

TWO NEW SPECIES OF *BRYOBIA* (ACARI, TETRANYCHIDAE) FROM FOREST TREES IN GREECE

BY E. N. HATZINIKOLIS¹ AND H. N. PANOU²

TETRANYCHIDAE
BRYOBIA PLATANI
BRYOBIA QUERCI
PLATANUS ORIENTALIS
QUERCUS AEGILOPS
GREECE

TETRANYCHIDAE
BRYOBIA PLATANI
BRYOBIA QUERCI
PLATANUS ORIENTALIS
QUERCUS AEGILOPS
GRÈCE

SUMMARY: The female and larva of *Bryobia platani* sp. nov. and *Bryobia querCi* sp. nov., collected from leaves of *Platanus orientalis* L. and *Quercus aegilops* L. respectively, are described and illustrated.

RÉSUMÉ : Les femelles et les larves de *Bryobia platani* sp. nov. et *Bryobia querCi* sp. nov., récoltées sur feuilles de *Platanus orientalis* L. et *Quercus aegilops* L. respectivement, sont décrites et illustrées.

Studies on Bryobiini Berlese of Greece revealed the presence of several new species belonging to the genera *Bryobia* Koch and *Bakerobryobia* Hatzinikolis & Emmanouel (HATZINIKOLIS & EMMANOUEL, 1990, 1991, 1993, 1996a, b; HATZINIKOLIS & PANOU, 1996a, b). The present work deals with *Bryobia platani* sp. nov. and *B. querCi* sp. nov. collected from the leaves of oriental plane-trees at Agia Triada, Karystos and of oak-trees at Kokkini, Marmari, Euboea island, Greece, respectively.

Methods of collecting, clearing, mounting etc. were described by HATZINIKOLIS (1982). The terminology of GRANDJEAN (1939), PRITCHARD & BAKER (1955) and MEYER (1974, 1987) is used. The type material is deposited in the collection of Acarology Laboratory of the Agricultural Research Centre of Athens, Greece. All measurements are given in micrometers (μm).

Bryobia platani sp. nov.

Female

Dimensions of holotype (measurements in parentheses are variations in paratypes): Length of body (including gnathosoma) 733 (726–730); length (excluding gnathosoma) 686 (666–680); breadth 563 (551–560). Length of legs: I 807 (783–808), II 443, III 436, IV 656.

Dorsum (Fig. 1). Without anterior angulations; propodosomal lobes strongly developed and bluntly conical; outer lobes characteristically curved laterally (Fig. 2); incisions between outer and median lobes shallow and wide; first pair of propodosomal setae (v_1) spatulate-serrate (Fig. 3) about half the length of second pair (v_2), which are ellipsoid-serrate (Fig. 4);

1. Acarology Laboratory, Agricultural Research Centre of Athens, GR 141 23 Lykovryssi, Greece.

2. Laboratory of Agricultural Zoology and Entomology, Agricultural University of Athens, 75 Iera Odos str., GR 118 55 Athens, Greece.

