

STUDIES ON MITES (ACARINA)
LIVING ON PLANTS IN POLAND. II.

BY

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First part of the paper was published in *Fragmenta Faunistica* (BOCZEK and KROPCZYŃSKA, 1964). This installment presents descriptions of four species of mites : one of Phytoseiidae and three of Tarsonemidae, new to science.

The pattern of descriptions of Phytoseiidae follows those used by CHANT (1959), but characters applied by STAMMER (1963) are also regarded. The descriptions of Tarsonemidae follow those of BEER (1954), EWING (1939), and STAMMER (1959).

Type material has been deposited at the Department of Applied Entomology, Warsaw Agricultural University, Warsaw, Rakowiecka 8.

PHYTOSEIIDAE.

Typhlodromus (Amblyseius) mazurensis n. sp. (Fig. 1).

Female. — Length of dorsal shield $319\ \mu$, width $167\ \mu$; slightly reticulated with 17 pairs of setae, nine in the lateral, two in the median and six in the dorsal rows. Length of dorsal setae : L_1 - L_3 26 ; L_4 37 ; L_5 23 ; L_6 34 ; L_7 30 ; L_8 28 ; L_9 60 ; M_1 19 ; M_2 33 ; D_1 19 ; D_2 18 ; D_3 18 ; D_4 21 ; D_5 21 ; D_6 7 μ long. Setae L_9 and M_2 slightly serrated. Four pairs of pores near L_1 , L_3 , L_8 and M_2 . Setae S_1 and S_2 on interscutal membrane. Sternal shield with three pairs of setae ; metasternal plates with fourth pair of setae ; genital shield with one pair of setae. Ventrianal shield 88 μ long, 81 μ wide, broader anteriorly, with three pairs of pre-anal setae and one pair of pores, with slight netlike design. Four pairs of setae on surrounding membrane ; the most posterior setae 32 μ long, smooth, remainder setae short and smooth. Two pairs of metapodal plates, second pair twice as great as first pair. Digitus mobilis of chelicerae with one tooth ; digitus fixus with four teeth. One longer seta on leg four (37 μ).

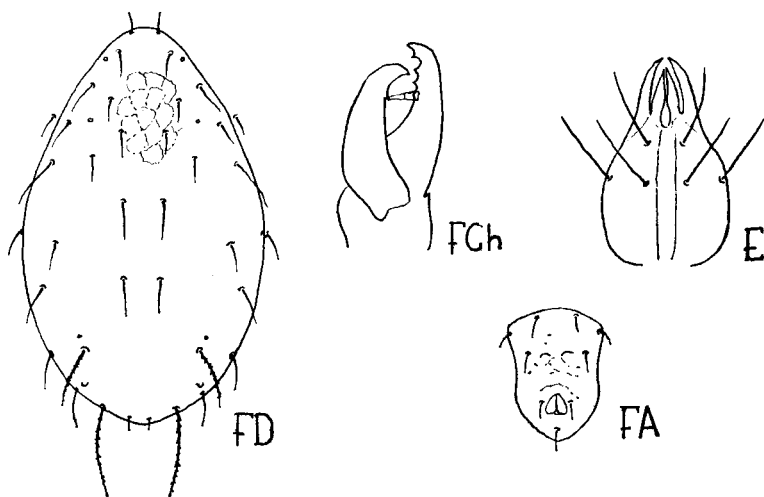


FIG. 1. — *Typhlodromus (Amblyseius) mazurski* n. sp.
Magnifications : E- $\times 950$; FA- $\times 250$; FCH- $\times 950$; FD- $\times 250$.

Male. — Unknown.

Type locality : Duzy Gil, Olsztyn, Northern Poland.

Collected : September 11, 1963, on *Potentilla* sp., by the author.

Material : holotype female, six female paratypes.

Discussion : above species resembles *Typhlodromus (A.) umbraticus* Chant but differs from this species in length of setae L_9 and M_2 and in having only one tooth on digitus mobilis of chelicerae.

TARSONEMIDAE.

