

NEW SPECIES OF *TENUIPALPUS* (ACARINA : TENUIPALPIDAE)
FROM NEW ZEALAND

BY

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Collections of leaf-inhabiting mites made in New Zealand during 1959-61 included five new species of the genus *Tenuipalpus* and one species that had already been described from Australia. All six species were found only on native New Zealand plants in the bush ; the mites are plant-feeding, and most are specific to particular host plants.

PRITCHARD and BAKER (1958) give a key to 33 species recognised in this genus, and DE LEON (1956) described thirteen other species from Mexico.

The type material of the species described here is deposited in the British Museum (Natural History), London, S.W.7. ; further material of all the species is in the collection of the Entomology Division, Auckland, New Zealand.

Tenuipalpus womersleyi Pritchard and Baker, 1958.

Described from *Leptospermum* sp., Queensland, Australia. In New Zealand females and nymphs of this species were found on *Leptospermum scoparium* and *Vitex lucens* in the Auckland Province.

***Tenuipalpus rubi* sp. n.**

Female. Fig. 1A. — Palpus three-segmented, with two setae on each of the second and third segments. Gnathosoma with a pair of ventral setae. First and third pairs of dorsal propodosomal setae lanceolate, second pair minute ; each of the third pair longer than half the distance between its base and the posterior margin of the propodosoma. Humeral setae widened. No development of body anterior to coxa III. First and second pairs of dorsocentral hysterosomal setae lanceolate, each seta extending beyond the base of the seta posterior to it ; third

