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NEW NASAL MITES PTILONYSSUS AND PARANEONYSSUS (Acarina: Mesostigmata), FROM TAIWAN AND NEW GUINEA[1]

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Abstract: *Paraneonyssus pericrocoti* is described from *Pericrocotus roseus divaricatus* in Taiwan and *Ptilonyssus wilsoni* from *Collocalia* sp. in New Guinea.

The following new species of nasal mites from Taiwan and New Guinea were collected for Bishop Museum in the course of an intensive survey of ectoparasites of Taiwan birds made by T. C. Maa, and in the course of general surveys of vertebrate ectoparasites in New Guinea.

Paraneonyssus pericrocoti Sakakibara, new species Figs. A-E.

Diagnosis: 2 large dorsal plates; podosomal plate broadly rounded anteriorly, posterior margin with 2 deep grooves; opisthosomal plate divided into 2 parts. In dorsal profile, slightly constricted above coxae IV.

♀. *Body*: Idiosoma 715 μ long, 325 μ wide.

Dorsum: Podosomal plate rounded anteriorly, 235 μ long, 225 μ wide, posterior margin undulate with 2 deep grooves, with 10 pairs of minute setae. Opisthosomal plate longer than wide, 350 μ long, 150 μ wide, a line, but not a distinct separation, sets off the pygidial area from the rest of the plate, with 4 pairs of minute setae, including the pygidial. Two pairs of setae posterolateral to podosomal plate, pair of setae lateral to the plate. Eight pairs of minute setae lateral to opisthosomal. Two pairs of posterior setae longer than the other 7 pairs. Peritreme including stigma 30 μ long.

Venter: Sternal plate 143 μ long, 99 μ wide, rounded anterior and posterior margins, with 3 pairs of sternal setae on plate. Genital plate 125 μ long, 98 μ wide, posterior margin rounded, 1 pair of minute genital setae. Anal plate 100 μ long, 70 μ wide, somewhat pear-shaped, with cribrum. Anus centrally placed, surrounded by 3 subequal anal setae, of which paranals lie level with anterior of anus. Ventral cuticle with 5 pairs of small setae, 3 pairs between genital and anal plate, 1 pair lateral of anal plate.

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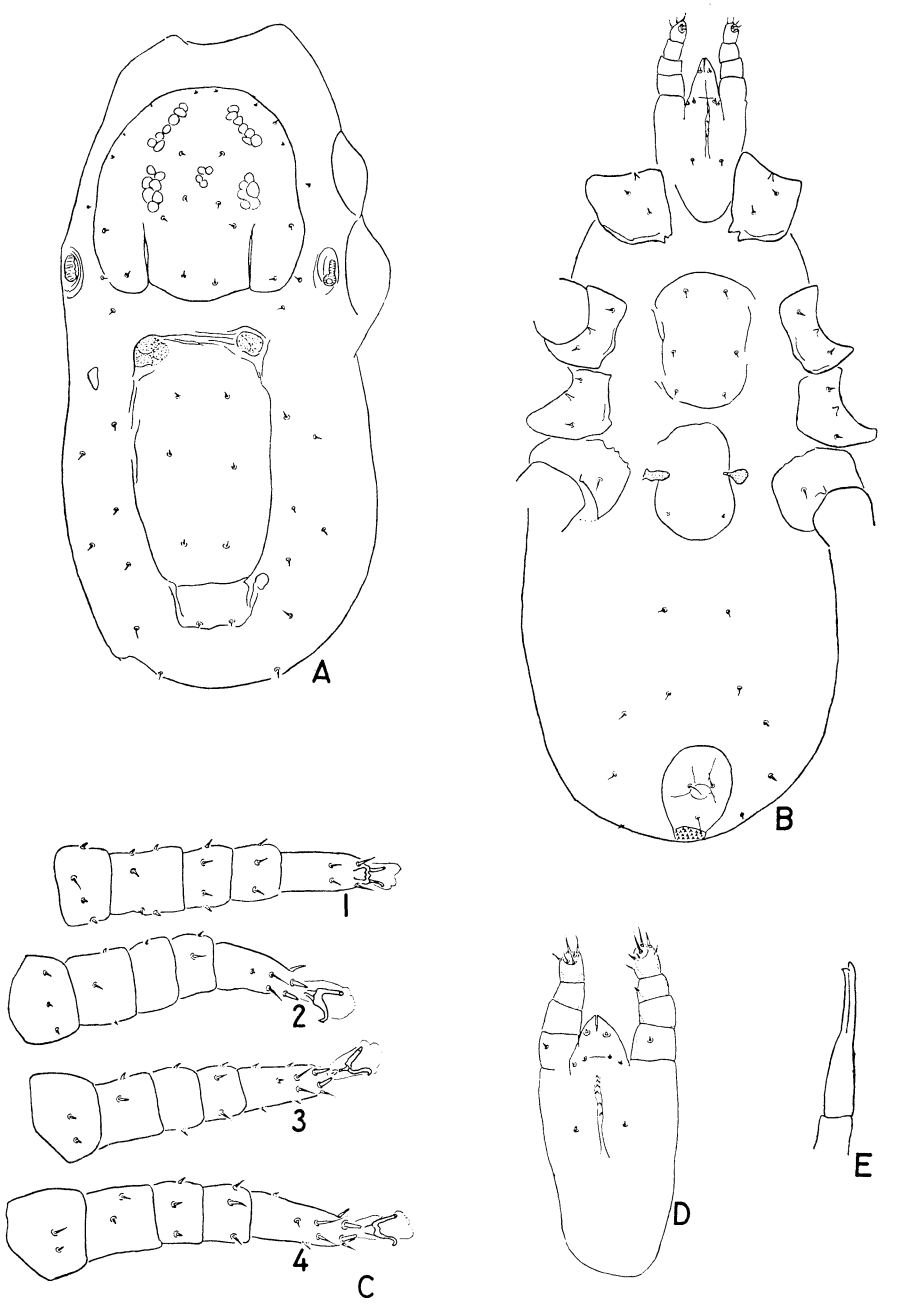