***Tarsonemus boczeki* n. sp. (Fig. 2).**

Female. — Body $210\ \mu$ long ($210-220\ \mu$), $100\ \mu$ wide ($100-120\ \mu$), elongated. Apodemes clearly defined. Apodemes I short, extending obliquely from coxae I and joining anterior median apodeme. Apodemes II not dissecting anterior median apodeme but ending in its proximity. Anterior median apodeme extending as unbroken line, broadens distally near apodemes II and ends close to the line between propodosoma and hysterosoma. Apodemes III quite wide, bending to the middle of the body. Apodemes IV in form of curved lines approaching the posterior median apodeme and joining it. Transverse apodeme divided into two separate, undulate parts. Pseudostigmatic organs eggshaped, set on a pedicel. Capitulum $35\ \mu$ long, $30\ \mu$ wide, broader in its distal part. Legs I with strongly elongated

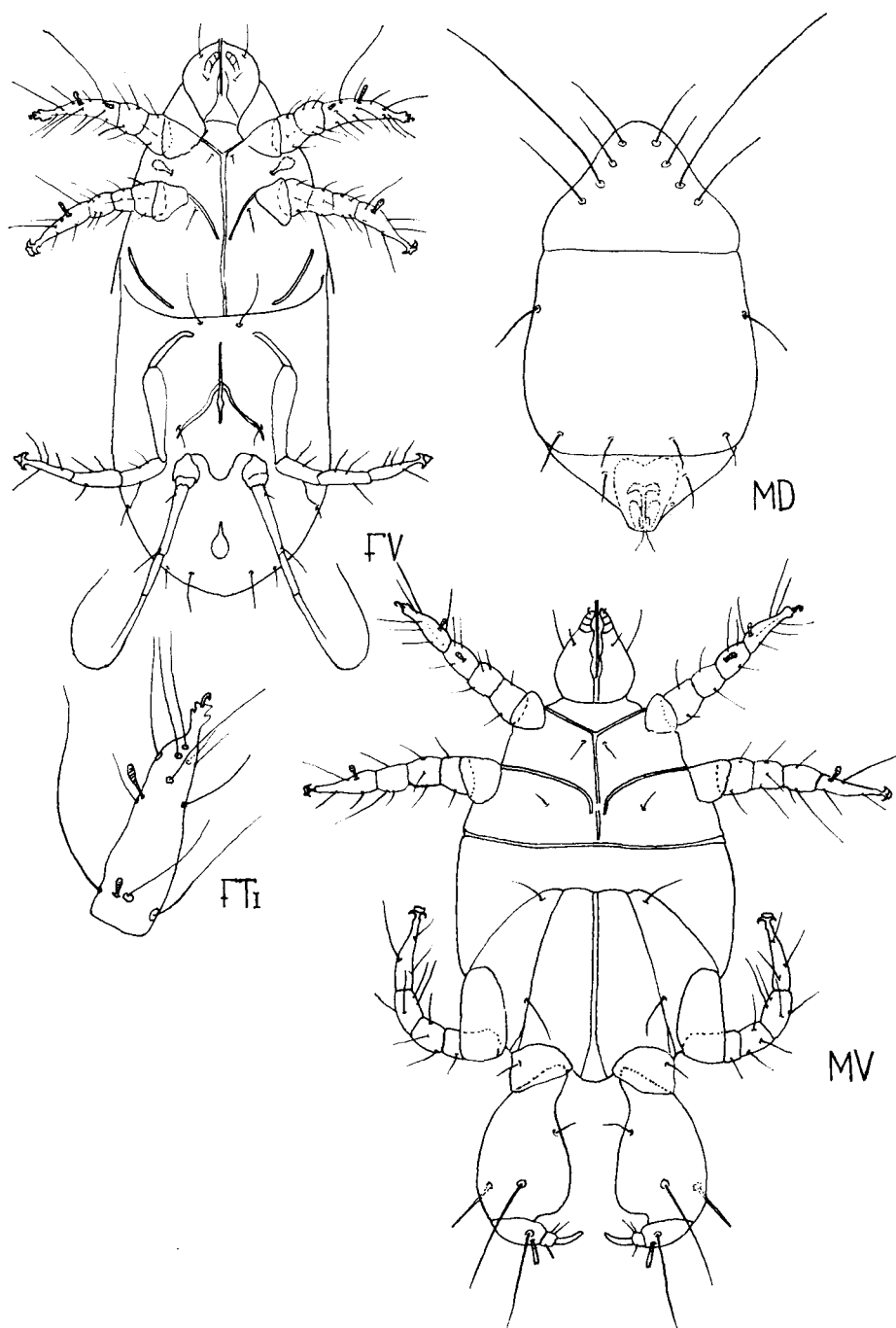


FIG. 2. — *Tarsonemus boczeki* n. sp.

