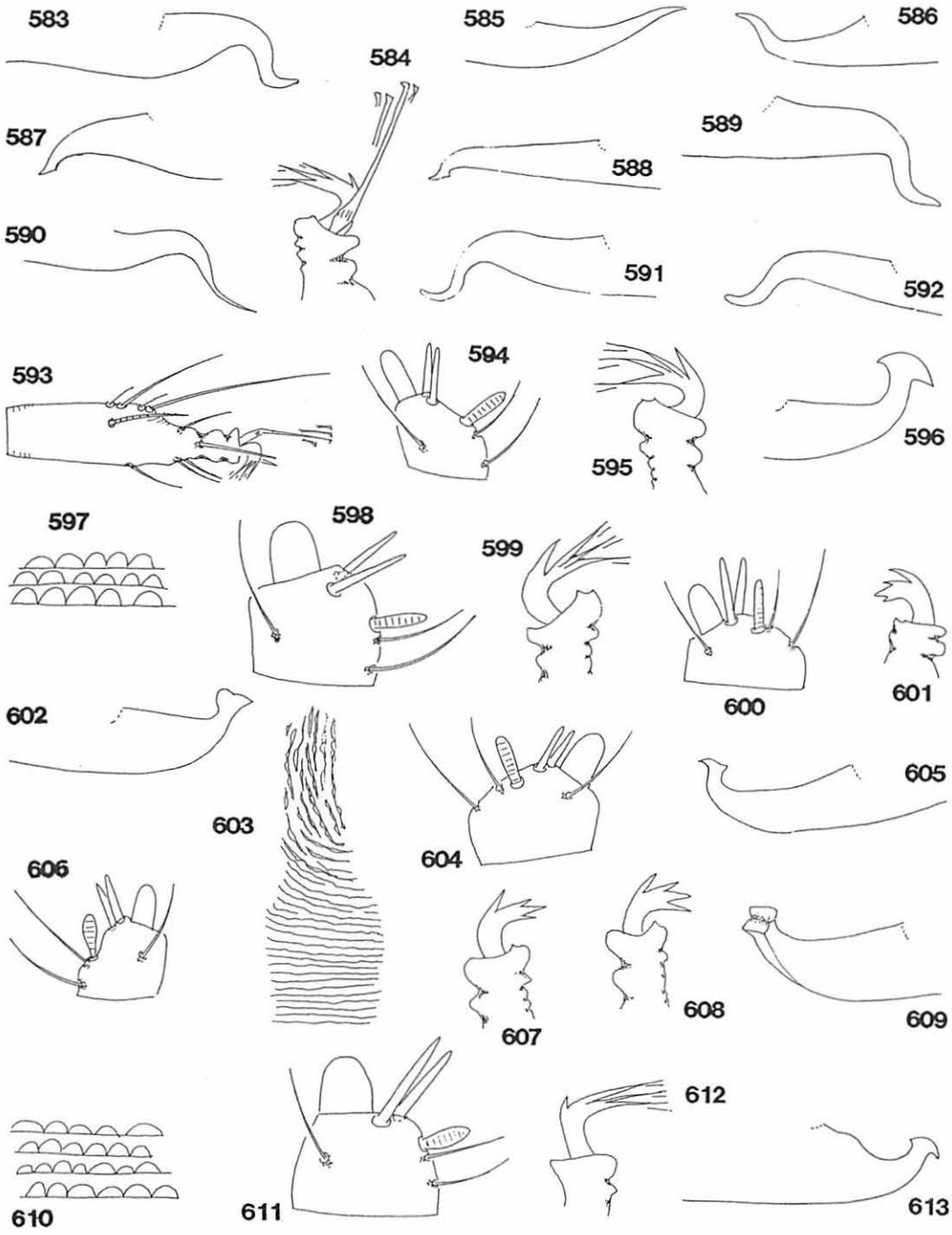

FIG. 583-584. *Eotetranychus camerounensis* Meyer & Bolland
FIG. 583. Aedeagus
FIG. 584. Tarsal appendages of female/ *Tarsale aanhangsels van wyfie*
FIG. 585. *Eotetranychus pentziae* Meyer. Aedeagus
FIG. 586. *Eotetranychus flavescens* Meyer. Aedeagus
FIG. 587. *Eotetranychus friedmanni* Gutierrez. Aedeagus
FIG. 588. *Eotetranychus portaureus* Meyer. Aedeagus
FIG. 589. *Eotetranychus cybebus* Baker & Pritchard. Aedeagus
FIG. 590. *Eotetranychus pauliani* Gutierrez. Aedeagus
FIG. 591. *Eotetranychus falcatus* Meyer & Rodriques. Aedeagus
FIG. 592. *Eotetranychus paracybelus* Gutierrez. Aedeagus
FIG. 593. *Palmanychus steganus* (Pritchard & Baker). Tarsus I of female/ *Tarsus I van wyfie* (After Pritchard & Baker, 1955)
FIG. 594-599. *Tetranychus axinitus* spec. nov.
FIG. 594. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 595. Tarsal appendages of male/ *Tarsale aanhangsels van mannetjie*
FIG. 596. Aedeagus
FIG. 597. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*
FIG. 598. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 599. Tarsal appendages of female/ *Tarsale aanhangsels van wyfie*
FIG. 600-604. *Tetranychus mesembryanae* spec. nov.
FIG. 600. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 601. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 602. Aedeagus
FIG. 603. Prodorsal striae of female/ *Prodorsale strias van wyfie*
FIG. 604. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 605. *Tetranychus elytropappi* Meyer. Aedeagus
FIG. 606-612. *Tetranychus chaeropus* spec. nov.
FIG. 606. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 607. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 608. Tarsal appendages of tarsus II of male/ *Tarsale aanhangsels van tarsus II van mannetjie*
FIG. 609. Aedeagus
FIG. 610. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*
FIG. 611. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 612. Tarsal appendages of female/ *Tarsale aanhangsels van wyfie*
FIG. 613. *Tetranychus angolensis* Meyer. Aedeagus

Eotetranychus pauliani Gutierrez
(Fig. 590)

Eotetranychus pauliani Gutierrez, 1968a: 20-22; Meyer, 1974: 206.

Proximal part of aedeagus (Fig. 590) curves dorsad but median part narrows abruptly to form a very slender, tapering, caudally directed, sigmoid distal end, about as long as proximal part of shaft; male palptarsus with a very small terminal sensillum, about as long as broad; male empodium I with strong middle pair of hairs but weak dorsal and ventral pairs of hairs; idiosoma of female with long, fine dorsal setae, longer than longitudinal distances between their bases; genital flap bears transverse striae but area immediately anterior to it with irregular longitudinal striae; terminal sensillum of female palpus about twice as long as broad; distally, peritreme dilated into a simple bulb.

Habitat and locality. This species was collected on *Gouania mauritiana* and *Acalypha* sp. in the Malagasy Republic.

Eotetranychus falcatus Meyer & Rodrigues
(Fig. 591)

Eotetranychus falcatus Meyer & Rodrigues, 1966: 13-14; Meyer, 1974: 211-214; Jeppson, Keifer & Baker, 1975: 170.

Shaft of aedeagus (Fig. 591) narrows slightly before curving ventrad near its middle to form a sigmoid distal part; distal, caudodorsally directed, scythe-like end of aedeagus about as long as deflexed part; dorsal margin of aedeagal shaft about twice as long as its greatest thickness; ventral margin of shaft slightly curved; prodorsum of female with longitudinal striae but opisthosoma generally with transverse striae; lobes on striae semicircular; striae on genital flap transverse and those immediately anterior to it vary in different specimens from transverse to irregularly longitudinal but mostly irregularly longitudinal; chromosome numbers n=3.

Habitat and locality. This species was previously recorded from *Gossypium* sp., *Hibiscus micranthus, Indigofera swaziensis, Sterculia murex, Millettia stuhlmanni, Ipomoea albivenia, Waltheria americana, Sesamum* sp., *Tephrosia vogelii, Mucuna pruriens, Dombeya rotundifolia* and *Sida alba* in South Africa, Mocambique, Zimbabwe, Angola and Malawi. Matthysse (1978) reported this species from *Mondia whitei*, Ibadan, Nigeria. Meyer & Bolland (1984) recorded *E. falcatus* from *Trema orientalis, Urena lobata*, unidentified plant of the Malvaceae, *Tephrosia nana* and *Eriosema* sp. in the Cameroun.

New records are: *Grewia flava*, Papatso, near Hammanskraal, Bophuthatswana, 30 January 1980 (M.K.P. Meyer); *Rhynchosia caribaea*, Z.A.S.M. Tunnel, between Waterval-Boven and Waterval-Onder, Tvl., 8 June 1976 (M.K.P. Meyer); *Grewia subspathulata*, "Al-te-ver", Maasstroom, Tvl., 18 August 1976 (A.S. Dippenaar); *Vernonia aurantiaca*, farm near Lake St. Lucia, Natal, 20 August 1980 (E.A. Ueckermann).

I also studied specimens from the Cape Verde Islands: *Ficus gnaphalocarpus* and *Cajanus cajan*, Sao Jorge, 23 May 1983 and 8 July 1983 (A. van Harten).

Eotetranychus paracybelus Gutierrez
(Fig. 592)

Eotetranychus paracybelus Gutierrez, 1967a: 388-391; Meyer, 1974: 214.

Aedeagal shaft (Fig. 592) slender with dorsal margin about 2,5 times as long as its greatest thickness, distal caudally directed end slightly longer than half the length of deflexed part; ventral margin of shaft straight; terminal sensillum on male palptarsus rudimentary; male empodium I tridigitate, with middle pair of hairs the strongest; female dorsal body setae extend past bases of setae next behind; striae on prodorsum longitudinal but transverse on opisthosoma; striae on genital flap transverse but those immediately anterior to it irregular longitudinal; terminal sensillum on female palptarsus slightly more than twice as long as broad; peritreme terminates in a simple bulb; chromosome numbers n=3.

Habitat and locality. This species was described from *Abrus precatorius* collected in the Malagasy Republic.

***Palmanychus* Baker & Tuttle**
(Fig. 593)

Palmanychus Baker & Tuttle, 1972: 14-15; Meyer, 1974: 216.

Type-species: *Eotetranychus steganus* Pritchard & Baker.

Baker & Tuttle (1972) described this genus as similar to *Eotetranychus* in general appearance but could be separated from the latter by the presence of a single pair of anal setae (ps_1) and by a reduced number of setae on certain leg segments; tarsus I (Fig. 593) bears 1 solenidion laterally and 1 tactile seta ventrally at level of proximal set of duplex setae but no tactile setae proximal to duplex setae; true claws pad-like and provided with tenent hairs; empodium split into 3 pairs of ventrally directed hairs; duplex setae on tarsus I distal and approximate; female dorsal body setae longer than longitudinal intervals between their bases; striae of prodorsum longitudinal but those of opisthosoma transverse.

This genus is recognized on the bases of a single species that occurs on palmetto in Florida, U.S.A.

***Tetranychus* Dufour**

Tetranychus Dufour, 1832: 276; Pritchard & Baker, 1955: 373; Wainstein, 1960b: 149; Manson, 1967b: 582-585; Tuttle & Baker, 1968: 124; Attiah, 1969: 735-736; Meyer, 1974: 216; Tuttle,

Baker & Abbatiello, 1976: 89; Mitrofanov, 1977: 1803; Zaher, Gomaa & El-Enany, 1982: 105-107; Gutierrez & Schicha, 1983: 109-110.

Type-species *Tetranychus lintearius* Dufour (= *T. urticae* Koch).

The genus *Tetranychus* may be recognized by a single pair of para-anal setae; empodia split into 3 pairs of proximoventral hairs (2 pairs in one case); empodia may possess mediodorsal spurs, shorter than proximoventral hairs; male empodium I usually bearing tridigitate spurs; aedeagus bends dorsad and is important for species identification; shape of lobes on the integumentary striae can be used to separate most species.

Wainstein (1960b) dividing this genus into 7 subgenera on the arrangement of the empodial rays, the peritremes and the colour of the feeding females. Tuttle & Baker (1968) recognized only the following 3 subgenera on the basis of the female dorsal striation pattern: *Tetranychus* s.str., *Polynychus* Wainstein and *Armenychus* Wainstein. Since 1968 many authors have followed the classification of Tuttle & Baker. Mitrofanov (1977) attached great significance to the female striation pattern and grouped species of *Tetranychus* and *Oligonychus* with similar patterns together. This gave generic status to *Polynychus* but *Armenychus* became a subgenus of *Amphitetranychus* Oudemans, having previously been a synonym of *Tetranychus*. Mitrofanov also considered *Reckiella* Tuttle & Baker a subgenus of *Polynychus* and not of *Oligonychus*.

Helle, Bolland & Heitmans (1981) pointed out that subgeneric divisions in *Tetranychus* could not be supported by chromosome numbers because these varied among species in the same subgenus. They considered the subgenera of *Tetranychus* more of practical than of phylogenetic value.

As in *Oligonychus*, the female striation pattern in *Tetranychus* is not a stable character. The subgenus *Tetranychus* s.str. is defined as having longitudinal striae and a diamond-shaped figure between the third (e_1) and fourth (f_1) pairs of dorsocentral setae. However, in *T. margaretae* Meyer, *T. elyptropappi* Meyer, *T. zambezianus* Meyer & Rodrigues, *T. rooyenae* Meyer and *T. joanni* spec. nov., which have a distinct diamond-shaped pattern, the striae between the third pair of dorsocentral setae vary from transverse, irregular to longitudinal. In *T. panici* Gutierrez, *T. angolensis* Meyer and *T. attiahi* Zaher, Gomaa & El-Enany, which have an ill-defined diamond-shaped figure, the striae between the third pair of dorsocentral setae are transverse to irregular. This extends to the fourth pair of dorsocentral setae in *T. attiahi*. There is no diamond-shaped figure in *T. sayedi* Baker & Pritchard, *T. andrei* Baker & Pritchard or *T. macfarlanei* Baker & Pritchard and the striae between the third pair of dorsocentral setae vary from irregular to longitudinal. In *T. macfarlanei* irregular striae are also found between the fourth pair of dorsocentral setae. In all these species, it is difficult to separate subgenera and in my opinion the use of such variable characters without other supporting differences cannot be justified for subgeneric let alone generic divisions.

KEY TO THE AFRICAN SPECIES OF *TETRANYCHUS*

1. Female with proximal pair of duplex setae distal to proximal tactile setae 2
- Female with proximal pair of duplex setae more or less in line with most of the proximal tactile setae 37
2. Peritreme hooked distally 3
- Peritreme straight distally 32
3. Female empodia with obvious mediodorsal spurs 4
- Female empodia without obvious mediodorsal spurs 12
4. Male empodium I with a mediodorsal spur and 2 proximoventral spurs 5
- Male empodium I with a mediodorsal spur and 3 pairs of proximoventral hairs ..... *T. axinitus* spec. nov.
5. Male empodium II with a mediodorsal spur and 2 proximoventral spurs 6
- Male empodium II with a mediodorsal spur and 3 pairs of proximoventral hairs 9
6. Female opisthosomal striae with dorsal lobes 7
- Female opisthosomal striae without lobes ..... *T. mesembryanae* spec. nov.
7. Axis of aedeagal knob parallel to shaft axis 8
- Aedeagal knob forms a strong angle with shaft axis ..... *T. elytropappi* Meyer
8. Aedeagal knob with dorsum flattened and indented medially; terminal sensillum of female palpus about 1,25 times as long as broad ..... *T. chaeropus* spec. nov.
- Aedeagal knob with dorsum obtusely angulate; terminal sensillum of female palpus broader than long ..... *T. tchadi* Gutierrez & Bolland
9. Axis of aedeagal knob parallel to shaft axis; dorsal margin of shaft straight 10
- Aedeagal knob at a distinct angle to shaft; dorsal margin of shaft curved ..... *T. angolensis* Meyer
10. Female opisthosomal striae with rounded lobes; aedeagal knob with neck not very short 11
- Female opisthosomal striae with triangular lobes; aedeagal knob with neck very short ..... *T. joanni* spec. nov.
11. Aedeagal knob about one fourth the length of dorsal margin of shaft; female with definite lobes on medioventral striae of metapodosoma ..... *T. sayedi* Baker & Pritchard
- Aedeagal knob about one third the length of dorsal margin of shaft; female with ventral lobes in an area extending from genital flap to gnathosoma ..... *T. zambezianus* Meyer & Rodrigues
12. Dorsal striae of female with narrow lobes, needle-like distally and triangular basally; lobes about as tall as spaces between consecutive striae ..... *T. triangularis* Meyer

- Dorsal striae of female with lobes not needle-like distally and shorter than spaces between consecutive striae 13

13. Aedeagal knob with one or both projections acute 14
- Aedeagal knob with anterior and posterior projections rounded; dorsum of knob indented medially 31

14. Aedeagal knob relatively large, at least twice as wide as neck 15
- Aedeagal knob less than twice the width of neck 19

15. Axis of aedeagal knob parallel to shaft axis ... .16
- Aedeagal knob at distinct angle to shaft .... *T. browningi* Baker & Pritchard

16. Knob of aedeagus with dorsal margin broadly convex 17
- Knob of aedeagus with dorsal margin obtusely angulate .... *T. turkestani* Ugarov & Nikolskii

17. Male empodium I with a strong mediodorsal spur; male empodium II with an obvious spur.. 18
- Male empodium I with a minute mediodorsal spur; male empodium II with a tiny, inconspicuous spur .... *T. amicus* Meyer & Rodrigues

18. Anterior projection of aedeagal knob broader than base of posterior projection; male palpus with terminal sensillum about twice as long as broad; dorsal striae of female with low, semicircular lobes ..... *T. fraternus* Meyer
- Anterior projection of aedeagal knob similar in width to base of posterior projection; male palpus with terminal sensillum 5 times as long as broad; dorsal striae of female with triangular lobes ..... *T. hydrangeae* Pritchard & Baker

19. Aedeagal knob with anterior projection rounded and posterior projection acute 20
- Aedeagal knob with both projections acute ..27

20. Axis of aedeagal knob parallel to shaft axis..21
- Aedeagal knob at a distinct angle to shaft ...24

21. Dorsum of aedeagal knob with a depression medially ..... *T. yusti* McGregor
- Dorsum of aedeagal knob without a depression, being rounded or obtusely angulate 22

22. Male empodium I with a minute mediodorsal spur 23
- Male empodium I with a strong mediodorsal spur ... *T. attiahi* Zaher, Gomaa & El-Enany

23. Aedeagal knob one third to one fourth as long as dorsal margin of shaft; lobes on dorsal striae of female narrow, triangular, mostly taller than broad, well separated at their bases and sharply pointed ... *T. lombardinii* Baker & Pritchard
- Aedeagal knob about 2,5 times as long as dorsal margin of shaft; lobes on dorsal striae of female broadly triangular, not very narrow and with rounded apices ..... *T. rooyenae* Meyer

24. Aedeagal knob with relatively long stem; dorsal striae of female with lobes mostly semicircular 25
- Aedeagal knob with very short stem; dorsal striae of female with lobes mostly triangular ... . *T. mkuziensis* Meyer

25. Male empodium I bearing a minute mediodorsal spur or without an obvious spur 26
- Male empodium I bearing a mediodorsal spur, about a third as long as proximoventral spurs.. ..... *T. panici* Gutierrez

26. Male empodium I with tiny mediodorsal spur; male empodium II with tridigitate proximoventral spurs ..... *T. margaretae* Meyer
- Male empodium I without obvious mediodorsal spur; male empodium II with 3 pairs of proximoventral hairs . *T. kaliphorae* Gutierrez

27. Aedeagal knob virtually nonexistent, ending distally in an acute posterior projection, directed dorsocaudally; lobes on dorsal striae of female semicircular ..... *T. muricatus* Meyer
- Aedeagal knob well developed, wider than its stem 28

28. Aedeagal knob with posterior projection single 29
- Aedeagal knob with posterior projection double ..... *T. geminatus* Meyer

29. Axis of aedeagal knob more or less parallel or forming a small angle with shaft axis 30
- Axis of aedeagal knob forming a strong angle with shaft axis; aedeagal knob with dorsal margin slightly indented and posterior projection directed ventrally; male tarsus I with minute empodial spur; lobes on dorsal striae of female predominently triangular .... *T. katbergensis* Meyer

30. Male empodium I without an obvious mediodorsal spur ..... *T. gardeniae* Meyer
- Male with empodial spur on tarsus I strong ... .*T. urticae* Koch

31. Female with lobes on striae predominantly rounded and bearing basal spots; male with empodial spur on tarsus I about one fourth the length of proximoventral spurs ....*T. neocaledonicus* André
- Female with lobes narrow, triangular and separated by spaces at bases, without basal spots; male with empodial spur on tarsus I about one third the length of proximoventral spurs ..... *T. pushelii* Meyer

32. Aedeagal knob relatively large, at least 2 times as wide as neck 33
- Aedeagal knob less than 2 times the width of neck 35

33. Aedeagal knob with anterior projection small and acute 34
- Aedeagal knob with anterior projection broadly rounded ..... *T. parfuriensis* Meyer

34. Male empodium II consists of 2 proximoventral spurs and a mediodorsal spur; female opisthosoma with lobes on striae triangular ... . *T. salsolae* spec. nov.
- Male empodium II consists of 3 pairs of proximoventral hairs and a mediodorsal spur; female opisthosoma with lobes on striae mostly

rounded and with basal spots .... *T. sphacelatum* Meyer

35. Aedeagus with dorsal margin of shaft straight; male empodium I with an obvious spur; proximoventral spurs not tridigitate; dorsal striae of female with rounded lobes 36
- Aedeagus with dorsal margin of shaft undulate; male empodium I without mediodorsal spur; proximoventral spurs tridigitate; dorsal striae of female devoid of lobes ..... *T. ferox* Meyer

36. Axis of aedeagal knob forming a small angle with shaft axis; anterior projection of aedeagal knob subacute, being broader than base of posterior projection; female with terminal sensillum of palpus about twice as long as broad; tarsus IV with 10 tactile setae and 1 solenidion ... *T. tumidosus* Baker & Pritchard
- Axis of aedeagal knob more or less parallel to shaft axis; anterior projection of aedeagal knob small and acute, being similar in width to base of posterior projection; female terminal sensillum about 1,5 times as long as broad; tarsus I with 9 tactile setae and 1 solenidion ... . *T. roseus* Gutierrez

37. Female and male empodia (except for legs I and sometimes II of male) with 3 pairs of proximoventral hairs, about similar in length; male aedeagus not stylet-like 38
- Female and male empodia with 2 pairs of proximoventral hairs, dorsal pair shorter than ventral pair; male aedeagus slender and tapers dorsad to a stylet-like distal part .... *T. fijiensis* Hirst

38. Female with small but obvious spur 39
- Female with empodial claw minute or absent.. 40

39. Aedeagal knob with relatively small, acute projections anteriorly and posteriorly; male empodium II with proximoventral tridigitate spurs ..... *T. macfarlanei* Baker & Pritchard
- Aedeagal knob with a relatively strong, acute projections anteriorly and posteriorly; empodium II of male with proximoventral hairs ..... *T. andrei* Baker & Pritchard

40. Axis of aedeagal knob forming a strong angle with shaft axis; female podosoma with medioventral striae smooth and semicircular lobes on dorsal striae .... *T. evansi* Baker & Pritchard
- Axis of aedeagal knob parallel to shaft axis; aedeagal knob with no posterior projection; dorsal striae of female with lobes triangular, sharply pointed and mostly taller than broad; female with lobes on venter ... *T. ludeni* Zacher

Tetranychus eharai Zaher, Gomaa & El-Enany

Tetranychus eharai Zaher, Gomaa & El-Enany, 1982: 107.

The inadequate description of this species by Zaher, Gomaa & El-Enany (1982) is based on a single female, collected from *Musa paradisiaca* in Egypt. They claim that it is close to *T. elytropappi* Meyer, but in this species the female opisthosomal striae between the third pair of dorsocentral setae (e_1) are irregularly transverse and those between the fourth pair of dorsocentral setae (F_1) longitudinal, forming a diamond-shaped figure between the 2 pairs of setae (Meyer, 1974). According to Zaher, Gomaa & El-Enany (1982) the striae on the opisthosoma of *T. eharai* are transverse, therefore these 2 species are not closely related. As the male of *T. eharai* is unknown, the identity of this species is not clear. The name *T. eharai* is a junior homonym of *T. eharai* Tuttle, Baker & Abbatiello, 1976, a species of a different identity.

Tetranychus axinitus spec. nov. (Fig. 594-599)

Tetranychus axinitus is similar to *T. nakahari* Baker & Tuttle in the morphology of its aedeagus, empodia with strong mediodorsal spurs and 3 pairs of proximoventral hairs and the female opisthosomal striae with rounded lobes. However, it differs in that the terminal sensillum of the male palptarsus is about 2,5 times as long as broad and that of the female about one and a third times as long as broad.

