TWO NEW SPECIES OF ERIOPHYID MITES (ACARINA : ERIOPHYIDAE) INCLUDING A NEW GENUS

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ABSTRACT.

A new genus *Neodichopelmus* is erected, the type species being *Neodichopelmus samoanus*, a leaf vagrant on *Codiaeum* leaves from Western Samoa. *Eriophyes tjyingi* is described from leaf blisters on *Lycium chinensis* from Taiwan.

INTRODUCTION.

Neodichopelmus samoanus n. gen., n. sp. was taken as a leaf vagrant on croton leaves (*Codiaeum* sp.) intercepted in quarantine from Western Samoa. Croton leaves are commonly brought into New Zealand and used for decorative purposes, but this is only the second occasion on which eriophyid mites have been encountered, the first record being in 1972 when I described *Phyllocoptes acuminatus* from beneath dead scale insects, *Parlatoria crotonis* on *Codiaeum* sp. from Western Samoa.

Eriophes tjyingi n. sp. was forwarded to me for identification by Mr I-SHYING TJYING of Taiwan. It was causing leaf blisters on *Lycium chinensis*, and as it appears distinct from any other species of *Eriophyes* it is here described as new.

Family Eriophyidae Nalepa
Subfamily Phyllocoptinae Nalepa.

Genus **Neodichopelmus** n. gen.

This genus bears a very close resemblance to *Dichopelmus* Keifer 1959, but can be distinguished by the more widely spaced and prominent dorsal tubercles, the lack of a fore tibial seta and the more broadly cleft feather-claws. It is defined as follows :

Neodichopelmus new genus.

Robust fusiform flattened dorso-ventrally, with abdominal rings divided into tergites and sternites. Rostrum quite small. Shield sub-semicircular, with prominent anterior lobe. Dorsal