Magnifications : FT_r × 2500 ; FV × 550 ; MD × 550 ; MV × 550.

tibiotarsus with 11 tactile setae and 1 fingerlike sensory seta. Tarsus of legs IV ending with two setae, inner of them three times longer than outer one.

Male. — Body 191 μ long (180-200 μ), 110 μ wide (110-125 μ). Body elongated, oval in shape. Propodosoma tapering anteriorly. Edges of the body between legs II and III parallel. Apodemes I and II parallel. Apodemes I joining anterior median apodeme, apodemes II not joining it. Apodemes III and IV distinctly defined; in their distal part joining posterior median apodeme, forming "a bridge". On propodosoma four pairs of setae: I pair 22; II 15; III 60; IV pair 22 μ long. On hysterosoma four pairs of setae; the longest are of the first pair. Length of capitulum 32 μ , width 25 μ ; subcordate in shape. Two pairs of setae on capitulum; dorsal pair half of length of capitulum; ventral pair twice shorter. Tarsus I elongated, tapering to the end with 5 tactile setae and 1 sensory, peglike seta. Tarsus II with 3 tactile setae and 2 sensory setae. Femur IV strongly developed with broad flange occupying 3/4 of the internal margin of the femur. On femur proximal ventral seta 6 μ ; distal ventral seta 27 μ ; dorsal seta 21 μ long. Tibia IV with 35 μ long tactile seta and 8 μ long fingerlike sensory seta. Tarsus IV short, rectangular, with curved, pointed claw.

Type locality: Dobra, Kraków, Southern Poland.

Collected: July 24, 1962, on *Prunus padus* L., in galls of *Eriophyes padi* (Nal.), by the author.

Material: holotype female, allotype male and three female and two male paratypes. This species is named in honour of Dr. J. BOCZEK, Professor at Warsaw Agricultural University, Warsaw, Poland.

***Steneotarsonemus melandri* n. sp. (Fig. 3).**

Female. — Body 165 μ long (160-185 μ), 100 μ wide (95-110 μ), eggshaped. Anterior median apodeme does not form a uniform line, but it broadens in three points forming three knotlike swells. Posterior median apodeme short, extending slightly wavy, also with two knots. Apodemes I short, distinctly defined, joining anterior median apodeme. Apodemes II extending from coxae II obliquely to the end of anterior median apodeme but not reaching it. Apodemes III relatively short, extending undulately from the medium of the body and terminate in the point of junction with the base of coxae III. Apodemes IV begin in the middle of posterior median apodeme and extending obliquely to it in the dissection of coxae III. They are also slightly wavy. Pseudostigmatic organs oval, set up on thin pedicel. Capitulum 35 μ long, 28 μ wide, wider in its distal part. Its dorsal setae one third longer than ventral ones. Tibiotarsus I strongly elongated with 10 tactile setae and 2 sensory setae. Tarsus II with distinct club-shaped sensory seta and 5 tactile setae. Legs III with elongated limbs, the strongest

is femur which is divided into two parts. Legs IV shorter than legs III terminating with two setae, inner of which three times longer than outer.

Male. — Body 140 μ long, 90 μ wide, oval, the highest width between legs II and III. All apodemes strongly defined. Apodemes I joining anterior median

