

THE SPIDER MITE FAMILY TETRANYCHIDAE
IN NEW ZEALAND
III. — THE GENUS SCHIZOTETRANYCHUS

BY

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SUMMARY.

Descriptions of two new species of *Schizotetranychus*, *S. kaspari* and *S. levinensis* are given, and also descriptions of the immature stages of *S. cornus* Pritchard and Baker.

RÉSUMÉ.

Je donne les descriptions de deux espèces nouvelles de *Schizotetranychus*, *S. kaspari* et *S. levinensis*, ainsi que les descriptions des stases immatures de *S. cornus*, Pritchard et Baker.

Mites of the genus *Schizotetranychus* can be distinguished from other Tetranychid mites by the form of the empodium, the proximal pair of empodial hairs being so enlarged as to resemble a bifid claw. The remaining two pairs of empodial hairs may be reduced or absent.

It can also be distinguished from the genera *Tetranychus* and *Oligonychus* by possessing two pairs instead of one pair, of para-anal setae (fig. 40).

A number of species from various parts of the world have been described, but little published information is available regarding the immature stages, the biology of the mites and their economic importance.

PRITCHARD and BAKER (1955) state that these mites occur mainly on monocotyledonous plants, particularly grasses, but also on bamboo and asparagus. They spin considerable webbing. WEIDHAAS and REEVES (1963) list *Schizotetranychus schizophorus* as a serious problem on *Salix* sp., control measures usually being necessary.

Only one species of *Schizotetranychus* has been recorded from New Zealand,
Acarologia, t. IX, fasc. 4, 1967.

namely *S. cornus* PRITCHARD and BAKER 1955, collected in 1949 on *Elaeocarpus dentatus* from Levin.

This paper describes two more species from New Zealand, including available immature stages, and also describes the immature forms of *S. cornus*.

In the following descriptions, all measurements of body length exclude the gnathosoma, and all leg lengths exclude the coxa and trochanter. The numbers of setae on each leg segment exclude the duplex setae, and the number in brackets after the total number represents the number of sensory setae for that particular leg segment. In counting the number of setae present it is advisable to check more than one specimen as counts may vary slightly. Those given in the descriptions are the normal number for any given leg segment.

Schizotetranychus kaspari n. sp.

(figs 1-17).

This species can be distinguished by the shape of the aedeagus (fig. 10) and by the structure of empodium I of the female, the two pairs of empodial hairs other than the proximo-ventral pair being considerably thickened (fig. 11).

Male (figs 2, 3, 6, 10, 14, 17).

Description from one specimen. Length of body 377 μ . Distal margin of stylophore flattened. Peritreme hooked. Terminal sensillum of palpus about three times as long as broad. Dorsal body setae long, slender, pubescent and tapering, varying in length from 72 μ -96 μ .

Length of leg I 280 μ , leg II 241 μ , leg III 243 μ , leg IV 270 μ ; length of individual leg segments : tarsus I, 69 μ , tibia I, 56 μ , genu I, 53 μ , femur I, 102 μ . Tarsus II, 67 μ , tibia II, 43 μ , genu II, 49 μ , femur II, 82 μ . Tarsus III, 73 μ , tibia III, 49 μ , genu III, 43 μ , femur III 78 μ . Tarsus IV, 78 μ , tibia IV, 58 μ , genu IV, 45 μ , femur IV, 89 μ .

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	16(3)	14(1)	10(1)	11(1)
tibia	13(4)	7	6	7
genu	5	5	4	4
femur	10	5	5	4

The neck of the aedeagus is bent at almost a right angle to the shaft and the head inclined at an angle to the neck (fig. 10). The head is angled both posteriorly and anteriorly.

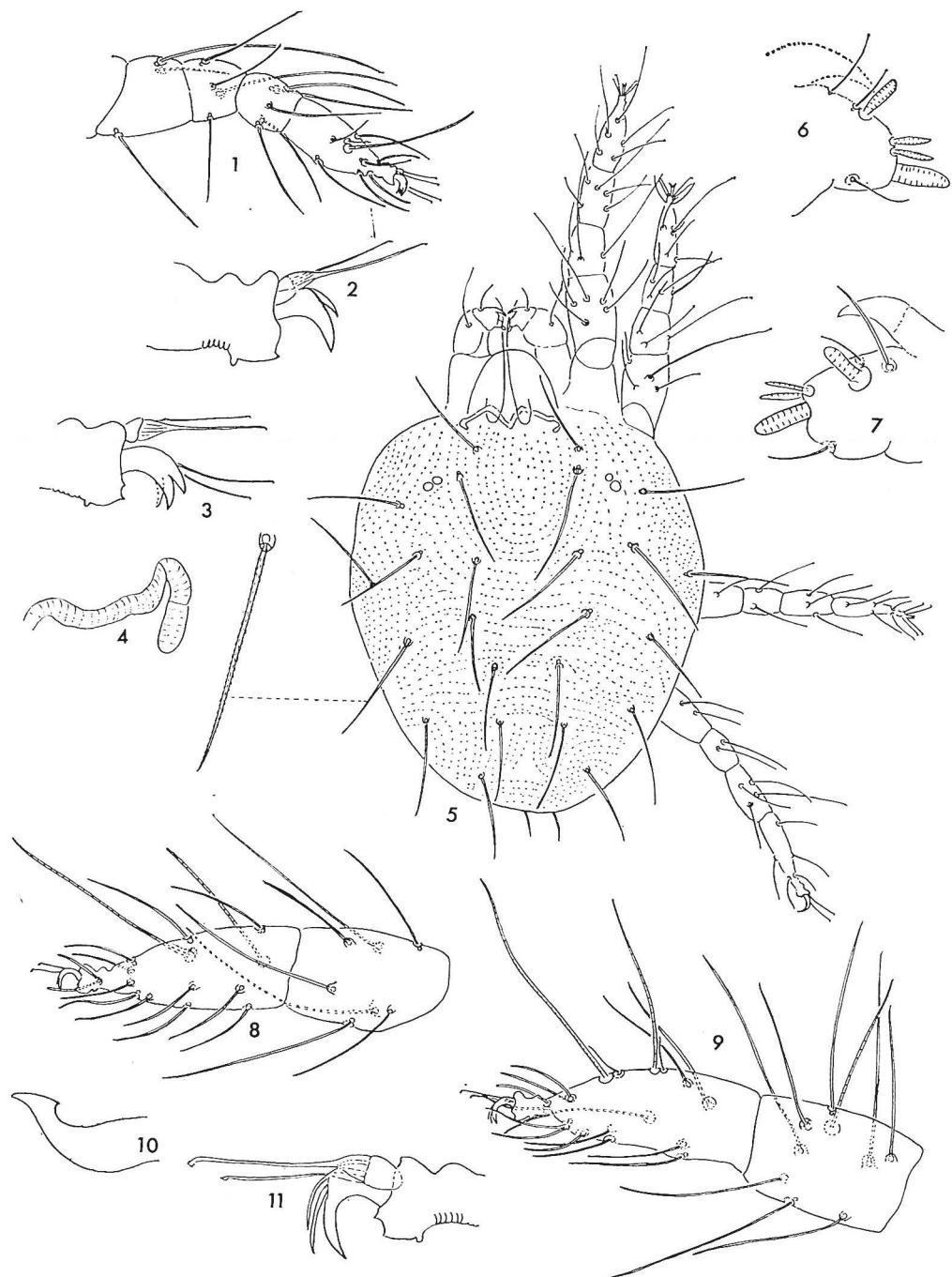


FIG. 1-11 : *Schizotetranychus haspaci* n. sp.

