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Previous volumes (2010-2017): 250 € / year (4 issues)
Acarologia, CBGP, CS 30016, 34988 MONTFERRIER-sur-LEZ Cedex, France

The digitalization of Acarologia papers prior to 2000 was supported by Agropolis Fondation under the reference ID 1500-024 through the « Investissements d’avenir » programme (Labex Agro: ANR-10-LABX-0001-01)

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A NEW PARASITIC MITE *ICHORONYSSUS COREANUS* FROM THE KOREAN PIPISTRELLE (ACARINA: DERMANYSSIDAE)

BY

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Abstract.

A new species of Dermanyssid mite *Ichoronyssus coreanus* is described from a Korean pipistrelle *Pipistrellus savii coreensis* Imaizumi, collected in central South Korea.

The genus *Ichoronyssus* Kolenati was redefined by Ewing (1922), and later restricted by Fonseca (1948). More recently Strandmann and Wharton (1958) reviewed and redesignated the genus, listing twenty-two known species. The majority of the twenty-three species recognized had been recorded from Europe, Africa and Americas, with a single species of the genus, *I. flavus* (Kolenati) having been reported from the Far East region of the U.S.S.R. (Bregetova, 1956).

In February, 1960, the author obtained a series of eight specimens of a dermanyssid mite from a single specimen of the Korean pipistrelle, *Pipistrellus savii coreensis* Imaizumi, taken at the Sangwonsa cave, Mount Samak-san, Chunchon, Kangwondo, Korea.

Study of this mite reveals it as a new species belonging to the genus *Ichoronyssus*, and is described herein. All measurements are in microns unless otherwise stated, and the averages of three (except paratype protonymph), with ranges in parentheses.

*Ichoronyssus coreanus* sp. nov.

Female. 705 μ (690-715) long by 427 μ (390-462) wide. An oval mite with long, flexible setae on dorsal plate.

*Dorsum* (Fig. A). — Dorsal plate rather elliptical in shape, with lateral margin at posterior fifth indented to form a truncate apex, 660 μ (650-675) long by 325 μ.

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Ichoronyssus coreanus Ah, sp. nov.

Fig. A, dorsum of female; Fig. B, venter of female; Fig. C, female gnathosoma; Fig. D, female chelicera; Fig. E, dorsum of male; Fig. F, venter of male; Fig. G, male gnathosoma; Fig. H, male chelicera.
wide; surface with a finely marked polygonal reticulation; setae of dorsal plate in definite pattern; with seventeen submarginal pairs varying in size (up to \(181 \ \mu\) long), and six pairs of submedian microsetae. Uncovered portion of integument with sixteen pairs of setae, four pairs of which are long and flexible (up to \(120 \ \mu\) long). Chaetotaxy as illustrated.

**Venter** (Fig. B). — Tritosternum pilose, bifurcate to \(175 \ \mu\) long from base. Presternal area reticulate. Sternal plate wider than long, \(103 \ \mu\) (97-110) long by \(190 \ \mu\) (170-208) wide; with a pair of closely striated stigma-like areas anterolaterally; posterior margin of sternal plate invaginated to a level of second sternal setae; anterior pair of sternal pores with transverse axis nearly parallel with anterior margin of plate, and second pair of pores located postero-lateral to second pair of setae; first and second pairs of sternal setae subequal, \(76 \ \mu\) (65-80) long; third pair slightly longer, \(83 \ \mu\) (78-90) long. Metasternal setae much smaller than third pair of sternal setae, \(49 \ \mu\) (48-52) long. Epigynial plate elongated and rounded posteriorly; with single pair of setae and scale-like lines; extending to about halfway between coxa IX and anal plate. Anal plate pear-shaped, \(158 \ \mu\) (151-162) long by \(95 \ \mu\) (95) wide; with principal area oval, and abruptly tapered to posterior end; anus located distinctly closer to anterior margin of plate than postanal seta; postanal setae (about \(35 \ \mu\) long) inserted at a level of posterior end of principal area; postanal setae \(64 \ \mu\) (62-64) long. Approximately 18-19 pairs of truely ventral setae plus 2 marginal pairs and a stouter caudal pair measuring about \(90 \ \mu\) long. Peritreme extending forward to middle of coxa I, \(317 \ \mu\) (310-320) long.

**Legs** (Fig. I). — Coxae with usual setae well developed; antero-dorsal spines of coxa II prominent; coxae II, III and IV with ventral, semicircular elevations; setae of legs essentially normal, femora I and II and genu I with long moderately developed setae on dorsal surfaces; tarsus I distinctive in having long and rather slender setae along with an apico-dorsal seta mounted on prominent pedicel, and four blunt spur and a strongly curved spur at distal margin; one dorso-lateral seta near proximal portion extremely long, measuring \(108 \ \mu\) (100-110) long.

