THE GENUS *SCHIZOGYNIUM* TRÄGÅRDH, 1950, AND DESCRIPTION OF *S. BERLESEI* n. sp. (SCHIZOGYNIIDAE : CELAENOPSOIDEA : MESOSTIGMATA) [1]

BY

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ABSTRACT.

Description of *Schizogynium berlesei* n. sp. is presented. The genus *Schizogynium* is diagnosed and expanded to include *Schizogynium berlesei* n. sp. and *Schizogynium megisthanoides* (STOLL, 1893) n. comb. A key to separate the four species of *Schizogynium* is provided.

This paper is part of a larger study (FUNK, 1968) in which the classification of the celaenopsoid mites (*sensu* CAMIN and GORIROSSI, 1955) was revised by the procedures of numerical taxonomy.

GENUS *SCHIZOGYNIUM* TRÄGÅRDH, 1950.

Diagnosis :

Celaenopsoid mites with latigynial and mesogynial shields free from each other but fused with ventral shield, extending posteriorly beyond anterior margin of coxa IV. Anal shield fused with ventral shield (KINN, 1966).

Description :

Female : Venter of gnathosoma without denticles. Deutosternal groove extending length of gnathosomal base. Gnathosomal setae setose. Membranous hypostomal processes smooth, short and inflated or elongated and not inflated. Membranous portion of hypopharynx approximately as long as sclerotized portion, without comb-like serrations. Sclerotized base of hypopharynx elongate, approximately as long as gnathosomal base. Corniculi pointed, with a small, medial tooth or strongly toothed. Tectum rounded or pointed, lateral margins smooth. Anterior seta of palpal trochanter strong, simple, not strongly setose nor branched.

Sternal Shield with three pairs of setose setae. Metasternal shields free from sternal shield and each other, bearing metasternal setae.

Latigynial and mesogynial shields free from each other. Latigynial shields fused with ventral shield, extending posteriorly beyond anterior margin of coxae IV, with four or more setae

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on each. Mesogynial shield fused with ventral shield. Vaginal sclerites curved with laterally directed angle. Endopodal shield IV free from ventral shield. Ventral shield rounded, with eight pairs of setae. Anal shield fused with ventral shield. Ventromarginal shields relatively narrow.

Male : Similar to female except for presence of holoventral shield. Gnathosomal base not separated from palpal coxae. Hypostome symmetrical.

Type Species :

Schizogynium intermedium Trägårdh, 1950, by original designation.

List of Species :

Schizogynium intermedium Trägårdh, 1950 ; type located in the Hope Museum (no. IT 1250), Oxford, England.

Schizogynium africanum Trägårdh, 1950 ; types probably located in the Museum of Natural History (Nos. IT 1251-1252), Stockholm, Sweden.

Schizogynium megisthanoides (Stoll, 1893) new comb.

Celaenopsis megisthanoides Stoll, 1893 ; location of type unknown to me.

Schizogynium berlesei n. sp. ; type to be deposited in the U. S. National Museum (U.S.N.M., No. 3339), Washington, D.C., U.S.A.

Key to species :

1. Femur IV with three blunt knobs on ventral margin..... *S. megisthanoides*
   Femur IV smooth, without blunt knobs on ventral margin..... 2
2. Sternal shield without a central, anteriorly directed, crescent-shaped ridge ; ventromarginal shield not expanded toward suture between endopodal and ventral shields..... *S. berlesei*
   Sternal shield with a central, anteriorly directed, crescent-shaped ridge ; ventromarginal shield expanded toward suture between endopodal and ventral shields..... 3
3. Five setae on each latigynial shield ; ventral shield tending toward circular, expanded immediately posterior to coxae IV ; membranous region between ventromarginal and ventral shields narrow.. *S. africanum*
   Seven setae on each latigynial shield ; ventral shield tending toward ovoid, not expanded immediately posterior to coxae IV ; membranous region between ventro-marginal and ventral shields wide.... *S. intermedium*

SCHIZOGYNIUM BERLESEI NEW SPECIES

Female.

(Figs. 1-6, Table 1).

Measurements are given in Table 1.