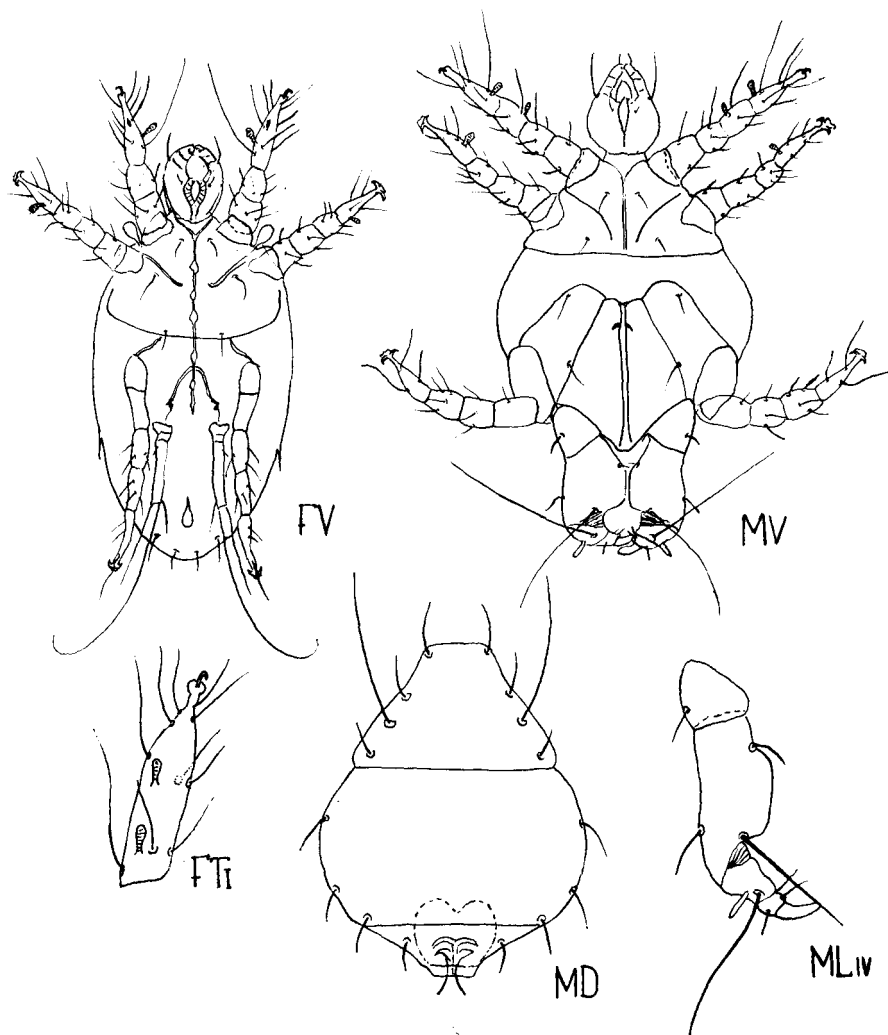


FIG. 3. — *Steneotarsonemus melandri* n. sp.

Magnifications : FT_I- \times 1300 ; FV- \times 550 ; MD- \times 550 ; MV- \times 550 ; ML_{IV}- \times 11300.

apodeme. Apodemes II extending obliquely from coxae II to the anterior median apodeme, but not reaching it. Anterior median apodeme in form of continuous line, terminates in some distance from the line dividing propodosoma from hysterosoma. Apodemes III and IV extending unparallelly and in their distal part

converging and forming "bridge". Posterior median apodeme with two transverse ribs, forming terminal fork at the end of the body. Four pairs of setae on propodosoma; the longest are of second pair, 55 μ , and further consecutively: I 15 μ , III 6 μ , and the shortest are of fourth pair, 5 μ long. Capitulum 21 μ long, 15 μ wide, cordate in shape. Ventral setae on capitulum distinctly shorter than dorsal. Tarsus I long; with 7 tactile and 1 sensory setae. On tarsus II 4 tactile and 1 sensory setae. Legs IV quite short; coxae triangular with single seta on outer side. Femur large and broad with slightly defined flange on inner margin. On femur three setae of different length: proximal ventral seta 3 μ ; distal ventral seta 19 μ ; dorsal seta 8 μ . Tibia elongated with one 22 μ long tactile and second, 5 μ long fingerlike seta. Tarsus short, rectangular, with three setae; terminating with hooked, stout claw.

Type locality: Babsk, Łódź, Central Poland.

Collected: August 12, 1962, on *Melandrium* sp. by the author.

Material: holotype female, allotype male and three female paratypes.

***Tarsonemoides rakowiensis* n. sp. (Fig. 4).**

Female. — Body 145 μ long (145-158 μ), 84 μ wide (69-90 μ), eggshaped. Propodosomatal shield covering whole gnatosoma and protruding beyond it anteriorly. Propodosoma approximately triangular. Body short, oval. Anterior median apodeme divided into two parts; proximal part 2 μ long, combined with apodemes I; distal part 12 μ long with small swell. Apodemes II in their distal part not joining anterior median apodeme. Posterior median apodeme bifurcate proximally, extending as a somewhat wavy, short line. Transverse apodeme absent. Apodemes III arcuate; apodemes IV slightly defined, swollen distally. Capitulum length, including palpi, 25 μ ; greatest width 16 μ ; of median size, tapering distally. Dorsal setae of capitulum twice as long as ventral setae. Leg I with tibiotarsus elongated, with 9 tactile setae and 3 club-shaped setae. Pseudostigmatic organs with expanded apices subcircular in outline.