Male. Gnathosoma. Palpus with terminal sensillum about 2,5 times as long as broad (Fig. 594).

Legs. Inclusive counts of leg setae and solenidia (in parentheses): femora 10-6-4-4; genua 5-5-4-4; tibiae 9(4)-7-6-7; tarsi 13(3)+2 dupl.-13(1)+1 dupl.-10(1)-10(1): tarsus I bears 4 tactile setae and 3 solenidia proximal to duplex setae; tarsus II with 3 proximal tactile setae and 1 solenidion; all empodia with strong, mediodorsal spurs and 3 pairs of proximoventral hairs (Fig. 595).

Aedeagus (Fig. 596). Aedeagus bends dorsad, knob set at a right angle to shaft and about twice as broad as neck; knob dorsally strongly convex and provided with strong projections anteriorly and posteriorly, posterior projection the largest; knob about three quarters the length of dorsal margin of shaft.

Female. Dimensions: length of body (including gnathosoma) 540-633 μm; length (excluding gnathosoma) 420-540 μm; breadth 317-400 μm.

Dorsum. Body setae longer than longitudinal intervals between their bases; opisthosomal striae between third pair of dorsocentral setae (e_1) and between fourth pair of dorsocentral setae (f_1) longitudinal, a diamond-shaped figure formed between these 2 pairs of setae; dorsal lobes (Fig. 597) large, semicircular and broad.

Venter. Medioventrally striae with low, rounded lobes.

Gnathosoma. Terminal sensillum of palpus about one and a third times as long as broad (Fig. 598); peritreme strongly hooked distally.

Legs. Numbers of setae and solenidia (in parentheses) on each of the leg segments: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-6-4-4; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-

13(1)+1 dupl.-10(1)-10(1); tarsus I has the proximal duplex setae distal to 4 tactile setae and 1 solenidion; tarsus II with 3 proximal tactile setae and 1 solenidion; empodia with strong mediodorsal spurs and 3 pairs of proximoventral hairs (Fig. 599).

Nympha and **Larva.** Similar to female.

Habitat and locality. Holotype male, 6 paratype males, 8 paratype females and 1 paratype nympha from *Cedrela odorata*, Ibadan, Nigeria, December 1975 and January 1976 (J.G. Matthysse); 8 paratype males, 14 paratype females and 3 paratype nymphae from *Codiaeum variegatum*, Ibadan, Nigeria, 19 November 1975 (J.G. Matthysse); 5 paratype males, 4 paratype females and 5 paratype nymphae from *Capsicum annuum* var. *grossum*, 15 September 1975 (J.G. Matthysse); 2 paratype males and 3 paratype nymphae from *Musa paradisiaca*, Ibadan, Nigeria, 26 November 1975 (J.G. Matthysse).

Tetranychus mesembryanae spec. nov. (Fig. 600-604)

The aedeagus of this species is similar to that of *T. yusti* McGregor. However, the dorsal margin of the aedeagal shaft is about 2,5 times and not 4 times longer than the knob. The striae on the female opisthosoma have no lobes, whereas those of *T. yusti* bear triangular lobes.

Male. Gnathosoma. Terminal sensillum on palptarsus about twice as long as broad (Fig. 600).

Legs. Tarsus I bears 4 tactile setae and 2 solenidia proximal to duplex setae; proximoventral spurs of empodium I (Fig. 601) slender, tridigitate and with a mediodorsal spur; empodium II consists of proximoventral spurs and a mediodorsal spur.

Aedeagus (Fig. 602). Shaft of aedeagus narrows distally and turns dorsad; anterior projection of knob rounded but posterior projection acuminate and smaller; dorsal margin of knob slightly indented.

Female. Dimensions: length of body (including gnathosoma) 540-627 μm; length (excluding gnathosoma) 433-567 μm; breadth 330-367 μm.

Dorsum. Body setae longer than distances between bases of consecutive setae; opisthosomal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal, striae forming a diamond-shaped figure between these 2 pairs of setae; medially, on prodorsum occurs a small area of striae with low, broadly, rounded lobes, otherwise striae without lobes (Fig. 603)

Venter. Ventrally, lobes absent.

Gnathosoma. Terminal sensillum of palpus about 1,5 times as long as broad (Fig. 604); peritreme retrorse at distal end.

Legs. Setal formula for the legs: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-6-4-4; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+1 dupl.-13+1 dupl.-9(1)-10(1) 4 tactile setae situated proximal to duplex setae on tarsus I; empodia each with a minute mediodorsal spur.

Nympha. Similar to female.

Habitat and locality. Holotype male, 5 paratype females and 1 paratype nympha from a wild plant of the Mesembryanthemaceae, Addo Elephant National Park, C.P., 14 February 1974 (C.J. Colijn).

Tetranychus elytropappi Meyer (Fig. 605)

Tetranychus elytropappi Meyer, 1974: 220-221.

Aedeagal shaft (Fig. 605) slender and bends upwards at about a right angle; knob forms a strong angle with shaft axis; knob with small anterior angulation and posterior acute tip, directed dorsad and somewhat deflexed; knob about one fourth the length of dorsal margin of shaft; empodia I and II each consist of proximoventral spurs and a strong mediodorsal spur; empodia III and IV with 3 pairs of proximoventral hairs and an obvious mediodorsal spur; opisthosomal striae irregular to longitudinal between third pair of dorsocentral setae (e_1) and longitudinal between fourth pair of dorsocentral setae (f_1), forming a diamond-shaped figure between these 2 pairs of setae; lobes triangular to broadly rounded, but mostly broadly rounded; female terminal sensillum on female palptarsus about 1,5 times as long as broad; all the legs with small empodial spurs.

Habitat and locality. *T. elytropappi* was collected on *Elytropappus rhinocerotis*. Helshoogte, near Stellenbosch, C.P.

New records are from: *Helichrysum pentzioides*, Middelburg, C.P., 7 August 1975 (M.W. Pretorius); unidentified wild plant, 7 km from Gouda, C.P., 30 September 1982 (D.P. Keetch).

Tetranychus chaeropus spec. nov. (Fig. 606-612)

This species is close to *T. neocaledonicus* André, but differs in that the anterior and posterior projections of the aedeagal knob are not rounded but flattened; male empodia I and II with proximoventral spurs and each also with a strong mediodorsal spur.

Male. Gnathosoma. Terminal sensillum (Fig. 606) of palpus about twice as long as broad and slightly shorter than mediodorsal sensilla.

Legs. Number of setae and solenidia (in parentheses) on legs: femora 10-6-4-4; genua 5-5-4-4; tibiae 9(4)-7-6-7; tarsi 13(3)+2 dupl.-13(1)+1 dupl.-10(1)-10(1): tarsus I bears 4 tactile setae and 3 solenidia proximal to duplex setae; mediodorsal spur of empodium I (Fig. 607) about a third the length of proximoventral spurs; empodium II (Fig. 608) with tridigitate proximoventral spurs and a mediodorsal spur; empodia III and IV with 3 pairs of proximoventral hairs and an obvious mediodorsal spur.

Aedeagus (Fig. 609). Shaft of aedeagus narrows distally and bent dorsad at about a right angle; anterior and posterior projections somewhat flattened from above, with a small indentation betweem them; axis of knob parallel to shaft axis.

Female. Dimensions: length of body (including gnathosoma) 600-633 μm; length (excluding gnathosoma) 520-527 μm; breadth 373-380 μm.

Dorsum. Body setae extend past bases of setae next behind; striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal and form a diamond-shaped figure between these 2 pairs of setae; lobes (Fig. 610) on striae rounded, occasionally somewhat broad or triangular.

Venter. Medioventrally, lobes are absent.

Gnathosoma. Terminal sensillum on palptarsus (Fig. 611) about 1,25 times as long as broad; peritreme strongly retrorse distally.

Legs. Chaetotaxy of legs as follows: coxae 2-2-1-1; trochanters 1-1-1-1; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-13(1)+1 dupl.-9(1)-10(1); tarsus I bears 4 tactile setae well proximal to duplex setae; all empodia with tiny mediodorsal spurs (Fig. 612).

Habitat and locality. Holotype male, 5 paratype males and 5 paratype females from *Chrysocoma tenuifolia*, Hogsback, C.P., 8 February 1974 (L.C. Smit).

Tetranychus tchadi Gutierrez & Bolland

Tetranychus tchadi Gutierrez & Bolland, 1973: 155-158.

Aedeagus of *T. tchadi* resembles that of *T. joanni* spec. nov. but differs from the latter in that male empodium II has 2 claw-like proximoventral spurs and a shorter mediodorsal spur; lobes on female dorsal striae broadly rounded and not triangular as in *T. joanni*; striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae of female longitudinal, forming a diamond-shaped figure between these setae; empodia with obvious mediodorsal spurs; chromosome numbers n=4.

Habitat and locality. This species was collected on *Dolichos lablab* in Chad. Gutierrez & Etienne (1981a) recorded this species from *Glycine soya* in Senegal.

Tetranychus angolensis Meyer
(Fig. 613)

Tetranychus angolensis Meyer, 1974: 219-220.

Aedeagus (Fig. 613) distinctive in that knob and shaft forms an acute angle; anterior projection of knob angulate, posterior projection acute and deflexed; dorsal margin of shaft curved; female striae between third pair of dorsocentral setae (e_1) transverse to irregular but those between fourth pair of dorsocentral setae (f_1) longitudinal; area between third (e_1) and fourth (f_1) pairs of dorsocentral setae with transverse striae; dorsal lobes mostly broadly triangular, occasionally rounded; legs with obvious mediodorsal spurs.

Habitat and locality. This species was found on *Elaeis guineensis* in Angola.

Tetranychus joanni spec. nov.
(Fig. 614-620)

The aedeagus of this species is very close to that of *T. tchadi* Gutierrez & Bolland but differs in that male empodium II bears 3 proximoventral hairs instead of proximoventral spurs; lobes on dorsal striae of female triangular and not broadly rounded.

Male. Gnathosoma. Palptarsus with a terminal sensillum that is about as long as broad (Fig. 614).

Legs. Setae and solenidia (in parentheses) on legs I-IV: femora 10-6-4-4; genua 5-5-4-4; tibiae 9(2)-7-6-7; tarsi 13(2)+2 dupl.-13(1)+1 dupl.-9(1)-10(1); tarsus I bears 4 tactile setae and 2 solenidia immediately behind proximal pair of duplex setae; mediodorsal spur on empodium I (Fig. 615) about a fourth the length of proximoventral spurs; empodium II (Fig. 616) with 3 pairs of proximoventral hairs and mediodorsal spur.

Aedeagus (Fig. 617). Shaft of aedeagus narrows distally and curves dorsad to form a knob with acute anterior and posterior projections; dorsal margin of knob angulate; axis of knob parallel to shaft axis; neck of knob very short; dorsal margin of shaft straight.

Female. Dimensions: length of body (including gnathosoma) 507-633 μm; length (excluding gnathosoma) 400-540 μm; breadth 300-367 μm.

Dorsum. Body setae longer than distances between bases of consecutive setae; striae between third (e_1) pair of dorsocentral setae irregular to longitudinal, between fourth pair of dorsocentral setea (f_1) longitudinal; transverse striae form a diamond-shaped pattern between third (e_1) and fourth (f_1) pairs of dorsocentral setae; lobes on striae triangular (Fig. 618).

Venter. Medioventrally, lobes broad and rounded.

Gnathosoma. Palptarsus (Fig. 619) with terminal sensillum broader than long; peritreme strongly retrorse distally.

Legs. Chaetotaxy of legs as follows: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-6-4-4; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-13(1)+1 dupl.-9(1)-10(1); 4 tactile setae located immediately behind proximal pair of duplex setea; legs with obvious mediodorsal, empodial spurs (Fig. 620).

Nympha. Similar to female.

Habitat and locaiity. Holotype male, 10 paratype males, 13 paratype females and 4 paratype nymphae from *Arachis hypogaea*, Zaria, Nigeria, 11 November 1975 (J.G. Matthysse); 1 paratype male and 4 paratype females from *Gossypium* sp., Samaru, Nigeria, December 1975 (J.C. Deeming).

This species is named for Dr John G. Matthysse of the United States. The species name is the latinized form of his first name.

Tetranychus sayedi Baker & Pritchard
(Fig. 621)

Tetranychus sayedi Baker & Pritchard, 1960: 543-545; Meyer, 1974: 221-222.

Aedeagus (Fig. 621) bends dorsad at a right angle and forms a small knob, with small, acute anterior and posterior angulations; knob about a fourth as long as dorsal margin of shaft; knob rounded dorsally; female dorsum bears striae with semicircular lobes; striae irregular between third pair of dorsocentral setae (e_1) but longitudinal between fourth pair of dorsocentral setae (f_1); medioventral striae on podosoma with lobes; empodia with mediodorsal spurs about a fourth the length of proximoventral hairs.

Habitat and locality. This species was studied from manihot in Zaïre.

Tetranychus zambezianus Meyer & Rodrigues
(Fig. 622)

Tetranychus zambezianus Meyer & Rodrigues, 1966: 11-12; Meyer, 1974: 222.

Shaft of aedeagus (Fig. 622) extends dorsad; dorsal margin of knob rounded, with anterior and posterior projections acute; knob axis parallel to shaft axis; empodium I bears a mediodorsal spur about half the length of proximoventral spurs; empodium II with a short mediodorsal spur and 3 pairs of proximoventral hairs; in female transverse striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae form a diamond-shaped figure; striae between third pair of dorsocentral setae (e_1) irregular but longitudinal between fourth pair of dorsocentral setae (f_1); dorsal lobes on striae rounded and of different sizes; occasionally with a broad, rounded lobe or a small triangular one; lobes with basal spots; ventrally, lobes present from genital shield to gnathosoma; ventral lobes on opisthosoma broader than dorsal lobes but those on prodorsum very wide and low; terminal sensillum on female palpus broader than long; empodia with mediodorsal spurs.

Habitat and locality. This species was recorded from *Gossypium* sp., *Glycine soya* and *G. javanica* in Mocambique, Zimbabwe and Angola. It was also found on *Teramnus labialis* in the Malagasy Republic.

Tetranychus triangularis Meyer

Tetranychus triangularis Meyer, 1974: 222-223.

Only the female of this species is known and it differs from *T. lombardinii* Baker & Pritchard and other related species in that the triangular lobes on the dorsal striae are very narrow and much taller than those of *T. lombardinii;* opisthosomal striae mostly transverse, except for longitudinal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae; striae form a diamond-shaped figure between these 2 pairs of setae; terminal sensillum on palpus about as long as broad.

Habitat and locality. Meyer (1974) described this species from *Salsola aphylla*, along the Great Fish River at Knutsford, C.P.

A new record is from: *Mikania cordata*, farm near Lake St. Lucia, Natal, 21 August 1980 (E.A. Ueckermann).

Tetranychus browningi Baker & Pritchard
(Fig. 623)

Tetranychus browningi Baker & Pritchard, 1960: 549-550; Meyer, 1974: 223-226.

Shaft of aedeagus (Fig. 623) gradually narrows distally and bends abruptly dorsad; knob large with axis forming a small angle with shaft axis; anterior projection of knob broad and rounded but posterior projection long and acute at tip: female opisthosomal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae, with tiny semicircular lobes running longitudinally; medioventral striae on podosoma without lobes except between coxae IV.

Habitat and locality. This species was recorded from peach in Zaïre. Gutierrez (1974) reported it from *Zanthoxylum tsihanimposa* in the Malagasy Republic.

Tetranychus turkestani Ugarov & Nikolski
(Fig. 624)

Tetranychus turkestani Ugarov & Nikolski, 1937: 28; Meyer, 1974: 226; Saba, 1975a: 797-800; Saba, 1975b: 385-389.

Aedeagus (Fig. 624) bends dorsad to form a moderately enlarged knob with a obtusely angulate dorsum; anterior projection of knob broad and narrowly rounded, posterior projection small and acute; knob and shaft axes form a slight angle; empodium I consists of 2 proximoventral spurs and a mediodorsal spur, about a third the length of proximoventral spurs; empodium II with 3 pairs of proximoventral hairs and a strong mediodorsal spur; female striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal; transverse striae between the latter 2 pairs of setae form a diamond-shaped figure; dorsal lobes of striae semicircular but occasionally triangular; several broad, ventral lobes present between third and fourth pairs of ventral setae; chromosome numbers n=3.

Habitat and locality. This species has a world-wide distribution and was formerly found on *Medicago sativa*, Brits and Louis Trichardt, Tvl. Saba (1973) recorded it from Morocco collected on various hosts.

New records are: *Medicago sativa*, Onderstepoort, near Pretoria, Tvl., 19 November 1979 (B.J. van Straaten); *Gossypium* sp., Hartbeespoort Research Station, near Brits, Tvl., 16 February 1984 (J.H. Botha).

Tetranychus amicus Meyer & Rodrigues
(Fig. 625)

Tetranychus amicus Meyer & Rodrigues, 1966: 10-11; Meyer, 1974: 228-229.

Shaft of aedeagus (Fig. 625) broad but tapers slightly distally, curves dorsad at about a right angle to form distally a large knob, about half the length of dorsal margin of shaft; rounded anterior projection of knob broader than base of acute caudal projection; male empodium I consists of 2 slender, tridigitate proximoventral spurs and a minute mediodorsal spur; empodium II with 3 pairs of proximoventral hairs and an inconspicuous mediodorsal spur; female opisthosomal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal; transverse striae form a diamond-shaped figure between these setae; dorsal lobes narrow, triangular, much longer than broad and separated by spaces at their bases; ventrally, lobes occur from anterior to second pair of ventral setae to genital opening, lobes short, semicircular but becoming broader posteriorly where they appear as an occasional incision of the striae.

Habitat and locality. *T. amicus* was previously recorded from *Gossypium* sp., *G. hirsitum, Musa paradisiaca, Vernonia shirensis, Arachis hypogaea, Clerodendrum speciosissimum, Corchorus olitorius, Manihot esculenta, Merremia tuberosa, Zantedeschia aethiopica, Vitex* sp. and *Datura candida* in the Transvaal, Natal, Cape and Mocambique.

New records of this species are from: *Nemesia albiflora*, Katberg Mountains, near Fort Beaufort, C.P., 7 February 1974 (C.J. Colijn); *Solanum* sp., Komga, C.P., 26 November 1975 (L.C. Smit); *Lippia javanica*, Havelock, Tvl., 24 March 1976 (L. Venter); *Ipomoea purpurea*, Georges Valley, Port Elizabeth, C.P., 3 November 1964 (G.G. van der Merwe); unidentified wild plant, Strydom Tunnel, Tvl., 22 February 1978 (E.A. Ueckermann); *Isoglossa* sp., Hanglip State Forestry Reserve, Louis Trichardt, Tvl., 28 March 1973 (L. Venter).

Tetranychus fraternus Meyer
(Fig. 626)

Tetranychus fraternus Meyer, 1974: 227.

Aedeagal shaft (Fig. 626) slender, curves dorsad at a right angle and bears distally a large knob, about half the length of shaft; knob axis parallel to that of shaft; anterior projection slightly angulate and base not wider than that of acute posterior projection; dorsal margin of knob broadly angulate, dorsal margin of shaft slightly curved; female opisthosomal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal, a diamond-shaped figure formed between these setae; dorsal lobes on striae large, semi-circular and relatively low, occasionally narrow and pointed; medioventrally, striae devoid of lobes.

Habitat and locality. *T. fraternus* was studied from *Acacia karoo*, Mafikeng, Bophuthatswana.

Tetranychus hydrangeae Pritchard & Baker
(Fig. 627)

Tetranychus hydrangeae Pritchard & Baker, 1955: 425; Ehara & Wongsiri, 1975: 181-182.

Tetranychus kanzawai Kishida, 1927: 105; Meyer, 1974: 227-228. Misidentification.

Meyer (1974) considered *T. hydrangeae* a synonym of *T. kanzawai* because the aedeagi of these species were similar. However, Ehara & Wongsiri (1975) pointed out that the aedeagal knob of *T. hydrangeae* is larger (ca. 4,5 μm in *hydrangeae* and 3,9 μm in *kanzawai*). In *T. hydrangeae* aedeagal knob about a third the length of dorsal margin of shaft; anterior rounded projection about as wide as base of acute posterior projection; knob and shaft axes parallel (Fig. 627); female opisthosoma with longitudinal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae, diamond-shaped figure formed between these setae; dorsal lobes triangular: ventrally, striae between second and third pairs of ventral setae with low, rounded lobes, posterior to third pair of setae lobes become broader and lower until hardly more than an occasional incision of the striae posteriorly; chromosome numbers n=3.

Habitat and locality. In South Africa (Cape and Transvaal) Meyer (1974) recorded this species from *Hydrangea macrophylla* under the name *T. kanzawai*.

Tetranychus yusti McGregor
(Fig. 628-630)

Tetranychus yusti McGregor, 1955: 368; Tuttle, Baker & Abbatiello, 1976: 97.
Tetranychus lobosus Boudreaux, 1956: 46.

Aedeagal knob with anterior projection rounded and posterior acuminate; dorsum of knob with a depression; knob about a fourth the length of dorsal margin of shaft (Fig. 628); male empodium I (Fig. 629) with 2 proximoventral spurs and a mediodorsal spur; empodia II-IV with 3 pairs of proximoventral hairs and a tiny mediodorsal spur; terminal sensillum on male palptarsus (Fig. 630) about 2,5 times as long as broad; in female striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal, a diamond-shaped figure formed between these setae; dorsal lobes triangular; ventrally, rounded lobes occur from genital opening to second pair of ventral setae; chromosome numbers n=3.

Habitat and locality. Matthysse (1978) recorded this species from cotton (*Gossypium* sp.), cowpeas (*Vigna sinensis*), *Phaseolus vulgaris*, groundnuts (*Arachis hypogaea*), lima beans, pigeon peas (*Cajanas cajan*), *Centrosema pubescens, Calocasia* sp., *Solanum* sp. and *Amaranthus tricolor* collected in Nigeria.

A new record is from: *Tagetes* sp., Jaracunda, Cape Verdi Islands, 28 August 1983 (A. van Harten).

Tetranychus attiahi Zaher, Gomaa & El-Enany

Tetranychus attiahi Zaher, Gomaa & El-Enany, 1982: 109.