Gnathosoma typical for family. Lateral margin of tectum smooth. Deutosternal groove with three rows of more than ten small denticles each. Corniculi strong, pointed, with one simple tooth arising from dorsal surface. Membranous hypostomal processes smooth and inflated. Hypostomal setae smooth ; gnathosomal setae weakly setose. Gnathosomal setae (*g. s.* 4) subequal in length to *g. s.* 1 and 3. *G. s.* 1 and 3 one-half as long as *g. s.* 2. Posterior mesal hypostomal setae (*g. s.* 2) stronger than others, only slightly shorter than distance between bases of *g. s.* 2 and gnathosomal setae. Movable digit of chelicerae with three tree-like and one saw-like excrescence. Palpal claw with three tines, most ventral greatly reduced, not apparent in Fig. 1.

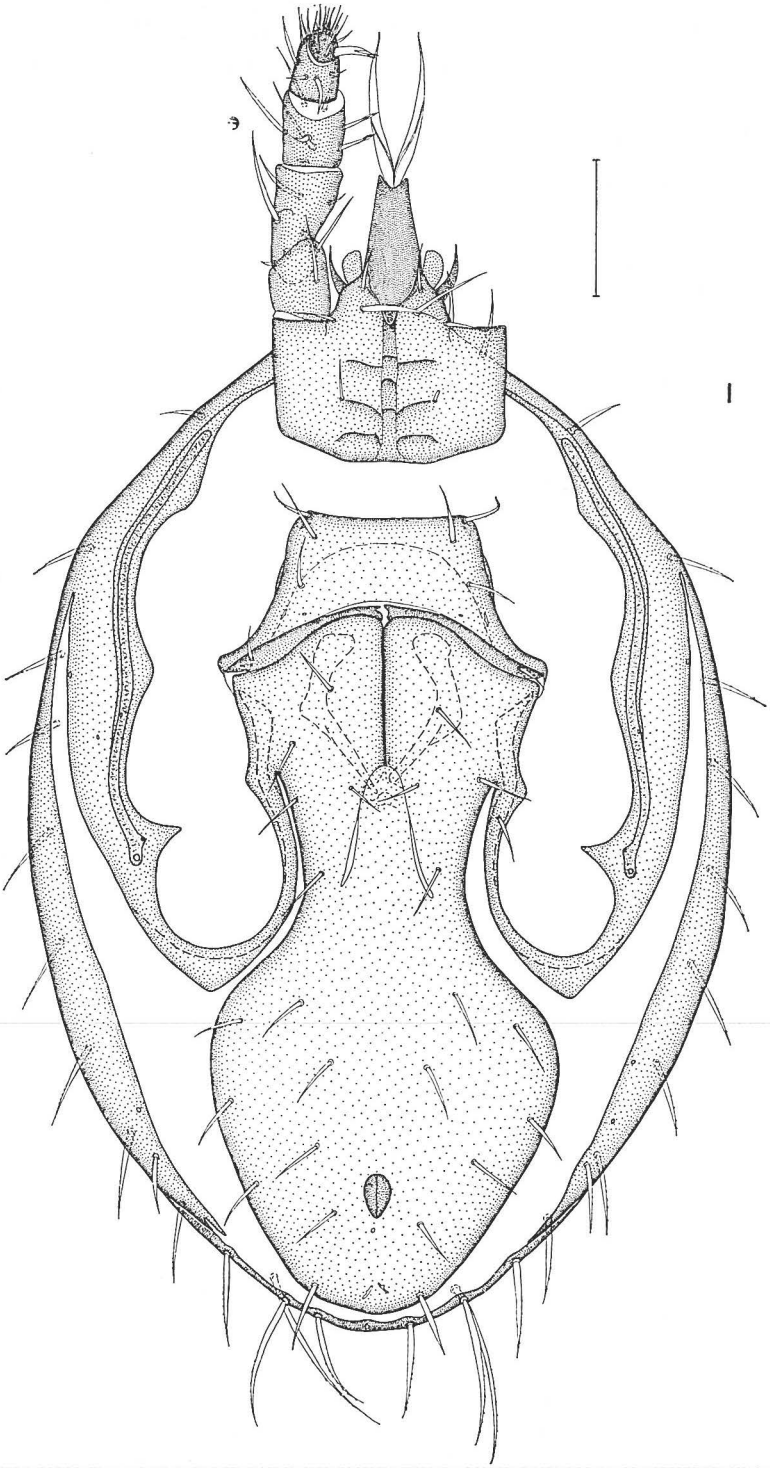


FIG. 1 : *Schizogynium berlesei* n. sp. Female, ventral.
Note : The scale line represents 100 μ.