Figs. A–E. *Paraneonyssus pericrocoti* n. sp. A, ♀ dorsal view; B, Ventral view; C, Legs I–V ventral view; D, Gnathosoma; E, Chelicera.

Gnathosoma: Deutosternum with 5 denticles in single file; the 3 pairs of hypostomal and 1 pair of gnathosomal setae are minute. Chelicera 160 μ long, slightly bulbous at base.

Legs: Length of tarsus I 60 μ, II 70 μ, III 68 μ, IV 80 μ long. Tarsi II, III and IV each with 2 ventral apical spines. Coxal setae small, piliform, those on coxae IV longer than other coxal setae. Coxae I and II are separated by about the distance of one coxal width.

Holotype ♀ (BISHOP 7517), taken from the nasal passages of bird, *Pericrocotus roseus divaricatus* collected at Liukuei, Taiwan (TMT 2064), 1964, by T. C. Maa. Paratopotypes: 4♀♀, same data as holotype.

Remarks: This new species has large elongate, parallel-sided opisthosomal plate and chelicera which is slightly bulbous at base. On account of these points, I consider this species as *Paraneonyssus*. *Paraneonyssus pericrocoti* may be easily distinguished from *P. astridae* (Fain), *P. capensis* (Zumpt & Till), *Neonyssus* (*Paraneonyssus*) *enriettii* Castro, *P. carduelis* Fain, *P. pari* Fain and *P. maluri* Domrow by the shape of podosomal plate, number and setation of opisthosomal setae from *P. astridae* (Fain); by the shape of podosomal and opisthosomal plate, minute hypostomal and gnathosomal setae from *P. capensis* (Zumpt & Till); by the absence of opisthosomal setae terminally, which are longer than others from *P. enriettii* (Castro); by the absence of long spinous setae on the podosomal plate from *P. carduelis*; by the shape of podosomal and number of opisthosomal setae from *P. pari*; by the shape of podosomal plate which is more rectangular than *P. pericrocoti*.

Ptilonyssus wilsoni Sakakibara, new species Figs. F–J, L & M.