- 1. — Leg II of larva. 2. — Empodium II of male. 3. — Empodium I of male. 4. — Peritreme of female. 5. — Dorsal view of adult female. 6. — Terminal segment of palpus of male. 7. — Terminal segment of palpus of female. 8. — Tarsus and tibia II of female. 9. — Tarsus and tibia I of female. 10. — Aedeagus. 11. — Empodium I of female.

Female (figs 4, 5, 7-9, II).

Description from six specimens. Length of body $424 \pm 82 \mu$. Greatest width of body $334 \pm 69 \mu$. Distal margin of stylophore rounded. Peritreme hooked. Terminal sensillum about three times as long as broad. Dorsal body setae long, slender, pubescent and tapering, varying in length from about 96μ - 116μ .

Empodium with proximal pair of hairs typically claw like, and remaining two pairs of hairs also enlarged and claw like, although more slender (fig. II). Empodia II, III and IV similar.

Length of leg I $308 \pm 11 \mu$, leg II $261 \pm 12 \mu$, leg III $268 \pm 9 \mu$, leg IV $296 \pm 15 \mu$. Lengths of individual leg segments : tarsus I, $85 \pm 5 \mu$, tibia I, $60 \pm 3 \mu$, genu I, $55 \pm 5 \mu$, femur I, $109 \pm 4 \mu$. Tarsus II, $79 \pm 6 \mu$, tibia II, $49 \pm 2 \mu$, genu II, $51 \pm 2 \mu$, femur II, $82 \pm 5 \mu$. Tarsus III $83 \pm 5 \mu$, tibia III $52 \pm 2 \mu$, genu III, $46 \pm 2 \mu$, femur III $84 \pm 2 \mu$. Tarsus IV, $88 \pm 3 \mu$, tibia IV $63 \pm 3 \mu$, genu IV, $46 \pm 4 \mu$, femur IV $100 \pm 6 \mu$.

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	14(1)	14(1)	10(1)	10(1) or 11(1)
tibia	9(1) or 10(1)	7	6	7
genu	5	5	4	4
femur	10	6	4	4

Ventrally, four pairs of mid ventral setae. Coxae I and II each with two setae. Coxae III and IV each with one seta. Two pairs of genital setae, two pairs of anal setae, and two pairs of para-anal setae.

Larva (figs 1, 13, 16).

Description from three specimens. Length of body $188 \pm 20 \mu$. Greatest width of body $181 \pm 7 \mu$. Distal margin of stylophore slightly flattened. Peritreme hooked distally. Terminal sensillum of palpus three to four times as long as broad. Dorsal body setae long, slender, pubescent.

Length of leg I $130 \pm 4 \mu$, leg II $114 \pm 4 \mu$, leg III $116 \pm 2 \mu$. Lengths of individual leg segments : Tarsus I $45 \pm 3 \mu$, tibia I $24 \pm 2 \mu$, genu I $20 \pm 1 \mu$, femur I $41 \pm 2 \mu$. Tarsus II $41 \pm 2 \mu$, tibia II $20 \pm 2 \mu$, genu II $20 \pm 1 \mu$, femur II $34 \pm 2 \mu$. Tarsus III $43 \pm 1 \mu$, tibia III $23 \pm 1 \mu$, genu III 19μ , femur III $30 \pm 1 \mu$.

Details of leg setation as follows :