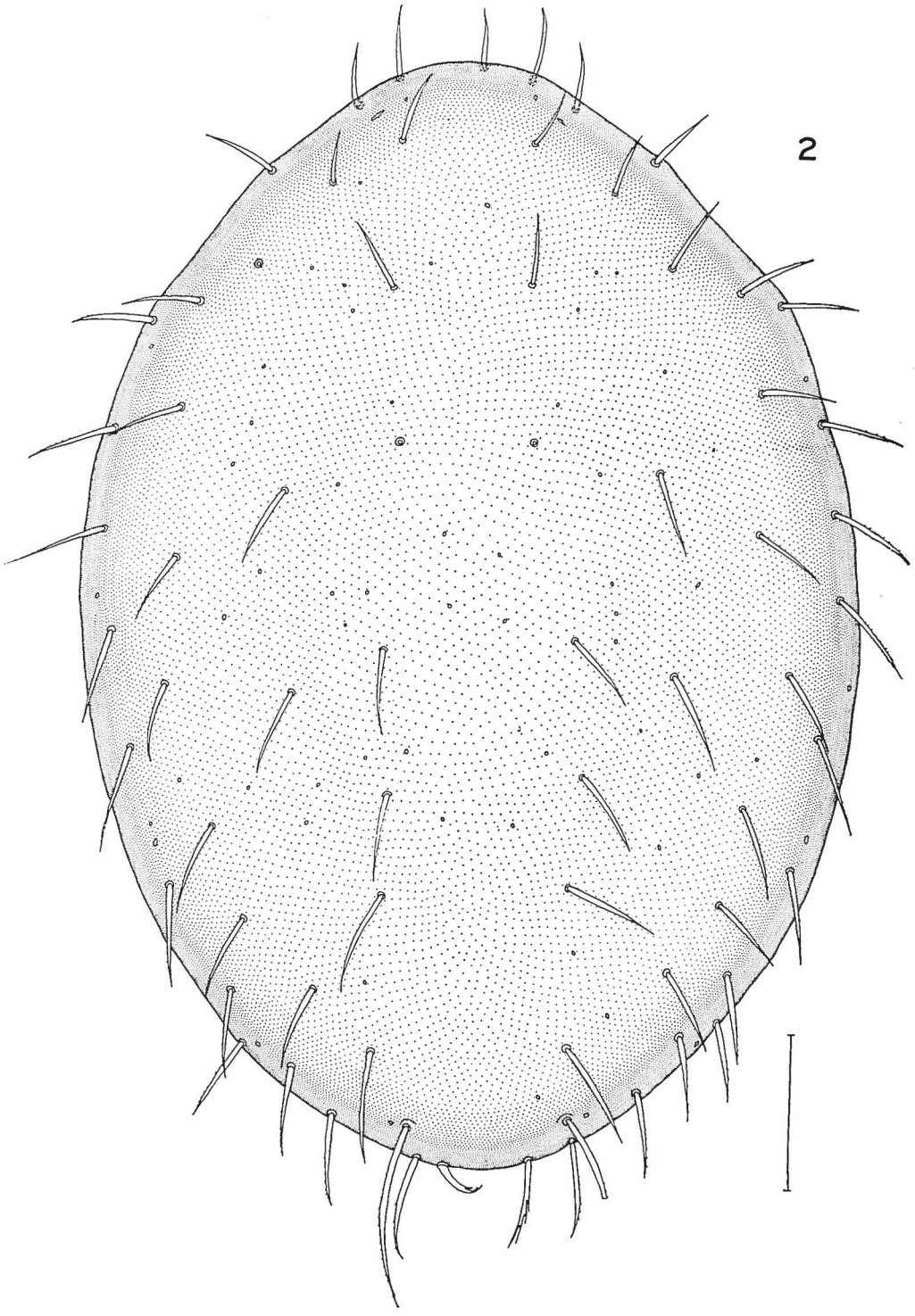