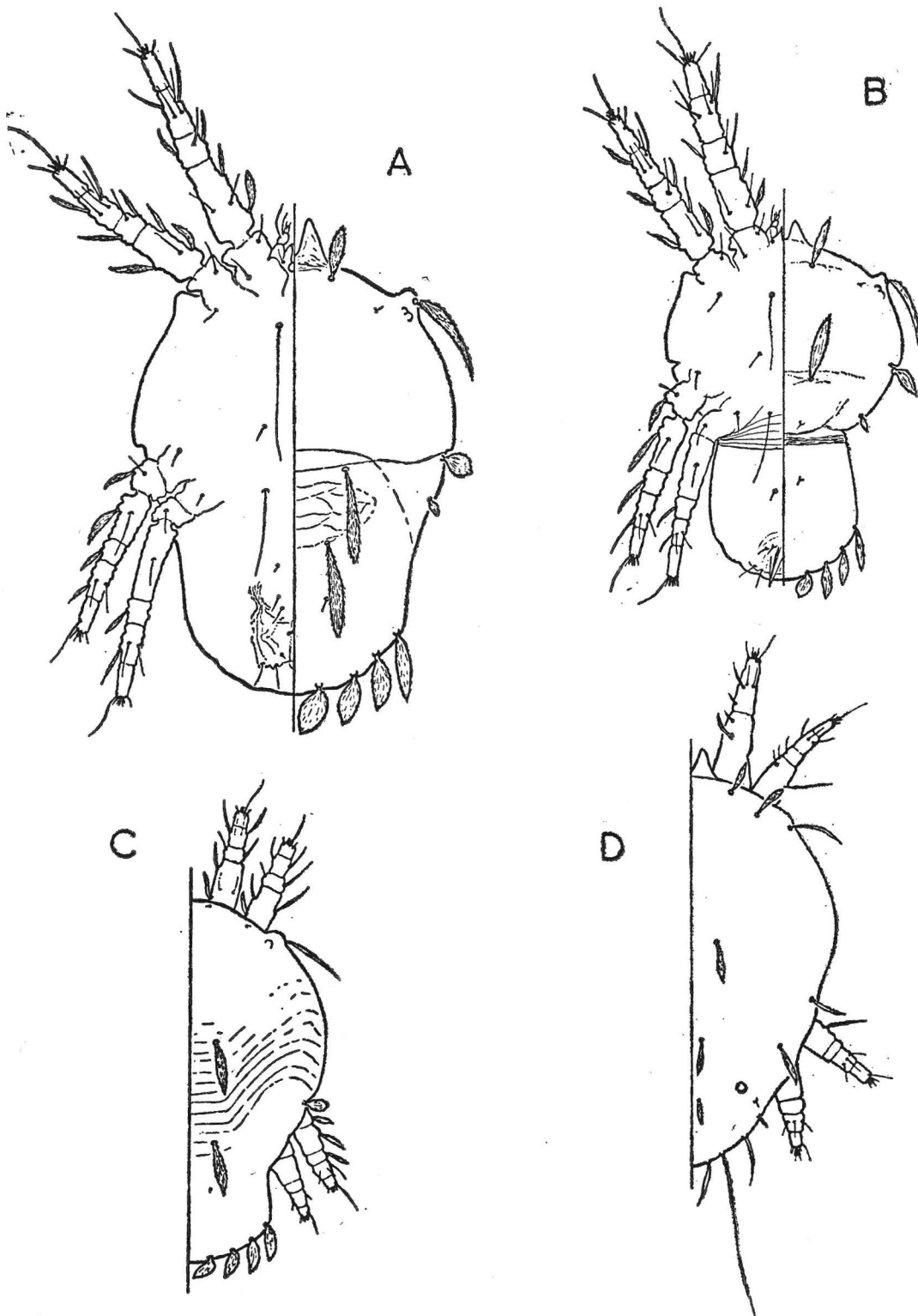


FIG. 1. — *Tenuipalpus rubi* : A. Female, B. Male, C. Nymph. *Tenuipalpus rangiorae* : D. Nymph.
Right, dorsal surface ; left, ventral surface.

pair minute. Four pairs of dorsolateral hysterosomals broadly lanceolate, and no flagellate setae. Ventrally one pair of short anterior medioventral setae, and one pair of long posterior medioventrals. All ventral setae nude. Many leg setae narrowly lanceolate. Genu I and II each with three setae, genu III and IV each with one seta; tibia I and II each with five setae, tibia III and IV each with three setae. Length 353 μ , and greatest width 252 μ .

Male. Fig. 1B. — Similar to female except that only the first pair of dorso-central hysterosomals are large, the second and third pairs are minute. Length 260 μ and greatest width 183 μ .

Nymph. Fig. 1C. — First two pairs of dorsocentral hysterosomals lanceolate, the third pair minute.

Diagnosis. — This species is deep red in colour, with red eggs. Similar to *T. womersleyi*, but in the female the first pair of dorsal propodosomals, and the first two pairs of dorsocentral hysterosomals, are large.

Locality. — It occurs in both North and South Islands on the leaves of various species of bush lawyer, the native *Rubus* spp. of New Zealand.

Type material. — Ten females, two males and four nymphs, on *Rubus* sp. at Little Huia, near Auckland, New Zealand, April 23, 1961.

***Tenuipalpus coprosmae* sp. n.**

Female. Fig. 2A. — Palpus three-segmented, second and third segments each with two setae. Gnathosoma with one pair of ventral setae. First and second pairs of dorsal propodosomals minute; third pair broadly lanceolate, each seta shorter than half the distance between its base and the posterior margin of the propodosoma. Humeral setae widened, no projection of body anterior to coxa III. First two pairs of dorsocentral hysterosomals lanceolate, third pair minute. Caudal end of hysterosoma square. Four pairs of dorsolateral hysterosomals, broadly lanceolate, and no flagellate setae. Ventrally one pair of short anterior medioventrals, and one pair of long posterior medioventrals. All ventral setae nude. Legs with many of the setae broadened. Genu I and II each with three setae, genu III and IV each with one seta; tibia I and II each with five setae, tibia III and IV each with three setae. Length 371 μ , greatest width 260 μ .

Male. Fig. 2B. — Similar to female, except that all three pairs of dorsocentral hysterosomals are minute. Length 315 μ , and greatest width 183 μ .

Nymph. Fig. 2C. — First and second pairs of dorsocentral hysterosomals small, third pair minute. Three pairs of lateral body setae very long, flagellate; three pairs of broadly lanceolate dorsolateral hysterosomals.

Diagnosis. — This species is red in colour. Similar to *T. rubi* sp. n., except that in the female the first pair of dorsal propodosomals are minute, and the third pair are shorter and broader; all enlarged setae including those on the legs are