According to Zaher, Gomaa & El-Enany (1982) the aedeagal knob is about as long as dorsal margin

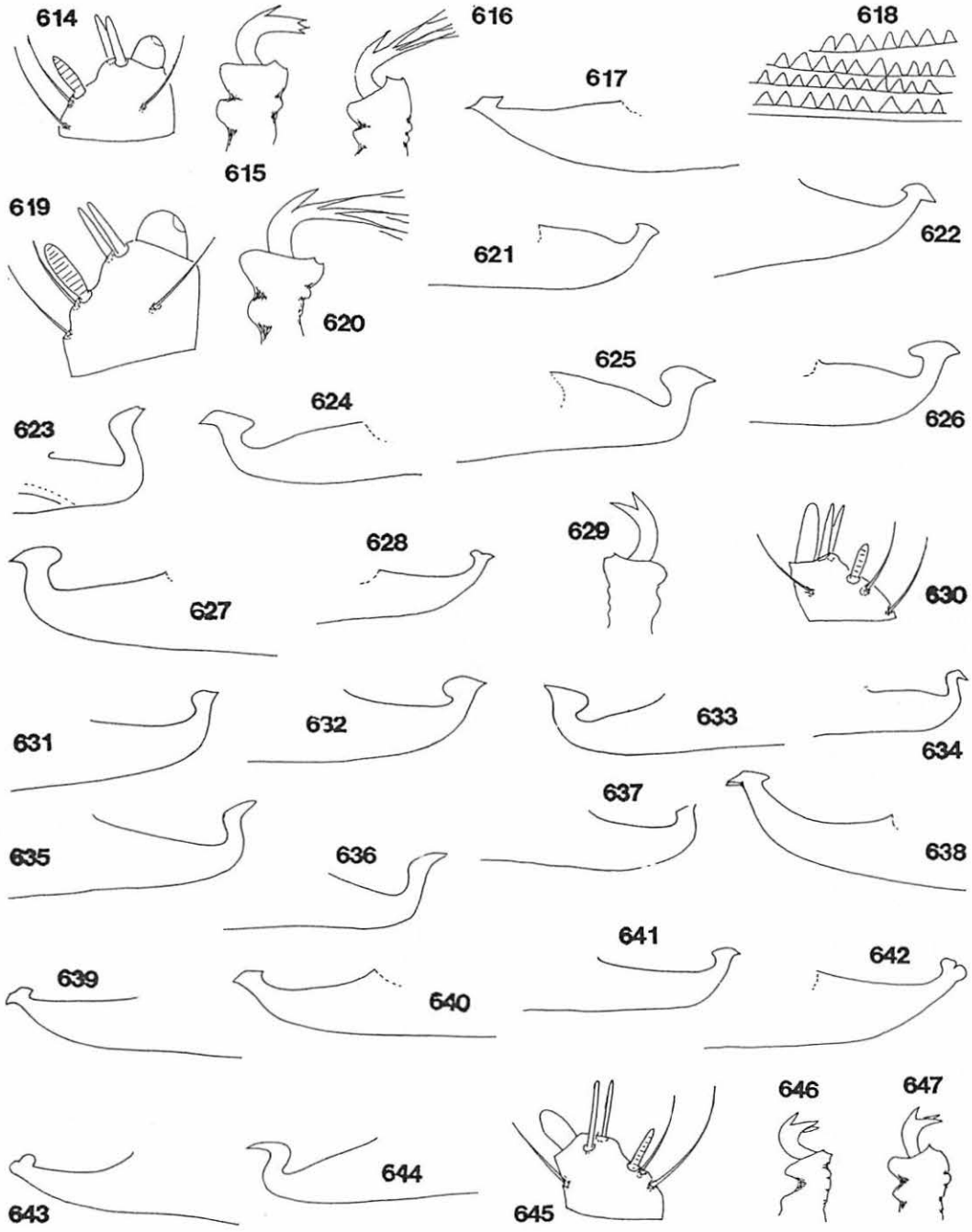

FIG. 614-620. *Tetranychus joanni* spec. nov.
FIG. 614. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 615. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 616. Tarsal appendages of tarsus II of male/ *Tarsale aanhangsels van tarsus II van mannetjie*
FIG. 617. Aedeagus
FIG. 618. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*
FIG. 619. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 620. Tarsal appendages of female/ *Tarsale aanhangsels van wyfie*
FIG. 621. *Tetranychus sayedi* Baker & Pritchard. Aedeagus
FIG. 622. *Tetranychus zambezianus* Meyer & Rodrigues. Aedeagus
FIG. 623. *Tetranychus browningi* Baker & Pritchard. Aedeagus
FIG. 624. *Tetranychus turkestani* Ugarov & Nikolski. Aedeagus
FIG. 625. *Tetranychus amicus* Meyer & Rodrigues. Aedeagus
FIG. 626. *Tetranychus fraternus* Meyer. Aedeagus
FIG. 627. *Tetranychus hydrangeae* Pritchard & Baker. Aedeagus
FIG. 628-630. *Tetranychus yusti* McGregor. Male/ *Mannetjie*
FIG. 628. Aedeagus
FIG. 629. Tarsal appendages of tarsus I/ *Tarsale aanhangsels van tarsus I*
FIG. 630. Palptarsus/ *Palptarsus*
FIG. 631. *Tetranychus lombardinii* Baker & Pritchard. Aedeagus
FIG. 632. *Tetranychus rooyenae* Meyer. Aedeagus
FIG. 633. *Tetranychus mkuziensis* Meyer. Aedeagus
FIG. 634. *Tetranychus panici* Gutierrez. Aedeagus
FIG. 635. *Tetranychus margaretae* Meyer. Aedeagus
FIG. 636. *Tetranychus kaliphorae* Gutierrez. Aedeagus
FIG. 637. *Tetranychus muricatus* Meyer. Aedeagus
FIG. 638. *Tetranychus geminatus* Meyer. Aedeagus
FIG. 639. *Tetranychus katbergensis* Meyer. Aedeagus
FIG. 640. *Tetranychus gardeniae* Meyer. Aedeagus
FIG. 641. *Tetranychus urticae* Koch. Aedeagus
FIG. 642. *Tetranychus neocaledonicus* André. Aedeagus
FIG. 643. *Tetranychus puschelii* Meyer. Aedeagus
FIG. 644. *Tetranychus pafuriensis* Meyer. Aedeagus
FIG. 645-651. *Tetranychus salsolae* spec. nov.
FIG. 645. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 646. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 647. Tarsal appendages of tarsus II of male/ *Tarsale aanhangsels van tarsus II van mannetjie*

of shaft; anterior projection narrowly rounded but posterior projection small and acute; dorsal margin of knob obtusely angulate; female striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae irregular; an ill-defined diamond-shaped figure occurs between these 2 pairs of setae.

Habitat and locality. This species was described from *Cynodon dactylon*, Upper Egypt.

Tetranychus lombardinii Baker & Pritchard (Fig. 631)

Tetranychus lombardinii Baker & Pritchard, 1960: 551-553; Meyer, 1974: 231-233.

Aedeagus (Fig. 631) curves dorsad, forming a knob about one fourth to one fifth the length of dorsal margin of shaft; knob and shaft axes almost parallel; anterior projection rounded but posterior projection small and acute; male empodium I with 2 proximoventral spurs and a minute mediodorsal spur; empodium II with 3 pairs of proximoventral hairs and a tiny mediodorsal spur; female striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal, a diamond-shaped figure formed between these setae; dorsal lobes narrow, triangular, mostly taller than broad and well separated at their bases; in some collections ventral lobes weak or absent but usually low, semicircular, broad and extend from the genital opening to near the gnathosoma; lobes on prodorsum very broad and hardly more than an occasional incision of striae; chromosome numbers n=3.

Habitat and locality. Meyer (1974) presented a long list of hostplants for this species collected in Malawi, Zimbabwe, Mocambique, Swaziland and South Africa. Gutierrez (1974) recorded *T. lombardinii* on *Flagellaria guineensis* from the Malagasy Republic and Kenya. Gutierrez & Schicha (1983) recorded it from Australia.

The following is a list of new records of hostplants and localities for this species: *Diospyros austro-africana* var. *microphylla*, Jansenville, C.P., 5 February 1974 (F.W. Schultz); *Solanum rigescens*, Katberg Mountains, near Fort Beaufort, C.P., 7 February 1974 (M.K.P. Meyer); *Helinus integrifolius*, Katberg Mountains, C.P., 7 February 1974 (L.C. Smit); *Erythrina* sp., *Crinum* sp. and *Tynospora frugosum*, Brummeria Botanical Gardens, Pretoria, Tvl., 21 March 1975 (L.C. Smit); *Amaranthus* sp., Stellenbosch, C.P., 3 March 1976 (L.C. Jordaan); *Achyranthes aspera*, Montrose (Waterval Boven road), Tvl., 25 March 1976 (M.K.P. Meyer); *Pollichia campestris*, 10 km from Parys (Fochville road), Tvl., 29 September 1976 (M.K.P. Meyer); *Gossypium* sp., Stentor Estates, between Malelane and Kaalrug, Tvl., 18 January 1977 (E.A. Ueckermann); *Atriplex muelleri*, Addo Research Station, C.P., 5 December 1977 (M.K.P. Meyer); *Felicia erigeriodes*, Kei River Mouth, between Port Alfred and East London, C.P., 7 December 1977 (M.K.P. Meyer); *Withania somnifera*, Kuruman, C.P., 8 February 1979 (E.A. Ueckermann); unidentified wild plant. Gobabeb, South West Africa (Namibia), 12 February 1980 (P.D. Theron); *Hebenstreitia cordata*, Blouberg Strand, C.P., 17 June 1981 (M.K.P. Meyer); *Wahlenbergia undulata*, Golden Gate Highlands National Park, O.F.S., 11 February 1982 (E.A. Ueckermann); *Solanum panduraeforme*, 50 km from Louis Trichardt, Tvl., 29 December 1982 (E. van den Berg); *Galinsoga parviflora*, Kutsaga Research Station, Harare, Zimbabwe, 18 January 1985 (B.W. Blair); unidentified wild plant, Lüderitz, South West Africa (Namibia), 25 April 1985 (L.C. Jordaan).

Tetranychus rooyenae Meyer (Fig. 632)

Tetranychus rooyenae Meyer, 1974: 229-230.

Aedeagus (Fig. 632) curves dorsad at a right angle forming a knob distally, with a rounded anterior projection broader than base of acute caudal projection; dorsal margin of shaft parallel to knob axis and about 2,5 times as long as knob; male empodium I bears 2 slender, tridigitate, proximoventral spurs and a tiny, inconspicuous mediodorsal spur; empodium II with 3 pairs of proximoventral hairs; on female, striae between third pair of dorsocentral setae (e_1) irregularly longitudinal to longitudinal; striae between fourth pair of dorsocentral setae (f_1) longitudinal; a diamond-shaped figure occurs between third (e_1) and fourth (f_1) pairs of dorsocentral setae; dorsal lobes triangular; ventral lobes occur from genital opening to second pair of ventral setae; ventral lobes very low, semicircular becoming broader posteriorly.

Habitat and locality. This species was collected on *Cineraria* sp., *Hibiscus engleri, Gossypium* sp., *Drymaria cordata, Nicotiana glauca, Argemone mexicana, Hermannia spinosa* and grass in Malawi, Botswana, the Cape and Transvaal.

New records are from: *Solanum rigescens*, 70 km from Uitenhage (Jansenville road), C.P., 5 February (M.K.P. Meyer); *Aristolochia macrophylla*, Klerksdorp, Tvl., 1 February 1979 (E.A. Ueckermann).

Tetranychus mkuziensis Meyer (Fig. 633)

Tetranychus mkuziensis Meyer, 1974: 223.

Shaft of aedeagus (Fig. 633) gradually narrows and turns dorsad at a right angle to form a short stem and a knob, about half the length of dorsal margin of shaft; rounded anterior projection broader than base of acute caudal projection; knob and shaft axes form an acute angle; on female, striae between third (e_1) and fourth ($_1$) pairs of dorsocentral setae longitudinal, a diamond-shaped figure present between these 2 pairs of setae; lobes on striae mostly broadly triangular with occasional broad, rounded lobes in between.

Habitat and locality. *T. mkuziensis* was collected on *Justicia flava* and *Ximenia caffra* var. *natalensis* in Natal.

Tetranychus panici Gutierrez
(Fig. 634)

Tetranychus panici Gutierrez, 1969: 59-61; Meyer, 1974: 221.

Aedeagal shaft (Fig. 634) curves dorsad at about a right angle; distal bent portion small and more or less sigmoid with posterior projection directed ventrad; anterior projection small and rounded; dorsal margin of knob slightly angulate; terminal sensillum of male palpus slightly more than twice as long as broad; female opisthosoma bears transverse to irregular striae between third pair of dorsocentral setae (e_1) and longitudinal striae between fourth pair of dorsocentral setae (f_1); a diamond-shaped patch of transverse striae present between third and fourth pairs of dorsocentral setae; dorsal lobes on striae broadly rounded; chromosome numbers n=4.

Habitat and locality. This species was collected on *Panicum uvulatum* in the Malagasy Republic.

Tetranychus margaretae Meyer
(Fig. 635)

Tetranychus margaretae Meyer, 1974: 220.

The aedeagus (Fig. 635) of this species is similar to that of *T. evansi* Baker & Pritchard but the knob is bigger; mediodorsal spur on male empodium I minute; proximal pair of duplex setae on tarsus I distad of proximal tactile setae; on female, striae between third pair of dorsocentral setae (e_1) irregular but longitudinal between fourth pair of dorsocentral setae (f_1), striae form a diamond-shaped figure between these setae; lobes on striae mostly rounded, occasionally very broad or small, triangular lobes present; lobes with basal spots.

Habitat and locality. This species is known to occur on *Rinorea* sp. in Malawi.

Tetranychus kaliphorae Gutierrez
(Fig. 636)

Tetranychus kaliphorae Gutierrez, 1969: 61-63; Meyer, 1974: 226.

Aedeagus (Fig. 636) bends abruptly dorsad and forms a large knob with a broadly rounded, anterior projection and a long, acute posterior projection directed dorsocaudad; knob and shaft axes forms a small angle; male empodium I tridigitate but empodia II-IV with 3 pairs of proximoventral hairs; on female, striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal and form a diamond-shaped figure between these setae; dorsal lobes on striae rounded and triangular; medioventral striae on podosoma bear semicircular lobes; empodia with 3 pairs of proximoventral hairs; chromosome numbers n=3.

Habitat and locality. *T. kaliphorae* was recorded from *Kaliphora madagascariensis* in the Malagasy Republic.

Tetranychus muricatus Meyer
(Fig. 637)

Tetranychus muricatus Meyer, 1974: 230.

Shaft of aedeagus (Fig. 637) narrows distally and turns dorsad; knob virtually nonexistent; distal surface of bent portion flat, directed dorsocaudally and ending in an acute, posterior projection; bent portion about one fourth the length of dorsal margin of shaft; female opisthosomal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal and form a diamond-shaped figure between these 2 pairs of setae; dorsal lobes mostly semicircular with an occasional triangular one; medioventral striae without lobes.

Habitat and locality. This species is only known from *Metalasia muricata* at Ezeljacht, Langkloof, C.P.

Tetranychus geminatus Meyer
(Fig. 638)

Tetranychus geminatus Meyer, 1974: 228.

Aedeagal shaft (Fig. 638) curves dorsad to form a knob with an acute, anterior projection and longer, acute, double projections; knob about half the length of dorsal margin of shaft; knob and shaft axes parallel; on female, opisthosomal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal and form a diamond-shaped figure between these 2 pairs of setae; striation lobes rounded but occasionally broad or triangular; lobes bear basal spots; medioventrally lobes absent.

Habitat and locality. This species is only known from *Acacia mellifera*, Rust de Winter, Tvl.

Tetranychus katbergensis Meyer
(Fig. 639)

Tetranychus katbergensis Meyer, 1974: 230-231.

Aedeagus (Fig. 639) of *T. katbergensis* is distinctive in that the dorsal surface of the knob is sightly indented; anterior projection directed anterodorsally but posterior projection bends ventrad; dorsomedian spur of male empodium I tiny; integumentary striae of female form a diamond-shaped figure between third (e_1) and fourth (f_1) pairs of dorsocentral setae; striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal; lobes on striae predominantly triangular and not widely spaced, occasionally interspersed with a rounded lobe.

Meyer (1974) erroneously described the female as having mediodorsal spurs on empodia but a study of the type series and other specimens revealed that there are no mediodorsal spurs.

Habitat and locality. This species was described

from *Canthium ciliatum*, Hogsback Inn, Katberg Mountains, C.P.

A new record is from: *Helinus integrifolius*, Pineapple Research Station, East London, C.P., 8 December 1977 (M.K.P. Meyer).

Tetranychus gardeniae Meyer
(Fig. 640)

Tetranychus gardeniae Meyer, 1974: 233-234.

Shaft of aedeagus (Fig. 640) gradually narrows and bends dorsad; aedeagal knob with acute anterior and posterior angulations and about one fourth the length of dorsal margin of shaft; knob and shaft axes form a slight angle; dorsal margin of shaft nearly straight; male empodium I without a mediodorsal spur but with 2 proximoventral spurs; female opisthosomal striae longitudinal between third (e_1) and fourth (f_1) pairs of dorsocentral setae and form a diamond-shaped figure between these setae; dorsal lobes on striae predominantly broadly triangular but mixed with rounded lobes.

Habitat and locality. Meyer (1974) first described *T. gardeniae* from *Gardenia* sp. collected in the Kruger National Park, Tvl.

A new record is from: *Acacia karroo*, Adelaide, C.P., 6 February 1974 (L.C. Smit).

Tetranychus urticae Koch
(Fig. 641)

Tetranychus urticae Koch, 1836: 10; Boudreaux & Dosse, 1963b: 350-360; Manson, 1967b; 586-588; Tuttle & Baker, 1968: 129; Meyer, 1974: 234; Dupont, 1979: 297-303; Brandenburg & Kennedy, 1981: 231-234; Zaher, Gomaa & El-Enany, 1982: 109; Gutierrez & Schicha, 1983: 113-114.

Tetranychus telarius (Linn.) Baker & Pritchard, 1960: 557-559, and many authors.

Acarus cinnabarinus Boisduval, 1867: 88.

Tetranychus cinnabarinus (Boisduval) Boudreaux, 1956: 43-48; Meyer, 1974: 235-238, and many authors.

Eotetranychus cucurbitacearum Sayed, 1946a: 90-93.

Tetranychus cucurbitacearum (Sayed) Attiah, 1967c: 9; Meyer, 1974: 234-235; Zaher, Gomaa & El-Enany, 1982: 109-110.

Tetranychus arabicus Attiah, 1967c: 8-9; Meyer, 1974: 226-227; Zaher, Gomaa & El-Enany, 1982: 527-529.

Tetranychus ricinus Saba, 1973: 63-67. Syn. nov.

The validity of *T. urticae* (the green form) and *T. cinnabarinus* (the carmine form) as 2 separate species has been questioned by many authors. Pritchard & Baker (1955) synonymized both names under *T. telarius* whereas Boudreaux (1956) revived the 2 species, separating them on the shape of the dorsal integumentary lobes of the female, but still using *T. telarius* for the green form. The reliability of the dorsal integumentary lobes as a taxonomic character was questioned by Van de Bund & Helle (1960) and Robinson (1961), because the appearance of these lobes can be affected by optical equipment and mounting techniques. However, Boudreaux & Dosse (1963a-b) concluded that the dorsal lobe shape is a useful and reliable character for species separation and that *T. urticae* is the proper name for this species. Further, Boudreaux (1956) and Saba (1973, 1975a) considered differences in colour between species of significant taxonomic value. The latter author even went so far as to describe a new species, *T. ricinus* because it was dark red in colour and differed markedly from the brownish-red *T. cinnabarinus*, although morphologically the species are indistinguishable.

Dupont (1979) synonymized *T. cinnabarinus* with *T. urticae* for the following reasons:

1. Morphological differences cannot always be correlated with colour because colour depends on the pigments in the haemolymph. Veerman (1974) found that *T. urticae* and *T. cinnabarinus* had the same carotenoid metabolism and therefore colour variations were insufficient justification for describing a new species unless there were other supporting characters.
2. Reproductive isolation between *T. urticae* and *T. cinnabarinus* is incomplete. Crosses between the Dutch *T. urticae* and the Italian *T. cinnabarinus* produced fecund hybrids. However, it is well known that varying degrees of reproductive isolation can occur between morphologically indistinguishable mite populations of the green and carmine forms. According to Helle & Overmeer (1973) interpopulation barriers are common in arrhenotokous spider mites and De Boer (1982) attributed hybrid infertility to the presence or absence of a genetically controlled cytoplasmic factor.
3. Diapause was induced in an Italian population of *T. cinnabarinus* by short day photoperiods. This is in contradistinction to experiments of Hazan, Tahori & Gerson (1971) where they failed to induce diapause in an acaricide-susceptible strain of *T. cinnabarinus* under different temperature and photoperiodic conditions.

From these findings the validity of *T. ricinus* Saba and *T. cucurbitacearum* (Sayed) can also be questioned. Saba (1975b) found that *T. ricinus* did not crossbreed with *T. cinnabarinus* nor *T. cucurbitacearum*, although the latter species reproduced normally with *T. cinnabarinus* from Morocco and Lebanon. In contrast, El-Enany, Zaher & Hassan (1983) found no reproduction between *T. cucurbitacearum* from Egypt and *T. cinnabarinus* from the Netherlands. All these cases, however, can be explained by the hybrid intersterility phenomenon as interpreted by De Boer (1982).

Crossbreeding experiments with *T. arabicus* Attiah and *T. urticae* revealed that the 2 species are conspecific (Zaher, Gomaa & El-Enany, 1981).

Scanning electron microscope studies of *T. urticae* and *T. cinnabarinus* by Brandenburg & Kennedy (1981) showed significant differences in the density of the dorsal integumentary lobes. They concluded that although the lobe shape of the 2

species was not always as described by Boudreaux (1956) there were distinct differences by which the species could be separated. For example the number of lobes per 10 μm along an integumentary fold averaged 6,44 for *T. urticae* and 7,47 for *T. cinnabarinus*. With the aid of an ocular micrometer these lobes were counted and Brandenburg & Kennedy decided to retain both species. They described the lobes of *T. cinnabarinus* as semicircular or triangular and those of *T. urticae* as semi-oblong and broader than they were tall. The aedeagus and other diagnostic characters of the male and female were similar in both species.

However, Jordaan (1977) and Dupont (1979) found variations in the lobe shape of *T. urticae* and *T. cinnabarinus* hybrids, these lobes varied from being similar to those of the parental species to all intermediate shapes and sizes. These lobe variations occured in both colour forms and consequently this factor can hardly be used to characterize species in this species complex. This view was confirmed by Mollet & Sevacherian (1984) who reared mites of the *T. cinnabarinus* - *T. urticae* complex for 10 generations at 2 temperature and humidity regimes. They found that the dorsal striation lobe densities change with temperature and humidity.

From the available evidence I conclude that *T. cinnabarinus, T. cucurbitacearum, T. ricinus* and *T. arabicus,* all are synonymous with *T. urticae.* Currently *T. urticae* can be defined as follows: knob of aedeagus (Fig. 641) always small, not less than one fourth the length of dorsal margin of shaft; axis of knob parallel or forms a small angle with shaft axis; dorsal margin of knob and the development of anterior and posterior projections may vary; male empodium I with a strong mediodorsal spur, about one third the length of the 2 proximoventral spurs; empodium II consists of 3 pairs of proximoventral hairs and a strong mediodorsal spur; female striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal and form a diamond-shaped figure between these setae; lobes on striae vary from triangular to broadly semicircular; chromosome numbers n=3.

Habitat and locality. This species has a world-wide distribution and was formerly recorded on a wide variety of hostplants from the following African countries: Morocco, Egypt, Sudan, Senegal, Zaïre, Angola, South Africa, Malagasy Republic and Reunion Island.

Tetranychus urticae is a pest of *Zea mays* in South Africa and a survey revealed that it attacks this crop at Dryden, Bethal, Morgenzon, Kinross, Delmas, Leandra, Devon, Kriel, Potchefstroom, Ventersdorp, Derby, Schweizer-Reneke, Wolmaransstad. Klerksdorp, Vereeniging, Balfour, Lichtenburg and Delareyville in the Transvaal; Viljoenskroon, Welkom, Theunissen, Bothaville, Odendaalsrus, Fauresmith, Winburg, Senekal, Villiers, Bethlehem and Reitz in the Orange Free State; Vaalhartz and Upington in the Cape.

New records of hostplants and localities for *T. urticae* in southern Africa are: *Rosa* sp., Hogsback, C.P., 8 February 1974 (F.W. Schultz); *Chrysanthemum* sp., Malelane, Tvl., 19 September 1974 (E.G. Eulitz); *Fragaria* sp., Roodeplaat, near Pretoria, Tvl., November 1974 (A.S. Dippenaar); *Rosa* sp. and *Morus japonica*, Edenvale, Tvl., 23 January 1976 (C.C. Grabant); *Erythrina* sp., Pretoria, Tvl., 23 February 1976 (U. Burger); *Eichhornia crassipes* (water hyacints), Roodeplaat, Tvl., 24 May 1976 (M.K.P. Meyer); *Amaranthus* sp. and *Pennisetum clandestinum*, 13 km from Dryden, Tvl., 23 March 1977 (E.A. Ueckermann); *Chrysanthemum* sp., Bredell, Tvl., 30 March 1977 (E.A. Ueckermann); *Gossypium* sp., Jan Kempdorp, Tvl., 12 May 1977 (J.F. de Villiers); *Mesembryanthemum crystallinum* and *Beta vulgaris*, Pretoria, Tvl., 26 January 1978 (C. van Rooyen); *Chrysanthemum* sp., Ottery, Cape Flats, 2 February 1978 (S.C. Cruickshank); *Fragaria* sp. and *Chrysanthemum* sp., Paarl, C.P., 2 April 1978 (S.C. Cruickshank); *Actinidea* sp., Johannesburg, Tvl, 25 January 1980 (A. von Blotnitz); *Protasparagus laricinus,* Suikerbosrand Nature Reserve, near Heidelberg, Tvl., 14 February 1979 (L.Siefe);*Cyclamen* sp., Windmill Farm, Domboshawa, Zimbabwe, 26 March 1981 (H. Chalmers); *Vanda teres* (orchids), Darling, C.P., 16 June 1981 (M.K.P. Meyer); *Medicago sativa*, Clocolan, O.F.S., 10 November 1981 (S.T. Potgieter); *Galinsoga parviflora*, Bethal, Tvl., 18 February 1982 (S.W. Broodryk); *Punica granatum*, Golden Gate Highlands National Park, O.F.S., 8 February 1982 (M.K.P. Meyer); *Phaseolus vulgaris*, Lutzville, C.P., 18 February 1983 (C. Deschodt); *Gerbera* sp., Gingindhlovo, Natal, 1 February 1983 (T.J.L. Koller); *Leonotis leonitis*, Pretoria, Tvl., 9 December 1983 (S. Neser); *Sorghum* sp., Pretoria, Tvl., 9 January 1975 (H. van Hamburg); *Ipomoea plebeia* subsp. *africana, I. arachnosperma* and *I. hochstetteri,* Groblersdal, Tvl., 8 April 1975 (L.C. Smit & M.K.P. Meyer); *Tynospora frugosum*, Brummeria Botanical Garden, Pretoria, Tvl., 21 March 1975 (L.C. Smit); *Vitis* sp., Stellenbosch, C.P., 3 March 1976 (K. Pringle); *Ornithogalum* sp., Pretoria North; Tvl., 15 March 1976 (E.A. Ueckermann); *Glycine soya*, Groblersdal, Tvl., 8 February 1977 (E.A. Ueckermann); *Euphorbia* sp. and *Raphionacme* sp., Hennops River, between Pretoria and Johannesburg, Tvl., 23 November 1979 (D. Cole); *Bauhinia monandra*, Johannesburg, Tvl., 14 July 1983 (M. Holtzhausen); *Gossypium* sp., Aughrabies, C.P., 6 March 1985 (N.C.J. Basson); *Cucumis sativus,* Margate, Natal, 21 February 1985 (E. Nieman).