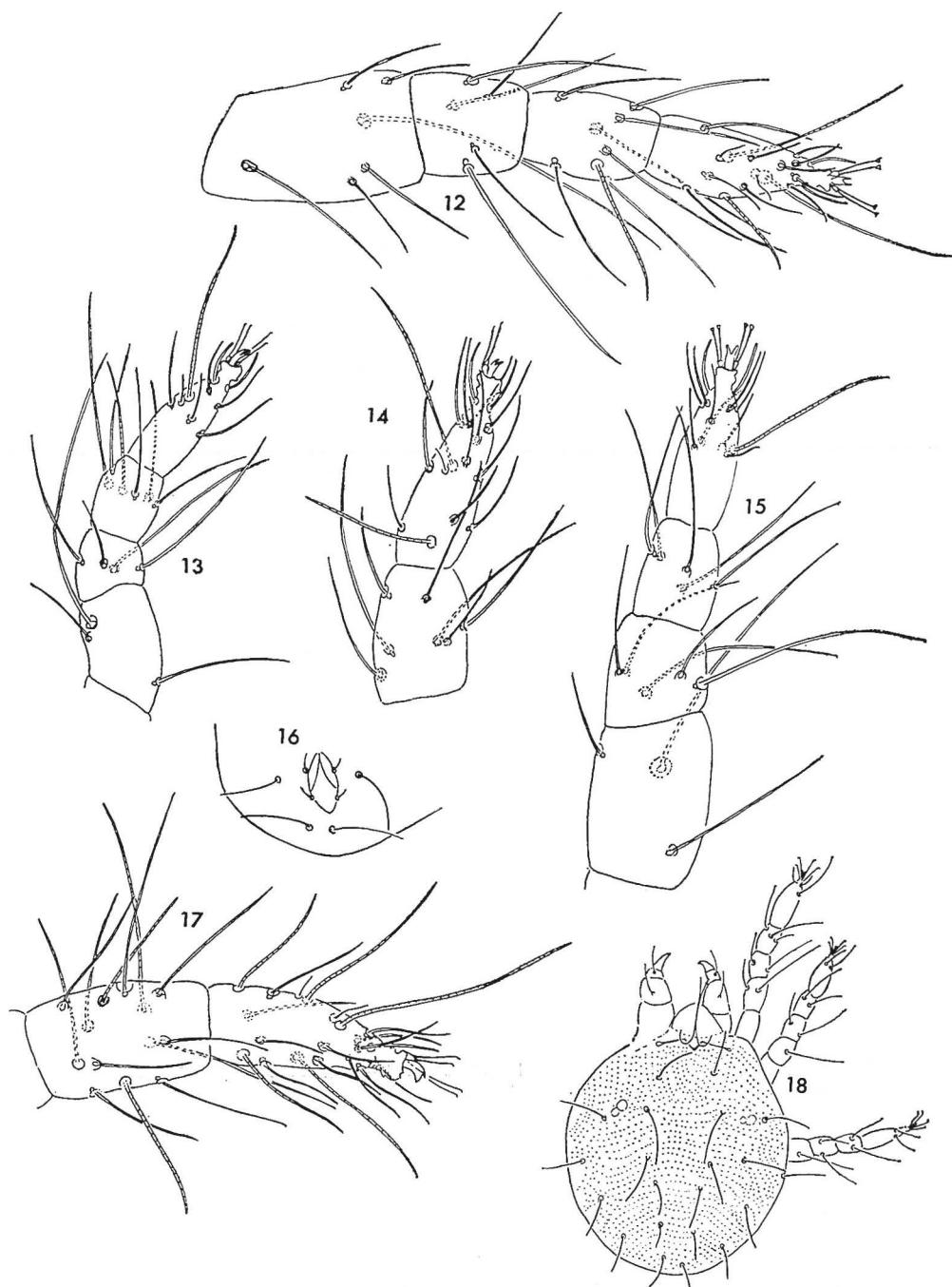


FIG. 12-17 : *Schizotetranychus kaspari* n. sp.

12. — Leg I of deutonymph. 13. — Leg I of larva. 14. — Leg II of male.
15. — Leg II of deutonymph. 16. — Genital area of larva. 17. — Leg I of male.

FIG. 18 : *Schizotetranychus levinensis* n. sp. Dorsal view of larva.

	Leg I	II	III
tarsus	7	7	6
tibia	6(1)	5	5
genu	4	4	2
femur	3	3	2

Ventrally, two pairs of mid ventral setae. Coxa I with one seta, coxae II and III without setae. Two pairs of anal setae and two pairs of para-anal setae (fig. 16).

Protonymph : Unknown.

Deutonymph (figs 12, 15).

Description from three specimens. Length of body $319 \pm 39 \mu$. Greatest width of body $277 \pm 32 \mu$. Distal margin of stylophore slightly flattened. Peritreme hooked. Terminal sensillum three to four times as long as broad. Dorsal body setae long, slender, pubescent, and tapering.

Length of leg I $211 \pm 10 \mu$, leg II $173 \pm 9 \mu$, leg III $181 \pm 11 \mu$, leg IV $183 \pm 13 \mu$. Lengths of individual leg segments : Tarsus I $55 \pm 4 \mu$, tibia I $42 \pm 2 \mu$, genu I $40 \pm 2 \mu$, femur I $75 \pm 4 \mu$. Tarsus II $52 \pm 3 \mu$, tibia II $32 \pm 2 \mu$, genu II $36 \pm 3 \mu$, femur II $55 \pm 3 \mu$. Tarsus III $56 \pm 5 \mu$, tibia III $38 \pm 2 \mu$, genu III $31 \pm 2 \mu$, femur III $56 \pm 4 \mu$. Tarsus IV $56 \pm 2 \mu$, tibia IV $39 \pm 6 \mu$, genu IV $31 \pm 4 \mu$, femur IV $59 \pm 3 \mu$.

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	13(1)	10	9(1)	8
tibia	8(1)	5	5	5
genu	5	5	3	3
femur	6	3	2	2

Ventrally, four pairs of mid ventral setae. Coxae I and II each with two setae, coxae III and IV each with one seta. Two pairs of anal setae, two pairs of para-anal setae and one pair of genital setae.

Holotype : Male, from *Cordyline kaspary*, Plant Diseases Division, Auckland, 23.xi.65, E. COLLYER. In collection of Entomology Division, D.S.I.R., Nelson.

Paratypes : Six females and immature specimens, with same data as holotype.

Schizotetranychus levinensis n. sp.

(figs 18-40).

This species is very similar to *Schizotetranychus beckeri* Wainstein which has been found on Graminae in the vicinity of Moscow, Russia. It differs in that the distal part of the aedeagus does not taper so markedly, and there is no cleft in the anterior margin of the stylophore.

Male (figs 21, 27, 34, 39).

Composite description from two specimens. Colour, pale greenish yellow. Length of body 351 μ . Greatest width of body 174 μ . Distal margin of stylophore rounded. Peritreme terminating as a simple bulb. Terminal sensillum of palpus about three times as long as broad. Dorsal body setae, long, slender, pubescent, varying in length from about 64 μ -90 μ .

Length of leg I 211 μ , leg II 174 μ , leg III 177 μ , leg IV 215 μ . Lengths of individual leg segments : Tarsus I 57 μ , tibia I 41 μ , genu I 36 μ , femur I 77 μ . Tarsus II, 51 μ , tibia II 33 μ , genu II 32 μ , femur II 58 μ . Tarsus III 53 μ , tibia III 35 μ , genu III 31 μ , femur III 58 μ . Tarsus IV 62 μ , tibia IV 44 μ , genu IV 35 μ , femur IV 74 μ .

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	16(3)	14(1)	11(1)	11(1)
tibia	12(3)	8	6	7
genu	5	5	4	4
femur	10	7	4	4

Aedeagus elongate, produced posteriorly to a fine point. Dorsal margin slightly undulate. Axis of aedeagus forming an angle with the axis of the shaft (fig. 27).

Ventrally, four pairs of mid ventral setae. Coxae I and II each with two setae. Coxae III and IV each with one seta. Four pairs of anal setae.

Female (figs 19, 20, 22-25, 28, 30).

Description from seven specimens.