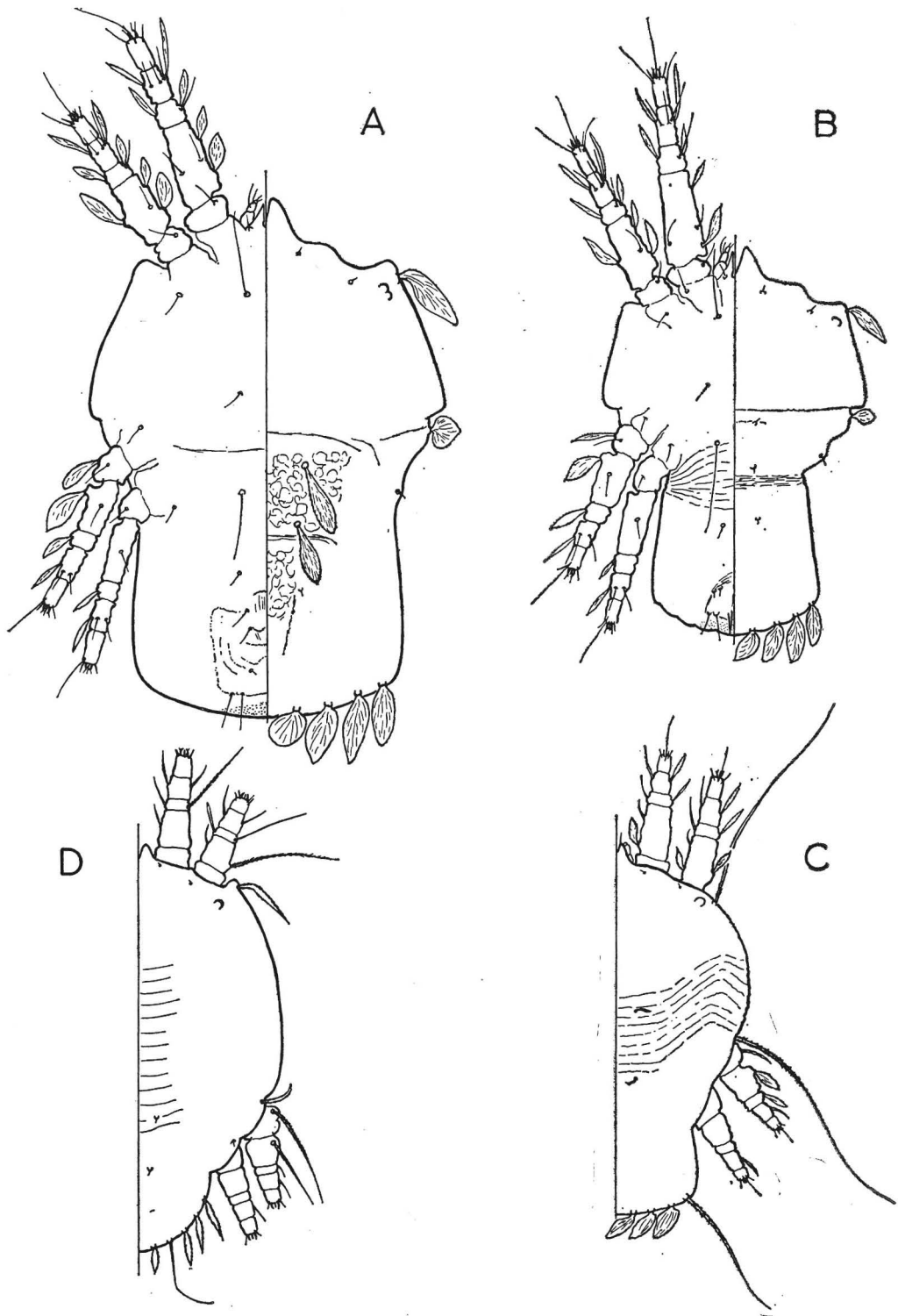


FIG. 2. — *Tenuipalpus coprosmae*. A. Female, B. Male, C. Nymph.
Tenuipalpus antipodus : D. Nymph.
Right, dorsal surface ; left, ventral surface.

broader. In the male the first dorsal propodosomals and the first dorsocentral hysterosomals are minute.

Locality. — In the North Island of New Zealand on the leaves of various species of *Coprosma*.

Type material. — Nine females, one male and six nymphs on *Coprosma* sp., at Hunua, near Auckland, New Zealand, 11th December, 1960.

***Tenuipalpus rangiorae* sp. n.**

Female. Fig. 3A. — Palpus two-segmented, with long terminal sensory seta. Gnathosoma with a pair of ventral setae. First and second dorsal propodosomals small and broad; third pair on a small projection, narrowly lanceolate and each seta longer than half the distance between its base and the posterior margin of the propodosoma. Anterolateral margin of propodosoma rounded. Humeral setae narrowly lanceolate. No projection of body anterior to coxa III. Three pairs of dorsocentral hysterosomals, lanceolate and of medium length. Four pairs of lanceolate dorsolateral hysterosomals, anterior pair shorter than others; one pair of long flagellate setae. Ventrally one pair each of anterior and posterior medioventral metapodosomals, both of medium length. Many of the leg setae pilose, not broadened. Genu I and II each with three setae, genu III and IV without setae. Tibia I-IV each with three setae. Length 315 μ , and greatest width 213 μ .

