

TWO NEW SPECIES OF BIRD NASAL MITES  
FROM NEW GUINEA  
(ACARI : MESOSTIGMATA, RHINONYSSIDAE) <sup>(1)</sup>

BY

Ippei SAKAKIBARA

This paper describes and illustrates two new species of nasal mites from New Guinea and Taiwan. These new species were found among the B. P. Bishop Museum's collection. Holotypes of the new species are deposited in the Acarology collection of the Bishop Museum. The following new species of nasal mite from New Guinea was collected by Bishop Museum staff members and associates.

***Ptilonyssus buloloensis* n. sp.**

Of known species, only one has been described with peritremes apparently set in small body processes. This species is *Ptilonyssus specootheris* Domrow. Dr. DOMROW said in his paper, " This effect may be due to heating during mounting procedure ", but since having found the same condition also in this species, I believe the condition to be a natural one, and not the result of heating.

Diagnosis : Idiosoma ovate in shape, with rectangular podosomal plate, bent peritremes set in small body processes ; metasternal setae present ; ventral cuticle with about 70 fine setae ; coxae I, II, III with ventral blunt setae ; coxae IV with hair-like setae ; postanal seta lacking.

*Female.*

Body : length of idiosoma 745  $\mu$  long, 540  $\mu$  wide.

Dorsum : podosomal plate 320  $\mu$  long, 250  $\mu$  wide, almost rectangular, punctuate, 4 pairs of piliform setae, the posterior pair longer than others. Pygidial plate 58  $\mu$  long, 50  $\mu$  wide, with 2 setae terminally. Two pairs of setae and pores lateral to

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podosomal plate, 1 pair of setae posterolateral to podosomal plate, 8 pairs of setae between podosomal and pygidial plates.

Venter : Sternal plate ill defined, 3 pairs of fine sternal setae, metasternal setae, which are almost same as sternal setae ; genital plate drop-like in shape, 155  $\mu$  long, 53  $\mu$  wide, 1 pair of genital setae, longer than width of anal plate and attached on