Colour, pale greenish yellow or pale greenish white. Length of body 416 + 85 μ ; greatest width of body 272 \pm 34 μ . Distal margin of stylophore smoothly rounded or with a slight anterior indentation. Peritreme terminating as a simple bulb. Terminal sensillum of palpus two to three times as long as broad. Dorsal body

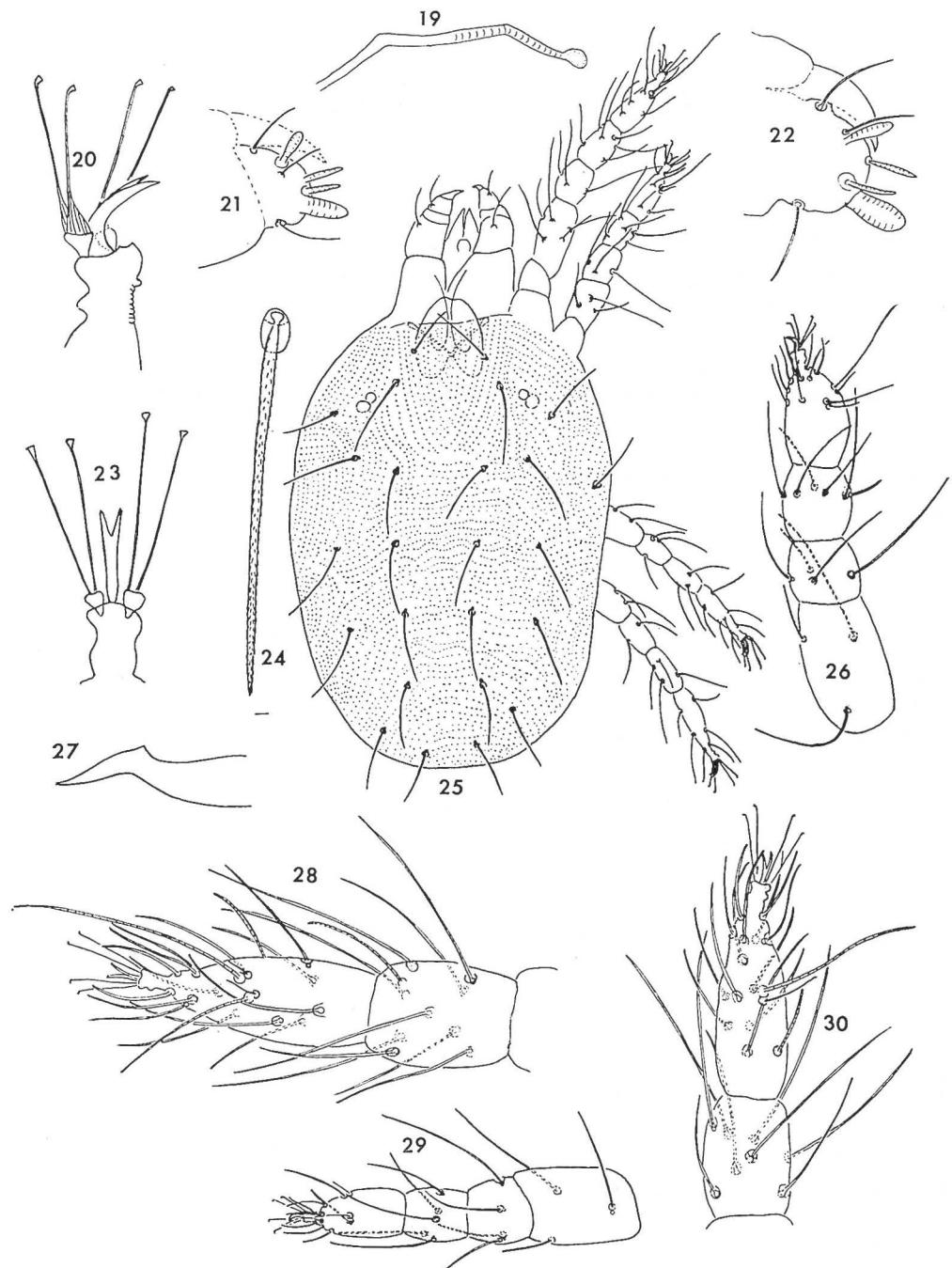


FIG. 19-30 : *Schizotetranychus levinensis* n. sp.

19. — Peritreme of female. 20. — Empodium I of female. 21. — Terminal segment of palpus of male. 22. — Terminal segment of palpus of female. 23. — Dorsal view of empodium I of female. 24. — Enlarged view of typical dorsal body seta. 25. — Dorsal view of adult female. 26. — Leg I of protonymph. 27. — Aedeagus. 28. — Tarsus and tibia I of female. 29. — Leg II of protonymph. 30. — Tarsus and tibia II of female.

setae long, slender, tapering and pubescent, about as long as the longitudinal intervals between them, varying from 51μ - 96μ long.

Length of leg I $209 \pm 9 \mu$, leg II $174 \pm 9 \mu$, leg III $179 \pm 8 \mu$, leg IV $213 \pm 14 \mu$. Lengths of individual leg segments : Tarsus I $57 \pm 7 \mu$, tibia I $41 \pm 3 \mu$, genu I $36 \pm 1 \mu$, femur I $74 \pm 4 \mu$. Tarsus II $50 \pm 6 \mu$, tibia II $33 \pm 1 \mu$, genu II $36 \pm 2 \mu$, femur II $56 \pm 3 \mu$. Tarsus III $55 \pm 4 \mu$, tibia III $36 \pm 2 \mu$, genu III $32 \pm 3 \mu$, femur III $55 \pm 3 \mu$. Tarsus IV $60 \pm 10 \mu$, tibia IV $44 \pm 2 \mu$, genu IV $36 \pm 3 \mu$, femur IV $70 \pm 6 \mu$.

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	15(1)	14(1)	11(1)	11(1)
tibia	10(1)	8	6	7
genu	5	5	4	4
femur	10	7	4	4

Ventrally, four pairs of mid ventral setae. Coxae I and II each with two setae. Coxae III and IV each with one seta. Two pairs of genital setae, two pairs of anal setae and two pairs of para-anal setae (fig. 40).

Larva (fig. 18).

Description from seven specimens. Length of body $146 \pm 19 \mu$. Greatest width of body $148 \pm 7 \mu$. Distal margin of stylophore rounded or with a slight anterior notch. Peritreme slightly swollen distally. Terminal sensillum of palpus about four times as long as broad. Dorsal body setae slender, tapering, pubescent, varying in length from 18μ - 61μ .

Length of leg I $110 \pm 4 \mu$, leg II $94 \pm 6 \mu$, leg III $95 \pm 6 \mu$. Lengths of individual leg segments : Tarsus I $36 \pm 2 \mu$, tibia I $22 \pm 2 \mu$, genu I $19 \pm 2 \mu$, femur I $34 \pm 2 \mu$. Tarsus II $31 \pm 2 \mu$, tibia II $17 \pm 1 \mu$, genu II $18 \pm 2 \mu$, femur II $28 \pm 4 \mu$. Tarsus III $33 \pm 2 \mu$, tibia III $19 \pm 2 \mu$, genu III $18 \pm 1 \mu$, femur III $25 \pm 3 \mu$.