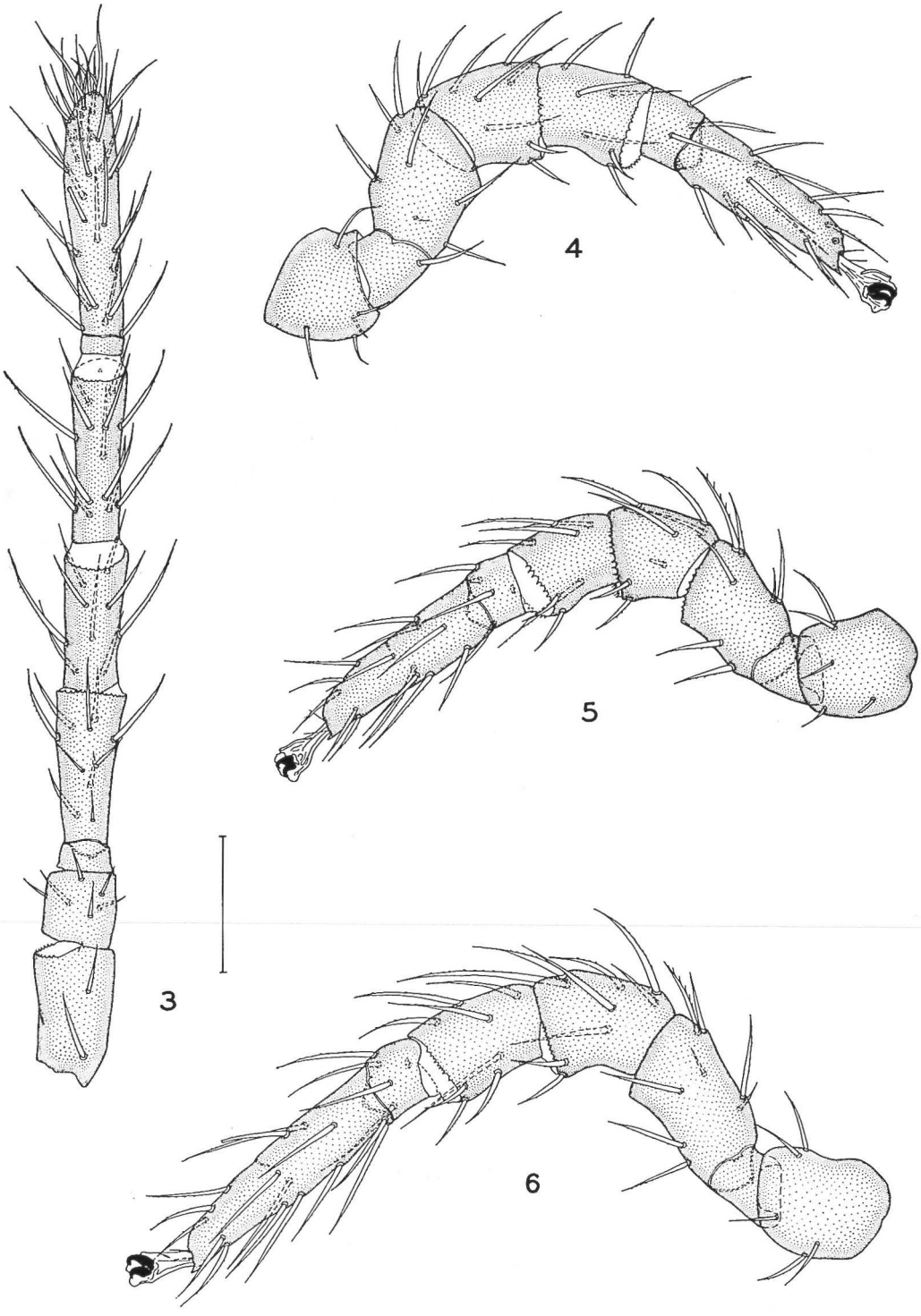