New records for this species from the Cape Verde Islands are: *Musa paradisiaca*, Sao Jorge, 2 July 1983 (A. van Harten); *Solanum melongena*, Sao Jorge, 21 February 1983 (A. van Harten); *Argemone mexicana*, Sao Jorge, 19 February 1983 (A. van Harten); *Manihot* sp., Pedro Badejo, 16 February 1983 (A. van Harten); *Fragaria vesca*, Sao Jorge, 26 August 1983 (A. van Harten).

Tetranychus neocaledonicus André
(Fig. 642)

Tetranychus neocaledonicus André, 1933: 302; Baker & Pritchard, 1960: 546-548; Boudreaux &

Dosse, 1963a: 20-21; Meyer & Rodrigues, 1966: 9; Attiah, 1969: 739; Meyer, 1974: 238-239.

Aedeagus (Fig. 642) bends dorsad at nearly a right angle; anterior and posterior projections of knob rounded and separated by a small, dorsal indentation; male empodium I with a relatively small, mediodorsal spur, about one fourth the length of proximoventral spurs; female opisthosomal striae form a diamond-shaped figure between third (e_1) and fourth (f_1) pairs of dorsocentral setae; striae between members of third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal; lobes on dorsal striae of different shapes and sizes but mostly semicircular with basal spots; lobes on medioventral striae low and wide, sometimes hardly more than an occasional incision on the striae; chromosome numbers n=3.

Habitat and locality. This species is wide-spread in the warmer parts of the world and has a wide host range. In Africa it was formerly recorded from Mauritius, Reunion Island, Malagasy Republic, Comora and Seychelles Islands, South Africa in the Kruger National Park, Swaziland, Mocambique, Zimbawe, Zambia, Angola, Malawi, Zaïre, Kenya, Cameroun, Nigeria, Senegal and Egypt.

New records for *T. neocaledonicus* are; Cape Verdi Island on *Phaseolus vulgaris*, Boa Entrada, 26 July 1983 (A. van Harten); *Nicotiana glauca*, Achada Baleia, 16 March 1984 (A. van Harten); South Africa on *Felicia zeyheri*, 5 km from Uitenhage (Jansenville road), C.P., 5 February 1974 (M.K.P. Meyer); *Acalypha glabrata*, Buffalo Pass, near East London, C.P., 11 February 1974 (F.W. Schultz); *Croton rivularis*, Agricultural Research Station, near East London, C.P., 24 November 1975 (L.C. Smit); *Lippia javanica*, Komga, C.P., 26 November 1975 (L.C. Smit); *Nuxia congesta*, Debegeni Waterfalls, near Tzaneen, Tvl., 8 May 1981 (M.K.P. Meyer).

Tetranychus puschelii Meyer
(Fig. 643)

Tetranychus puschelii Meyer, 1974: 239.

Aedeagus (Fig. 643) similar to that of *T. neocaledonicus* André but dorsomedian spur on male empodium I stronger; the female is distinctive in that the dorsal lobes on the striae are small, narrow, triangular and separated by spaces at their bases; transverse integumentary striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae form a diamond-shaped figure; striae longitudinal between members of third (e_1) and fourth (f_1) pairs of dorsocentral setae.

Habitat and locality. Meyer (1974) reported this species from *Cephalocroton puschelii* and *Sida chrysantha*.

New records are from: *Plectranthus* sp., Buffalo Pass, near East London, C.P., 11 February 1974 (L.C. Smit); *Lippia rehmannii*, Enkeldoornspoort, near Rust de Winter, Tvl., 24 January 1974 (F.W. Schultz).

Tetranychus pafuriensis Meyer
(Fig. 644)

Tetranychus pafuriensis Meyer, 1965: 83-85; Meyer, 1974: 242.

Aedeagus (Fig. 644) bends upwards at less than a right angle and forms a knob bearing a strong posterior projection which is directed ventrad and extends well beyond level of bend; anterior portion of knob rounded; axis of knob forms an acute angle with shaft axis; knob about half the length of dorsal margin of shaft; male empodium I with 2 proximoventral spurs and a mediodorsal spur, about one fourth the length of proximoventral spurs; empodia II-IV consist of 3 pairs of proximoventral hairs and a small mediodorsal spur; female opisthosomal striae between third pair of dorsocentral setae (e_1) transverse but longitudinal between fourth pair of dorsocentral setae (f_1); lobes on striae semicircular and most with a dark basal spot; among semicircular lobes an occasional broader or smaller lobe present; ventral lobes occur from genital opening to base of gnathosoma; ventral lobes broad and rounded from posterior part of opisthosoma to second pair of ventral setae; anterior to these setae lobes broader and lower; all female empodia with mediodorsal spurs, about one fifth the length of proximoventral hairs.

Habitat and locality. This species was formerly recorded from *Commicarpus fallacissimus* forma *pilosa* and *C. pentandrus* in the Transvaal.

A new record for it is from *Boerhavia pterocarpa*, 5 km from Graaff-Reinet (Jansenville road), C.P., 6 February 1974 (L.C. Smit).

Tetranychus salsolae spec. nov.
(Fig. 645-651)

This species has a distinctive aedeagal knob about twice as wide as the stem; dorsal margin of shaft about 2,5 times as long as knob; posterior projection of knob directed dorsocaudad; in female dorsal striation lobes triangular.

Male. Gnathosoma. Palpus bears a terminal sensillum about twice as long as broad (Fig. 645).

Legs. Inclusive counts of setae and solenidia (in parentheses) on legs I-IV: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-6-4-4; genua 5-5-4-4; tibiae 9(4)-7-6-7; tarsi 13(3)+2 dupl.-13(1)+1 dupl.-9(1)- 10(1); 4 tactile setae and 2 solenidia situated proximal to duplex setae on tarsus I; empodia I (Fig. 646) and II (Fig. 647) with slender proximoventral spurs and each with a mediodorsal spur; empodia III and IV with 3 pairs of proximoventral hairs and a small mediodorsal spur.

Aedeagus (Fig. 648). Shaft of aedeagus broad and curves dorsad to form a knob with an acuminate anterior projection and a longer upturned posterior projection; knob less than half the length of dorsal margin of shaft and forms a strong angle with shaft axis.

Female. Dimensions: length (including gnathosoma) 533-600 μm; length (excluding gnathosoma) 400-480 μm; breadth 300-327 μm.

Dorsum. Serrate body setae reach past bases of setae next behind; longitudinal striae between members of third (e_1) and fourth (f_1) pairs of dorsocentral setae: transverse striae between these 2 pairs of setae forming a diamond-shaped figure; lobes on striae triangular (Fig. 649).

Venter. Medioventral striae smooth.

Gnathosoma. Palptarsus (Fig. 650) with terminal sensillum about twice as long as broad; peritreme ends straight and simple.

Legs. Setal formula for legs: femora 10-6-4-4; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-13(1)+1 dupl.-9(1)-9 or 10(1); tarsus I bears 4 tactile setae proximal to duplex setae; empodia of legs with 3 pairs of proximoventral hairs and a mediodorsal spur (Fig. 651).

Habitat and locality. Holotype male, 2 paratype males and 7 paratype females from *Salsola* sp., 31 km from Postmasburg (Matsap road), C.P., 9 October 1979 (E.A. Ueckermann).

Tetranychus sphacelatum Meyer
(Fig. 652)

Tetranychus sphacelatum Meyer, 1974: 242-243.

Aedeagal shaft (Fig. 652) curves dorsad to form a large, distal knob, with a strong posterior projection and an acute anterior projection; posterior projection directed ventrad and extends well beyond level of bend; knob axis forms an acute angle with shaft axis; dorsal margin of shaft about 1,5 times as long as knob; mediodorsal spur on male empodium I nearly one fourth the length of proximoventral spurs; empodia II-IV each with 3 pairs of proximoventral hairs and a small mediodorsal spur; on female, opisthosomal striae transverse, except for longitudinal striae between fourth pair of dorsocentral setae (f_1); lobes mostly rounded with basal spots but some lobes narrower and more triangular in shape; medioventrally striae without lobes; empodia I-IV with a small mediodorsal spur.

Habitat and locality. *T. sphacelatum* was collected on *Pennisetum sphacelatum*, Prieska, C.P.

Tetranychus ferox Meyer
(Fig. 653)

Tetranychus ferox Meyer, 1974: 243.

Shaft of aedeagus (Fig. 653) thick, gradually narrows distally and bends dorsad; knob at slight angle to shaft and with small anterior and posterior projections; knob about one fourth the length of undulate, dorsal margin of shaft; male empodia I and II tridigitate; empodia III and IV with small mediodorsal spurs; female opisthosomal striae smooth and transverse, except for longitudinal striae between fourth pair of dorsocentral setae (f_1); all empodia provided with mediodorsal spurs, about one fourth the length of proximoventral hairs.

Habitat and locality. This species was described from *Eberlanzia ferox*, Knapdaar, C.P.

Tetranychus tumidosus Baker & Pritchard
(Fig. 654)

Tetranychus tumidosus Baker & Pritchard, 1960: 531-533; Meyer, 1974: 243.

The straight shaft of the aedeagus (Fig. 654) turns dorsad at a right angle to form a distal knob bearing a small, subacute, anterior projection and a small, acute, posterior projection; knob about one third the length of dorsal margin of shaft; knob axis at slight angle to shaft axis; male empodia I and II with 2 proximoventral spurs and a medioventral spur, about half the length of proximoventral spur; empodia III and IV with 3 pairs of proximoventral hairs and a mediodorsal spur, about two thirds the length of proximoventral hairs; female opisthosomal striae transverse, except for longitudinal striae between fourth pair of dorsocentral setae (f_1); lobes on striae semicircular; medioventral striae on podosoma smooth; peritreme ends in a simple bulb; mediodorsal spurs of empodium I-IV slightly less than half as long as 3 pairs of proximoventral hairs.

Habitat and locality. This species was first recorded from a restionaceous plant in the Matroosberg, C.P.

New records are from: *Restio subreticulata*, Jonkershoek, C.P., 7 July 1978 (S.C. Cruickshank); *Restio* sp., Kirstenbosch Botanical Garden, C.P., 12 January 1982 (D. Kotzé).

Tetranychus roseus Gutierrez
(Fig. 655)

Tetranychus roseus Gutierrez, 1969: 57-59; Meyer, 1974: 244.

Aedeagus (Fig. 655) turns dorsad at a right angle, with a small distal knob bearing small acute anterior and posterior projections; knob and shaft axes parallel; male empodium I with 2 proximoventral spurs and a shorter mediodorsal spur; integumentary striae on female opisthosoma transverse between third pair of dorsocentral setae (e_1) and longitudinal between fourth pair of dorsocentral setae (f_1); dorsal striae with rounded lobes; female empodia of legs with 3 pairs of proximoventral hairs and a long mediodorsal spur; chromosome numbers n=4.

Habitat and locality. *T. roseus* was described from *Medemia nobilis* in the Malagasy Republic.

Tetranychus fijiensis Hirst

Tetranychus fijiensis Hirst, 1924: 523-524; Pritchard & Baker, 1955: 382.

This species is distinctive because the empodia are split into 2 instead of 3 proximoventral hairs; empodia of both sexes with a strong mediodorsal spur; aedeagus very long, slender, tapers distally and upcurved; integumentary striae on female opisthosoma between third (e_1) and fourth (f_1) pairs

of dorsocentral setae form a diamond-shaped pattern; tactile setae of female tarsus I in line with proximal duplex setae; chromosome numbers n=4.

Habitat and locality. *T. fijiensis* occurs on citrus, coconut, *Seakorthia* palm and *Dieffenbachia* sp. in India, Fiji and the Philippines. It was also reported by Gutierrez (1974) from *Cocos nucifera* and *Actinophloeus macarthuri* in the Seychelles.

Tetranychus macfarlanei Baker & Pritchard (Fig. 656)

Tetranychus macfarlanei Baker & Pritchard, 1960: 537-539; Meyer, 1974: 244.

Aedeagus (Fig. 656) narrows gradually and dorsal margin nearly straight; neck of knob very short; knob with very small, anterior and posterior angulations; shaft and knob axes parallel; male empodium I with a mediodorsal spur, smaller than proximoventral spurs; empodium II with tridigitate proximoventral spurs and a smaller mediodorsal spur; dorsal integumentary striae of female irregularly longitudinal between third (e_1) and fourth (f_1) pairs of dorsocentral setae; dorsal lobes on striae small and semicircular but a few tend to be pointed; ventrally, striae with broadly, rounded lobes extending forward to hypostome; proximal pair of duplex setae on tarsus I in line with 3 of the proximal tactile setae; empodium I with well developed mediodorsal spur, about one fourth the length of proximoventral hairs; chromosome numbers n=3.

Habitat and locality. This species was described form beans and hibiscus in Mauritius. It has also been found on *Citrullus lanatus*, *Ipomoea* sp., *Phaseolus lunatus*, *Pueraria javanica* and *Ricinus communis* in the Malagasy Republic. In India it was collected on okra (*Hibiscus esculentus*), gourd (*Cucurbita* sp.), pumpkin and cucumber (*Cucumis sativus*).

Tetranychus andrei Baker & Pritchard (Fig. 657)

Tetranychus andrei Baker & Pritchard, 1960: 534-536; Meyer, 1974: 244-245.

The male of *T. andrei* can be recognized by the aedeagal knob (Fig. 657) which bears slender anterior and posterior angulations; knob and shaft axes parallel; male empodium I with 2 slender, tridigitate, proximoventral spurs and a relatively shorter medioventral spur; empodium II with short, mediodorsal spur and 3 proximoventral hairs; female opisthosomal striae transverse, except for irregular striae between third pair of dorsocentral setae (e_1) and longitudinal striae between fourth pair of dorsocentral setae (f_1); lobes on striae mostly elongate; medioventral striae on podosoma with wide lobes; second pair of duplex setae on tarsus I in line with 3 proximal tactile setae; all empodia with well developed mediodorsal spurs, about one third the length of 3 pairs of proximoventral hairs.

Habitat and locality. *T. andrei* was first collected on legume leaf, Zaïre. Matthysse (1978) recorded it from *Centrosema pubescens* in Nigeria.

Tetranychus evansi Baker & Pritchard (Fig. 658)

Tetranychus evansi Baker & Pritchard, 1960: 540-543; Meyer, 1974: 245.

The male of *T. evansi* has a slender, aedeagal shaft (Fig. 658) that curves dorsad; axis of knob forms a strong angle with shaft axis; knob very small but bearing a small anterior projection and a relatively longer, acute and somewhat deflexed, posterior projection; in male mediodorsal spur on empodia I and II much smaller than proximoventral spurs; empodia III and IV each with a short, mediodorsal spur and 3 pairs of proximoventral hairs; female opisthosoma with longitudinal, dorsal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae; transverse striae forming a diamond-shaped figure between these 2 pairs of setae; dorsal striae with semicircular lobes; medioventral striae on podosoma with very low lobes; tarsus I with proximal pair of duplex setae more or less in a line with 4 tactile setae; empodium I with a minute mediodorsal spur; chromosome numbers n=3.

Habitat and locality. This species was first collected on tomatoes in Mauritius. Later it was also identified on various plants in Rodrigues and Seychelles Islands. Blair (1983) reported it damaging tomatoes and tobacco in Zimbabwe. He also collected it on potatoes and Apple-of-Peru (*Nicandra physalodes*).

New records are from: *Solanum incanum*, Bindura, Zimbabwe, 13 February 1984 (B.W. Blair); *Lycopersicon lycopersicum* and *Solanum melongena*, Maputo, Mocambique, 8 January 1985 (V. Pantazis).

Tetranychus ludeni Zacher (Fig. 659)

Tetranychus ludeni Zacher, 1913: 40; Pritchard & Baker, 1955: 405-407; Boudreaux & Dosse, 1963a: 18; Meyer & Rodrigues, 1966: 10; Meyer, 1974: 245-246.

Aedeagus (Fig. 659) bends dorsad; aedeagal knob without a posterior projection; anterior projection small and acuminate; male empodium I with a mediodorsal spur, about one third the length of 2 proximoventral spurs; empodia II-IV consist of 3 pairs of proximoventral hairs and a small but distinct mediodorsal spur; on female, dorsal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae longitudinal and form a diamond-shaped figure between these 2 pairs of setae; dorsal lobes triangular, sharply pointed and mostly taller than broad; ventrally lobes broad, rounded and low becoming broader and lower

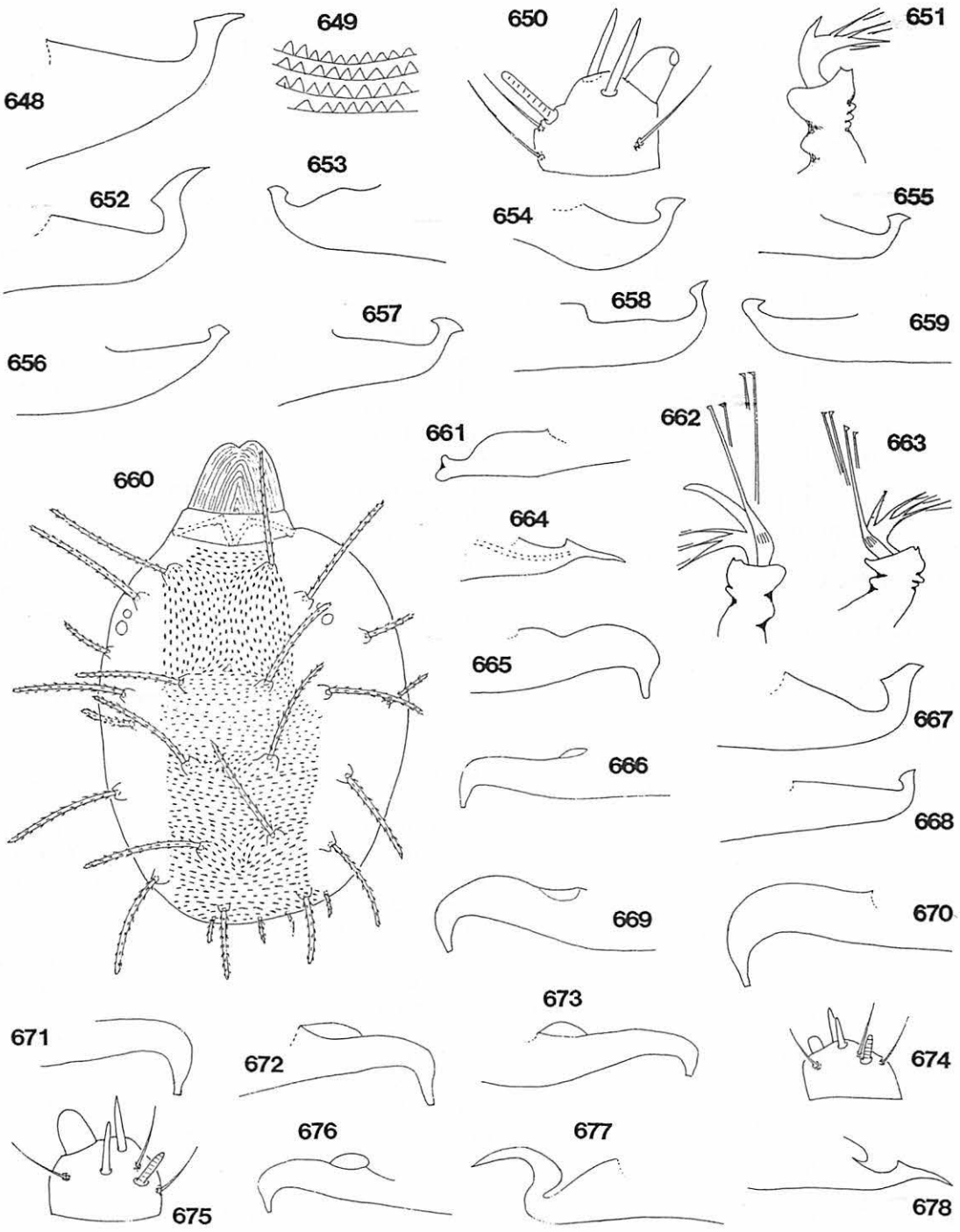

FIG. 648-651. *Tetranychus salsolae* (continued/*vervolg)*
FIG. 648. Aedeagus
FIG. 649. Lobes on dorsal striae of female/ *Lobbe op dorsale strias van wyfie*
FIG. 650. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 651. Tarsal appendages of female/ *Tarsale aanhangsels van wyfie*
FIG. 652. *Tetranychus sphacelatum* Meyer. Aedeagus
FIG. 653. *Tetranychus ferox* Meyer. Aedeagus
FIG. 654. *Tetranychus tumidosus* Baker & Pritchard. Aedeagus
FIG. 655. *Tetranychus roseus* Gutierrez. Aedeagus
FIG. 656. *Tetranychus macfarlanei* Baker & Pritchard. Aedeagus
FIG. 657. *Tetranychus andrei* Baker & Pritchard. Aedeagus
FIG. 658. *Tetranychus evansi* Baker & Pritchard. Aedeagus
FIG. 659. *Tetranychus ludeni* Zacher. Aedeagus
FIG. 660. *Atrichoproctus uncinatus* Flechtmann. Dorsal view of female/ *Dorsale aansig van wyfie*
FIG. 661. *Hellenychus bollandi* Gutierrez. Aedeagus
FIG. 662-663. *Hellenychus tamfoloziensis* Meyer. Female/ *Wyfie*
FIG. 662. Tarsal appendages of tarsus I/ *Tarsale aanhangsels van tarsus I*
FIG. 663. Tarsal appendages of tarsi II-IV/ *Tarsale aanhangsels van tarsi II-IV*
FIG. 664. *Oligonychus occidentalis* Gutierrez. Aedeagus
FIG. 665-666. *Oligonychus coffeae* (Nietner). Variations in aedeagus/ *Variasies van aedeagus*
FIG. 667. *Oligonychus themedae* Meyer. Aedeagus
FIG. 668. *Oligonychus amnicolus* Meyer. Aedeagus
FIG. 669. *Oligonychus vitis* Zaher & Shehata. Aedeagus
FIG. 670. *Oligonychus mangiferus* (Rahman & Sapra). Aedeagus
FIG. 671. *Oligonychus punicae* (Hirst). Aedeagus
FIG. 672-675. *Oligonychus ununguis* (Jacobi)
FIG. 672-673. Variations in aedeagus/ *Variasies van aedeagus*
FIG. 674. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 675. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 676. *Oligonychus judithae* Meyer. Aedeagus
FIG. 677. *Oligonychus nasutus* Meyer. Aedeagus
FIG. 678. *Oligonychus calcis* Baker & Pritchard. Aedeagus

anteriorly, extending from genital opening to base of gnathosoma; proximal pair of duplex setae in line with 4 tactile setae on tarsus I; empodia with small mediodorsal spurs; chromosome numbers n=3.

Habitat and locality. *T. ludeni* has a world-wide distribution and occurs on a great variety of cultivated and wild plants. In Africa it is also widely distributed and has a large host range.