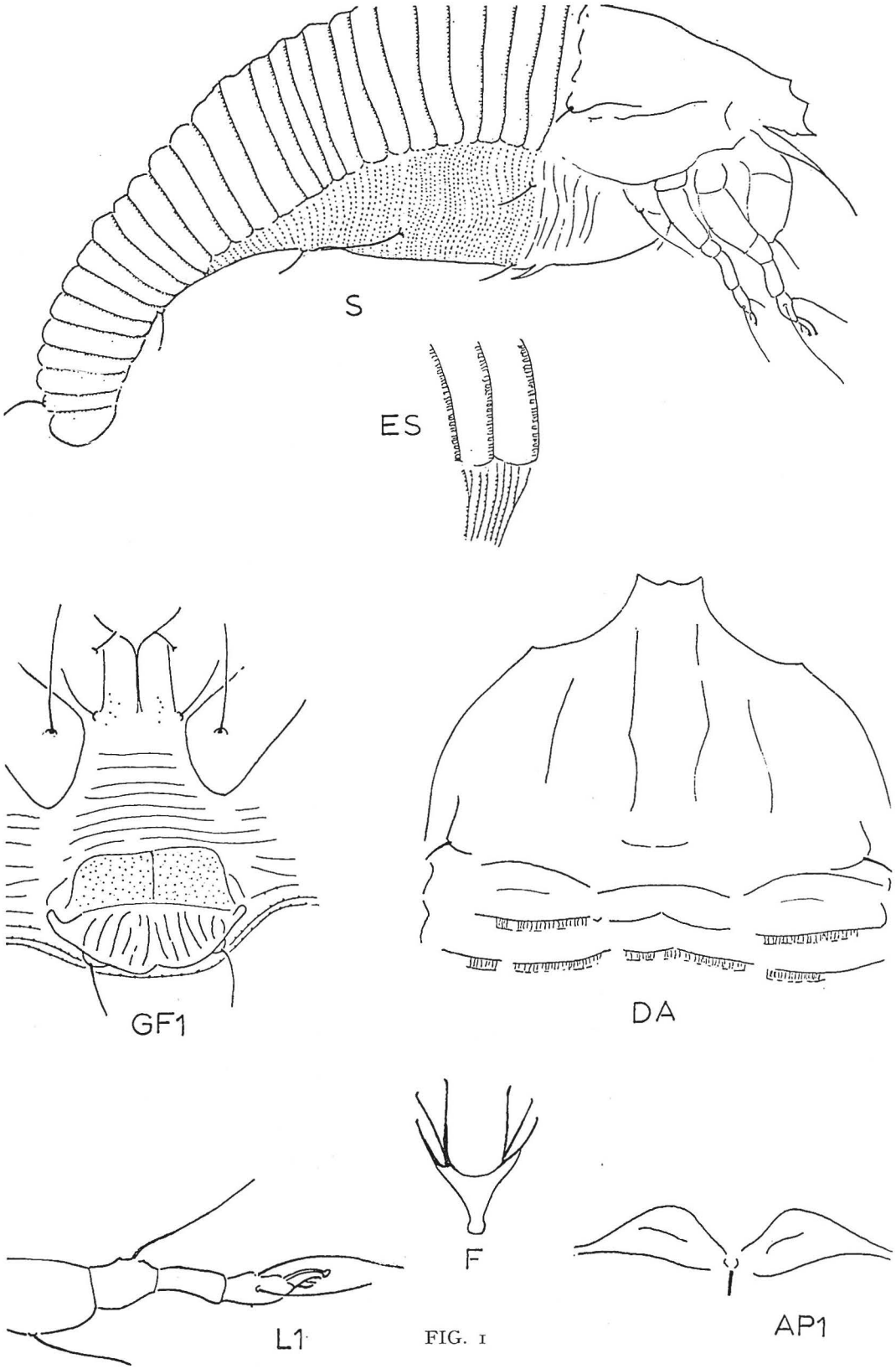


FIG. 1 : *Neodichopelmus samoanus*, new genus and species.

S — side view of adult mite ; ES — side skin structure ; GF_1 — female genitalia ; DA — dorsal view of shield ; L_1 — foreleg ; F — feather claw ; AP_1 — internal female genitalia.

tubercles widespread, large, with short posteriorly diverging setae. Three pairs of coxal setae present. Fore tibia lacking tibial seta, otherwise leg setation normal. Featherclaw divided, broadly cleft. Abdomen with all the usual setae. Female genital coverflap with longitudinal markings.

Type species — *Neodichopelmus samoanus* n. sp.

Neodichopelmus samoanus n. sp.
(Fig. 1).

Female : 140 μ-200 μ long, 75 μ wide, 55 μ thick ; robust fusiform ; flattened dorso-ventrally, colour brown. Rostrum 20 μ long, curved down ; antapical rostral seta 11.8 μ long. Dorsal shield 45 μ long, 71 μ wide, sub-semicircular. Anterior shield lobe prominent, truncate apically when viewed dorsally ; when viewed laterally the lobe terminates in an acute point. Shield smooth with firmly impressed sub-parallel admedian lines, usually a fainter, slightly diverging sub-median line. Dorsal tubercles prominent, 61 μ apart ; dorsal setae 6 μ long, diverging to rear.

Foreleg 32 μ long ; tibia 7 μ long, lacking tibial seta ; tarsus 6 μ long ; claw 4.3 μ long, strongly knobbed ; featherclaw broadly cleft, 3-rayed on each side. Hindleg 28 μ long, tibia 6.8 μ long, tarsus 6 μ long, claw 4.3 μ long. Coxae almost devoid of ornamentation ; a few small granules at the base of the second coxal tubercles ; first setiferous coxal tubercles ahead of second and opposite anterior coxal approximation ; second tubercles ahead of line across third setiferous coxal tubercles.

Abdomen with about 29 broad tergites and 68 sternites. Tergites with short impressed lines behind anterior margin ; sternites with small elongate microtubercles. Lateral seta 8 μ long, arising from about sternite 6 ; first ventral seta 3 μ long, on about sternite 25 ; second ventral seta 11 μ long, on about sternite 40 ; third ventral seta 14 μ long, on about 7th ring from the end. Accessory seta absent. Female genitalia 24 μ wide, 13 μ long ; coverflap with about 13 longitudinal lines ; genital seta 9 μ long.

Type Locality : Western Samoa.

Collected : 31 May 1972 from plants intercepted in quarantine by C. H. Read.

Host : Codiaeum sp. Euphorbiaceae

Relation to Host : leaf vagrants, occurring on both leaf surfaces but mainly on the upper surfaces.

Type Material : A holotype slide and paratype slides. Holotype and paratype slides in the collection of the Department of Agriculture, Levin. Paratype material deposited with the Entomology Division, D.S.I.R., Nelson and Mr H. H. Keifer, 1112 Swanston Drive, Sacramento, California, 95818, U.S.A.

Subfamily Eriophyinae Nalepa.

Eriophyes tjyingi n. sp.
(Fig. 2).