Details of leg setation as follows :

	Leg I	II	III
tarsus	7	7	6
tibia	6(1)	5	5
genu	4	4	2
femur	3	3	2

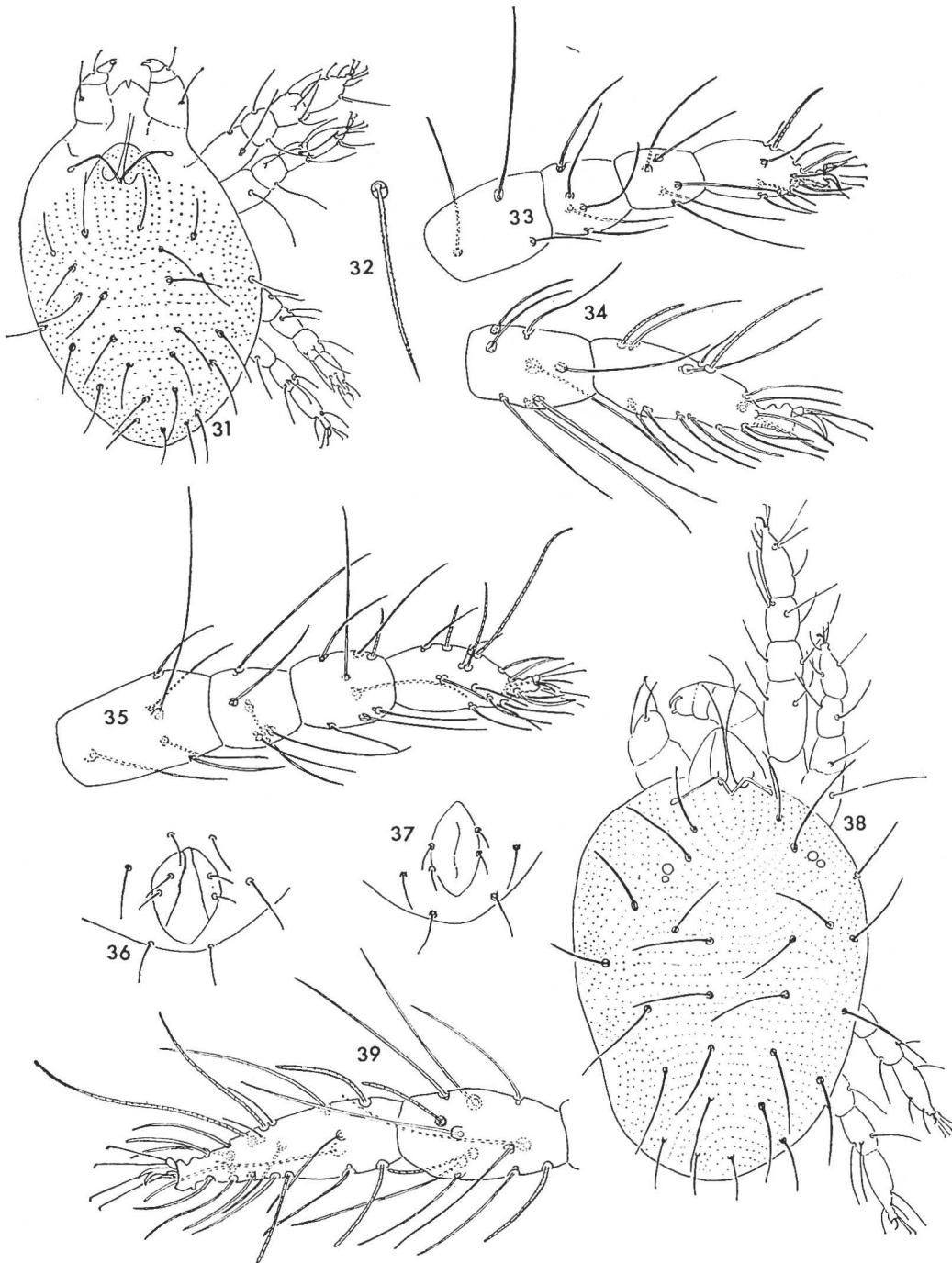


FIG. 31-39 : *Schizotetranychus levinensis* n. sp.

31. — Dorsal view of protonymph. 32. — Enlarged view of dorsal body seta of protonymph.
 33. — Leg II of deutonymph. 34. — Tarsus and tibia II of male. 35. — Leg I of deutonymph.
 36. — Genital area of deutonymph. 37. — Genital area of protonymph. — 38. Dorsal
 view of deutonymph. 39. — Tarsus and tibia I of male.

Ventrally, two pairs of mid ventral setae. Coxae I with one seta, coxae II and III without setae. Two pairs of anal setae and two pairs of para-anal setae.

Protonymph (figs 26, 29, 31, 32, 37).

Composite description from two specimens. Length of body 212 μ . Greatest width of body 171 μ . Distal margin of stylophore rounded or with a slight depression. Peritreme terminating as a simple bulb. Terminal sensillum of palpus three to four times as long as broad.

Length of leg I 134 μ , leg II 118 μ , leg III 117 μ , leg IV 111 μ . Lengths of individual leg segments : Tarsus I 40 μ , tibia I 26 μ , genu I 23 μ , femur I 45 μ . Tarsus II 35 μ , tibia II 22 μ , genu II 23 μ , femur II 38 μ . Tarsus III 35 μ , tibia III 24 μ , genu III 21 μ , femur III 37 μ . Tarsus IV 37 μ , tibia IV 24 μ , genu IV 18 μ , femur IV 32 μ .

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	9	9	8	6
tibia	6(1)	5	5	5
genu	4	4	2	2
femur	3	3	2	2

Ventrally, three pairs of mid ventral setae. Coxa I with two setae. Coxae II and III each with one seta. Coxa IV with no seta. Two pairs of anal setae and two pairs of para-anal setae (fig. 37).

Deutonymph (figs 33, 35, 36, 38).

Description from three specimens.

Length of body 268 $\mu \pm 37 \mu$. Greatest width of body 197 $\pm 18 \mu$. Distal margin of stylophore rounded. Peritreme terminating as a simple bulb. Terminal sensillum of palpus about three times as long as broad.

Length of leg I 156 $\pm 17 \mu$, leg II 133 $\pm 7 \mu$, leg III 132 $\pm 10 \mu$, leg IV 150 $\pm 15 \mu$. Lengths of individual leg segments : Tarsus I 45 $\pm 6 \mu$, tibia I 30 $\pm 2 \mu$, genu I 28 $\pm 2 \mu$, femur I 53 $\pm 7 \mu$. Tarsus II 39 $\pm 2 \mu$, tibia II 25 $\pm 2 \mu$, genu II 25 $\pm 3 \mu$, femur II 43 $\pm 4 \mu$. Tarsus III 41 $\pm 3 \mu$, tibia III 28 $\pm 3 \mu$, genu III 23 $\pm 2 \mu$, femur III 41 $\pm 3 \mu$. Tarsus IV 45 $\pm 5 \mu$, tibia IV 31 $\pm 4 \mu$, genu IV 25 $\pm 3 \mu$, femur IV 45 $\pm 6 \mu$.