New host and locality records for this species are: *Xanthium spinosum*, Katberg Mountains, C.P., 8 February 1974 (F.W. Schultz); unidentified wild herb, Stone Crescent Hotel, Howieson's Poort, near Grahamstown, C.P., 12 February 1974 (F.W. Schultz); *Cucumis sativus*, Pyramid, near Pretoria, Tvl., 16 January 1975 (D. Uys); *Sida rhombifolia*, Loskop Dam, near Groblersdal, Tvl., 27 February 1975 (L.C. Smit); *Eichhornia crassipes* (water hyacinths), Pretoria, Tvl., 14 November 1975 (R. Kluge); *Sida rhombifolia*, Roodeplaat, near Pretoria, Tvl., 9 February 1976 (M. Bolton); *Verbena venosa*, Parys, O.F.S., 29 September 1976 (L.C. Jordaan); *Chrysanthemum* sp., Ottery, Cape Flats, 10 April 1978 (S.C. Cruickshank); *Aristolochia macrophylla*, Klerksdorp, Tvl., 1 February 1979 (E.A. Ueckermann); *Lantana* sp., Sun Valley, Cape Town, 26 January 1980 (E.A. Ueckermann); *Ulmus procera*, Cape Gardens, 29 January 1980 (E.A. Ueckermann); *Euclea crispa*, Suikerbosrand Nature Reserve, near Heidelberg, Tvl., 14 February 1979 (E.A. Ueckermann); *Galinsoga parviflora*, Bethal, Tvl., 18 February 1982 (S.W. Broodryk); *Leonotis leonitis*, Pretoria, Tvl., 9 December 1983 (S. Neser); *Tithonia rotundifolia*, Goromanzi, Zimbabwe, 16 March 1984 (D. Blackwell).

Atrichoproctus Flechtmann
(Fig. 660)

Atrichoproctus Flechtmann, 1967: 39; Meyer, 1974: 246-247.
Acostanychus Livshitz, 1967: 1.

Type-species: *Atrichoproctus uncinatus* Flechtmann.

Atrichoproctus is characterized by the presence of 1 pair of anal (ps_1) and 1 pair of para-anal setae (h_2); dorsal body setae set on tubercles; like *Oligonychus* empodia claw-like with proximoventral hairs.

This genus is represented by the type-species from Brazil and by *A. salinasi* (Livshitz) from Cuba.

Hellenychus Gutierrez

Hellenychus Gutierrez, 1970: 727; Meyer, 1974: 247.

Type-species: *Hellenychus bollandi* Gutierrez.

Hellenchus can be defined as follows: empodia of all or at least 3 pairs of legs with empodial claws, about half the length of proximoventral hairs; empodial claws of *Oligonychus* about as long as or much longer than proximoventral hairs; duplex setae of tarsus I approximate and so differ from the genus *Tetranychus*; peritreme terminates in a simple bulb; as in *Oligonychus* and *Tetranychus* venter with 1 pair of para-anal setae (h_2) and 2 pairs of anal setae (ps_{1-2}).

Hellenychus bollandi Gutierrez
(Fig. 661)

Hellenychus bollandi Gutierrez, 1970: 728-730; Meyer, 1974: 247.

The strong aedeagal shaft (Fig. 661) narrows abruptly distally and turns dorsad at a slight angle; anterodorsally directed projection of knob small and rounded but caudoventrally directed projection much bigger; knob at an angle to shaft; dorsal body setae of female much longer than distances between bases of consecutive setae; striae on prodorsum longitudinal but those on opisthosoma transverse; empodia I-IV each with a dorsal claw about half the length of 3 pairs of proximoventral hairs.

Habitat and locality. This species was collected on *Blotia bemarensis* in the Malagasy Republic.

Hellenychus umfoloziensis Meyer
(Fig. 662-663)

Hellenychus umfoloziensis Meyer 1974: 247-248.

Only the females of this species are known and they differ from those of *H. bollandi* Gutierrez in that the dorsal claw of empodium I (Fig. 662) is longer than the proximoventral hairs; dorsal claws of empodia II-IV (Fig. 663) half the length of proximoventral hairs; serrate, dorsal body setae of female extend past bases of setae next behind; striae on opisthosoma mostly transverse, except for irregular striae between fourth pair of dorsocentral setae (f_1).

Habitat and locality. *H. umfoloziensis* was described from *Panicum deustum* collected in the Umfolozi Game Reserve, Natal.

Oligonychus Berlese

Oligonychus Berlese, 1886: 24; Pritchard & Baker, 1955; 270; Wainstein, 1960b: 203; Tuttle & Baker, 1968: 116; Meyer, 1974: 248; Mitrofanov, 1977: 1801-1802.

Type-species: *Heteronychus brevipodus* Targioni Tozzetti.

Oligonychus is characterized by a single pair of para-anal setae (h_2); well developed claw-like empodia situated at right angles to and about as long as proximoventral setae; duplex setae on tarsus I distal and adjacent; dorsal body setae, with few exceptions, not located on tubercles.

Wainstein (1960b) was the first to divide *Oligonychus* into 5 subgenera namely *Oligonychus* s.str., *Homonychus* Wainstein, *Pritchardinychus*

Wainstein, *Metatetranychoides* Wainstein and *Paratetranychus* Zacher.

Tuttle & Baker (1968) retained 4 of Wainstein's subgenera, created 2 new ones namely *Wainsteiniella* and *Reckiella* and considered *Paratetranychus* a synonym of *Oligonychus* s.str. They based their subgenera on such characters as the dorsal striation pattern of the female opisthosoma, the length of the dorsal body setae, the number of tactile setae on tibia I and the aedeagus.

I tested their system on the African species and found that the subgenera are not always well demarcated and some characters such as the opisthosomal patterns are variable. For instance Tuttle & Baker (1968) based the subgenus *Oligonychus* s.str. on the presence of 7 tactile setae on tibia I and transverse striae on the opisthosoma. In the 9 African species, which have 7 tactile setae on tibia I, the striae between either the third (e_1) or fourth (f_1) pairs of dorsocentral setae and sometimes between both pairs vary from being transverse to irregular and in some cases they tend to be longitudinal. These variations occur among specimens within the same population.

Oligonychus andrei Gutierrez which has longitudinal striae between the third pair of dorsocentral setae (e_1), keyed out to *Homonychus*. However, the aedeagus of this species curves dorsad and not ventrad as given in the definition of this subgenus.

The subgenus *Reckiella* is characterized by longitudinal striae between the fourth pair of dorsocentral setae (f_1) and 9 tactile setae on tibia I. I found 2 species that have 8 tactile setae on tibia I, together with longitudinal striae between the fourth pair of dorsocentral setae (f_1). In *O. pennisetum* Meyer and *O. rusticus* Meyer, which also keyed out to *Reckiella*, I found some specimens with irregular striae between the fourth pair of dorsocentral setae (f_1) and others with irregular rather than transverse striae between the third pair of dorsocentral setae (e_1).

Mitrofanov (1977) went further than Tuttle & Baker (1968) and gave generic status to *Metatetranychoides*, *Pritchardinychus* and *Homonychus*. He also created a new genus *Neonychus* with *Oligonychus licinus* Baker & Pritchard as type-species. He took this step because it was becoming increasingly more difficult to differentiate between the genera *Oligonychus* and *Tetranychus*, on the basis of the presence or absence of claw-like empodia. As additional species of *Tetranychus* with dorsomedial spurs resembling the empodial claw of *Oligonychus* are described, the distinction between the 2 genera becomes less distinct. To avoid this, Mitrofanov used the striation pattern on the opisthosoma to differentiate between genera and subgenera. However, as pointed out previously this character is not stable and can hardly be used for subgeneric divisions and much less for segregating genera.

Neonychus is recognized by longitudinal striae between the third (e_1) and fourth (f_1) pairs of dorsocentral setae and a diamond-shaped patch of transverse striae between these setae. I studied *O. trichardti* which has longitudinal striae between the fourth pair of dorsocentral setae (f_1). In most specimens a diamond-shaped figure was present between the third (e_1) and fourth (f_1) pairs of dorsocentral setae but the striae between the third pair of dorsocentral setae (e_1) were either transverse, irregular or longitudinal. This also occurred among specimens of the same population. The question is to which subgenus or genus does *O. trichardti* belong?

Naming subgenera and genera on variable characters can lead to confusion and comminution of related mite groups.

KEY TO THE AFRICAN SPECIES OF *OLIGONYCHUS*

1. Striae on opisthosoma form a reticulated pattern of irreglar, elongate elements .... *O. comptus* Meyer & Bolland
- Striae on opisthosoma not forming a reticulated pattern 2
2. Tibia I with 7 tactile setae 3
- Tibia I with 8 or 9 tactile setae 11
3. Female tarsus II with 1 tactile seta well proximal to duplex setae 4
- Female tarsus II with 2 or 3 tactile setae well proximal to duplex setae 5
4. Males unknown; reproduction by thelytokus parthenogenesis ..... *O. thelytokus* Gutierrez
- Males known; aedeagal knob longer than dorsal margin of shaft; axis of aedeagal knob almost parallel to axis of shaft; posterior projection considerably longer than small anterior projection .. *O. occidentalis* Gutierrez
5. Female tarsus II with 2 tactile setae well proximal to duplex setae 6
- Female tarsus II with 3 tactile setae well proximal to duplex setae 8
6. Aedeagus curving dorsad 7
- Aedeagus curving ventrad at a right angle .... *O. coffeae* (Nietner)
7. Aedeagal knob comparatively large, about half the length of dorsal margin of shaft .... *O. themedae* Meyer
- Aedeagal knob very small, about a fourth to a fifth the length of dorsal margin of shaft .... *O. amnicolus* Meyer
8. Terminal sensillum on female palptarsus not longer than broad 9
- Terminal sensillum on female palptarsus longer than broad 10
9. Aedeagus bent ventrad at a right angle to shaft; bent portion less than half as long as dorsal margin of shaft .... *O. vitis* Zaher & Shehata
- Aedeagus bent at an acute angle to shaft; bent portion about half as long as dorsal margin of shaft ..... *O. mangiferus* (Rahman & Sapra)
- Aedeagus bent at a slight obtuse angle; bent portion about three quarters the length of dorsal margin of shaft; aedeagal hook rather broad and ending in a finger-like projection ... . *O. punicae* (Hirst)
10. Terminal sensillum on female palptarsus about 1,3 to 1,8 times as long as broad: terminal

sensillum on male palptarsus slightly longer than broad ..... *O. ununguis* (Jacobi)

- Terminal sensillum on female palptarsus about twice as long as broad; terminal sensillum on male palptarsus 2,5 times as long as broad .... *O. judithae* Meyer

11. Striae of opisthosoma transverse 12
- Striae of opisthosoma longitudinal or irregular longitudinal between third (e_1) or fourth (f_1) pairs of dorsocentral setae 20

12. Tibia II with 6 tactile setae 13
- Tibia II with 7 tactile setae 14

13. Axis of aedeagal knob forming a distinct angle with axis of shaft; posterior projection of knob about 3 times as long as stem of knob; male empodium I with proximoventral spurs .... *O. nasutus* Meyer
- Axis of aedeagal knob more or less parallel to axis of shaft; posterior projection of knob roughly twice as long as stem of knob; male empodium I with 3 pairs of proximoventral hairs ..... *O. calcis* Baker & Pritchard

14. Peritreme hooked distally 15
- Peritreme ending in a bulb distally 16

15. Aedeagal knob with axis parallel to that of shaft and with tip of posterior projection bending ventrad ..... *O. biharensis* (Hirst)
- Axis of aedeagal knob forming a strong angle with axis of shaft; tip of posterior projection curving dorsad ..... *O. hova* Gutierrez

16. Duplex setae on male tarsus I with members very dissimilar in length; female palpus with terminal sensillum less than twice as long as broad 17
- Duplex setae on male tarsus I with members half to nearly as long as distal member; female palpus with terminal sensillum more than twice as long as broad 19

17. Aedeagus with shaft very short, knob much longer than shaft; striae anterior to female genital area irregular to transverse 18
- Aedeagus with shaft longer, knob about as long as shaft; striae anterior to female genital area longitudinal ..... *O. malawiensis* Meyer

18. Aedeagal knob with posterior projection twice as wide as stem; female with terminal sensillum of palpus twice as long as broad .... *O. pemphisi* Gutierrez
- Aedeagal knob with posterior projection slightly wider than width of stem; female with terminal sensillum one and two thirds as long as broad ..... *O. imberbei* Meyer

19. Tip of posterior projection of aedeagal knob not reaching level of ventral margin of shaft; proximal member of duplex setae of male tarsus I about half as long as distal member; female medioventral striae with lobes .... *O. apohadrus* spec. nov.
- Tip of posterior projection reaching level of ventral margin of shaft; proximal member of duplex setae of male tarsus I about three quarters the length of distal member, female medioventral striae devoid of lobes .... *O. hadrus* Pritchard & Baker

20. Striae longitudinal or irregular between both third (e_1) and fourth (f_1) pairs of dorsocentral setae and form a diamond-shaped figure between these setae 21
- Striae longitudinal between either third (e_1) or fourth (f_1) pairs of dorsocentral setae and no diamond-shaped figure is formed between these setae 26

21. Aedeagus with posterior projection drawn out in a very slender stylet directed anterodorsally; peritreme ends in a bulb .. *O. trichardti* Meyer
- Aedeagus with posterior projection not stylet-like but acute and of variable length; peritreme hooked distally 22

22. Aedeagal knob with posterior projection shorter than stem of knob .... *O. licinus* Baker & Pritchard
- Aedeagal knob strongly enlarged, posterior projection longer than stem of knob 23

23. Aedeagal knob with posterior projection evenly curved; dorsum of knob slightly convex .... *O. intermedius* Meyer
- Dorsum of aedeagal knob sigmoid 24

24. Aedeagal knob with posterior projection strongly undulate before deflexed tip; male palptarsus about 4 times as long as broad .... *O. gossypii* Zacher
- Aedeagal knob with posterior projection slightly undulate before dorsally directed tip; male palptarsus about 3 times as long as broad 25

25. Female medioventral striae without lobes; chromosome numbers n=4; Transvaal, South Africa found on various *Grewia* spp. and *Ehretia rigida* ..... *O. grewiae* Meyer
- Female with broad, low lobes on medioventral striae between coxae III and IV; chromosome numbers n=2; Malagasy Republic found on *Croton* sp. ..... *O. randriamasii* Gutierrez

26. Striae longitudinal between third pair of dorsocentral setae (e_1); distal portion of aedeagus curving dorsad at an obtuse angle; knob slightly more than half as long as dorsal margin of shaft ..... *O. andrei* Gutierrez
- Striae longitudinal between fourth pair of dorsocentral setae (f_1) 27

27. Tibia I with 8 tactile setae 28
- Tibia I with 9 tactile setae 29

28. Tibia II with 6 tactile setae; aedeagus with dorsal margin of shaft about 1,75 times as long as distal knob ..... *O. nelensis* Meyer
- Tibia II with 7 tactile setae; aedeagus with dorsal margin of shaft about 3 times as long as distal knob ..... *O. rusticus* Meyer

29. Tibia II with 6 tactile setae 30
- Tibia II with 7 tactile setae 31

30. Aedeagus with distal part tapering and sigmoid; male empodial claw on tarsus I about as long as proximoventral spurs.. *O. waltersi* spec. nov.
- Aedeagus with distal part forming a very small knob; male empodial claw on tarsus I much longer than proximoventral spurs .... *O. andropogonearum* Gutierrez

31. Male empodium I with 2 proximoventral spurs 32
- Male empodium I with 3 pairs of proximoventral hairs; aedeagal knob nearly a third the length of dorsal margin of shaft; male palptarsus with terminal sensillum about one and two thirds as long as broad; female terminal sensillum about twice as long as broad ..... *O. grastis* Meyer
32. Distal portion of aedeagus mostly with a knob and not forming a sigmoid tip 33
- Distal portion of aedeagus without distinct knob, becoming sigmoid 52
33. Axis of aedeagal knob parallel to axis of shaft 34
- Axis of aedeagal knob forming an angle with axis of shaft 35
34. Female palptarsus with terminal sensillum slightly longer than broad; male palptarsus with terminal sensillum nearly twice as long as broad ..... *O. afrasiaticus* (McGregor)
- Female palptarsus with terminal sensillum 1,5 times or twice as long as broad; male palptarsus with terminal sensillum about 2,5 times as long as broad ... *O. aquilinus* Meyer
35. Aedeagal knob with posterior projection not longer than stem of knob or knob virtually non-existent 36
- Aedeagal knob with posterior projection distinctly longer than stem 48
36. Aedeagal knob with dorsal margin convex or straight 37
- Aedeagal knob with dorsal margin shallowly concave; male palptarsus with terminal sensillum slightly longer than broad; female palptarsus with terminal sensillum broader than long ..... *O. simus* Baker & Pritchard
37. Aedeagal knob with almost no anterior projection 38
- Aedeagal knob with a distinct anterior projection 40
38. Aedeagal knob with dorsal margin straight; distal part of aedeagus curving dorsad at a strong acute angle ..... *O. pennisetum* Meyer
- Aedeagal knob with dorsal margin obtusely angulate; distal part of aedeagus curving dorsad at about a right angle or a slight acute angle 39
39. Aedeagus bent at right angle to shaft ..... *O. tylus* Baker & Pritchard
- Aedeagus bent at an acute angle to shaft ..... *O. senegalensis* Gutierrez & Etienne
40. Male empodium I with empodial claw obviously longer than proximoventral spurs ... . *O. campestris* spec. nov.
- Male empodium I with empodial claw not longer than proximoventral spurs 41
41. Peritreme shortened; aedeagal knob nearly half the length of dorsal margin of shaft ..... *O. hortulanus* Meyer
- Peritreme of normal length; aedeagal knob not more than a third the length of dorsal margin of shaft 42
42. Aedeagal knob not more than a fourth the length of dorsal margin of shaft 43
- Aedeagal knob less than a third the length of dorsal margin of shaft 46
43. Peritreme straight distally, ending in a bulb..44
- Peritreme hooked distally ..... *O. chazeaui* Gutierrez
44. Aedeagus with posterior projection acute; terminal sensillum of female palpus longer than broad 45
- Aedeagus with posterior projection a rounded protuberance; terminal sensillum on female palpus about as long as broad ..... *O. etiennei* Gutierrez
45. Terminal sensillum on female palpus 2,5 times as long as broad; terminal sensillum on male palpus twice as long as broad ..... *O. krantzi* Zaher, Gomaa & El-Enany
- Terminal sensillum on female palpus twice as long as broad; terminal sensillum on male palpus 2,5 times as long as broad ..... *O. virens* Gutierrez
46. Aedeagal knob about twice width of stem .... *O. pratensis* (Banks)
- Aedeagal knob less than twice width of stem 47
47. Aedeagal shaft as long as its greatest width; male empodium II with claw longer than proximoventral spurs, spurs each with 2 fine dorsal hairs; female genital flap with transverse striae ..... *O. ocellatus* spec. nov.
- Aedeagal shaft longer than its greatest width; male empodium II with claw and 3 pairs of proximoventral hairs; female genital flap with longitudinal striae anteriorly and transverse striae posteriorly ..... *O. neopratensis* Meyer
48. Aedeagal knob about half as long as dorsal margin of shaft ..... *O. castrensis* spec. nov.
- Aedeagal knob about as long as dorsal margin of shaft 49
49. Aedeagal knob with posterior projection curving ventrad 50
- Aedeagal knob with posterior projection straight and directed dorsad 51
50. Aedeagal knob about 4 times as broad as its stem and tip hooked ..... *O. martensis* Meyer
- Aedeagal knob about 3 times as broad as its stem and tip straight ... *O. barbatae* spec. nov.
51. Aedeagal knob with a needle-like posterior projection, directed dorsad at an angle of more than 45° ..... *O. leandrianae* Gutierrez
- Aedeagal knob with posterior projection gradually tapering to a sharp tip, directed dorsad at an angle of about 45° ..... *O. bessardi* Gutierrez
52. Aedeagus with dorsally directed part slender and obtusely angulate near middle; terminal portion of bend about two thirds the length of dorsal margin of shaft ..... *O. grypus* Baker & Pritchard
- Aedeagus with dorsally directed part more or less S-shaped 53
53. Aedeagus with distal part strongly sigmoid; deflexed part strong, about half the width of knob and tip extended well past caudal margin

of dorsally directed bend .....
..... *O. saccharinus* Baker & Pritchard
- Aedeagus with distal part shallowly sigmoid 54
54. Aedeagus with bent portion ventrally directed .
.....55
- Aedeagus with bent portion directed dorsocaudad 56
55. Aedeagus with bent portion about as long as dorsal margin of shaft; male empodium I with mediodorsal claw about half the length of proximoventral spurs .. *O. duncombei* Meyer
- Aedeagus with bent portion about half the length of dorsal margin of shaft; male empodium I with mediodorsal claw about twice as long as proximoventral spurs .....
.....*O. triandrae* Meyer
56. Peritreme retrorse distally .....
..... *O. neoplegas* Meyer
- Peritreme ending in a simple bulb 57
57. Aedeagus with distal sigmoid part forming a right angle with axis of shaft .....
..... *O. sayedi* Zaher, Gomaa & El-Enany
- Aedeagus with distal sigmoid part forming an acute angle with axis of shaft .....
.....*O. plegas* Baker & Pritchard

Oligonychus comptus Meyer & Bolland

Oligonychus comptus Meyer & Bolland, 1984: 218.

This species is distinctive in that the dorsal striae form a network of elongate, irregular elements; setal formula for female and male tibiae 7(3)-6-5-5; chromosome numbers n=4; aedeagus curves dorsad at about a right angle; distal knob slightly wider than stem and about a fourth the length of dorsal margin of shaft; aedeagal knob anteriorly and posteriorly acute; axis of knob parallel to shaft; chromosome numbers n=4.

Habitat and locality. This species was described from *Melinis minutiflora*, Bamenda, Cameroun.

Oligonychus thelytokus Gutierrez

Oligonychus thelytokus Gutierrez, 1977: 65-72.

This species resembles *O. coffeae* (Nietner) in that female tarsus I has 3 tactile setae proximal to the duplex setae and tibia I has 7 tactile setae and 1 solenidion. However, it can be distinguished from *O. coffeae* by 2 tactile setae instead of 1 opposite duplex setae on ventral side of tarsus I; tarsus II with 1 tactile seta well proximal to the duplex setae and 2 tactile setae ventral to duplex setae; males unknown and reproduction is by thelytokus parthenogenesis; chromosome numbers n=3.

Habitat and locality. This species was first described from specimens collected on *Hephelium litchi* at Noumeá, New Caledonia. It was further recorded from 22 plant species belonging to 17 different families in the Comoro Islands, the Seychelles, the Malagasy Republic and Reunion.

Oligonychus occidentalis Gutierrez (Fig. 664)

Oligonychus occidentalis Gutierrez, 1969: 54-56; Meyer, 1974: 255.

The relatively short shaft of aedeagus (Fig. 664) turns dorsad to form a distal knob provided with a small acute, anterior projection and a relatively long, slightly undulate, posterior projection; dorsal margin of knob slightly concave; axis of knob nearly parallel to axis of shaft. According to Gutierrez (1969) the female opisthosomal striae are transverse except for longitudinal striae behind fourth pair of dorsocentral setae (f_1); terminal sensillum on female palptarsus about as long as broad; peritreme terminates in a simple bulb; tibia I provided with 7 tactile setae and 1 solenidion; tibia II with 5 tactile setae; on tarsus I 3 tactile setae and 1 solenidion proximal to duplex setae; tarsus II with 1 tactile seta well proximal to duplex setae.

Habitat and locality. This species is described from *Malleastrum* sp. and *Diospyros greveana* in the Malagasy Republic.

Oligonychus coffeae (Nietner) (Fig. 665-666)

Acarus coffeae Nietner, 1861.
Oligonychus coffeae (Nietner) Pritchard & Baker, 1955: 315; Baker & Pritchard, 1960: 505-506; Meyer & Rodrigues, 1966: 12-13; Gutierrez, 1968b: 446-447; Meyer, 1974: 251-252.
Oligonychus merwei Tucker, 1926: 6.
Paratetranychus terminalis Sayed, 1946a: 94.

Distally aedeagus (Fig. 665-666) bends ventrad at a right angle to shaft axis and gradually narrows to a slender truncate tip; male palptarsus with a tiny terminal sensillum; male tarsus I bears 3 tactile setae and 2 solenidia well proximal to duplex setae; empodia provided with 5 pairs of proximoventral hairs; serrate dorsal body setae of female longer than distances between consecutive setae; striae on opisthosoma mostly transverse but sometimes U-shaped or irregular between third pair of dorsocentral setae (e_1). I have found specimens in which the striae between the fourth pair of dorsocentral setae (f_1) are irregular to irregular longitudinal; striae immediately anterior to genital flap vary from being longitudinal to transverse; female tarsus I with 3 tactile setae and 1 solenidion well proximal to duplex setae (this character may vary as I have examined specimens of the same accession where the female had 3 tactile setae and 1 solenidion on one leg and 4 tactile setae and 1 solenidion proximal to duplex setae on the other leg); 1 tactile seta occurs opposite duplex setae on ventral side of tarsus I; tarsus II bears 2 tactile setae well proximal to duplex setae and 1 tactile seta ventral to duplex setae; setal formula of tibiae 7(1)-5-5-5; chromosome numbers n=3.