Mr H. H. Keifer (pers. comm.) informs me that this species is very close to *Eriophyes eucricotes* (Nalepa) but is distinguished by the transverse band of short dashes on the dorsal shield

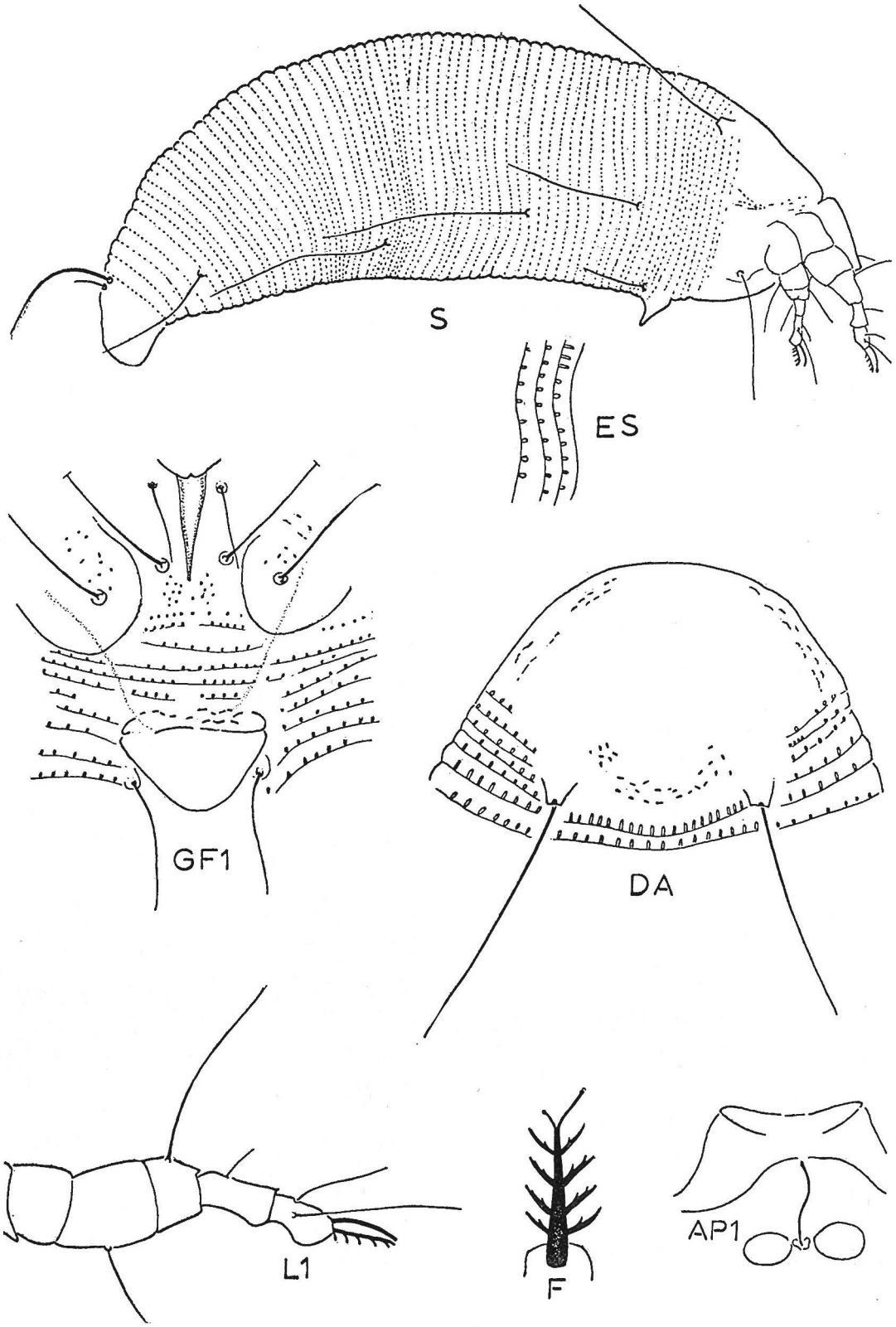


FIG. 2 : *Eriophyes tjyingi* n. sp. ; S — side view of adult mite ; ES — side skin structure ; GF_1 — female genitalia ; DA — dorsal view of shield ; L_1 — foreleg ; F — feather claw ; AP_1 — internal female genitalia.

in front of the dorsal tubercles, and by the forked sternal line. It also bears some resemblance to *Eriophyes pallida* (Keifer) described from *Lycium pallidum*, Arizona, U.S.A., but differs in that the hind coxae have some dash like markings. and the microtubercles are not spinulate.