Male. — Body 120 μ long (115-125 μ), 77 μ wide (69-75 μ). Hysterosoma distinctly broader than propodosoma. Anterior median apodeme extending as straight line from the conjunction with apodemes I to the main body suture. Posterior median apodeme conspicuous, extending to the end of body. Apodemes II not dissecting anterior median apodeme. Apodemes III and IV subparallel in their length; bent proximally, forming "bridge". Capitulum 30 μ long, greatest width 28 μ ; subcordate. Propodosoma with four pairs of setae: I pair 14 μ ; II pair 9 μ ; III pair 30 μ ; IV pair 15 μ long. Hysterosoma with two pairs of setae. Distally on tibia I and II on their outer side single large club seta. Coxae IV subtriangular, remaining segments elongated. Femur IV on inner side without flange; with proximal ventral seta 6 μ , distal ventral seta 13 μ and dorsal seta 17 μ long.

Tibia IV with $46\ \mu$ long tactile seta and $4\ \mu$ long, fingerlike sensory seta. Tarsus IV with short, bent, pointed claw.

Type locality : Limanowa, Kraków, Southern Poland.

Collected : July 24, 1962, on *Populus tremula* L., by the author.

Material : holotype female, allotype male and four female and two male paratypes.

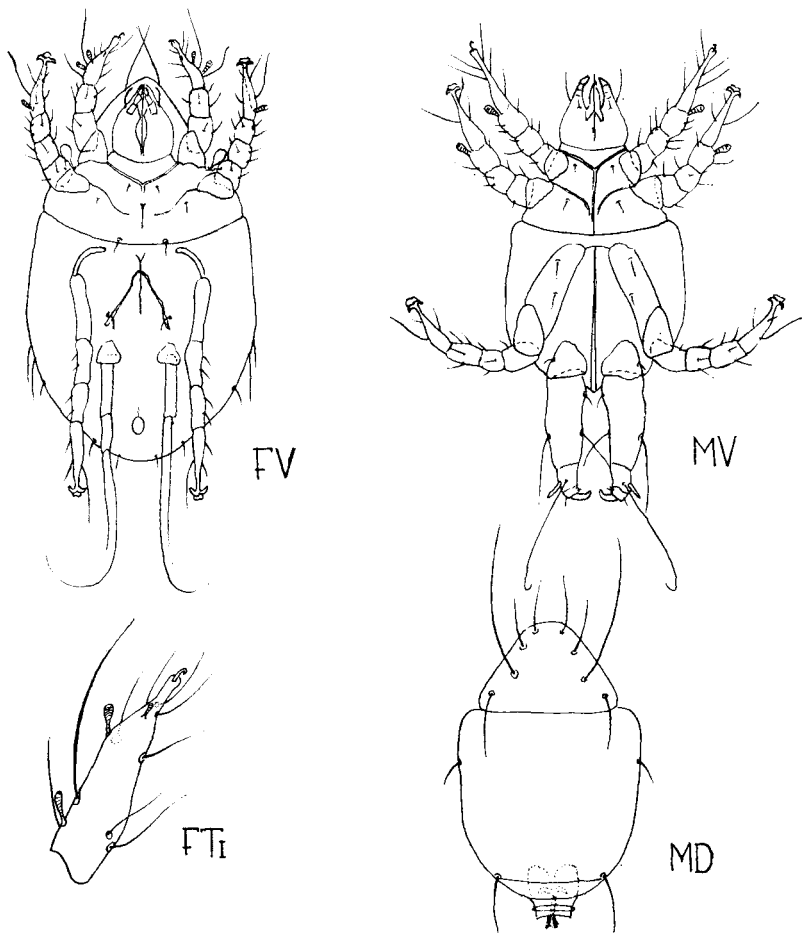


FIG. 4. — *Tarsonemoides rakowiensis* n. sp.

Magnifications : FTI- $\times 2900$; FV- $\times 550$; MD- $\times 550$; MV- $\times 550$.

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Designations on plates : E — epistom ; FA — ventrianal shield of female ; FCh — female chelicerae ; FD — dorsum of female ; FT_I — tarsus I of female ; FV — ventrum of female ; MCh — chelicerae of male ; MD — dorsum of male ; ML_{IV} — leg IV of male ; MV — ventrum of male.