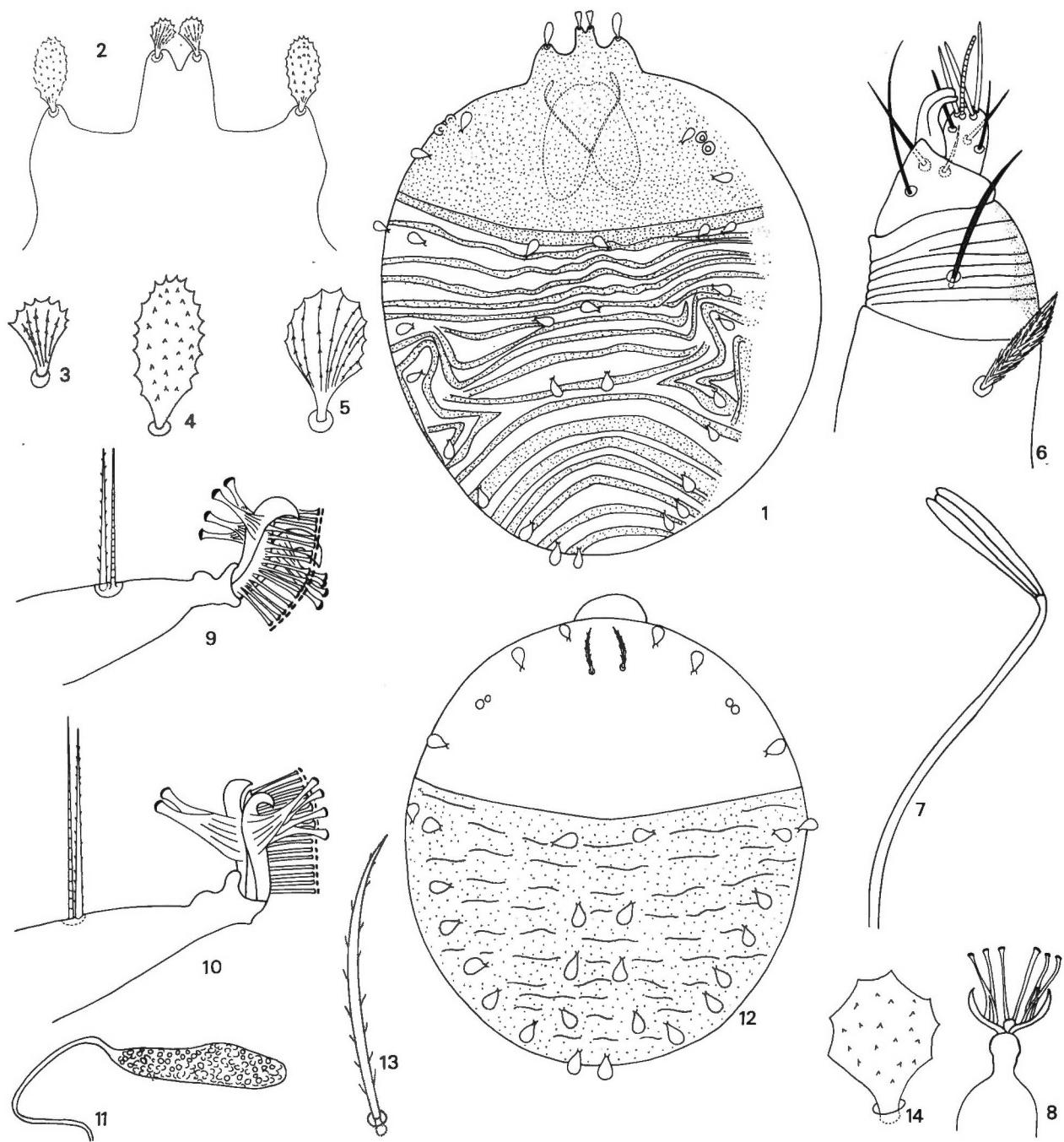


FIG. 1-14: *Bryobia platani* sp. nov.

Figs. 1-11, female: 1. — Dorsum. 2. — Propodosomal lobes. 3. — First propodosomal seta (v1). 4. — Second propodosomal seta (v2). 5. — Dorsal body seta. 6. — Palp. 7. — distal end of peritreme. 8. — Extremity of tarsus I and apotele. 9. — Extremity of tarsus III and apotele. 10. — Extremity of tarsus IV and apotele. 11. — Spermatheca. Figs. 12-14, larva: 12. — Dorsum. 13. — First propodosomal seta (v1). 14. — Second propodosomal seta (v2).

rest of dorsal body setae spatulate-serrate, 23–27 long and 15–17 wide (Fig. 5); dorsal integument of propodosoma granulate; dorsal integument of hysterosoma granulate only between striae (Fig. 1); striae of hysterosoma irregularly transverse among dorsocentral setae (c_1 , d_1 , e_1) becoming curved towards the end of the body (Fig. 1).

Gnathosoma. Stylophore mediodistally, slightly notched anteriorly (Fig. 1); palpal claw bidentate and palptarsus with 7 setae including eupathidia and a solenidion (Fig. 6); distal part of peritreme with three lobulate diverticula (Fig. 7) and an enlargement about 26 long and 16 broad.

Legs. Leg setae and solenidia (in parentheses) as follow: coxae 2-1-1-1; trochanters 1-1-1-1; femora 19-10-6-5; genua 7 or 8-6-6-6; tibiae 17(1)-9-9-9; tarsi 20(6) + 2 dupl.-18(4) + 1 dupl.-11 + 1 dupl.-13 + 1 dupl.; true claws I slender, uncinate, with one pair of tenent hairs (Fig. 8), while II, III and IV bearing normal claws with two pairs of tenent hairs (Fig. 9, 10); empodium I (Fig. 8) pad-like, about one-fifth the length of true claws with one pair of tenent hairs; empodia II, III and IV pad-like narrowed distally, about three-fifths, four-fifths and five-sixths the length of true claws, each provided with 8, 15 and 16 pairs of tenent hairs respectively (Fig. 9, 10); duplex setae of tarsus III (Fig. 9) and IV (Fig. 10) with tactile setae subequal in length to solenidia.