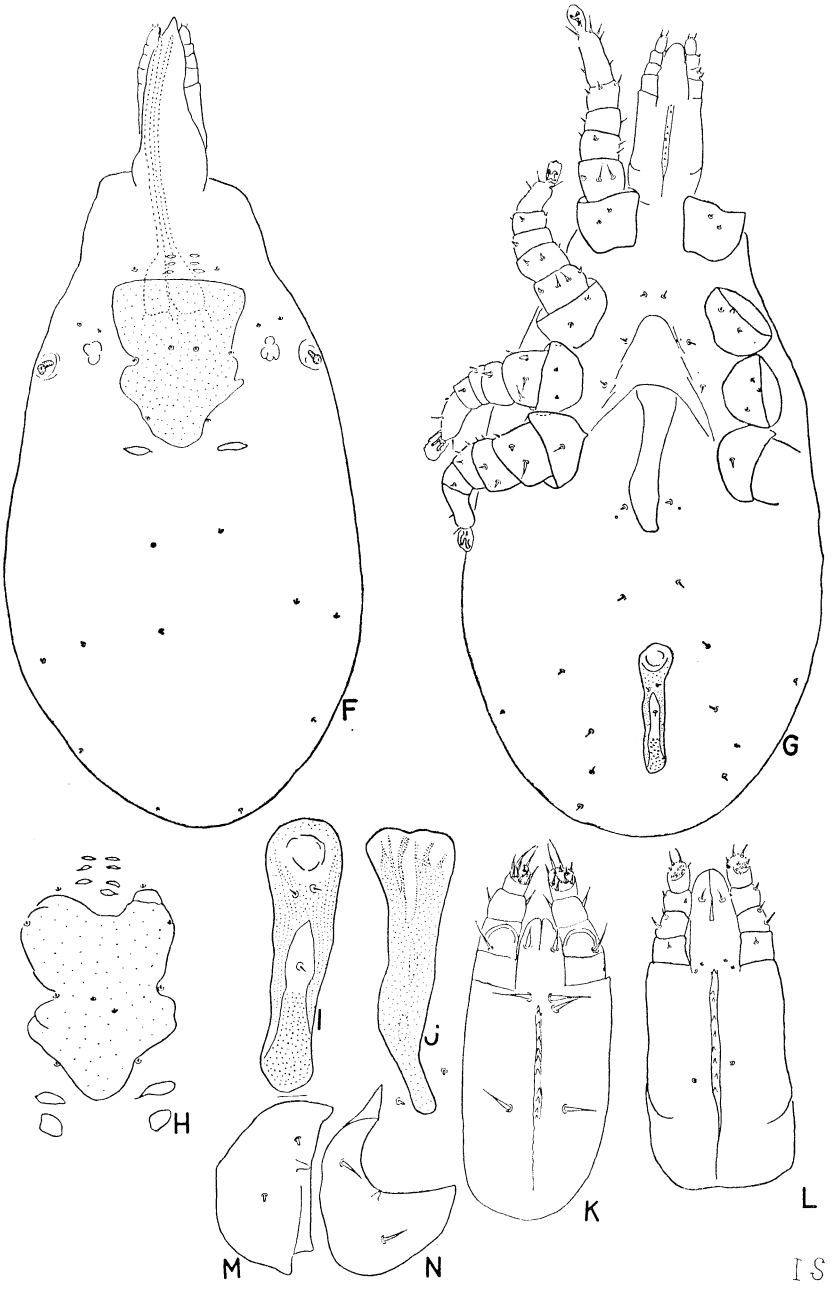
Generally speaking, genus *Ptilonyssus* has 2 plates, 1 podosomal and 1 pygidial. Body elongate and slightly constricted medially. Six species are known with the pygidial plate absent.

Diagnosis: Body oval; pygidial plate absent; genital and anal plate elongate; paranal setae posterior to anus; bulbous portion of chelicera 1/4 of total length.

♀. *Body*: Idiosoma 907 μ long, 508 μ wide, widest about middle, podosomal plate weakly sclerotized, constricted about middle, posterior margin rounded, with 3 minute setae on plate, 3 setae on lateral margin of plate. Pygidial plate absent. Three pairs of small areolate areas anterior, 1 pair of areolate areas posterior and 1 pair of areolate areas lateral to podosomal plate. One pair of minute setae anterior to podosomal plate, 2 pairs of minute setae lateral to plate; opisthosoma with 11 setae.

Venter: Sternal plate 113 μ long, 100 μ wide, weakly outlined, 3 pairs of sternal setae bordering plate and becoming progressively farther apart from anterior to posterior; no sternal pores; genital plate elongate, tapered posteriorly, with rayed anteromargin, weak fissure about middle of plate. Anal plate 183 μ long, 50 μ wide, thickened margins best developed laterally. Paranal setae posterior to anus; anus well forward; cribrum well developed. Ventral opisthosomal cuticle with 5 setae on right side, 4 setae on left side.

Gnathosoma: 3 pairs of hypostomal setae, anterior 1 pair spinous, longest; 1 pair of gnathosomal minute setae; deutosternal groove with 9 denticles in single file. Chelicera 100 μ long, bulbous portion about 1/4 of total length.



Figs. F–J. *Ptilonyssus wilsoni* n. sp. F, Female dorsal view; G, Ventral view; H. Podosomal plate of paratype; I, Anal plate; J, Genital plate; K, Gnathosoma of *Ptilonyssus desfontainei* Zumpt & Till (paratype); L, Gnathosoma of *P. wilsoni*; M, Coxa II of *P. wilsoni*; N, Coxa II of *P. desfontainei* (paratype).

Legs: Length of tarsi I 75 μ, II 53 μ, III 55 μ and IV 70 μ long. Setae on coxae IV longer than others.

Holotype ♀ (BISHOP 7518) taken from the nasal passages of swift (*Collocalia* sp.) collected at Enarotali, NW New Guinea (BBM-NG 21397) by H. Clissold. Paratopotype: 1♀, same data as holotype.

Remarks: *Ptilonyssus wilsoni* is similar to *Ptilonyssus desfontainei* Zumpt & Till. The new species may be separated from *P. desfontainei* by the following characters: (1) podosomal plate is constricted about middle; (2) tapered genital plate and anal plate more rectangular than in *P. desfontainei*; (3) coxae II without spurs on anterior margin; (4) coxal setae smaller than those of *P. desfontainei*; (5) gnathosomal and hypostomal setae shorter. Gnathosoma and coxae II for the species are illustrated for comparison.

P. wilsoni is named for Dr N. Wilson in appreciation for his help and kindness during my studies. Also, I wish to express my appreciation to Dr Zumpt, South African Institute for Medical Research, for the loan of specimens for comparison with our material.

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