Habitat and locality. *O. coffeae* has a world-wide distribution and in some countries it is

considered the most serious of all tea pests. It is also widely distributed in Africa and was recorded from *Camellia sinensis, Mangifera indica, Eugenia gambolana, Vitis vinifera, Parthenocissus quinquefolia, Quercus* sp., *Senecio angulatus, Prunus persica, Trichilia dregeana, T. emetica, Plumeria* sp., *Hakea* sp., *Pyracantha* sp., *Citrus* sp., *Eucalyptus* sp., *Elaeis guineensis, Coteneaster* sp., *Grevillea robusta, Protea compacta, P. eximia, Anacardium occidentale, Terminalia catappa, Manihot esculenta, Rubus avium, Scolopia mundii, Rhus* sp., *Acacia cyanophylla, Persea americana, Szyzygium cordatum, Psidium guajava, Combretum erythropyllum, C. paniculatum, Gossypium* sp., *Butyrospermum paradoxum* and *Antigonon leptopus*.

New records for *O. coffeae* in South Africa are: *Bequartiodendron magalismontanum*, Enkeldoornspoort, Tvl., 24 January 1974 (M.K.P. Meyer); *Platanus acerifolia*, Roodeplaat near Pretoria, Tvl., 23 February 1977 (E.A. Ueckermann); *Fragaria* sp., Stellenbosch, C.P., 13 March 1981 (S.C. Cruickshank); unidentified wild shrub, Louis Trichardt, Tvl., 29 December 1982 (E. van den Berg); *Acacia* sp. and *Eucalyptus gomphocephala*, Kommetjie, C.P., 8 March 1983 (M.K.P. Meyer & D.P. Keetch).

Oligonychus themedae Meyer
(Fig. 667)

Oligonychus themedae Meyer, 1974: 254-255.

Aedeagus (Fig. 667) turns dorsad at about a right angle; knob about half as long as dorsal margin of shaft and forms a distinct angle with shaft axis; posterior projection of knob longer than anterior projection and directed dorsocaudally; dorsal margin of knob angulate and slightly concave anteriorly; opisthosomal striae of female between fourth pair of dorsocentral setae (f_1) transverse or irregular (in some specimens they tend to be more longitudinal); tibia I with 7 tactile setae and 1 solenidion; tibiae II-IV each with 5 tactile setae.

Habitat and locality. This species was first reported from unidentified grass collected in the Umfolozi Game Reserve, Natal and *Themeda triandra* at Potchefstroom, Tvl.

Oligonychus amnicolus Meyer
(Fig. 668)

Oligonychus amnicolus Meyer, 1974: 254.

The aedeagus (Fig. 668) of *O. amnicolus* is distinctive in having a very small knob, about one fourth to one fifth the length of dorsal margin of shaft; anterior projection virtually absent and small posterior projection directed dorsocaudally to form an acute angle with shaft axis; opisthosomal striae of female mostly transverse except for irregular longitudinal striae between fourth pair of dorsocentral setae (f_1); striae with triangular lobes; tibia I bears 7 tactile setae and 1 solenidion; tibiae II-IV each with 5 tactile setae.

Habitat and locality. This species was collected on *Cynodon dactylon* and *Themeda triandra* in Natal, Transvaal and Zimbabwe.

Oligonychus vitis Zaher & Shehata
(Fig. 669)

Oligonychus vitis Zaher & Shehata, 1965: 67-69; Meyer, 1974: 252.

This species is very close to *O. coffeae* (Nietner) and *O. mangiferus* (Rahman & Sapra) but can be separated from the former species by female tarsus II bearing 3 tactile setae well proximal to duplex setae. *O. vitis* differs from *O. mangiferus* by the aedeagus (Fig. 669) which bends ventrad at a right angle. Female tarsus I usually with 4 tactile setae and 1 solenidion proximal to duplex setae. However, this is a variable character because some specimens have only 3 tactile setae whereas others may have 3 on one leg and 4 on the other leg; setal formula for tibiae of *O. vitis* is 7(1)-5-5-5.

Habitat and locality. This species was first described from vineyards in Egypt. In South Africa it was recorded from *Vitis vinifera* at Stellenbosch, C.P.

New records for *O. vitis* are: *Heteropyxis natalensis*, Duiwelskloof, Tvl., 7 May 1981 (M.K.P. Meyer); *Vitis vinifera*, Somerset West, C.P., 23 March 1983 (A. Schwartz); *V. vinifera*, Wolseley, C.P., March 1985 (A. Schwartz).

Oligonychus mangiferus (Rahman & Sapra)
(Fig. 670)

Paratetranychus mangiferus (Rahman & Sapra) Moutia, 1940: 192.
Oligonychus mangiferus (Rahman & Sapra) Moutia, 1958: 60; Meyer, 1974: 252-253.

As in *O. coffeae* (Nietner) and *O. vitis* Zaher & Shehata the aedeagus (Fig. 670) bends ventrad but differs in forming a more or less acute angle with shaft axis; distal portion abruptly narrows at tip; female tarsus I with 4 tactile setae and 1 solenidion proximal to duplex setae; tarsus II bears 3 tactile setae well proximal to duplex setae; setal formula of tibiae 7(1)-5-5-5.

Habitat and locality. This species is widely distributed in the tropics. In Africa it occurs in Egypt and was recorded by Moutia (1958) from Mauritius collected on mango, peach, loquat, *Annona* sp., *Vitis* sp., *Rosa* sp. and *Eugenia* sp. Meyer (1974) reported *O. mangiferus* from Tzaneen, Tvl. collected on *Trichilia emetica*. More recently, I found this species in collections made from *Mangifera indica* on Reunion Island, April 1982 (C. Vuillaume) and *Combretum erythrophyllum*, Potgietersrus Nature Reserve, Tvl., 5 March 1985 (E.A. Ueckermann).

Oligonychus punicae (Hirst)
(Fig. 671)

Paratetranychus punicae Hirst, 1926: 830.
Oligonychus punicae (Hirst) Baker & Pritchard,

1955: 335-336; Tuttle, Baker & Abbatiello, 1976: 73; Zaher, Gomaa & El-Enany, 1982: 110.

Aedeagus (Fig. 671) bends ventrally at a slight obtuse angle; bent portion about three quarters the length of dorsal margin of shaft; aedeagal hook rather broad, ending in a finger-like projection; female tarsus I with 4 tactile setae and 1 solenidion proximal to duplex setae; tarsus II with 3 tactile setae and 1 solenidion proximal to duplex setae; tibia I with 7 tactile setae; chromosome numbers n=2.

Habitat and locality. Zaher, Gomaa & El-Enany (1982) reported this species from *Vitis vinifera* in Upper Egypt.

Oligonychus ununguis (Jacobi) (Fig. 672-675)

Tetranychus ununguis Jacobi, 1905: 239.
Oligonychus ununguis (Jacobi) Pritchard & Baker, 1955: 319-327; Ehara, 1962: 168-171; Livshitz & Mitrofanov, 1969: 41-43; Mitrofanov, Bossenko & Bitchevskis, 1975: 10; Tuttle, Baker & Abbatiello, 1976: 72-75; Wang, 1981: 104-106.
Oligonychus biotae Reck, Livshitz & Mitrofanov, 1969: 42-43.
Oligonychus rollowi Reck, Livshitz & Mitrofanov, 1969: 42-34.

According to Pritchard & Baker (1955) and Ehara (1962) variations in the leg chaetotaxy, the length of the distal bent portion of the aedeagus and the striae in the area immediately anterior to the female genital flap may occur among specimens of different populations and among different specimens within the same population. Pritchard & Baker (1955) considered that a species-complex is probably involved. Mitrofanov, Bossenko & Bitchevskis (1975) tried to clarify the systematic position of the "ununguis" complex but found not distinctive morphological differences between the 3 species in the "ununguis" complex, namely *O. rollowi* Reck, *O. biotae* and *O. ununguis* and therefore considered these 3 species to be conspecific.

The diagnostic characters given by Livshitz & Mitrofanov (1969) for *O. rollowi* are similar to those observed in the South African material and therefore the local specimens are considered to be *O. ununguis*. However, the distal bent of the aedeagus (Fig. 672) is shorter than that depicted by Jeppson, Keifer & Baker (1975) and Tuttle, Baker & Abbatiello (1976) for *O. ununguis*, although Pritchard & Baker (1955) pointed out that the length of the bent portion may vary considerably from less than one half to nearly as long as the dorsal margin of the shaft (Fig. 673).

The South African specimens exhibit the following diagnostic characters: Male palptarsus as in Fig. 674; setae and solenidia (in parentheses) on male leg segments: femora 8-6-2-1; genua 5-5-2-2; tibiae 7(4)-5-5-5; tarsi 11(3)+2 dupl.-10(1)+1 dupl.-8(1)-8(1); tarsus I of male with 4 tactile setae and 3 solenidia proximal to duplex setae; female dorsal body setae longer than longitudinal distances between their bases; terminal sensillum on female palptarsus (Fig. 675) 1,3 times as long as broad (according to Mitrofanov, Bossenko & Bitchevskis (1975) the terminal sensillum of the female palpus may vary from 1,3 to 2,0 times as long as it is broad); dorsal opisthosomal striae mostly transverse but those between the third pair of dorsocentral setae (e_1) form a shallow V; striae in area immediately anterior to genital flap longitudinal; chaetotaxy of female legs; femora 8-6-2-1; genua 5-5-2-2; tibiae 7(1)-5-5-5; tarsi 11(1)+2 dupl.-10(1) +1 dupl.-8(1)-8(1); tarsus I with 4 tactile setae and 1 solenidion proximal to duplex setae; tarsus II bears 3 pairs of tactile setae well proximal to duplex setae; chromosome numbers n=3.

Habitat and locality. *O. ununguis* is a serious pest of conifers throughout the world. This species is now recorded for the first time in South Africa: *Chamaecyparis tunebris*, Haenertsburg, Tvl., 8 May 1981 (M.K.P. Meyer); unidentified Gymnosperm, Ebenezer Dam, near Haenertsburg, Tvl., 24 May 1983 (M.K.P. Meyer).

Oligonychus judithae Meyer (Fig. 676)

Oligonychus judithae Meyer, 1974: 253-254.

Oligonychus judithae differs from other species found on conifers, such as *O. ununguis* (Jacobi) by the presence of a well developed terminal sensillum on the palptarsus of both female and male; sensillum on male palptarsus about 2,5 times as long as broad; female palptarsus with terminal sensillum about twice as long as broad; female tarsus I with 4 tactile setae and 1 solenidion proximal to duplex setae; setal formula of tibiae 7(1)-5-5-5; aedeagus with distal third bends ventrad at a right angle; distal end of aedeagus narrows to a truncate tip (Fig. 676).

Habitat and locality. Meyer (1974) described this species from *Cupressus glabra* collected at Mazelspoort, O.F.S.

A new record is: *Cupressus* sp., 13 km from Clarens (Golden Gate road), O.F.S., 9 February 1982 (M.K.P. Meyer).

Oligonychus nasutus Meyer (Fig. 677)

Oligonychus nasutus Meyer 1974: 258.

Shaft of aedeagus (Fig. 677) narrows distally and curves dorsad to form a large knob about as long as shaft; axis of knob forms a 45° angle with shaft axis; knob broadly rounded anteriorly but posteriorly provided with a downwardly curved, beak-like projection; male empodium I with proximoventral spurs about as long as empodial claws: dorsal body setae of female not longer than longitudinal intervals between their bases; opisthosomal striae mostly transverse, except for a

small area between fourth pair of dorsocentral setae (f_1), where the striae are slightly irregular; tibiae I with 9 tactile setae; tibiae II and IV with 6 and tibia III with 5 tactile setae.

Habitat and locality. *O. nasutus* was first described from *Themeda triandra*, Potchefstroom, Tvl.

Oligonychus calcis Baker & Pritchard
(Fig. 678)

Oligonychus calcis Baker & Pritchard, 1960: 516-520; Meyer 1974: 255-258.

Aedeagal shaft (Fig. 678) curves strongly dorsad, almost from base; distal knob with an acute anterodorsally directed projection and a longer posterior projection, tapering distad and curving slightly ventrad; axis of knob parallel to shaft axis; male empodium I bears 3 pairs of proximoventral hairs; slender, serrate dorsal body setae of female reach to bases of setae next behind; opisthosoma bears smooth transverse striae; terminal sensillum on female palptarsus about as long as broad; peritreme ends in a simple bulb; tibia I with 9 and tibia II with 6 tactile setae; tarsus I with 2 tactile setae and 1 solenidion proximal to duplex setae.

Habitat and locality. This species was first reported from *Baphia solbeidi* in Zaïre.

Oligonychus biharensis (Hirst)
(Fig. 679)

Paratetranychus biharensis Hirst, 1924a: 69.
Oligonychus biharensis (Hirst) Pritchard and Baker, 1955: 364-366; Baker & Pritchard, 1960: 514-515; Meyer, 1974: 279.

Shaft and aedeagus (Fig. 679) curves dorsad and distally forms a large knob, which is longer than dorsal margin of shaft; anterior projection small and acute but posterior projection long and curves downwards; axis of knob parallel to shaft axis; dorsal margin of knob convex; female dorsal body setae longer than longitudinal intervals between them; opisthosomal striae transverse; terminal sensillum on female palptarsus short and broad; peritreme retrorse distally.

Habitat and locality. Baker & Pritchard (1960) recorded this species from loquat collected in Mauritius. Elsewhere in the world it was also found on mango, litchi, rose, coteneaster, camphor and *Euphorbia longana*.

Oligonychus hova Gutierrez
(Fig. 680)

Oligonychus hova Gutierrez, 1966: 607-610; Meyer, 1974: 278.

Aedeagus (Fig. 680) curves dorsad at a slight obtuse angle to form a distal knob with a small, acute anterior projection and a long, acute and dorsocaudally directed posterior projection; axis of knob forms an obtuse angle with shaft axis: female dorsal body setae much longer than distances between consecutive setae; opisthosomal striae transverse.

Habitat and locality. *O. hova* was first identified from *Croton* sp. in the Malagasy Republic.

Oligonychus malawiensis Meyer
(Fig. 681)

Oligonychus malawiensis Meyer, 1974: 279.

Aedeagus (Fig. 681) curves dorsad at a slight obtuse angle to form a knob with a small acute, anterior projection and a strong, slightly upcurved, posterior projection; dorsal margin of knob slightly indented and axis of knob parallel to shaft; knob slightly longer than dorsal margin of shaft; dorsal body setae of female about as long as longitudinal distances between their bases; opisthosoma with transverse striae; striae immediately anterior to genital flap longitudinal.

Habitat and locality. This species was found on *Terminalia sericea* in Malawi.

Oligonychus pemphisi Gutierrez
(Fig. 682)

Oligonychus pemphisi Gutierrez, 1970: 718-720; Meyer, 1974: 282.

The short shaft of the aedeagus (Fig. 682) turns dorsad at a slight obtuse angle; knob with a slight acute projection anteriorly and a strong downcurved posterior projection, about twice as wide as stem of knob; axis of knob parallel to shaft axis; dorsal margin of knob slightly indented; striae on female opisthosoma mostly transverse and bear rounded lobes; ventral striae devoid of lobes; genital flap bears transverse striae and striae in area immediately anterior to flap irregular to transverse; chromosome numbers n=3.

Habitat and locality. This species was described from *Pemphis madagascariensis* in the Malagasy Republic.

Oligonychus imberbei Meyer
(Fig. 683)

Oligonychus imberbei Meyer, 1974: 282-283.

Aedeagus (Fig. 683) turns dorsad to form a large knob, with a small acute projection anteriorly and a large, ventrally curved posterior projection, slightly wider than stem; shaft very short; female dorsal body setae extend past bases of setae next behind; striae on opisthosoma transverse; female palpus bears a terminal sensillum about one and two thirds as long as broad; tarsi I and II with proximal member of duplex setae very short.

Habitat and locality. This species was recorded from *Boscia transvaalensis* and *Combretum imberbe* collected in the Kruger National Park, Tvl.

Oligonychus apohadrus spec. nov.
(Fig. 684-688)

Oligonychus apohadrus closely resembles *O. hadrus* Pritchard & Baker but differs in that the ventrally directed posterior projection of the knob does not reach the level of the ventral margin of shaft; proximal member of duplex setae of male tarsus I about half as long as distal member and the female medioventral striae have lobes.

Male. Gnathosoma. Terminal sensillum on palptarsus very small.

Legs. Setae and solenidia (in parentheses) on leg segments: femora 8-7-3-2; genua 5-5-3-3; tibiae 9(4)-7-6-7; tarsi 13(3)+2 dupl.-11(1)+1 dupl.-9(1)-9(1); 4 tactile setae and 2 solenidia located proximal to duplex setae on tarsus I; proximal members of duplex setae on tarsus I about a third as long as distal member; proximal member of duplex setae of tarsus II about as long as distal member (Fig. 684); empodium I with a claw and 3 pairs of proximoventral hairs.

Aedeagus (Fig. 685). Shaft curves dorsad at an obtuse angle and terminates in a large distal knob; anterior projection small and acute; posterior projection about as wide as stem of knob; acuminate tip of posterior projection directed ventrad but does not reach the level of ventral margin of shaft.

Female. Dimensions: length of body (including gnathosoma) 433-467 μm; length (excluding gnathosoma) 360-389 μm; breadth 227-240 μm.

Dorsum. Serrate body setae about as long as longitudinal distances between their bases; opisthosoma bears transverse striae; lobes on striae semicircular with basal spots.

Venter. Genital flap and area immediately anterior bears transverse striae; small rounded lobes on striae, occurring from genital flap to base of gnathosoma.

Gnathosoma. Terminal sensillum (Fig. 686) on palptarsus about 2,5 times as long as broad; distally, peritreme dilated into a simple bulb.

Legs. Setal formula for leg segments: femora 8-7-3-2; genua 5-5-3-3; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-11(1)+1 dupl.-9(1)-9(1); tarsus I with 4 tactile setae proximal to duplex setae; proximal member of duplex setae (Fig. 687) of tarsus I about half as long as distal member; proximal member of duplex setae (Fig. 688) of tarsus II about three quarters the length of distal member.

Habitat and locality. Holotype male and 3 paratype females from *Rhus chirindensis*, Farm Welkom, near Lake St. Lucia, Natal, 21 August 1980 (M.K.P. Meyer).

Oligonychus hadrus Pritchard & Baker
(Fig. 689-692)

Oligonychus hadrus Pritchard & Baker, 1955: 369-371; Baker & Pritchard, 1960: 515; Meyer, 1974: 278-279.

Aedeagus (Fig. 689) curves dorsad and has a large distal knob; anterior projection small and acute but long posterior projection directed ventrally, reaching the level of ventral margin of shaft; on male tarsus II proximal member of duplex setae about two thirds the length of distal member (Fig. 690) but on tarsus I about three quarters the length of distal member; empodium I of male with a claw and 3 pairs of proximoventral hairs; female dorsal body setae serrate and reach past bases of setae next behind; opisthosomal striae transverse; lobes on dorsal striae rounded; medioventral striae devoid of lobes; genital flap and area immediately anterior to it with transverse striae; tibia I bears 9 tactile setae; tibiae II and IV each with 7 tactile setae; tibia III with 6 tactile setae; members of duplex setae (Fig. 691) on tarsus II nearly equal in length but proximal members of duplex setae on tarsus I about a half to three quarters the length of distal members (Fig. 692); 4 tactile setae on tarsus I proximal to duplex setae; solenidia on tarsi III and IV short.

Habitat and locality. *O. hadrus* was recorded from *Combretum microphyllum* and *C. zeyheri* in the Transvaal.

New records for this species are: *C. erythrophyllum* and *Rhus leptodictya*, Swartkrans, near Potgietersrus, Tvl., 5 May 1981 (M.K.P. Meyer & E.A. Ueckermann): *Combretum apiculatum*, Oudestad, near Groblersdal, Tvl., 5 December 1979 (E.A. Ueckermann).

Oligonychus trichardti Meyer
(Fig. 693)

Oligonychus trichardti Meyer, 1974: 262.

Aedeagus (Fig. 693) has a small, acute anterior angulation but the posterior projection is drawn out into a slender stylet, directed anterodorsally; opisthosomal striae of female mostly transverse except for longitudinal striae between fourth pair of dorsocentral setea (f_1); striae between third pair of dorsocentral setae (e_1) transverse, irregular or longitudinal; in most specimens a distinct diamond-shaped figure present between third (e_1) and fourth (f_1) pairs of dorsocentral setae; peritreme terminates in a simple bulb.

Habitat and locality. Meyer (1974) described this species from grass at Louis Trichardt, Tvl.

New records are from: *Brachiaria brizantha, Conyza floribunda* and *Hyperthelia dissoluta*, 5 km from Rustenburg (Krugersdorp road), Tvl., 30 March 1977 (E.A. Ueckermann & S.C. Cruickshank); *Heteropogon contortus* and *Hyparrhenia filipendula* var. *pilosa*, 50 km East of Rustenburg (Pretoria road), Tvl., 25 May 1977 (E.A. Ueckermann).

Oligonychus licinus Baker & Pritchard
(Fig. 694)

Oligonychus licinus Baker & Pritchard, 1960: 510-514; Meyer, 1974: 261.
Oligonychus sylvestris Gutierrez, 1967b: 576-580.

Gutierrez & Etienne (1981a) considered *O. licinus* and *O. sylvestris* to be conspecific. Shaft of

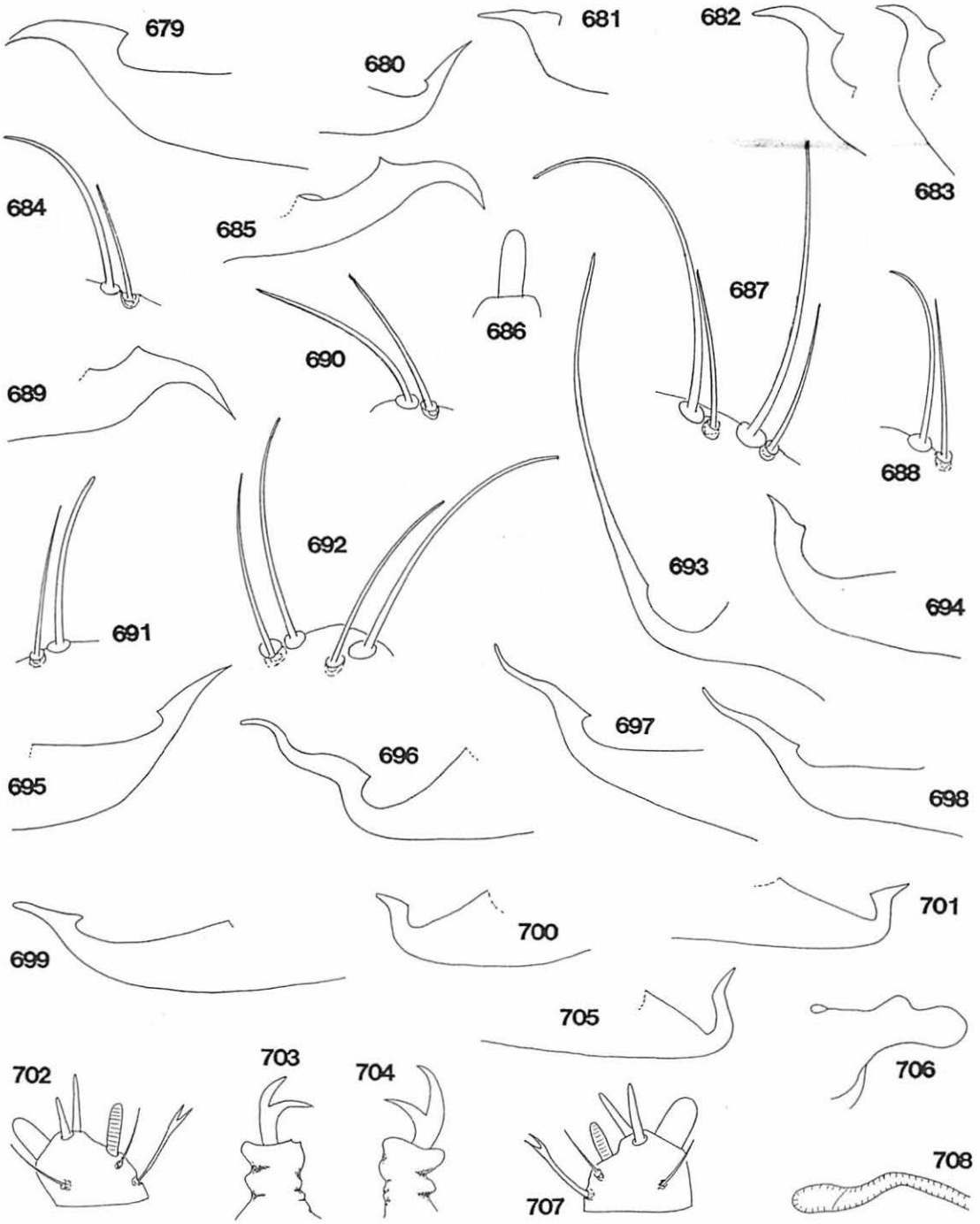

FIG. 679. *Oligonychus biharensis* (Hirst). Aedeagus
FIG. 680. *Oligonychus hova* Gutierrez. Aedeagus
FIG. 681. *Oligonychus malawiensis* Meyer. Aedeagus
FIG. 682. *Oligonychus pemphisi* Gutierrez. Aedeagus
FIG. 683. *Oligonychus imberbei* Meyer. Aedeagus
FIG. 684-688. *Oligonychus apohadrus* spec. nov.
FIG. 684. Duplex setae on tarsus II of male/ *Dubbelhare op tarsus II van mannetjie*
FIG. 685. Aedeagus
FIG. 686. Terminal sensillum on palptarsus of female/ *Terminale sensillum op palptarsus van wyfie*
FIG. 687. Duplex setae on tarsus I of female/ *Dubbelhare op tarsus I van wyfie*
FIG. 688. Duplex setae on tarsus II of female/ *Dubbelhare op tarsus I van wyfie*
FIG. 689-692. *Oligonychus hadrus* Pritchard & Baker
FIG. 689. Aedeagus
FIG. 690. Duplex setae on tarsus II of male/ *Dubbelhare op tarsus II van mannetjie*
FIG. 691. Duplex setae on tarsus II of female/ *Dubbelhare op tarsus II van wyfie*
FIG. 692. Duplex setae on tarsus I of female/ *Dubbelhare op tarsus I van wyfie*
FIG. 693. *Oligonychus trichardti* Meyer. Aedeagus
FIG. 694. *Oligonychus lidinus* Baker & Pritchard. Aedeagus
FIG. 695. *Oligonychus intermedius* Meyer. Aedeagus
FIG. 696. *Oligonychus gossypii* (Zacher). Aedeagus
FIG. 697. *Oligonychus grewiae* Meyer. Aedeagus
FIG. 698. *Oligonychus randriamasii* Gutierrez. Aedeagus
FIG. 699. *Oligonychus andrei* Gutierrez. Aedeagus
FIG. 700. *Oligonychus nelensis* Meyer. Aedeagus
FIG. 701. *Oligonychus rusticus* Meyer. Aedeagus
FIG. 702-708. *Oligonychus waltersi* spec. nov.
FIG. 702. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 703. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 704. Tarsal appendages of tarsus II of male/ *Tarsale aanhangsels van tarsus II van mannetjie*
FIG. 705. Aedeagus
FIG. 706. Spermatheca/ *Spermateka*
FIG. 707. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 708. Termination of peritreme of female/ *Eindpunt van peritreem van wyfie*

aedeagus (Fig. 694) gradually narrows distally, turns dorsad and bears an acute projection anteriorly; posteriorly tip tapers narrowly and slightly deflexed; dorsal margin of distal end slightly sigmoid; terminal sensillum on male palptarsus about 4 times as long as broad; female dorsal body setae longer than distances between consecutive setae; opisthosomal striae mostly transverse, except for longitudinal striae between third (e_1) and fourth (f_1) pairs of dorsocentral setae; dorsal striae bear rounded lobes; from coxae III to genital flap medioventral striae with broad, low lobes; chromosome numbers n=2.