Spermatheca. The sacculus is elongate and figured in Fig. 11.

Male and nymphs. Unknown.

Larva (Fig. 12)

First (v_1) propodosomal setae (Fig. 13) lanceolate, sparsely pilose, two times the length of the second ones and situated characteristically in line with third propodosomal setae (sc_1); rest of dorsal body setae large spatulate, serrate (Fig. 14), 10–14 long and 8–10 wide; dorsocentral setae in normal position; integument of propodosoma smooth (Fig. 12); integument of hysterosoma sparsely granulate with discontinued and irregular striae (Fig. 12). True claws normal with one pair of tenent hairs; empodium I pad-like, two-fifths the length of true claws, with three pairs of tenent hairs; empodia II and III pad-

like, half the length of true claws, with five pairs of tenent hairs.

Type material: Holotype female, 6 paratype females and 3 paratype larvae, 18 August 1978, Agia Triada, Karystos, Euboea island, Greece (Code number 8/78). This material, mounted on five slides, was collected by the first author from *Platanus orientalis* L. leaves in the region of Agia Triada near Karystos.

Etymology: The name of that new species is derived from the scientific name of the oriental plane-tree.

Remarks: The anterior lobes and the propodosomal setae (v_1 and v_2) of the female resemble those of *Bryobia rugosa* Livshitz & Mitrofanov, 1966, but can be readily distinguished by the setal formula of femora and genua, which are 12-9-5-5 and 7-5-5-5 respectively, the duplex setae on tarsus IV and the distal part of the peritreme. Also, in this new species the first pair of propodosomal setae (v_1) is about half the length of the second one (v_2) whereas in *B. rugosa*, the first and second pair of propodosomal setae are subequal in length.

Bryobia querici sp. nov.

Female

Dimensions of holotype (measurements in parentheses are variations in paratypes). Length of body (including gnathosoma) 939 (922–948); length (excluding gnathosoma) 909 (882–918); breadth 606 (601–621). Length of legs: I 889 (880–899), II 531, III 518, IV 702.

Dorsum (Fig. 15). Without anterior angulations; propodosomal lobes bluntly conical, equally developed and with deep incision between them (Fig. 16); propodosomal setae (v_1 , v_2) slender, spatulate, serrate (Fig. 17, 18); first pair (v_1) 37 long and 11 wide, second pair (v_2) 46 long and 15 wide; rest of dorsal setae slender, spatulate, serrate (Fig. 19) 38–47 long and 12–15 wide except the fifth dorsocentrals (h_1) which are approximately two times (82–88) longer (Fig. 20); dorsocentral setae in normal position; dorsal integument of propodosoma densely granulate (Fig. 15); dorsal integument of hysterosoma sparsely granulate with short widely spaced striae (Fig. 15) between first (c_1) and second (d_1) dorsocentrals; sur-