FIG. 2 : *Schizogynium berlesei* n. sp. Female, dorsal.
Note : The scale line represents 100 μ.



FIGS. 3-6 : *Schizogynium berlesei* n. sp. Female, legs.
3. — Leg I ; 4. — Leg II ; 5. — Leg III ; 6. — Leg IV.
Note The : scale line represents 100 μ.

TABLE 1.

Schizogynium berlesei n. sp.

Measurements of Female and Male.

	$\bar{Y}$	cs	Range	C. V.
Adult ♀ n = 4				
Dorsal shield :				
Length	735.6 μ	57.13	670.7-791.8	7.17
Width	514.9	34.05	480.3-553.9	6.10
Sternal shield :				
Length	108.2	6.64	99.5-112.5	5.67
Width	127.7	6.01	121.2-134.1	4.35
Distance between sternal setae 2	106.0	4.71	103.8-112.5	4.10
Length of tarsus IV	215.3	19.29	194.7-238.0	8.27
Gnathosomal width	176.3	12.90	164.4-190.4	6.76
Adult ♂ n = 4				
Dorsal shield :				
Length	743.2	35.20	709.6-778.9	4.37
Width	531.1	20.73	510.6-549.5	3.60

Abbreviations : Y = mean ; cs = corrected standard deviation (using Dixon and Massey's correction factor $c = 1 + \frac{1}{4\,(n-1)}$;) C.V. = coefficient of variability.

Idiosoma (Fig. 1) oval, without shoulders. Surface of dorsal shield (Fig. 2) finely reticulate (not illustrated in figure) with single anterior median seta and 34 pairs of smooth to weakly setose setae, including i1, s1 and marginal setae ; with only single pair of posterior submarginal setae noticeably longer than others (three anterior dorsal setae were missing from specimen illustrated and represented only by setal bases in Fig. 2).

Metasternal shields free from sternal shield and from each other. Sternal shield without transverse ridge. Sternal setae weakly setose. Sternal setae 1 and 3 approximately four-fifths as long as sternal setae 2. Sternal setae 2 one-half as long as distance between their bases. Metasternal setae one-half length of sternal setae 2.

Latigynial and mesogynial shields entirely free from one another but fused posteriorly with ventral shield. Latigynial shields fused with endopodals in region of coxae III but free from them in region of coxae IV. Inverted Y, formed by contiguous margins of latigynial and mesogynial shields, extending posteriorly to middle of coxae IV. Seta on right endopodal shield III in Fig. 1 not present on any other available specimens of this species ; this appears to be the homologue of a seta on left latigynial shield. Latigynial shields each with three to five setae, usually possessing four in locations indicated on right side of Fig. 1. Vaginal sclerites with laterally directed flanges.

Ventroanal area of shield with eight pairs of subequal, smooth setae posterior to genital

area. Two lyriform pores posterior to anus. Ventromarginal shield not as well developed as in *S. intermedium* and *S. africanum*, not extending mesally to fill angle between exopodals and genitoventral shield ; not fused together posteriorly, but fused anteriorly with peritremalia. Only one seta present on ventromarginal shield.

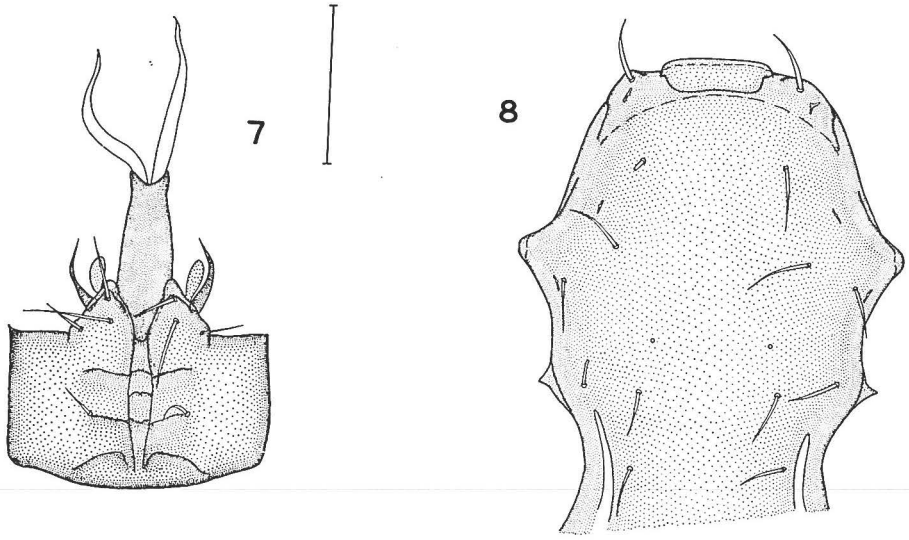
Legs as in Figs. 3-6. Genua IV (Fig. 6) with pd_1 similar to, but somewhat longer than, other leg setae. All leg setae setiferous ; those on basal segments more strongly so than those on tarsi.