Habitat and locality. This species was first described from a wild plant collected in Zaïre. *O. sylvestris* was recorded from *Desmodium canum, D. mauritianum, Stenotaphrum dimidiatum, Phaseolus mungo* and *Sida rhombifolia* in the Malagasy Republic. Matthysse (1978) reported *O. licinus* from Ibadan, Nigeria on *Cajanas cajan* (pigeon peas). Meyer & Bolland (1984) studied this species from the Cameroun, collected on *Eriosema montanum*. Gutierrez & Etienne (1981a) recorded *O. licinus* from Senegal found on *Vigna* sp.

Oligonychus intermedius Meyer
(Fig. 695)

Oligonychus intermedius Meyer, 1964: 675-678; Meyer, 1974: 260-261.

Aedeagus (Fig. 695) narrows distally, curves dorsad and forms a large knob, about two thirds the length of dorsal margin of shaft; anterior projection of knob small and acute; posterior projection long and directed dorsad; axis of knob forms an angle of about 45° with shaft axis; male palptarsus bears a terminal sensillum about 3 times as long as broad; dorsal body setae of female serrate and longer than distances between bases of consecutive setae; opisthosomal striae mostly transverse except for longitudinal striae between third pair of dorsocentral setae (e_1); irregular to mostly longitudinal striae between fourth pair of dorsocentral setae (f_1); a diamond-shaped figure present between third (e_1) and fourth (f_1) pairs of dorsocentral setae; dorsal lobes on striae semicircular with basal spots; broad, low lobes present medioventrally between coxae III and IV; chromosome numbers n=2.

Habitat and locality. Meyer (1974) recorded this species from *Dombeya rotundifolia, Grewia subspathulata, Annona senegalensis, Gossypium* sp. and *Pappea capensis* collected in the Transvaal and Malawi.

New records are: *Dombeya cymosa*, Great Kei River Pass, C.P., 9 February 1974 (C.J. Colijn); *D. rotundifolia* var *rotundifolia* and *Rhynchosia nitens*, Blydepoort Nature Reserve, Tvl., 23 February 1978 (M.K.P. Meyer); *Dombeya rotundifolia* var. *rotundifolia* and *Grewia monticola*, near Moria, Lebowa, 8 May 1981 (E.A. Ueckermann).

Oligonychus gossypii (Zacher)
(Fig. 696)

Paratetranychus gossypii Zacher, 1921: 183.
Oligonychus gossypii (Zacher) Pritchard & Baker, 1955: 359; Baker & Pritchard, 1960: 508; Meyer, 1974: 263.

Aedeagus (Fig. 696) narrows distally and curves dorsad at about a right angle; distally, aedeagus with a large knob bearing a small anterior projection and a long, undulate posterior projection; tip directed ventrad; female opisthosoma with longitudinal striae between members of third (e_1) and fourth (f_1) pairs of dorsocentral setae; a diamond-shaped figure present between these 2 pairs of setae; chromosome numbers n=2.

Habitat and locality. *O. gossypii* is widespread in equatorial Africa and was recorded from Togo, Senegal, Sierra Leone, Nigeria, Cameroun, Zaïre and Angola. It is a pest of cotton but also has a wide variety of host plants.

A new record is from *Manihot* sp., M'Vuazi, Bas Zaïre, 7 October 1983 (R.D. Hennessey).

Oligonychus grewiae Meyer
(Fig. 697)

Oligonychus grewiae Meyer, 1965: 86-88; Meyer, 1974: 260.

Meyer (1974) synonymized *O. randriamasii* Gutierrez with *O. grewiae* because they exhibit the same diagnostic characters. However, Helle, Bolland & Heitmans (1981) found that the chromosome numbers of these 2 species differ from n=4 in *O. grewiae* to n=2 in *O. randriamasii*. These authors also found that there was a difference in the morphology of the egg. The egg-shell of *O. randriamasii* was considerably thicker than that of *O. grewiae* and when squashed it burst open in a different way. For these reasons Helle, Bolland & Heitmans (1981) considered them to be different.

Shaft of aedeagus (Fig. 697) narrows distally, turns dorsad and with a large knob; anterior projection of knob small and acute but posterior projection very long and slightly undulate, with tip directed dorsocaudad; male palptarsus bears a terminal sensillum, about 3 times as long as broad; female dorsal body setae serrate and extend past bases of setae next behind; dorsal integument of opisthosoma with mostly transverse striae, except for longitudinal striae between third pair of dorsocentral setae (e_1) and fourth pair of dorsocentral setae (f_1); striae bear semicircular lobes with basal spots; lobes fairly uniform but a narrow pointed or lobes may occur; striae on venter devoid of lobes; genital flap bears transverse striae but area anterior to flap with dashed longitudinal striae; terminal sensillum on female palptarsus twice as long as broad; peritreme strongly retrorse distally.

Habitat and locality. This species has a wide distribution and was recorded from *Grewia* sp., *G. kwebensis, G. bicolor* and *G. messinica*.

New records are from: *G. flava*, Papatso, near Hammanskraal, Bophuthatswana, 30 January 1980 (H.R. Bolland); *Ehretia rigida*, Naboomspruit, Tvl., 5 May 1981 (E.A. Ueckermann).

Oligonychus randriamasii Gutierrez
(Fig. 698)

Oligonychus randriamasii Gutierrez, 1967b: 573-576.

Oligonychus randriamasii exhibits the same diagnostic characters as *O. grewiae* Meyer. After a careful examination of the types of *O. grewiae* and 1 paratype female and 2 paratype males of *O. randriamasii* I found that the female of the latter had broad, low lobes on the medioventral striae in an area between coxae III and IV but the females of *O. grewiae* were devoid of lobes in this area. *O randriamasii* further differed from *O. grewiae* by having a thicker egg-shell and a chromosome number of n=2; aedeagus shown in Fig. 698.

Habitat and locality. Gutierrez (1967b) described this species from *Croton* sp. in the Malagasy Republic.

Oligonychus andrei Gutierrez
(Fig. 699)

Oligonychus andrei Gutierrez, 1966: 600-603; Meyer, 1974: 262.

Aedeagal shaft (Fig. 699) narrows distally and turns dorsad forming a knob with an acute anterior projection and a longer posterior projection; tip directed dorsad; axis of knob forms an acute angle with shaft axis; dorsal margin of knob slightly concave; dorsal margin of shaft about 1,5 times as long as knob; female opisthosomal striae transverse except for longitudinal striae between third pair of dorsocentral setae (e_1); chromosome numbers n=2.

Habitat and locality. This species was recorded from *Grewia lavanalensis* in the Malagasy Republic.

Oligonychus nelensis Meyer
(Fig. 700)

Oligonychus nelensis Meyer, 1974: 258-259.

Aedeagus (Fig. 700) turns dorsad at an acute angle to form a distal knob slightly wider than stem; knob rounded anteriorly and with an acute posterior projection, directed caudodorsally to form a distinct angle with shaft axis; dorsal margin of shaft about 1,75 times as long as distal knob; tibia I bears 8 tactile setae; tibiae II and IV each with 6 setae; tibia III with 5 setae; female opisthosoma with longitudinal striae between fourth pair of dorsocentral setae (f_1).

Habitat and locality. This species was first described from *Eragrostis curvula*, Nelshoogte, near Barberton, Tvl.

New records for this species are: *Setaria sphacelata*, 13 km from Delmas (Devon road), Tvl., 9 November 1973 (M.K.P. Meyer); grass, 5 km from Leandra, Tvl., 5 November 1973 (M.K.P. Meyer).

Oligonychus rusticus Meyer
(Fig. 701)

Oligonychus rusticus Meyer, 1974: 272-273.

Shaft of aedeagus (Fig. 701) turns dorsad at an acute angle and forms a knob, about one third the length of dorsal margin of shaft; anterior projection of knob small and acute but posterior projection longer, acute and directed caudodorsally, making an angle of about 45° with shaft axis; dorsal margin of knob straight; female dorsal body setae serrate, longer than distances between bases of consecutive setae; opisthosomal striae transverse except for irregular to longitudinal striae between fourth pair of dorsocentral setae (f_1); tibia I with 8 tactile setae; tibiae II and IV each with 7 and tibia III with 6 tactile setae.

Habitat and locality. This species was first described from grass collected in the Umfolozi Game Reserve, Natal and the Kruger National Park, Tvl.

Oligonychus waltersi spec. nov.
(Fig. 702-708)

The aedeagus of *O. waltersi* resembles that of *O. grypus* Baker & Pritchard in that the distal part tapers and has an obtuse angulation near the middle. However, this distal part is shorter than that of *O. grypus*. Tibiae II, III and IV of *O. waltersi* bear 6, 5 and 6 setae respectively whereas tibiae II-IV of *O. grypus* have 7, 6 and 7 setae respectively.

Male. Dimensions: length of body (including gnathosoma) 389-433 μm; length (excluding gnathosoma) 340-367 μm; breadth 220-227 μm.

Gnathosoma. Palptarsus (Fig. 702) with terminal sensillum about 1,5 times as long as broad.

Legs. Setae and solenidia (in parentheses) on leg podomeres: femora 9-6-4-4; genua 5-5-4-4; tibiae 9(4)-6-5-6; tarsi 13(3)+2 dupl.-13(1)+1 dupl.-9(1)-9(1); tarsus I with 4 tactile setae and 2 solenidia well proximal to duplex setae; empodia I (Fig. 703) and II (Fig. 704) with proximoventral spurs about as long as claw.

Aedeagus (Fig. 705). Shaft narrowing and turning dorsad; distal part tapers to form an obtuse angulation medially; distal bent portion about half as long as distal margin of shaft.

Female. Dimensions: length of body (including gnathosoma) 520-560 μm; length (excluding gnathosoma) 433-467 μm; breadth 320-347 μm.

Dorsum. Body setae serrate and extend past bases of setae next behind; opisthosomal striae mostly transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1); lobes on striae rounded with basal spots.

Venter. Lobes on striae broad and low, extending as far forward as second pair of ventral setae; striae immediately anterior to genital flap longitudinal.

Spermatheca (Fig. 706). Sacculus minute and rounded; duct very fine and inconspicuous but widens near its origin.

Gnathosoma. Terminal sensillum of palptarsus (Fig. 707) about 1,5 times as long as broad;

palptarsus with a forked seta proximodorsally; peritreme ends in a bulb (Fig. 708).

Legs. Chaetotaxy of legs: coxae 2-2-1-1; trochanters 1-1-1-1; femora 9-6-4-4; genua 5-5-4-4; tibiae 9(1 or 2)-6-5-6; tarsi 13(1 to 3)+2 dupl.-13(2) +1 dupl.-9(1)-9(1); tarsus I with 4 tactile setae proximal to duplex setae; tarsus II bears 4 tactile setae and 1 solenidion proximal to duplex setae.

Habitat and locality. Holotype male, 11 paratype males and 24 paratype females from *Pennisetum clandestinum*, Baardskeerdersbos, C.P., July 1982 (S.S. Walters).

This species is named for Dr S.S. Walters of the Winter Rainfall Region, Stellenbosch.

Oligonychus andropogonearum Gutierrez
(Fig. 709)

Oligonychus andropogonearum Gutierrez, 1969: 50-52; meyer 1974: 259.

Aedeagus (Fig. 709) curves dorsad and is slightly wider distally, forming a small knob; anterior projection very small and directed ventrally but small posterior projection directed dorsally; dorsal margin of shaft of aedeagus 2,5 times as long as distal knob; dorsal margin of distal end forms a distinct angle with shaft axis; peritreme ends in a simple bulb; tibia I bears 9 tactile setae; tibia II with 6 tactile setae.

Habitat and locality. Gutierrez (1969) studied this species from *Hyparrhenia rufa* and *H. cymbaria* in the Malagasy Republic.

Oligonychus grastis Meyer
(Fig. 710)

Oligonychus grastis Meyer, 1974: 267-272.

Distal portion of aedeagus (Fig. 710) bent dorsad at an acute angle; anterior projection of knob small but posterior projection longer and directed caudodorsally to form an acute angle with shaft; male empodia I-IV each with a claw and 3 pairs of proximoventral hairs; opisthosomal striae of female longitudinal between fourth pair of dorsocentral setae (f_1).

Habitat and locality. Meyer (1974) reported this species from grass collected at Charter's Creek, Lake St. Lucia, Natal.

Oligonychus afrasiaticus (McGregor)
(Fig. 711)

Paratetranychus afrasiaticus McGregor, 1939: 255.
Oligonychus afrasiaticus (McGregor) Pritchard & Baker, 1955: 349; Baker & Pritchard, 1960: 523-524.

Aedeagus (Fig. 711) curves dorsad and bears distally a moderately large knob, about half the length of dorsal margin of shaft; anterior projection of knob broadly rounded and about as long as posterior projection; the latter projection is acute and deflexed at tip; axis of knob parallel to shaft axis; terminal sensillum of male palpus about 1,5 times as long as broad; female opisthosoma with longitudinal striae between fourth pair of dorsocentral setae (f_1); female palpus with terminal sensillum slightly longer than broad.

Habitat and locality. This species is sometimes a serious pest of dates in North Africa, the Middle East, Algeria, Iraq and Iran.

Oligonychus aquilinus Meyer
(Fig. 712)

Oligonychus aquilinus Meyer, 1974: 266-267.

Aedeagus (Fig. 712) turns dorsad at about a right angle and has a distal knob, about half the length of dorsal margin of shaft; anterior projection broadly rounded and about half the length of posterior projection; the latter projection acute, deflexed at tip and about twice as long as stem of knob; terminal sensillum on male palptarsus about twice as long as broad; female opisthosoma with longitudinal striae between fourth pair of dorsocentral setae (f_1); terminal sensillum on female palptarsus about twice as long as broad.

Habitat and locality. *O. aquilinus* was described from grass, Pretoria, Tvl. and *Arachis hypogaea*, Vaalharts, C.P.

Oligonychus simus Baker & Pritchard
(Fig. 713)

Oligonychus simus Baker & Pritchard, 1960: 520-522; Meyer, 1974: 267.

Base of aedeagus (Fig. 713) broad becoming evenly narrower towards dorsally directed bend; distal end slightly widened with concave dorsal margin; anterior projection small and obtuse but posterior projection long and directed dorsally to form a distinct angle with shaft axis; male palptarsus with terminal sensillum slightly longer than broad; female with longitudinal striae between fourth pair of dorsocentral setae (f_1); terminal sensillum on female palpus broader than long.

Habitat and locality. This species was recorded from *Sorghum vulgaris* and *S. caffrorum* collected in the Transvaal and Malawi.

Oligonychus pennisetum Meyer
(Fig. 714)

Oligonychus pennisetum Meyer, 1974: 283.

Aedeagal shaft (Fig. 714) broad but narrowing towards acute, dorsal curve, then widened distally; posterior projection about half as wide as stem and directed dorsally; anterior projection virtually non-existent; dorsal margin of distal end forming an

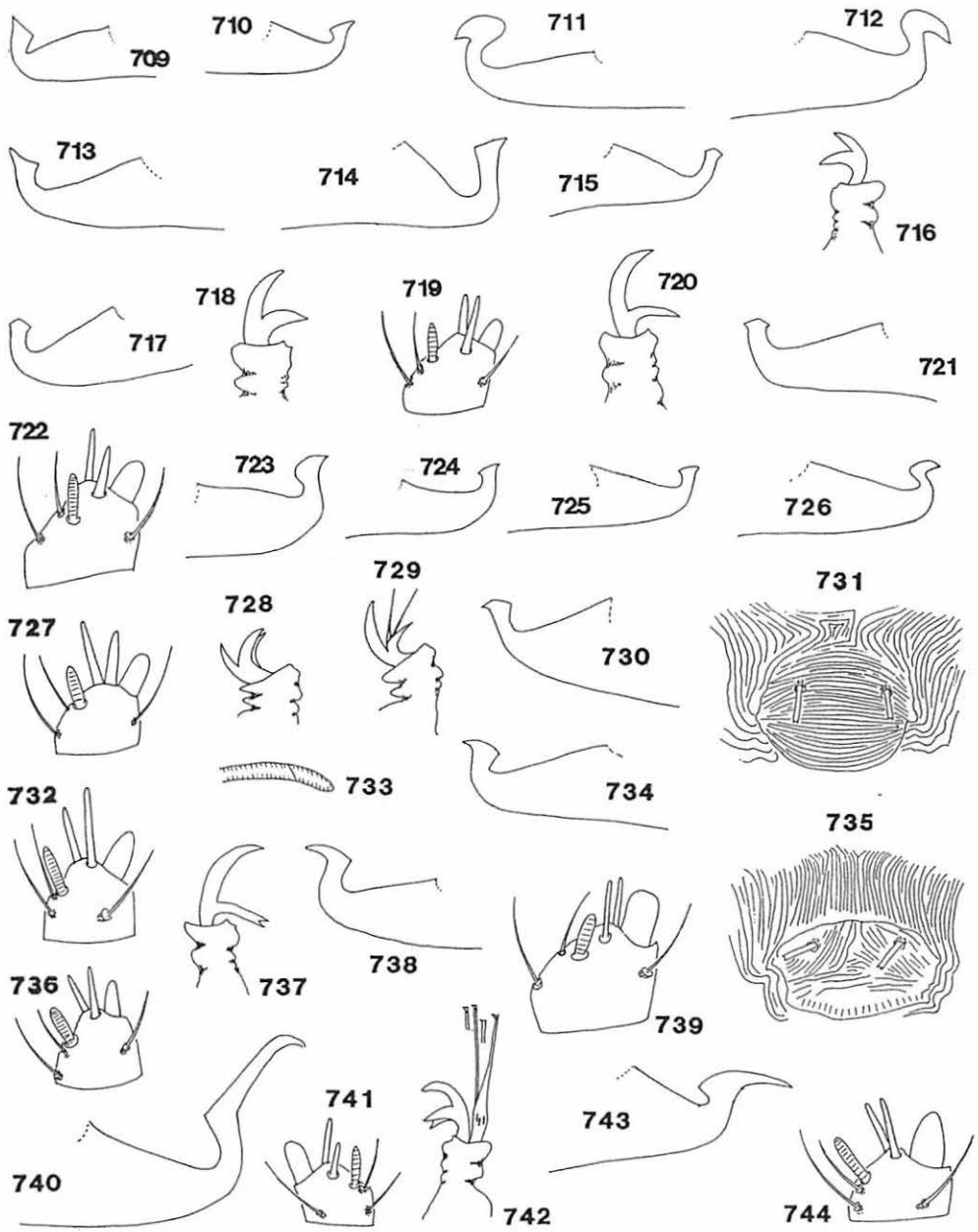

FIG. 709. *Oligonychus andropogonearum* Gutierrez. Aedeagus
FIG. 710. *Oligonychus grastis* Meyer. Aedeagus
FIG. 711. *Oligonychus afrasiaticus* (McGregor). Aedeagus
FIG. 712. *Oligonychus aquilinus* Meyer. Aedeagus
FIG. 713. *Oligonychus simus* Baker & Pritchard. Aedeagus
FIG. 714. *Oligonychus pennisetum* Meyer. Aedeagus
FIG. 715-716. *Oligonychus tylus* Baker & Pritchard. Male/ *Mannetjie*
FIG. 715. Aedeagus
FIG. 716. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 717-718. *Oligonychus senegalensis* Gutierrez & Etienne. Male/ *Mannetjie*
FIG. 717. Aedeagus
FIG. 718. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 719-722. *Oligonychus campestris* spec. nov.
FIG. 719. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 720. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 721. Aedeagus
FIG. 722. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 723. *Oligonychus hortulanus* Meyer. Aedeagus
FIG. 724. *Oligonychus chazeaui* Gutierrez. Aedeagus
FIG. 725. *Oligonychus virens* Gutierrez. Aedeagus
FIG. 726. *Oligonychus pratensis* (Banks). Aedeagus
FIG. 727-733. *Oligonychus ocellatus* spec. nov.
FIG. 727. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 728. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 729. Tarsal appendages of tarsus II of male/ *Tarsale aanhangsels van tarsus II van mannetjie*
FIG. 730. Aedeagus
FIG. 731: Genital flap of female/ *Genitaalflap van wyfie*
FIG. 732. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 733. Termination of peritreme of female/ *Eindpunt van peritreem van wyfie*
FIG. 734-735. *Oligonychus neopratensis* Meyer
FIG. 734. Aedeagus
FIG. 735. Genital flap of female/ *Genitaalflap van wyfie*
FIG. 736-739. *Oligonychus castrensis* spec. nov.
FIG. 736. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 737. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 738. Aedeagus
FIG. 739. Palptarsus of female/ *Palptarsus van wyfie*
FIG. 740. *Oligonychus martensis* Meyer. Aedeagus
FIG. 741-744. *Oligonychus barbatae* spec. nov.
FIG. 741. Palptarsus of male/ *Palptarsus van mannetjie*
FIG. 742. Tarsal appendages of tarsus I of male/ *Tarsale aanhangsels van tarsus I van mannetjie*
FIG. 743. Aedeagus
FIG. 744. Palptarsus of female/ *Palptarsus van mannetjie*

obtuse angle with shaft axis; striae on female opisthosoma mostly transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1); in some specimens striae between third pair of dorsocentral setae (e_1) irregular; chromosome numbers n=4.

Habitat and locality. Meyer (1974) described this species from *Pennisetum* sp. collected in Angola. Meyer & Bolland (1984) reported *O. pennisetum* from *Pennisetum* sp., *P. purpureum* and *Andropogon gayanus* in the Cameroun.

Oligonychus tylus Baker & Pritchard
(Fig. 715-716)

Oligonychus tylus Baker & Pritchard, 1960: 525; Meyer, 1974: 259.