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	12(1)	10	9(1)	8
tibia	8(1)	5	5	5
genu	5	5	3	2
femur	6	3	2	2

Ventrally, four pairs of mid ventral setae. Coxae I and II each with two setae. Coxae III and IV each with one seta. Two pairs of anal setae, two pairs of para-anal setae and one pair of genital setae (fig. 36).

Holotype : Male, from grass and weeds. Buller Rd, Levin. 5.i.66. D.C.M. MANSON. In the collection of the Department of Agriculture, Levin.

Paratypes : Two males, two females and immature stages with same data as holotype. Also 34 females and 10 larvae, from grass and weeds, Buller Rd, Levin, 7.VIII.66, 12.VIII.66 and 21.VIII.66. Paratypes in collection of Department of Agriculture, Levin and Entomology Division, D.S.I.R. Nelson.

Schizotetranychus cornus Pritchard and Baker
(figs 41-61).

Schizotetranychus cornus Pritchard and Baker, 1955 ;
Pac. Coast Ent. Soc. Mem. 2 (1) : 242.

Male (figs 41, 49, 50, 52-54).

Description from six specimens. Length of body $287 \pm 30 \mu$. Greatest width of body $218 \pm 13 \mu$. Distal margin of stylophore rounded. Peritreme terminating as a hook or broadly expanded (figs 52, 53).

Terminal sensillum of palpus two to three times as long as broad, distal part triangular and tapering sharply. There is a marked difference in the length of the two sensory rods adjacent to the terminal sensillum, one being almost twice as long as the other (fig. 50). Dorsal body setae short, slender, pubescent, only about half as long as the longitudinal intervals between them. Varying in length from about $16 \mu - 27 \mu$.

Length of leg I $187 \pm 8 \mu$, leg II $156 \pm 4 \mu$, leg III $163 \pm 4 \mu$, leg IV $171 \pm 9 \mu$. Lengths of individual leg segments : Tarsus I $42 \pm 2 \mu$, tibia I $38 \pm 2 \mu$, genu I $38 \pm 3 \mu$, femur I $70 \pm 4 \mu$. Tarsus II $40 \pm 3 \mu$, tibia II $29 \pm 2 \mu$, genu II $30 \pm 2 \mu$, femur II $56 \pm 3 \mu$. Tarsus III $46 \pm 2 \mu$, tibia III $33 \pm 1 \mu$, genu III $29 \pm 2 \mu$, femur III $55 \pm 2 \mu$. Tarsus IV $48 \pm 3 \mu$, tibia IV $35 \pm 2 \mu$, genu IV $32 \pm 2 \mu$, femur IV $57 \pm 3 \mu$.

Details of leg setation as follows :

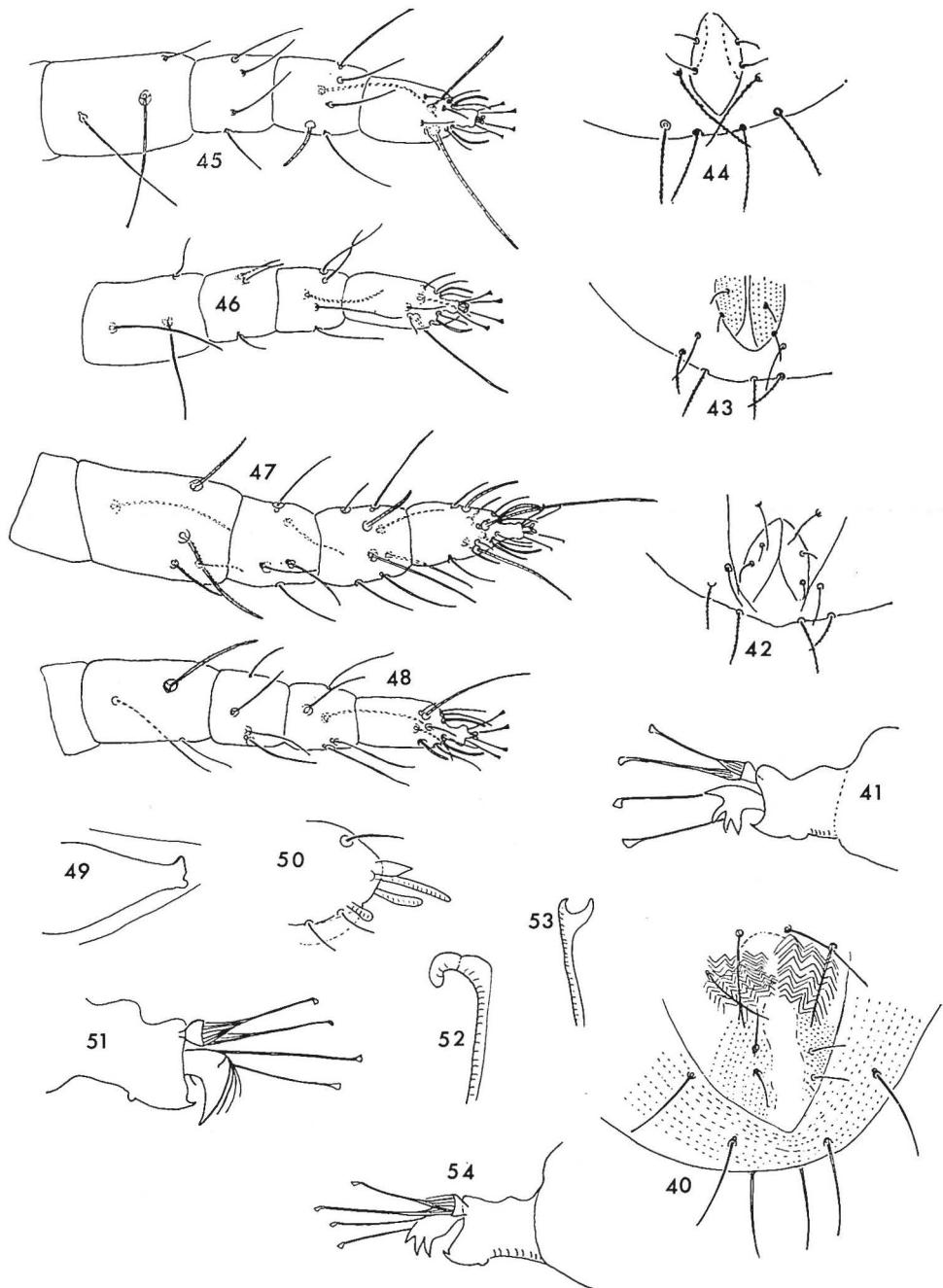


FIG. 40 : *Schizotetranychus levinensis* n. sp.
Ventral view of genital area of adult female.

