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NEW RECORDS OF PHYTOSEIID MITES FROM GREECE, WITH A DESCRIPTION OF TYPHLODROMUS KRIMBASI SP. NOV. (ACARINA: PHYTOSEIIDAE)

by G. Th. Papadoulis* and N. G. Emmanouel*

**NEW RECORDS FOR GREECE**

1. *Amblyseius aurescens* Athias-Henriot


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Specimens examined – Katsikas, Co. Ioannina, 1994, on grass; Voras Mountain (2300 m altitude), Co. Pella, 1994 on unidentified low-growing plants.

Previous records – The type specimens were collected from litter under cut Ulex europaeus in Spain. This species has also been recorded from Algeria, U.S.A. (California, Arizona), the former U.S.S.R. (Ukraine, Crimea, Georgia) and Australia.

2. Amblyseius obtusus (Koch)

Zorcon obtusus Koch, 1839; Canestrini & Fanzago, 1876: 130-141; Oudemans, 1930: 71.
Sejus obtusus (Koch); Berlese, 1889: 7.
Typhlodromus obtusus (Koch); Chant, 1957: 306; Karg, 1960: 443.
Typhlodromus (Amblyseius) obtusus (Koch); Chant, 1959: 90.
Amblyseius rhabdus Denmark, 1965: 95 (Synonymy by Denmark & Muma, 1989).
Amblyseius karashvili Gomelauri, 1968: 515-517 (Synonymy by Wainstein, 1975)
Amblyseius bajulus Chaudhri, 1979: 70 (Synonymy by Denmark & Muma, 1989)

Specimens examined – Katsikas, Co. Ioannina, 1994, on grass; Voras Mountain (2300 m altitude), Co. Pella, 1994, on unidentified low-growing plants.

Previous records – The type locality is unknown. Berlese (1889) collected his specimens from moss in Florence, Italy. This species has also been recorded from Algeria, Germany, Pakistan, Sweden, U.S.A. (Florida) and the former U.S.S.R., mainly on grass, in moss, soil and litter.

3. Amblyseius tauricus Livshitz & Kuznetzov


Specimens examined – Voros Mountain (2300 m altitude), Co. Pella, 1994, on unidentified low-growing plants; Smolikas Mountain (2500 m altitude), Co. Ioannina, 1994, on unidentified herbaceous plants.

Previous records – The type specimens were collected on Teuctrium polium, Stachys cretica, Asperula humifusa, Achillea sp., Medicago sp., in Crimea (former U.S.S.R.). This species has been recorded on Echium sp., Leamurus cardica, litter, soil and rodent nests in Ukraine (former U.S.S.R.).

4. Typhlodromus pritchardi Arutunian


Specimens examined – Parnis Mountain (1200 m altitude), Co. Attiki, 1994, in moss.

Previous records – The type specimens were collected from Fragaria sp. in Armenia (former U.S.S.R.). This species has been recorded on Pinus sp., Primula vulgaris, Prunus spinosa in Crimea (former U.S.S.R.) and on herb, linden and mountain ash in Yavoslave Province (former U.S.S.R.).

5. Typhlodromus triporus Chant & Yoshida-Shaul


Specimens examined – Rodopi Mountain (1400 m altitude), Co. Drama, 1992, on Quercus sp.

Previous records – The type specimens were collected from miscellaneous plants in Italy. This species has also been recorded from Canada, England, Germany, Portugal, U.S.A. (California) and the former U.S.S.R. (Crimea, Georgia, Kazakhstan, Lenigrad, Moldavia).
6. Typhlodromus tuberculatus Wainstein


Typhlodromus (Seilus) tuberculatus Wainstein; Ehara, 1966: 17.

Typhloctonus (Typhloctonus) tuberculatus (Wainstein); Wainstein, 1973a: 176.

Typhloctonus tuberculatus (Wainstein); Arutunian, 1977: 55; Denmark & Rather, 1984: 175-176.

Seilus (Typhloctonus) tuberculatus (Wainstein); Beglyarov, 1981: 19.


Specimens examined – Kotyli (1500 m altitude), Co. Kastoria, 1994, on Acer sp.

Previous records – The type specimens were collected on Acer sp. in Georgia (former U.S.S.R.). This species has been recorded from Caucasus, Moldavia (former U.S.S.R.) and Norway.

Typhlodromus krimbasi sp. nov.