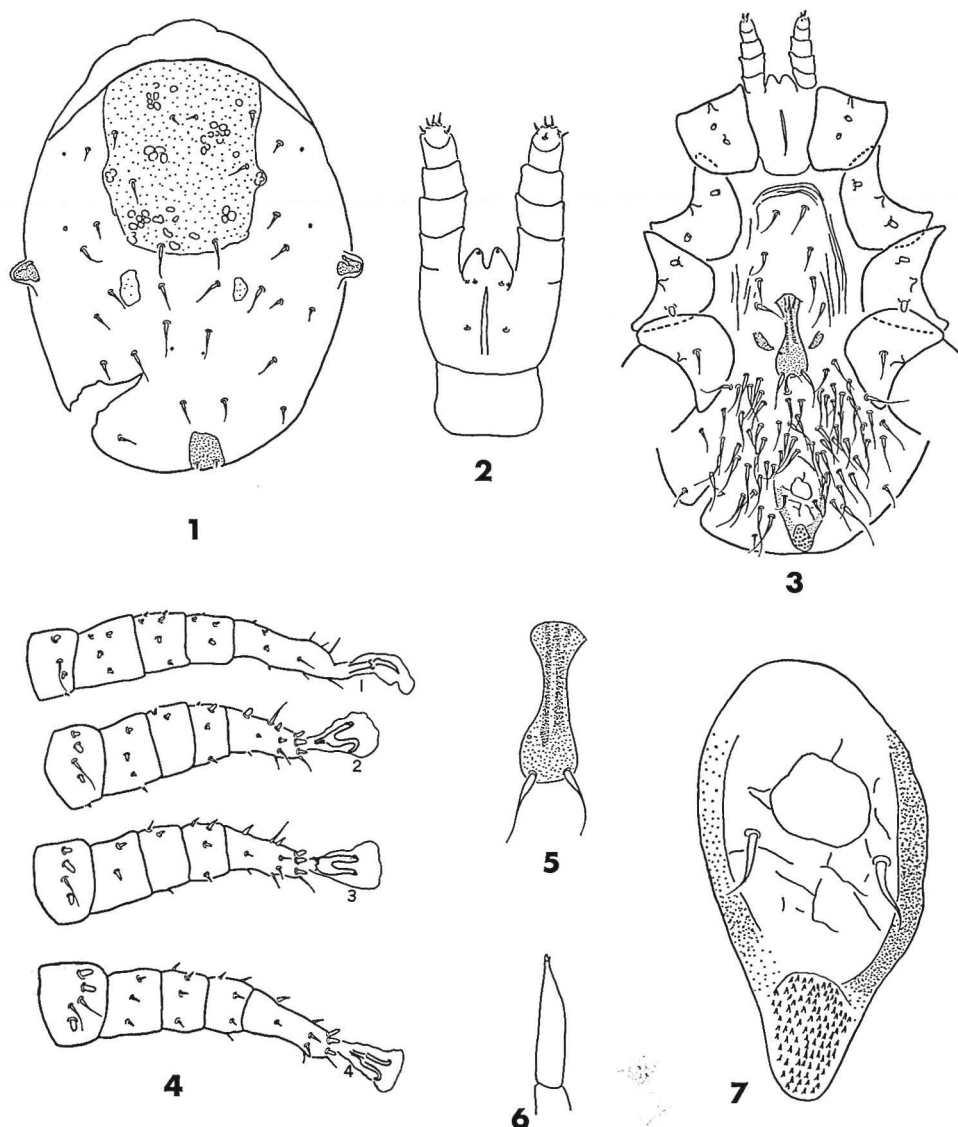


FIG. 1-7 : *Ptilonyssus buloloensis* n. sp., female.

1. — Dorsal view. 2. — Gnathosoma. 3. — Ventral view. 4. — Legs 1 to 4, ventral views.  
5. — Genital plate. 6. — Chelicera. 7. — Anal plate.

posterior margin ; anal plate 158  $\mu$  long, 60  $\mu$  wide, slightly elongate, with anus forward, in front of anal setae, postanal seta lacking. Cribrum well developed, thickened margin best developed laterally ; ventral cuticle with 70 setae, which are slightly expanded basally.

Gnathosoma : Deutosternal groove without denticles, 1 pair of gnathosomal setae and 3 pairs of hypostomal setae present. Chelicera 138  $\mu$  long, attenuated about 1/3 from tip.

Legs : Claws of legs I almost straight ; setae on coxae IV fine, other coxal setae blunt ; trochanters I, II, III with 3 blunt and hair-like setae ; IV with 3 blunt and 2 hair-like setae.

Setal Formula of legs :

	I	II	III	IV
Tarsus		3 2—3 7	3 3—3 6	5 2—3 6
Tibia	3 1—1 3	4 0—0 4	4 1—1 4	5 1—1 3
Genu	3 2—0 4	5 1—1 2	5 1—1 2	4 1—0 3
Femur	5 0—1 4	4 0—1 3	3 0—0 2	3 0—0 3
Trochanter	0 0—0 4	0 0—1 4	0 0—0 4	0 0—0 5

Holotype : ♀, Bishop (7492), taken from nasal passages of " Bird of Paradise ", collected at Bulolo River, New Guinea (NG 27845), by P. SHANAHAN, deposited in the Acarology collection of Bishop Museum, Honolulu.

Paratypes : 2 ♀♀, same data as holotype.

Remarks : *Ptilonyssus buloloensis* is easily distinguished from *Ptilonyssus spectrotheris* and other species by the presence of metasternal setae and 70 ventral setae.

**Ptilonyssus missimensis** n. sp.

Fig. 8-13.

Diagnosis : Elongate mite, widest above coxae III, slightly concave about middle ; pygidial plate divided, each half elliptical ; 1st sternal setae shorter than 2nd and 3rd setae. Basally expanded setae on all coxae.

*Female.*

Idiosoma 734  $\mu$  long, 340  $\mu$  wide.

Dorsum : Podosomal plate 203  $\mu$  long, 188  $\mu$  wide, broadly rounded anteriorly, posterior margin convex ; punctate, with 5 pairs of minute setae. Pygidial plate divided, each half elliptical, with minute seta posteriorly. Three pairs of minute setae lateral and another 3 pairs posterolateral to podosomal plate. Peritreme including stigma 30  $\mu$  long, above coxa III.

Venter : Sternal plate weakly outlined, 3 pairs of sternal setae out of the plate, 1st pair anterior to sternal plate, 2nd and 3rd pair lateral to the plate. First pair of sternal setae shorter than others, st I 5  $\mu$ , st II 13  $\mu$ , st III 22  $\mu$  long. Genital plate narrow, tapered posteriorly. Genital setae set free in cuticle. Anal plate elongate, pear-shaped, thickened margin best developed laterally, with anal pore well forward, paranal setae posterior to anal pore ; cribrum present. Opisthosoma with 20-21 spinous setae, which are slightly expanded basally.

Gnathosoma : 1 pair of basally expanded gnathosomal setae, 2 pairs of hypostomal setae and deutosternum with at least 2 denticles in single file. Palpal trochanter with 1 basally expanded seta. Chelicera 138  $\mu$  long, not distinctly bulbous basally. Chela 5  $\mu$  long.

Setal formula of legs :

	I	II	III	IV
Tarsus			3 2—1 4	3 2—2 5
Tibia	2 0—1 2	2 0—1 2	2 1—0 1	1 2—0 0
Genu	4 0—1 1	0 0—1 1	4 1—0 0	3 1—0 0
Femur	4 2—1 3	0 0—1 2	4 1—0 1	3 1—0 1
Trochanter	0 0—1 3	0 1—0 3	0 1—0 3	0 1—0 4

Legs : Length of tarsus I 93  $\mu$ , II 94  $\mu$ , III 113  $\mu$ , IV 83  $\mu$  long. Ventral setae basally expanded. Tarsus claws well developed. Coxa II with blunt anterior spur.