Male. Fig. 3B. — As female except that the third pair of dorsocentral hysterosomals are minute, first and second pairs are relatively shorter than in the female. Length 260 μ , and greatest width 149 μ .

Nymph. Fig. 1D. — Three pairs of narrowly lanceolate dorsocentral hysterosomals.

Diagnosis. — Pale greenish or yellowish species. Similar to *T. tetrazygiae* De Leon, but in the female the first and second dorsal propodosomals are broader, and the third dorsal propodosomals, humerals, and three pairs of dorsocentral hysterosomals, are longer.

Locality. — Found in various parts of the North Island of New Zealand on leaves of *Brachyglottis repanda*. Named after rangiora, the Maori name for plants of the genus *Brachyglottis*.

Type Material. — Seventeen females, fourteen males and two nymphs on *Brachyglottis repanda*, Piha, near Auckland, New Zealand, 27th December, 1960.

***Tenuipalpus antipodus* sp. n.**

Female. Fig. 3C. — Palpus three-segmented, second segment with a long serrate seta, and the third with a terminal sensory seta. Gnathosoma with a pair of setae ventrally. First dorsal propodosomals minute, second slightly longer and

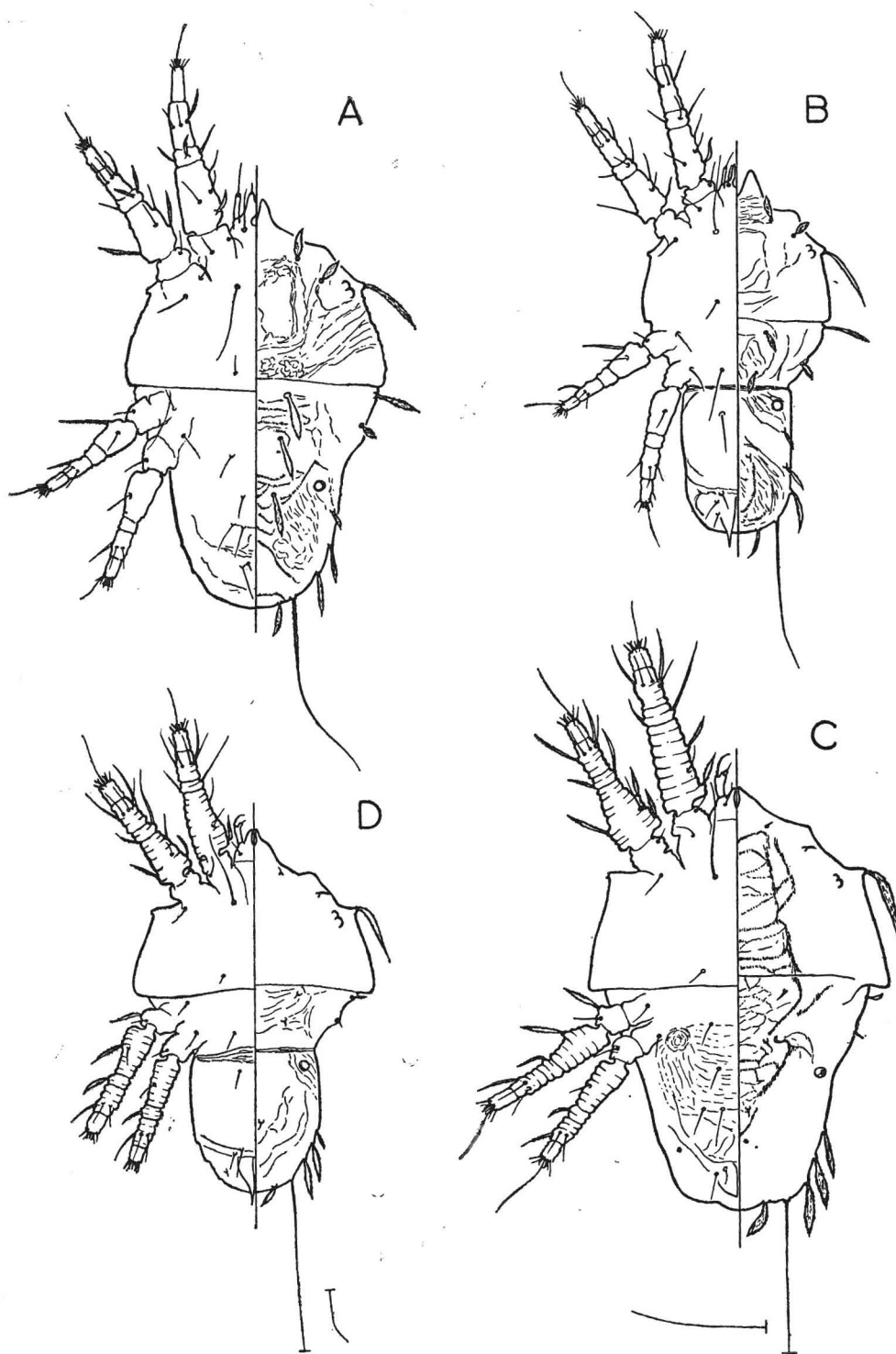


FIG. 3. — *Tenuipalpus rangiorae* : A. Female, B. Male.
Tenuipalpus antipodus : C. Female, D. Male.
Right, dorsal surface ; left, ventral surface.

serrate ; third on small projection, elongate lanceolate, elbowed, with each seta longer than half the distance between its base and the posterior margin of the propodosoma. Humeral setae small, no projection of body anterior to coxa III. Three pairs of small dorsocentral hysterosomal setae. Four pairs of lanceolate dorsolateral hysterosomals and one pair of very long flagellate setae. Ventrally one pair each of anterior and posterior medioventral metapodosomals. Genu I and II each with two setae, genu III and IV each with one seta ; tibia I and II each with five setae, tibia III and IV each with three setae. Length 325 μ , and greatest width 223 μ .

Male. Fig. 3D. — Similar to female. Length 270 μ , and greatest width 176 μ .

Nymph. Fig. 2D. — Two pairs of minute dorsocentral hysterosomals. Several setae on the legs are long and pilose, otherwise the nymph is similar to the adult.