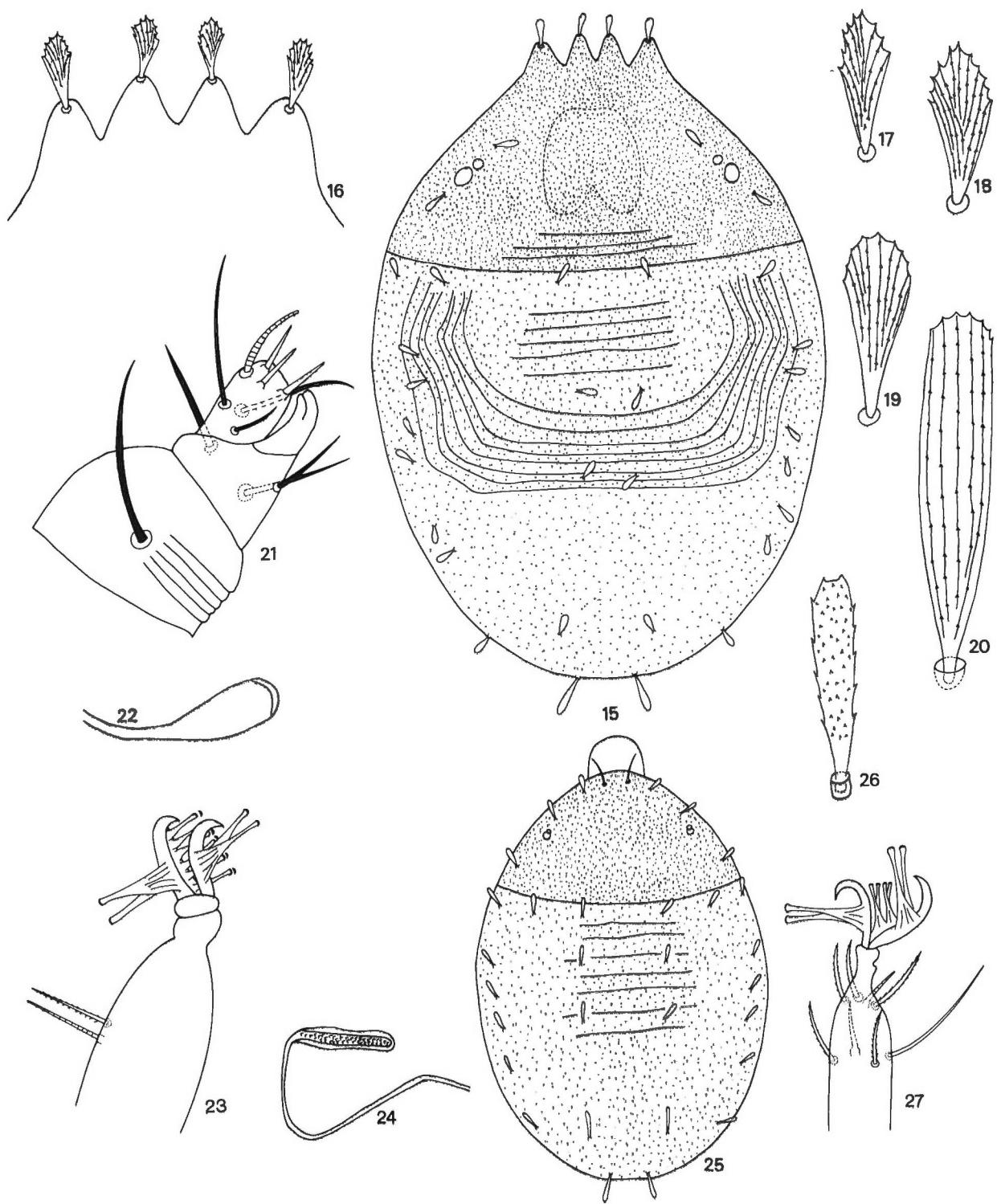


FIG. 15 to 27: *Bryobia querci* sp. nov.

Figs. 15-24, female: 15. — Dorsum. 16. — Propodosomal lobes. 17. — First propodosomal seta (v1). 18. — Second propodosomal seta (v2). 19. — Dorsal body seta. 20. — Fifth dorsocentral seta (h1). 21. — Palp. 22. — Distal end of peritreme. 23. — Extremity of tarsus IV and apotele. 24. — Spermatheca. Figs. 25-27, larva: 25. — Dorsum. 26. — Dorsal body seta. 27. — Extremity of tarsus I and apotele.

rounded laterally and posteriorly by a number of striae as in Fig. 15.

Gnathosoma. Stylophore mediodistally with a depression anteriorly (Fig. 15); palpal claw bidental and palptarsus with 7 setae including eupathidia and a solenidion (Fig. 21); peritreme ending simple, anastomosing distally (Fig. 22), 40–47 long and 19–24 wide.

Legs. Leg setae and solenidia (in parentheses) as follow: coxae 2-1-1-1; trochanters 1-1-1-1; femora 12-9-5-5; genua 7-5-5-5; tibiae 14(1)-9-9-9; tarsi 16(2) + 2 dupl.-14(1) + 1 dupl.-11(1)-12(1); true claws normal with one pair of tenant hairs; empodium I pad-like, about one-third the length of true claws and with two pairs of tenant hairs; empodia II, III and IV pad-like about two-thirds, two-fifths and three-fourths the length of true claws, provided with 4, 5 and 6 pairs of tenant hairs respectively (Fig. 23); solenidia of tarsi III and IV approximate, subequal in length and not associated with tactile setae (Fig. 23).

Spermatheca. Sacculus elongate and somewhat constricted medially (Fig. 24).

Male and nymphs. Unknown.

Larva (Fig. 25).