(Figs 1–8)

Female (Figs 1–8) – Dorsum (Fig. 1) – Dorsal setal pattern 12A: 8A (r3 and R1 off shield). Dorsal shield strongly sclerotized, reticulated with distinct waist, bearing 5 pairs of solenostomes: between j4 and z4, posterolaterally to s4, posteromedially to s6, anterior to Z4, near to S5. Small pores (sensillae) not visible on dorsal shield. Muscle marks (sigilla) visible only on podosoma. Length of dorsal shield (j1–J5) 312 (308–317); width (distance between bases of S2) 161. All dorsal setae (except j1, j4, j5, z2, z5 which are smooth) slightly (j3, j6, J2, J5, z3, z4) to distinctly (Z4, Z5, s4, s6, S2, S4, S5) serrated. Setae Z4, Z5, S2, S4, S5 located on tubercules; Z5 with bulbous tip, longer than others. Sublateral setae r3 and R1 on intercutal membrane, smooth. Measurements of setae as follows: j1 26 (25–27), j3 35 (34–36), j4 17 (16–18), j5 21 (20–22), j6 29 (27–31), J2 36, J5 13, z2 23, z3 32 (31–32), z4 37 (36–38), z5 23, Z4 49, Z5 62 (59–65), s4 39 (38–40), s6 43 (41–45), S2 47, S4 48 (47–49), S5 41 (40–41), r3 27 (25–29) and R1 30 (29–31). Peritreme 193 (188–197) in length (from stigma to apex) extended at level of j1.

Venter (Figs 2–4) – Ventral setal pattern 15: JV: ZV. Sternal shield smooth faintly sclerotized; three pairs of sternal setae (ST1, ST2, ST3) and two pairs of pores (pst1, pst2); posterior margin of sternal shield not visible, so that ST3 may be on or off the sternal shield. Width of sternal shield (ST2–ST2) 62 (61–63). Metasternal setae (MS) and a pair of pores (pst3) on ventral intercutal membrane. Genital shield smooth, slightly sclerotized; width (at level of setae G) 63; pst5 laterally to posterior part of genital shield. Ventrianal shield smooth, not reticulated with 4 pair of preanal setae (JV1, JV2, JV3, ZV2), anal setae (a1, a2, a3), a pair of small crescentic solenostomes posteromedially between of setae JV2 and muscle marks posterolaterally. Length of ventrianal shield 100 (97–103); width 89 (88–90). Setae JV4, JV5, ZV1, ZV3 on integument surrounding ventrianal shield. Setae JV5 serrated much longer 41 (40–41) than others. Metapodal plates as shown in Fig. 6; length of primary metapodal plates 23; width 5. In addition to pst5 at least 6 pairs of pores are present on ventral intercutal membrane.

Chelicerae (Fig. 5) – Fixed digit 24 (23–25) long with 4 visible teeth and pilus dentilis; movable digit 25 long with 3 teeth.

Legs, Palps (Fig. 8) – Measurements of legs (base of coxae to base of claws) and palp (base of trochanter to apex of tarsus) as follows: Leg I 287 (280–294), Leg II 250 (248–252), Leg III 250 (243–257), Leg IV 330 (327–333) and palp 101. Leg IV carries 3 macrosetae with bulbous tip: on genu 20 long, on tibia 20 and on basitarsus 29. Genu II with 7 setae. Chaetotactic formulae of leg segments as follows: femur I 2-5/3-2; genu I 2-2/1,2/1; tibia I 2-1/1,1/1-2; femur II 2-5/2-1; genu II 2-2/0, 2/0-1; tibia II 2-1/1, 1/1-2; femur III 1-3/1-1; genu III 1-2/1, 2/0-1; tibia III 3-1/1, 1/1-2; femur IV 1-3/1-1; genu IV 1-2/1, 1/1-1; tibia IV 1-1/1, 1/1-1.

Spermatheca (Fig. 7) – Cervix tube-shaped with a raised ring-like area in its middle distance. Atrium bulbous connected with the cervix; major duct long and narrow; minor duct not visible. Length of spermatheca 16.

Male – Unknown.

Type material – The holotype female collected on Quercus coccifera L. at Hymmetos Mountain near Kaessariani Monastery on 20 October, 1987 and
2 female paratypes found on the same host and the same region on 5 February, 1988, are deposited in the Acari Collection, Laboratory of Agricultural Zoology & Entomology, Agricultural University of Athens, Greece.

Etymology – This species is named in honour of Constantinos Krimbas, Professor of Genetics at the Agricultural University of Athens.

**TAXONOMIC NOTES – DIAGNOSIS**

*T. krimbasi* resembles the species: *T. brisbanensis* Schicha (1978), *T. caudiglans* Schuster (1959), *T. fleschneri* Chant (1960), *T. porathi* Swirski & Amitai (1967) and *T. wainsteini* Abbasova, (1970) which possess bulbous tip of setae Z5 and similar shape of spermatheca; it can be distinguished, however, by the following combination of characters: longer length of dorsal setae, serration of many setae of dorsal shield, 5 solenostomes of dorsal shield, 3 teeth of movable digit of chelicerae, 3 bulbous tipped macrosetae of leg IV and solenostomes of ventrianal shield.
FIGS. 5-8: *Typhlodromus krimbasi* sp. nov., female.
5. — Chelicerae. 6. — Metapodal plates. 7. — Spermatheca (a, b various aspects). 8. — Leg IV.
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