Diagnosis. — This species is very pale in colour, and has flattened yellow eggs. Similar to *T. rangiorae*, except that the first two pairs of dorsal propodosomals and the dorsocentral hysterosomals are small and the humeral setae short. Differs from *T. punicae* P. & B. in the very long third dorsal propodosomals.

Locality. — Occurs commonly in the North Island of New Zealand on a number of bush plants including *Coprosma* spp., *Melicytus ramiflorus*, and *Nothopanax* sp.

Type material. — Forty females, eight males and two nymphs from *Melicytus ramiflorus* at Little Huia, near Auckland, New Zealand, 23rd April, 1961.

***Tenuipalpus mahoensis* sp. n.**

Female. Fig. 4A. — Palpus two-segmented, the first with a long serrate seta, the second with a terminal sensory rod. Gnathosoma with a pair of ventral setae. First and second dorsal propodosomals minute ; third on small projection, broadened at base and tapering towards the distal end, in length each seta is equal to about half the distance between its base and the posterior end of the propodosoma. Humeral setae very broad. Conical projection of body anterior to coxa III. Dorsocentral hysterosomals minute. Four pairs of lanceolate dorsolateral hysterosomals, of which the anterior pair are smaller and narrower, the other three pairs broad ; also a pair of long flagellate setae. Ventrally one pair of short anterior medioventral setae, and one pair of longer posterior medioventrals. Ventral setae nude. Femora of legs broadened. Legs I, II and III with some setae widened. Genu I and II each with two setae, genu III with one seta and genu IV with no setae. Tibia I and II each with four setae, tibia III and IV each with three setae. Length 370 μ , greatest width 260 μ .

Male. Fig. 4B. — Similar to female. Length 297 μ , greatest width 209 μ .

Nymph. — Similar to adult.

Diagnosis. — Similar to *T. podocarpi* Lawrence, but the third dorsal propodosomals and humeral setae are broader ; of the enlarged dorsolateral hysterosomal

setae the anterior pair are the smallest, whereas in *T. podocarpi* the posterior pair are smallest.

Locality. — Found occasionally in the North Island of New Zealand on *Melicytus ramiflorus*, the Maori name for which is the mahoe.

Type material. — Two females, four males and seven nymphs collected from *Melicytus ramiflorus* in the Waitakeres, near Auckland, New Zealand, 29th November, 1959.