Male.

(Figs. 7 & 8).

Measurements are given in Table 1.

Gnathosoma (Fig. 7) similar to that of female. Corniculi, proportionally, somewhat longer than those of female. Chelicerae with strong accessory digits extending almost to tip of movable digit.



Figs. 7-8 : *Schizogynium berlesei* n. sp. Male.
7. — Gnathosoma, ventral ; 8. — Sternal area.
Note : The scale line represents 100 μ.

Idiosoma as in female except for presence of holoventral shield which bears 15 pairs of subequal, weakly setose setae (only seven of which are shown in Fig. 8). Anterior medial portion of sternal shield less sclerotized than remainder of holoventral shield.

Legs as in female.

Type data :

Type habitat : Unknown.

Holotype : ♀, Congo, Yangambi, Oriental Province, 1952 (C. Donis, R-2421 Z-1677). To be deposited in the U. S. National Museum, Washington, D. C., U.S.A.

Allotype : ♂, same data as holotype. To be deposited in the U. S. National Museum, Washington, D. C., U.S.A.

Paratypes : 9 ♀♀, 4 ♂♂, same data ; 2 ♀♀, same locality, 1953 (C. DONIS, R-2458 Z-A-560). Material deposited in the British Museum (Natural History), London, England (1 ♀, 1 ♂) ; the Laboratory of Acarology, Ohio State University, Columbus, Ohio, U.S.A. (1 ♀, 1 ♂) ; l'Institut Royal des Sciences naturelles, Bruxelles, Belgium (1 ♀) ; the Snow Entomological Museum, The University of Kansas, Lawrence, Kansas, U.S.A. (2 ♀♀, 2 ♂♂) ; Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands (1 ♀) ; the Natal Museum, Pietermaritzburg, South Africa (1 ♀) ; the U. S. National Museum, Washington, D. C., U.S.A. (3 ♀♀). The remaining specimen (1 ♀) is deposited in the collection of the author.

The type series is mounted in Hoyer's medium and the coverslips are ringed with Zut lacquer.

The specific epithet is in honor of the " Father of Acarology ", Dr. Antonio BERLESE.

SCHIZOGYNIUM MEGISTHANOIDES (STOLL, 1893) NEW COMBINATION *CELAENOPSIS MEGISTHANOIDES* STOLL, 1893.

The description of *Celaenopsis megisthanoides* was discovered during the investigation of the literature on Celaenopsoidea. Neither the type material nor additional specimens could be located ; however, it is believed that its transfer from *Celaenopsis* to *Schizogynium* is warranted.

Although STOLL's descriptions and figures of *Celaenopsis megisthanoides* agree in most respects with the current definition of *Schizogynium*, there are certain differences which should be delineated. *Schizogynium intermedium*, *S. africanum* and *S. berlesei* are all found in Africa, whereas, *S. megisthanoides* is from Central America. Also, according to STOLL, the tectum of *S. megisthanoides* has a pointed rather than a rounded tip ; the corniculi are longer and more strongly toothed than those of other species of *Schizogynium* ; the membranous hypostomal process is more elongated and less inflated ; and, lastly, the animal is larger, 1250 μ as opposed to approximately 700 μ to 955 μ.

In spite of the differences listed above, *Celaenopsis megisthanoides* Stoll can be considered as a member of *Schizogynium*.

ACKNOWLEDGEMENTS.

I wish to take this opportunity to thank my major professor, Dr. J. H. CAMIN, for his assistance in guiding my interests and studies in the Celaenopsoidea and more specifically for reading and criticizing this paper. I would also like to express my appreciation to Mrs. PARTO KAMRANI for inking my pencilled drawings.

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