**Gnathosoma** (Figs C, D). — Chelicera \(183 \ \mu\) (178-192) long; chela about \(51 \ \mu\) long; fixed chela with a pair of recurved teeth and an apical hook-like tooth; movable digit with broad proximal base, tapered distally. Tectum triangular, with margin minutely serrated. Deutosternum with a single longitudinal row of 9-10 denticles. Corniculi long, transparent process extending almost to anterior margin of palpal femur. Palpi well supplied with setae; tarsus bearing usual two-tinged process; trochanter with a distinct process.

**Male.** \(658 \ \mu\) (650-670) longy by \(453 \ \mu\) (445-465) wide; general appearance as in female.

**Dorsum** (Fig. E). — Dorsal plate entire, tapering to an evenly rounded caudal extremity, \(602 \ \mu\) (590-610) long by \(328 \ \mu\) (320-335) wide. Chaetotaxy and reticulation as in female.
Venter (Fig. F). — Tritosternum and presternal area as in female; holoventral plate divided into a sternogenital and a ventro-anal plate; reticulation distinct; sternogenital plate tongue-like, measuring 258 μ (250-270) long and widest 165 μ (160-170) at halfway between second and third sternal setae; with genital opening on slightly convexed anterior margin flanked by anterior sternal setae; setae and pores of sternal area arranged as in female. Ventro-anal plate elongate, measuring 295 μ (294-306) long, with 4 or 5 setae on preanal area; adanal setae about 25 μ long, postanal setae 50 μ long. Approximately 12 pairs of setae on unarmed portion

Ichoronyssus coreanus Ah, sp. nov.

Fig. I, female tarsus I; Fig. J, venter of protonymph; Fig. K, dorsum of protonymph; Fig. L, egg shell.
of venter; posterior pair longest (87.5). Peritreme slightly shorter than in female (185 μ long).

Gnathosoma (Figs G, H). — Chelicerae 177.5 μ long, with marked sexual dimorphism; fixed digit slender; movable digit divided at base, longer branch measuring 48 μ long.

Legs. — Essentially as in female.

Protonymph. 600 μ long by 300 μ wide, exclusive of gnathosoma.

Dorsum (Fig. K). — Dorsal plates with a large podosomal plate, a smaller opisthosomal plate and two pairs of intermediate platelets; podosomal plate broadly triangular, 21.5 μ long by 175 μ at widest width, tapering to anterior tip; with six submarginal pairs of long setae (up to 85 μ long), and four submedian pairs of microspurs; opisthosomal plate roughly pentagonal, 85 μ long by 95 μ at widest points; with four pairs of microsetae and posterior marginal pairs measuring 48 μ long. Anterior pair of intermediate platelets oval, about three times as large as the posterior one, measuring 11 μ long by 20 μ wide; approximately ten pairs of setae on unarmed portion of dorsum (up to 85 μ long).

Venter (Fig. J). — Sternal plate indistinctly defined, with three pairs of subequal setae approximately 50 μ long. Anal plate similar to that of adult female. Four pairs of setae on unarmed portion of venter posterior to sternal plate.

Gnathosoma. — Essentially as in female.

Legs. — Essentially as in female.

Egg (Fig. L). — In the course of mounting, an egg was expelled. Pearly oval in shape, approximately 450 μ long by 300 μ wide. Shell smooth except posterior half where external surface is ornated with about 150 bulged patterns of irregular shapes and sizes.

Type Host. — Pipistrellus savii coreensis Imaizumi (the Korean pipistrelle).

Type Locality. — The Sangwonsa Cave, Mount Samak-san, (654 m. elevation), Chunchon, Kwangwon-do, Korea.

Type Material. — Holotype female, allotype male and paratype protonymph are deposited in the U. S. National Museum. Other paratypes are in the author’s collection. All types were collected from the type host on February 16, 1960. Collector : Hyong-Sun Ah.

Discussions: Ichoronyssus coreanus sp. nov. may be distinguishable from all other species of the genus Ichoronyssus in that the submarginal setae on the dorsal plate are extremely long and flexible. In this respect this species appears to be related to I. australicus (Womersley), from which it is distinguished by its typically divided holoventral plate in male. I. coreanus more closely resemble a Nearctic species I. longisetosus Furman, 1950 than any other. However, from

the latter the new species is readily separated by the long submarginal setae on the dorsal plate, by the female fixed chela with an apical hooklet in addition to two subapical hooklets, by the male sternogenital plate with the broadly rounded posterior margin, and by the male ventro-anal plate with less than four pairs of setae.

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