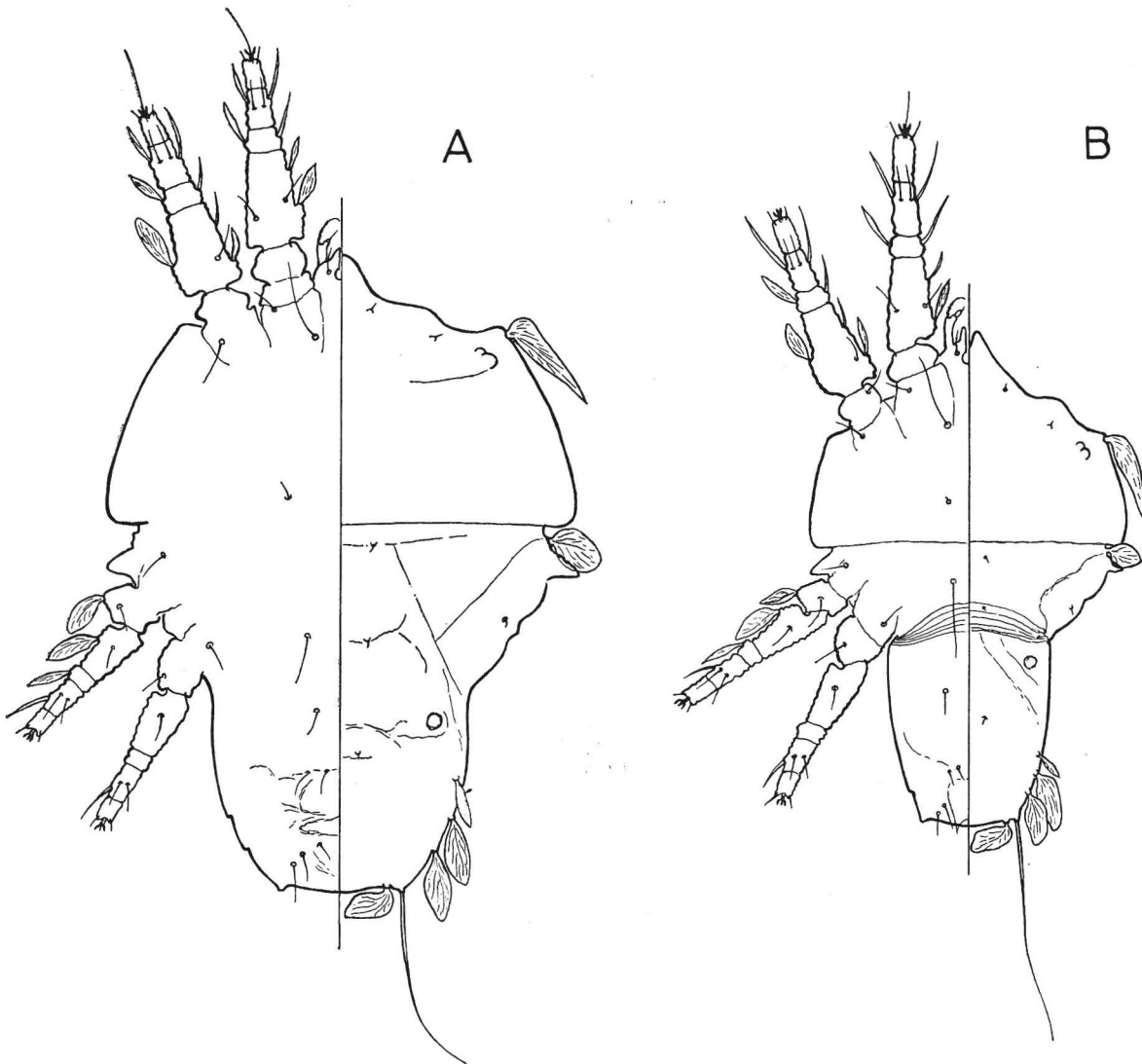


FIG. 4. — *Tenuipalpus mahoensis* : A. Female, B. Male.
Right, dorsal surface ; left, ventral surface.

SUMMARY.

Five new species of *Tenuipalpus*, *T. rubi*, *T. coprosmae*, *T. rangiorae*, *T. antipodus* and *T. mahoensis* are described from specimens collected in New Zealand. *T. womersleyi* P. & B. is recorded from this country for the first time.

REFERENCES

- DE LEON (D.), 1956. — The genus *Tenuipalpus* in Mexico (Acarina : Tenuipalpidae). *Fla. Ent.* 40, 3 : 81-93.
- PRITCHARD (A. E.) and BAKER (E. W.), 1958. — The False Spider Mites (Acarina : Tenuipalpidae). *Univ. Calif. Publ. Ent.* 14, 3 : 175-274.
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