First propodosomal setae (v_1) simple, about two times the length of second ones (v_2) (Fig. 25) and situated in normal position marginally; all other dorsal setae slender, spatulate, serrate (Fig. 26), 14–17 long and 4–6 wide except the fourth dorsocentrals (f_1) and fifth dorsocentrals (h_1) which are 18–22 and 20–25 long, respectively; dorsocentral setae in normal position (Fig. 25); integument of propodosoma granulate; integument of hysterosoma sparsely granulate with few widely spaced striae among the dorsocentral setae (c_1, d_1, e_1). True claws slender with one pair of tenant hairs; empodial pad of tarsus I one-third length of true claws and with two pairs of tenant hairs (Fig. 27); empodial pad of tarsus II and III three-fifths length of true claws and with three and four pairs of tenant hairs respectively.

Type material: Holotype female, 3 paratype females, and 2 paratype larvae, 18 May 1970, Kokkini, Marmari, Euboea island, Greece (Code Number

8/70). This material was collected by the first author from *Quercus aegilops* L. leaves and is mounted on three slides.

Etymology: The name of this new species is derived from the scientific name of the host-plant.

Remarks: The anterior lobes and the propodosomal setae (v_1, v_2) of the female resemble those of *Bryobia siliquae* Hatzinikolis & Emmanouel, 1991; but this new species can be distinguished from the latter in that the dorsal setae of the female are not set on prominent tubercles, the fifth dorsocentral setae (h_1) are twice the length of other dorsal setae and the dorsocentral setae (c_1, d_1, e_1, f_2) of the female and larva are in line.

REFERENCES

- GRANDJEAN (F.), 1939. — Les segments post-larvaires de l'hysterosoma chez les Oribates (Acariens). — Bull. Soc. zool. Fr., **64**: 273–284.
- HATZINIKOLIS (E. N.), 1982. — New phytophagous mites found in Greece. — Agric. Res., **6**: 67–76.
- HATZINIKOLIS (E. N.) & EMMANOUEL (N. G.), 1990. — A new species, *Bryobia attica* (Acari: Tetranychidae) from Greece. — Entomol. Hellenica, **8**: 45–51.
- HATZINIKOLIS (E. N.) & EMMANOUEL (N. G.), 1991. — A revision of the genus *Bryobia* in Greece (Acari: Tetranychidae). — Entomol. Hellenica, **9**: 21–34.
- HATZINIKOLIS (E. N.) & EMMANOUEL (N. G.), 1993. — *Bakerobryobia*, a new genus of Bryobiinae (Acari: Tetranychidae) from *Flosis fruticosa* L. — Int. J. Acarol., **19**: 341–344.
- HATZINIKOLIS (E. N.) & EMMANOUEL (N. G.), 1996a. — *Bryobia pilensis* sp. nov. of the family Tetranychidae (Acari, Prostigmata) from Greece. — Acarologia, **37**: 27–30.
- HATZINIKOLIS (E. N.) & EMMANOUEL (N. G.), 1996b. — *Bryobia agioriticus* sp. nov. of Bryobiinae (Acari: Tetranychidae) from Greece. — Int. J. Acarol., **22** (2): 109–111.
- HATZINIKOLIS (E. N.) & PANOU (H. N.), 1996a. — Three new species of *Bryobia* (Acari, Tetranychidae) from fruit trees in Greece. — Acarologia, **37**: 107–113.
- HATZINIKOLIS (E. N.) & PANOU (H. N.), 1996b. — *Bryobia cyclamenae* sp. nov. of Bryobiinae (Acari: Tetranychidae) from Greece. — Entomol. Mitt. zool. Mus. Hamburg, **12** (153): 23–30.
- HATZINIKOLIS (E. N.) & PANOU (H. N.), 1996c. — Two new species of *Bryobia* (Acari: Tetranychidae) from moss in Greece. — Int. J. Acarol., **22** (4): 305–310.

MEYER (M. K. P.), 1974. — A revision of the Tetranychidae (Acari) of Africa with a key to the genera of the world. — Entomol. Mem. Dep. Agric. Tech. Repub. S. Afr., **36**: 1-291.

MEYER (M. K. P.), 1987. — African Tetranychidae (Acari: Prostigmata) with reference to the world genera. — Entomol. Mem. Dep. Agric. Wat. Supply Repub. S. Afr., **69**: 1-175.

PRITCHARD (E. A.) & BAKER (E. W.), 1955. — A revision of the spider mite family Tetranychidae. — Pacif. Coast. Entomol. Soc. Mem., **2**: 1-472.