Shaft of aedeagus (Fig. 715) narrows sligthly distally, turns dorsad at about a right angle and forms a small distal knob, which is obtusely angulate dorsally; aedeagus strongly resembles that of *O. senegalensis* Gutierrez; terminal sensillum on male palptarsus about twice as long as broad; male tarsus I with 3 or 4 tactile setae and 3 solenidia proximal to duplex setae; male empodium I with proximoventral spurs longer than dorsal claw (Fig. 716); female dorsal body setae long, slender and serrate; opisthosomal integument with transverse, lobed striae except for longitudinal striae between fourth pair of dorsocentral setae (f_1); lobes on striae rounded with basal spots; terminal sensillum on female palpus slightly longer than broad; peritreme straight distally; female tibia I bears 9 tactile setae and tibia II with 7 tactile setae; 4 tactile setae and 1 solenidion are located proximal to duplex setae.

Habitat and locality. Baker & Pritchard (1960) first described this species from *Panicum maximum* in Mauritius.

Oligonychus senegalensis Gutierrez & Etienne
(Fig. 717-718)

Oligonychus senegalensis Gutierrez & Etienne, 1981b: 389-390.

The diagnostic characters of this species are similar to those of *0. tylus* Baker & Pritchard, except that the dorsally directed, distal part of the aedeagus (Fig. 717) forms an acute angle with shaft; male empodium I with proximoventral spurs about as long as dorsal claw (Fig. 718). I have studied collections from *Phoenix dactylifera* in Israel and *Sorghum* sp. from India which appear to be conspecific with *O. senegalensis*. The aedeagi of the mites in both collections had the distal parts forming an acute angle with shaft axis. Cross-mating experiments are necessary to determine the true status of these 2 species.

Habitat and locality. Gutierrez & Etienne (1981b) described this species from rice in Senegal.

Oligonychus campestris spec. nov.
(Fig. 719-722)

As in *O. virens* Gutierrez the axis of the aedeagal knob forms a distinct angle with shaft axis but anterior and posterior projections of knob about equal in size whereas the posterior projection in *O. virens* is longer; *O. campestris* further differs from *O. virens* in that the dorsal claw is longer than the proximoventral spurs of male empodium I.

Male. Gnathosoma. Terminal sensillum on palptarsus (Fig. 719) about twice as long as broad; proximodorsal sensillum about as long as terminal one; peritreme ends simply.

Legs. Setae and solenidia (in parentheses) on leg podomeres: femora 10-6-4-4; genua 5-5-4-4; tibiae 9(3)-7-6-7; tarsi 13(3)+2 dupl.-13(1)+1 dupl.9(1) -9(1); 4 tactile setae and 2 solenidia situated well proximal to duplex setae on tarsus I; proximoventral spurs of empodium I (Fig. 720) about two thirds as long as dorsal claw; empodia II-IV with 3 pairs of proximoventral hairs.

Aedeagus (Fig. 721). Shaft turns dorsad at about a right angle, forming a distal knob with small, acute anterior and posterior projections of about equal sizes; axis of knob forms a small angle with shaft axis; dorsal margin of shaft slightly more than 3 times as long as width of knob.

Female. Dimensions: length of body (including gnathosoma) 500 μm; length (excluding gnathosoma) 467 μm; breadth 233 μm.

Dorsum. Serrate body setae longer than distances between bases of consecutive setae; opisthosomal striae transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1); striae bear semicircular lobes with basal spots.

Venter. Lobes semicircular but become broader anteriorly and absent near gnathosoma; striae on genital flap transverse but those anterior to flap irregular.

Gnathosoma. Palpus with terminal sensillum about twice as long as broad (Fig. 722); peritreme ends simply.

Legs. Numbers of setae and solenidia (in parentheses) on legs: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-6-4-4; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-12(1)+1 dupl.-9 (1)-9(1); tarsus I bears 4 tactile setae well proximal to duplex setae.

Habitat and locality. Holotype male and 1 paratype female from *Themeda triandra*, Potchefstroom Experimental Farm, Tvl., October 1969 (P.D. Theron).

Oligonychus hortulanus Meyer
(Fig. 723)

Oligonychus hortulanus Meyer, 1974: 272.

Aedeagus (Fig. 723) turns dorsad at an acute angle and forms a knob slightly less than half the length of dorsal margin of shaft; knob with anterior

projection broadly rounded and acute posterior projection directed caudodorsally, forming a small angle with shaft axis; female opisthosomal striae transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1); peritreme very small and ends simply.

Habitat and locality. This species was collected from grass in Pretoria, Tvl.

Oligonychus chazeaui Gutierrez
(Fig. 724)

Oligonychus chazeaui Gutierrez, 1970: 716-718; Meyer 1974: 260.

The shape of the aedeagus (Fig. 724) resembles that of *O. virens* Gutierrez; shaft turns dorsad and distally bears a small knob with small, acute anterior and posterior projections; posterior projection on knob directed dorsad and axis of knob forms an acute angle with shaft axis; male empodial claw of tarsus I much shorter than proximoventral spurs; dorsal body setae of female long and fine; terminal sensillum on female palptarsus about as long as broad; peritreme hooked distally; tibia I with 9 tactile setae; tibia II has 7 tactile setae; chromosome numbers n=4.

Habitat and locality *O. chazeaui* was first identified from *Hyphaene shatan* in the Malagasy Republic.

Oligonychus etiennei Gutierrez

Oligo. ycus etiennei Gutierrez, 1982: 389-392.

Judging from the drawing by Gutierrez (1982) the aedeagus curves dorsad at a slight acute angle to shaft and knob about one fourth the length of shaft; small, rounded anterior and posterior projections; terminal sensillum on male palptarsus about twice as long as broad but terminal sensillum on female palptarsus about as long as broad; peritreme ends in a bulb; tibia I bears 9 tactile setae; tibia II with 7 tactile setae.

Habitat and locality. This species was recorded from rice (*Oryza sativa*) on Reunion Island.

Oligonychus krantzi Zaher, Gomaa & El-Enany

Oligonychus krantzi Zaher, Gomaa & El-Enany, 1982: 113.

According to Zaher, Gomaa & El-Enany (1982) the aedeagus curves dorsad at about a right angle and bears a distal knob, about a fifth the length of shaft; anterior projection of knob rounded but posterior projection longer and acute; axis of knob forms an angle with shaft axis; terminal sensillum on palpus of male about twice as long as broad; female opisthosoma bears longitudinal striae between fourth pair of dorsocentral setae (f_1); terminal sensillum on female palpus 2,5 times as long as broad; peritreme terminates in a bulb; tibia I bears 9 tactile setae; tibia II with 7 tactile setae.

Habitat and locality. This species was first identified from *Cynodon dactylon* in Egypt.

Oligonychus virens Gutierrez
(Fig. 725)

Oligonychus virens Gutierrez, 1969: 52-54; Meyer 1974: 259-260.

Shaft of aedeagus (Fig. 725) curves dorsad and distally bears a knob about a fourth the length of dorsal margin of shaft; anterior projection of knob very small and acute, posterior projection longer and directed upwards; axis of knob forms an acute angle with shaft axis; terminal sensillum on male palptarsus about 2,5 times as long as broad; male empodial claw of tarsus I about as long as proximoventral spurs; tibia I has 9 tactile setae and tibia II 7 tactile setae; female palptarsus about twice as long as broad; chromosome numbers n=4.

Habitat and locality. This species was collected on *Melinis minutiflora* in the Malagasy Republic.

Oligonychus pratensis (Banks)
(Fig. 726)

Tetranychus pratensis Banks, 1912: 97.
Oligonychus pratensis (Banks) Pritchard & Baker, 1955: 349-354; Meyer & Ryke, 1959: 346-347; Meyer, 1974: 273.

Distal portion of aedeagus (Fig. 726) bends dorsad at nearly a right angle; distal knob about twice as wide as its stem; axis of knob is at a distinct angle to shaft axis; dorsal margin of knob nearly straight; anterior projection rounded but posterior projection acute and with tip curving slightly ventrad; opisthosoma of female bears longitudinal striae between fourth pair of dorsocentral setae (f_1); chromosome numbers n=4.

Habitat and locality. According to Jeppson, Keifer & Baker (1975) this species is a serious pest of many grass species in the southern and western United States, Puerto Rico, Central American, Mexico, Hawaii and Africa. It also attacks sugarcane, wheat, sorghum, maize and dates. Moutia (1958) reported it from coconut leaves, *Panicum maximum* and maize in Mauritius. Gutierrez & Etienne (1981a) collected this species from sorghum and rice in Senegal.

Oligonychus ocellatus spec. nov.
(Fig. 727-733)

This species is closely related to *O. neopratensis* Meyer, but differs in the following respects: dorsal margin of aedeagal shaft as long as its greatest width; proximoventral spurs of empodium II much shorter than dorsal claw and each with 2 fine dorsal hairs; peritreme ends simply and not hooked; striae

immediately anterior to genital flap irregular and not longitudinal.

Male. Gnathosoma. Palptarsus (Fig. 727) with a terminal sensillum about twice as long as broad and about as long as proximodorsal sensillum; peritreme ends simply.

Legs. Distribution of setae and solenidia (in parentheses) on legs I-IV: femora 10-6-4-4; genua 5-5-4-4; tibia 9(4)-7-6-7; tarsi 13(3)+2 dupl.-13+1 dupl.-9(1)-9(1); tarsus I bears 4 tactile setae and 2 solenidia well proximal to duplex setae; proximoventral spurs of empodium I (Fig. 728) longer than dorsal claw; empodium II with proximoventral spurs much shorter than dorsal claw and each with 2 fine dorsal hairs (Fig. 729).

Aedeagus (Fig. 730). Shaft curves dorsad at about a right angle; distal knob about a third the length of dorsal margin of shaft; anterior projection rounded, acute posterior projection forms a small angle with shaft axis; dorsal margin of shaft about as long as its greatest width.

Female. Dimensions: length of body (including gnathosoma) 433-480 μm; length (excluding gnathosoma) 347-373 μm; breadth 220-260 μm.

Dorsum. Serrate body setae extend for half their lengths past bases of setae next behind; opisthosomal striae transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1); lobes on striae semicircular.

Venter. Lobes between genital opening and second pair of ventral setae very low, anterior to ventral setae lobes virtually absent; genital flap bears transverse striae; striae anterior to genital flap irregular (Fig. 731).

Gnathosoma. Terminal sensillum on palpus twice as long as broad (Fig. 732); peritreme ends simply (Fig. 733).

Legs. Chaetotaxy of legs: coxae 2-2-1-1; trochanters 1-1-1-1; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-13(1)+1 dupl.-9(1)-9(1); tarsus I bears 4 tactile setae well proximal to duplex setae.

Habitat and locality. Holotype male, 2 paratype males and 6 paratype females from *Convolvulus ocellatus*, 40 km from Kuruman (Hotazel road), C.P., 7 February 1979 (E.A. Ueckermann).

Oligonychus neopratensis Meyer (Fig. 734-735)

Oligonychus neopratensis Meyer, 1974: 273-278.

Aedeagus (Fig. 734) curves dorsad at a slight acute angle; distal knob about a third the length of dorsal margin of shaft; anterior projection rounded, acute prosterior projection forms a small angle with shaft axis; in contrast to *O. ocellatus* spec. nov. dorsal margin of shaft longer than its greatest width; female differs from that of the latter species in that the peritreme forms a small hook before it ends simply and in that striae anterior to and on anterior part of genital flap (Fig. 735) are longitudinal but transverse on posterior part of flap, tibia I bears 9 tactile setae; tibiae II and IV each with 7 and tibia III with 6 tactile setae.

Habitat and locality. *O. neopratensis* was first identified from grass, Houtboschloop, near Nelspruit, Tvl.

Oligonychus castrensis spec. nov. (Fig. 736-739)

The aedeagus of this species resembles that of *O. pratensis* (Banks) but the distal knob is relatively narrower and the posterior projection longer.

Male. Gnathosoma. Terminal sensillum on palptarsus (Fig. 736) about twice as long as broad and about as long as proximodorsal sensillum.

Legs. Formulae for leg setae and solenidia (in parentheses): femora 10-6-4-4; genua 5-5-4-4; tibiae 9(3)-7-6-7; tarsi 13(3)+2 dupl.-13(1)+1 dupl.-9(1)-9(1); 4 tactile setae and 2 solenidia located well proximal to duplex setae on tarsus I; dorsal claw longer than bidentate proximoventral spurs of empodium I (Fig. 737); empodia II-IV each bear 3 pairs of proximoventral hairs.

Aedeagus (Fig. 738). Shaft narrows distally and curves dorsad to form a knob about half the length of shaft; axis of knob forms a 45° angle with shaft axis; anteriorly the knob forms a small, acute projection and posteriorly with a downwardly curved, beak-like projection, longer than stem of knob.

Female. Dimensions: length of body (including gnathosoma) 440-507 μm; length (excluding gnathosoma) 389-427 μm; breadth 227-253 μm.

Dorsum. Serrate body setae longer than intervals between consecutive setae; opisthosomal striae mostly transverse except for a small area between fourth pair of dorsocentral setae (f_1) where striae are longitudinal; lobes on striae semicircular and bear basal spots.

Venter. Lobes on striae broad and rounded on opisthosoma and extend forward to second pair of ventral setae; genital flap bears transverse striae but anterior to flap striae irregular to longitudinal.

Gnathosoma. Palpus bears a terminal sensillum about 1,5 times as long as broad (Fig. 739); peritreme terminates simply.

Legs. Chaetotaxy of legs: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-6-4-4; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-13(1)+1 dupl.-9(1)-9(1); 4 tactile setae located well proximal to duplex setae on tarsus I.

Habitat and locality. Holotype male and 7 paratype females from an unidentified wild plant, Gaint's Castle Nature Reserve, Natal, 4 February 1982 (E.A. Ueckermann).

Oligonychus martensis Meyer (Fig. 740)

Oligonychus martensis Meyer, 1974: 263-266.

Aedeagus gradually narrows and curves dorsad at about a right angle to form a large knob; anterior projection of knob small and acute but posterior projection large with a deflexed tip; axis of knob forms a strong angle with shaft axis; posterior

projection about 3 times as long as stem of knob; dorsal body setae of female long, serrate and reach to bases of setae second behind; striae on opisthosoma mostly transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1).

Habitat and locality. *O. martensis* was first described from Zimbabwe on *Zea mays*.

Oligonychus barbatae spec. nov.
(Fig. 741-744)

Oligonychus barbatae is closely allied to *O. gramineus* (McGregor) but distal knob of aedeagus about as long as shaft whereas that of *O. gramineus* is about half as long as shaft.

Male. Gnathosoma. Terminal sensillum on palptarsus (Fig. 741) about twice as long as broad; terminal and proximodorsal sensilla about the same length; peritreme ends simply.

Legs. Setal pattern (solenidia in parentheses) of legs I-IV: femora 10-6-4-4; genua 5-5-4-4; tibiae 9(4)-7-6-7; tarsi 13(2)+2 dupl.-13(1)+1 dupl.-9 (1)-9(1); 4 tactile setae and 2 solenidia located proximal to duplex setae on tarsus I; proximoventral spurs of empodium I (Fig. 742) about as long as dorsal claw; empodia II-IV with dorsal claw and 3 pairs of proximoventral hairs.

Aedeagus (Fig. 743). Distal portion of aedeagus bends dorsad at about a right angle to form a large distal knob, about as long as dorsal margin of shaft; axis of knob forms a 45° angle with shaft axis; anteriorly knob with a small, acute projection, posteriorly with a beak-like projection, curved ventrad and about twice as long as stem of knob.

Female. Dimensions: length of body (including gnathosoma) 400-427 μm; length (excluding gnathosma) 320-347 μm; breadth 213-233 μm.

Dorsum. Serrate body setae extend past bases of setae next behind; opisthosomal striae generally transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1); lobes on striae semicircular and with basal spots.

Venter. Lobes broad and rounded from genital opening to base of gnathosoma, becoming lower and broader anteriorly; striae on genital flap transverse but longitudinal immediately anterior to flap.

Gnathosoma. Terminal sensillum on palptarsus (Fig. 744) about 1,3 times as long as broad; thin proximodorsal sensillum about as long as terminal one; peritreme ends simply.

Legs. Setal formula of legs: coxae 2-2-1-1; trochanters 1-1-1-1; femora 10-6-4-4; genua 5-5-4-4; tibiae 9(1)-7-6-7; tarsi 13(1)+2 dupl.-13(1)+1 dupl.-9(1)-9(1); 4 tactile setae located well proximal to duplex setae on tarsus I.

Larva and **Nympha.** Similar to female except that dorsal striae between fourth pair of dorsocentral setae (f_1) are transverse.

Habitat and locality. Holotype male, 12 paratype females, 12 paratype nymphae and 2 paratype larvae from *Setaria barbata*, Ibadan, Nigeria (J.G. Matthysse).

Oligonychus leandrianae Gutierrez
(Fig. 745)

Oligonychus leandrianae Gutierrez, 1970: 714-716; Meyer, 1974: 263.

Aedeagus (Fig. 745) narrows distally and curves dorsad at a sharp angle; anterior projection of knob broadly rounded but posterior projection very long, needle-like and directed dorsad; posterior projection about 3 times broader than stem and knob about as long as dorsal margin of shaft; opisthosomal integument of female bears mostly transverse striae except for longitudinal striae between fourth pair of dorsocentral setae (f_1); chromosome numbers n=4.

Habitat and locality. This species was first described from *Brachiaria leandriana* in the Malagasy Republic.

Oligonychus bessardi Gutierrez
(Fig. 746)

Oligonychus bessardi Gutierrez, 1966: 603-607; Meyer, 1974: 278.

Aedeagal shaft (Fig. 746) turns dorsad at an angle of 45° to form a large distal knob; anteriorly knob broadly rounded, posteriorly with a relatively long, acute projection directed dorsally; axis of knob forms a distinct angle with shaft axis; knob about as long as shaft; female opisthosomal striae longitudinal between fourth pair of dorsocentral setae (f_1); chromosome numbers n=4.

Habitat and locality. This species was first described from *Isachne mauritiana* in the Malagasy Republic.

Oligonychus grypus Baker & Pritchard
(Fig. 747)

Oligonychus grypus Baker & Pritchard, 1960: 526; Meyer, 1974: 283-284.

Shaft of aedeagus (Fig. 747) narrows distally and turns dorsad to form an obtuse angulation near middle with end directed dorsocaudad; terminal portion distal to this bent almost as long as shaft and slightly convex; terminal sensillum on male palptarsus about 3 times as long as broad; striae on female prodorsum longitudinal but those on opisthosoma transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1); dorsal lobes on striae semicircular with basal spots; anterior part of genital flap bears longitudinal striae but posterior part with transverse striae; striae immediately anterior to flap longitudinal; peritreme terminates mostly in a simple bulb, rarely a lobe is formed distally, so that peritreme is hooked; chromosome numbers n=4.

Habitat and locality. This species has been collected from grass, sugarcane, maize, rice, *Graminia capim, Urochloa mossambicensis, Heteropogon contortus, Pennisetum macrourum,*

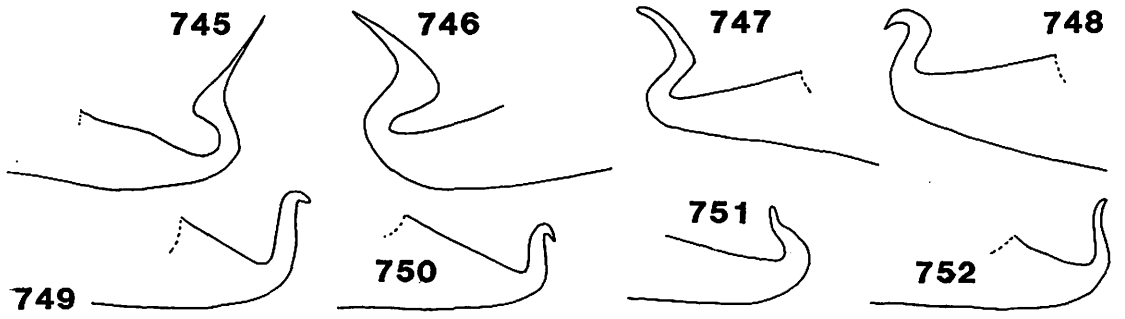

FIG. 745. *Oligonychus leandrianae* Gutièrrez. Aedeagus
FIG. 746. *Oligonychus bessardi* Gutierrez. Aedeagus
FIG. 747. *Oligonychus grypus* Baker & Pritchard. Aedeagus
FIG. 748. *Oligonychus saccharinus* Baker & Pritchard. Aedeagus
FIG. 749. *Oligonychus duncombei* Meyer. Aedeagus
FIG. 750. *Oligonychus triandrae* Meyer. Aedeagus
FIG. 751. *Oligonychus neoplegas* Meyer. Aedeagus
FIG. 752. *Oligonychus plegas* Baker & Pritchard. Aedeagus

Panicum maximum, Setaria barbata Cissampelos owariensis and *Musa paradisiaca* in Africa and the Malagasy Republic. Meyer & Bolland (1984) recorded this species from *Arundinaria alpina* in the Cameroun.

A new record for *O. grypus* is: *Ehrharta erecta*, Gonubie Strand, East London, C.P., 9 February 1974 (M.K.P. Meyer).

Oligonychus saccharinus Baker & Pritchard
(Fig. 748)

Oligonychus saccharinus Baker & Pritchard, 1960: 525-526; Meyer, 1974: 284-285.

Aedeagal shaft (Fig. 748) narrows from the base and bends abruptly at its distal end to form a knob with an obtuse angulation anteriorly and an acute posterior projection which curves ventrad; female opisthosomal striae mostly transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1).

Habitat and locality. Baker & Pritchard (1960) first described *O. saccharinus* from sugarcane collected in Mauritius. It was also found on *Saccharum officinarum* in Mocambique and Natal and on *Rottboellia exaltata* in Malawi.

Oligonychus duncombei Meyer
(Fig. 749)

Oligonychus duncombei Meyer, 1974: 285.

Shaft of aedeagus (Fig. 749) thick and gradually narrows; sigmoid distal part curved dorsad but directed ventrad at the apex; bent portion about as long as shaft; male empodium I with dorsal claw about half the length of proximoventral spurs; female body setae much longer than distances between consecutive setae; opisthosomal striae mostly transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1).

Habitat and locality. This species is known from *Cynodon dactylon* var. *bermudas* collected in Zimbabwe.

Oligonychus triandrae Meyer
(Fig. 750)

Oligonychus triandrae Meyer, 1974: 285-286.

Aedeagal shaft (Fig. 750) thick, narrows distally and turns dorsad; bent portion sigmoid and about half the length of shaft; tip directed ventrad; dorsal claw of male tarsus I about twice as long as proximoventral spurs; striae on female opisthosoma mostly transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1).

Habitat and locality. This species was collected on *Themeda triandra* at Bethulie, O.F.S. and on unidentified grass at Potchefstroom, Tvl.

Oligonychus neoplegas Meyer
(Fig. 751)

Oligonychus neoplegas Meyer, 1964: 672-675; Meyer, 1974: 286.

Distally aedeagus (Fig. 751) curves dorsad; dorsally directed, sigmoid, distal part about half the length of dorsal margin of shaft; male empodium I with dorsal claw about twice as long as proximoventral spurs; female opisthosomal striae mostly transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1); peritreme retrorse distally; chromosome numbers n = 4.

Habitat and locality. Meyer (1964) first described this species from *Panicum* sp. collected in Nelspruit, Tvl. It was also recorded from grass, Kaapmuiden and Groblersdal, Tvl., as well as on *Rottboellia exaltata* in Malawi.

Oligonychus sayedi Zaher, Gomaa & El-Enany

Oligonychus sayedi Zaher, Gomaa & El-Enany, 1982: 111-112.

According to Zaher, Gomaa & El-Anany (1982) the aedeagus of this species resembles that of *O.*

plegas Baker & Pritchard, but differs in that the distal sigmoid part is at a right angle to axis of shaft. Other characters are probably similar to those of *O. plegas*.

Habitat and locality. *O. sayedi* was described from *Cynodon dactylon* in Egypt.

Oligonychus plegas Baker & Pritchard
(Fig. 752)

Oligonychus plegas Baker & Pritchard, 1960: 528-529; Meyer, 1974: 286.

Shaft of aedeagus (Fig. 752) narrows and bends dorsad distally; dorsally directed, sigmoid part tapers and about as long as dorsal margin of shaft; proximoventral spurs of male empodia I much longer than dorsal claws; female dorsal body setae long, slender and serrate; dorsal striae of opisthosoma lobed and transverse except for longitudinal striae between fourth pair of dorsocentral setae (f_1); peritreme terminates in a simple bulb; chromosome nubers n=4.

Habitat and locality. *O. plegas* was reported from coconut leaves in Mauritius.

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