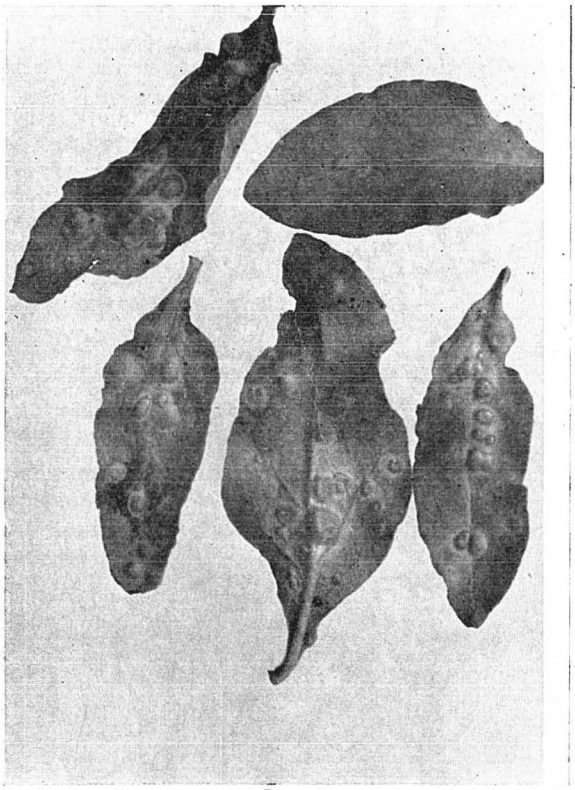
Female : 170 μ-250 μ long, 69 μ wide, 55 μ thick, fusiform, Rostrum 18 μ long, curved downwards ; antapical rostral seta 6 μ long.

Dorsal thoracic shield almost semi-circular in outline. 28 μ long, 30 μ wide ; largely devoid of markings except for a few granulate peripheral lines and a transverse area of short thick dashes at the base of the shield. Dorsal tubercles prominent, arising from posterior shield margin, 21 μ apart ; dorsal seta 37 μ long, directed posteriorly.

Forelegs 36 μ long, tibia 7 μ long, with 4 μ seta at about 1/4 ; tarsus 6 μ long, claw 6 μ long ; feather claw 5-rayed with asymmetrical terminal fork. Hind leg 33 μ long, tibia 6 μ long, tarsus 6 μ long, claw 6 μ long.

Anterior coxae devoid of markings, posterior coxae with dash like markings, on inner side. Forked sternal line. First setiferous coxal tubercles ahead of second and slightly further apart. First coxal setae 10 μ long. Second tubercles slightly ahead of a line across third tubercles.

Abdomen with about 68 microtuberculate rings, microtubercles rounded and resting on rear ring margins. The micro tubercles on the first ring behind the dorsal shield are different from the remainder, being more elongate and of a rectangular shape. Lateral seta 31 μ long, on about



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Damage to *Lycium chinensis*, by *Eriophyes tjyingi*
FIG. 3 — Close-up view of leaf blisters.
FIG. 4 — Damaged plants " in situ " (Tainan City, Taiwan).

ring 11 ; first ventral seta 51 μ long, on about ring 23 ; second ventral seta about 54 μ long, on about ring 39 ; third ventral seta about 24 μ long, on about 5th ring from the end. Accessory caudal seta 5 μ long. Female genitalia 12 μ long, 16 μ wide ; coverflap devoid of markings ; genital seta 20 μ long.

Type Locality : Ton-Jin, Chia-Yi Hsien, Taiwan.

Collected : 18 February 1972 by I-Shying Tjying.

Host : Lycium chinensis (Solanaceae). According to Mr I-SHYING TJYING this is the famous medical plant in China which the Chinese call GO-G-JU.

Relation to Host : forming leaf blisters.

Type Material : A holotype slide, 10 paratype slides and dried material.

Holotype and paratype slides in the collection of the Department of Agriculture, Levin, Paratype slides are deposited with the Entomology Division, D.S.I.R., Nelson and Mr I-SHYING TJYING, Taiwan. Paratype material is also held by Mr H. H. KEIFER, 1112 Swanston Drive, Sacramento, California 95818.

I have pleasure in naming this species for Mr I-SHYING TJYING.

ACKNOWLEDGEMENTS.

My thanks are due to Mr H. H. KEIFER who suggested the erection of a new genus for the first species, and confirmed that the second species is undescribed. Mr I-SHYING TJYING has kindly supplied the photograph showing damage " in situ " of *Eriophyes tjyingi.*

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