FIG. 41-54 : *Schizotetranychus cornus*.

41. — Empodium I of male. 42. — Genital area of deutonymph. 43. — Genital area of protonymph. 44. — Genital area of larva. 45. — Leg I of protonymph. 46. — Leg II of protonymph. 47. — Leg I of deutonymph. 48. — Leg II of deutonymph. 49. — Aedeagus. 50. — Terminal segment of palpus of male. 51. — Empodium I of female. 52. — Peritreme of male. 53. — Peritreme of male. 54. — Empodium II of male.

	Leg I	II	III	IV
tarsus	13(2)	8(1)	5	9
tibia	10(1)	5	4	5
genu	7(1)	5	3	2
femur	7(1)	5	3	0

Aedeagus straight, terminating bluntly with a slight dorsal projection (fig. 49).

Ventrally, four pairs of mid ventral setae. Coxae I and II each with two setae. Coxae III and IV each with one seta. Four pairs of genital setae.

Female (fig. 51).

Description from six specimens.

Length of body $431 \pm 28 \mu$. Greatest width of body $324 \pm 18 \mu$. Distal margin of stylophore rounded. Peritreme ending as a hook or broadly expanded. Terminal sensillum of palpus cone shaped, slightly longer than greatest basal width. Dorsal body setae short, slender, pubescent, much shorter than the longitudinal distances between them, varying in length from about 14μ to 33μ .

Length of leg I $223 \pm 7 \mu$, leg II $191 \pm 6 \mu$, leg III $205 \pm 2 \mu$, leg IV $227 \pm 4 \mu$. Lengths of individual leg segments : Tarsus I $52 \pm 3 \mu$, tibia I $42 \pm 2 \mu$, genu I $43 \pm 3 \mu$, femur I $84 \pm 2 \mu$. Tarsus II $51 \pm 3 \mu$, tibia II $36 \pm 2 \mu$, genu II $37 \pm 4 \mu$, femur II $67 \pm 3 \mu$. Tarsus III $59 \pm 2 \mu$, tibia III $41 \pm 1 \mu$, genu III $38 \pm 3 \mu$, femur III $70 \pm 3 \mu$. Tarsus IV $62 \pm 3 \mu$, tibia IV $44 \pm 2 \mu$, genu IV $40 \pm 2 \mu$, femur IV $80 \pm 2 \mu$.

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	12(1)	9(1)	7(1)	7(1)
tibia	8(1)	5	5	5
genu	5	4	3	3
femur	8 or 9	5	2	0

Ventrally, four pairs of mid ventral setae. Coxae I and II each with two setae. Coxae III and IV each with one seta. Two pairs of anal setae, two pairs of genital setae, two pairs of para-anal setae.

Larva (figs 44, 57-59, 61).

Description from six specimens. Length of body $200 \pm 28 \mu$. Greatest width of body $181 \pm 26 \mu$. Distal margin of stylophore usually rounded or slightly

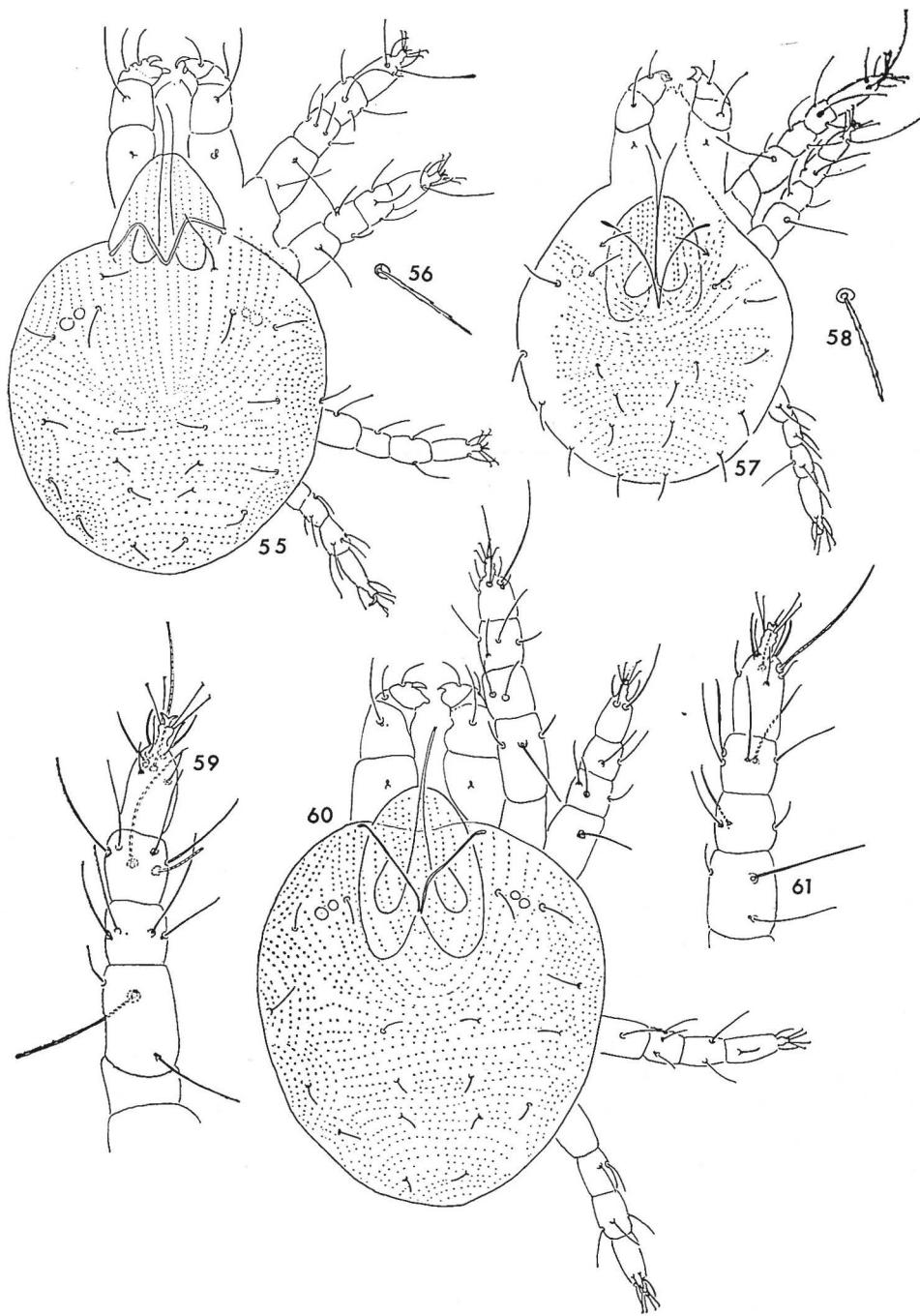


FIG. 55-61 : *Schizotetranychus cornus*.