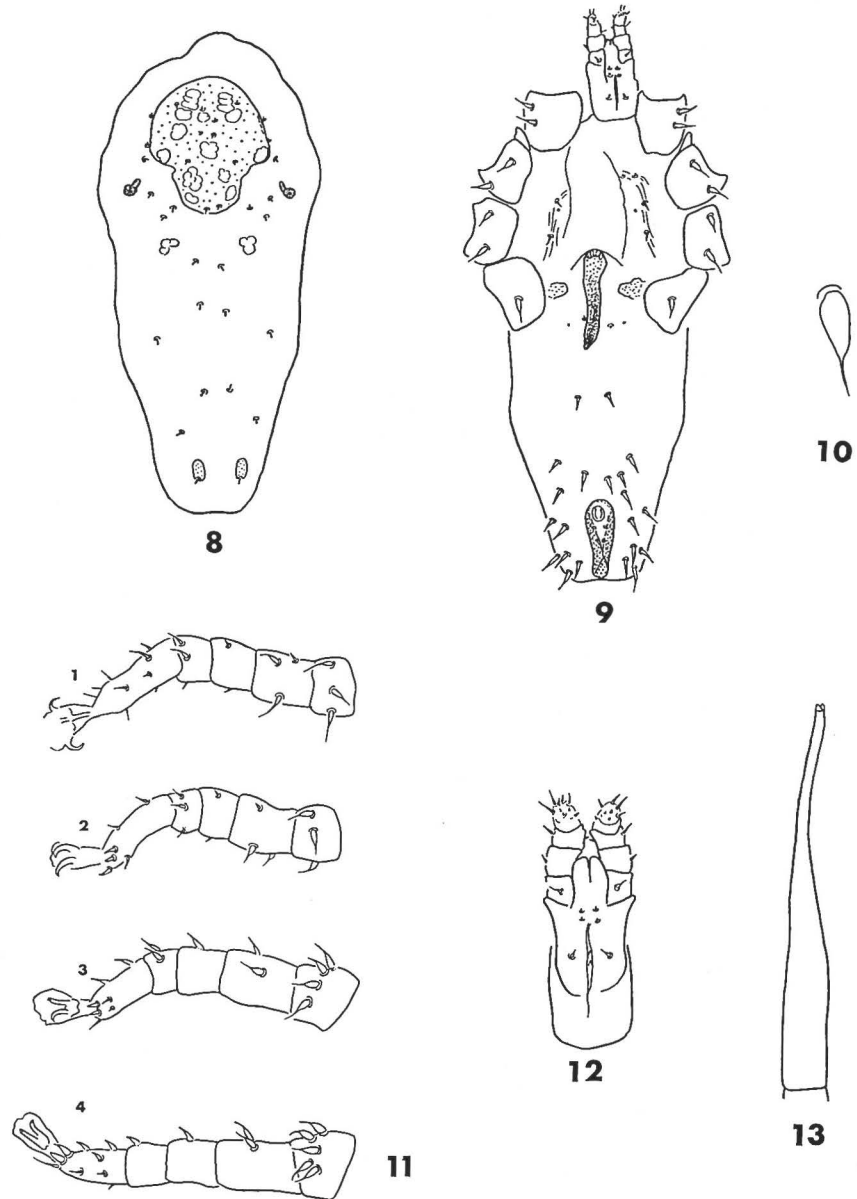


FIG. 8-13. — *Ptilomyssus missimensis* n. sp., female.  
8. — Dorsal view. 9. — Ventral view. 10. — Coxal seta.  
11. — Legs 1 to 4, ventral views. 12. — Gnathosoma. 13. — Chelicera.

Holotype : ♀ (Bishop 7491), taken from the nasal passages of bird " Honey eater " (Meliphagidae), collected at Mt. Missim, New Guinea (BBM-NG 21170) by H. CLISSOLD, deposited in the Acarology collection of Bishop Museum, Honolulu.

Paratypes : 3 ♀♀, same data as holotype.

Remarks : *Ptilonyssus missimensis* does not have the typical chelicera, bulbous basally of this genus, but the shape of body and pygidial plates of this species belongs to genus *Ptilonyssus*. Several kinds of species of genus *Ptilonyssus* have divided pygidial plates, paranal setae in back of anus, and basally expanded setae on coxae.

*Ptilonyssus missimensis* may be easily distinguished from the other species which have these characters by the presence of the short sternal setae I, which are obviously shorter than other sternal setae, and by the shape of the podosomal plate.

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B.P. Bishop Museum, Honolulu, Hawai 96819  
Nippon Veterinary and Zootechnical College, Tokyo.

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