55. — Dorsal view of protonymph. 56. — Enlarged view of dorsal body seta of protonymph.
 57. — Dorsal view of larva. 58. — Enlarged view of dorsal body seta of larva. 59. — Leg I
 of larva. 60. — Dorsal view of deutonymph. 61. — Leg II of larva.

flattened. Peritreme enlarged distally. Terminal sensillum of palpus about three-times as long as broad. Dorsal body setae, short, slender. Length of mid dorsal body setae varying from 13μ - 24μ . Length of leg I $123 \pm 6 \mu$, leg II $108 \pm 7 \mu$, leg III $112 \pm 6 \mu$. Lengths of individual leg segments : Tarsus I $38 \pm 2 \mu$, tibia I $24 \pm 1 \mu$, genu I $22 \pm 3 \mu$, femur I $42 \pm 3 \mu$. Tarsus II $35 \pm 2 \mu$, tibia II $20 \pm 2 \mu$, genu II $20 \pm 2 \mu$, femur II $32 \pm 3 \mu$. Tarsus III $38 \pm 3 \mu$, tibia III $21 \pm 2 \mu$, genu III $20 \pm 2 \mu$, femur III $34 \pm 2 \mu$.

Details of leg setation as follows :

	Leg I	II	III
tarsus	7	7	4
tibia	6(1)	5	5
genu	4	3	2
femur	3	3	2

Ventrally, two pairs of mid ventral setae. Coxa I with one seta, coxae II and III with no seta. Two pairs of anal setae, and two pairs of para-anal setae, varying from 24μ - 36μ in length (fig. 44).

Protonymph (figs 43, 45, 46, 55, 56).

Description from six specimens. Length of body $225 \pm 27 \mu$. Greatest width of body $215 \pm 9 \mu$. Distal margin of stylophore rounded or slightly flattened. Peritreme enlarged and swollen distally. Terminal sensillum of palpus two to three times as long as broad. Dorsal body setae short, slender, varying in length from about 11μ - 18μ .

Leg I $155 \pm 20 \mu$, leg II $129 \pm 18 \mu$, leg III $138 \pm 23 \mu$, leg IV $131 \pm 22 \mu$. Length of individual leg segments : Tarsus I $40 \pm 5 \mu$, tibia I $30 \pm 5 \mu$, genu I $30 \pm 3 \mu$, femur I $55 \pm 8 \mu$. Tarsus II $40 \pm 5 \mu$, tibia II $23 \pm 4 \mu$, genu II $23 \pm 4 \mu$, femur II $44 \pm 8 \mu$. Tarsus III $38 \pm 9 \mu$, tibia III $28 \pm 4 \mu$, genu III $26 \pm 3 \mu$, femur III $46 \pm 8 \mu$. Tarsus IV $40 \pm 5 \mu$, tibia IV $26 \pm 5 \mu$, genu IV $26 \pm 5 \mu$, femur IV $39 \pm 8 \mu$.

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	9	9	6	4
tibia	6(1)	5	5	5
genu	4	3	2	2
femur	3	3	2	0

Ventrally, three pairs of mid ventral setae. Coxa I with two setae, coxae II and III each with one seta, coxae IV with no seta. Two pairs of anal setae and two pairs of para-anal setae, varying in length from $14\ \mu$ to $30\ \mu$ (fig. 43).

Deutonymph (figs 42, 47, 48, 60).

Description from seven specimens. Length of body $253 \pm 25\ \mu$. Greatest width of body $229 \pm 23\ \mu$. Distal margin of stylophore rounded or slightly flattened. Peritreme enlarged and swollen distally. Terminal sensillum of palpus about twice as long as broad. Dorsal body setae short and slender, varying in length from about $10\ \mu$ - $16\ \mu$. Length of leg I $167 \pm 9\ \mu$, leg II $144 \pm 9\ \mu$, leg III $154 \pm 11\ \mu$, leg IV $155 \pm 12\ \mu$. Lengths of individual leg segments : Tarsus I $39 \pm 4\ \mu$, tibia I $33 \pm 2\ \mu$, genu I $35 \pm 3\ \mu$, femur I $62 \pm 5\ \mu$. Tarsus II $39 \pm 2\ \mu$, tibia II $27 \pm 3\ \mu$, genu II $29 \pm 3\ \mu$, femur II $49 \pm 6\ \mu$. Tarsus III $43 \pm 2\ \mu$, tibia III $30 \pm 3\ \mu$, genu III $29 \pm 3\ \mu$, femur III $50 \pm 5\ \mu$. Tarsus IV $43 \pm 3\ \mu$, tibia IV $33 \pm 3\ \mu$, genu IV $28 \pm 2\ \mu$, femur IV $51 \pm 6\ \mu$.

Details of leg setation as follows :

	Leg I	II	III	IV
tarsus	12(1)	9(1)	7(1)	6
tibia	8(1)	5	5	5
genu	5	4	3	3
femur	5	3	2	0

Ventrally, four pairs of mid ventral setae. Coxae I and II each with two setae. Coxae III and IV each with one seta. Two pairs of anal setae, one pair of genital setae and two pairs of para-anal setae, these latter varying in length from $16\ \mu$ - $26\ \mu$ (fig. 42).

PRITCHARD and BAKER recorded this species from *Elaeocarpus dentatus* at Levin. I have since recorded it from this host at Levin (13.x.63, 31.v.66) and from Akatarawa, near Wellington (1.i.64). I suspect it probably occurs wherever the host plant is found. The mites form colonies on the undersurface of the leaf at the junction between the main vein and one of the side veins where a natural «cave» formation exists. The mites live in the «caves» spinning a dense white web over the entrance. All stages of the mite are reddish in colour, the adults being carmine with light black irregular streaking. Other hosts from which I have recorded it are *Rubus australis*, Khandallah, Wellington, 1.i.64 and *Weinmannia racemosa*, Akatarawa, 30.iii.64, in each case the mites being found on the lower leaf surface under a dense canopy of silk.

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