On six new oribatid mites from Japan

By

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Zygoribatula truncata n. sp. (Fig. 1)

The rostrum is slightly pointed. The rostral hairs are thick and rather rough, reach beyond the tip of the rostrum by half their length. The lamellae are almost equally thick throughout; they are jointed just behind their tip by the translamella, which is rather broad and slightly bent. The lamellar hairs are of the same appearance as the rostral hairs, but are twice as long as the latter; they are situated on the weakly projected tip of the lamellae. The interlamellar hairs are directed upward, situated a little behind the middle of the distance between the insertion of the lamellar hair and the pseudostigmatic cup. The latter is somewhat extended forward; besides the opening for the pseudostigmatic organ they have another window at the posterior end. The pseudostigmatic organ has a club-shaped head, which is set with tiny hairs. The tectopodia I are a little pointed; the tectopodia II are well developed and projected forward.

The hysterosoma is rounded, longer than its breadth, broadest behind the middle; the anterior end projects in a trapezoidal arch. The shoulders are project a little beyond the outline of the hysterosoma, having a short shoulder hair. The dorsal hairs are short and

slightly incurved. At the anterior part of the hysterosoma there are a number of large irregular dark areas and just behind them many more smaller ones present.

The anterior pairs of legs comparatively

Fig. 1 *Zygoribatula truncata* n. sp.

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thicker than the posterior ones. The femora I and II are considerably well developed. All tarsi have three claws, of which the middle one is the strongest.

Measurement: 333(356)371 × 205(230)243 μ.

Holotype: 1 ex. Isa-Machi, Miya-Shi, Yamaguchi-Ken. XII. 16. 1960. Paratypes: 45 exs. ditto; 12 exs. Arai, Fukushima-Shi, Fukushima-Ken. XI. 16. 1960.

This new species is closely related to *Z. frisiae* Oudemans, but (1) the apparent coarse propodosomal hairs, (2) the truncate tip of the lamellae, (3) the considerably projected anterior end of the hysterosoma and (4) the much smaller size of the body distinguish them.

***Peloribates acutus* n. sp.** (Fig. 2)

On the surface of the body two kinds of punctuations, i.e. large and small ones, are found (Fig. 2d). The lamellae become slender toward the tip. The propodosomal hairs are set with tiny hairs; the lamellar and the interlamellar hairs are well developed, twice as long as the rostral hairs. The pseudostigmatic organ has a very slender spindle-like head whose tip tapers into a sharp point; it is set with two rows of tiny hairs unilaterally.

The pteromorphae are triangular, rounded

ventrally. The anterior border of the hysterosoma projects forward beyond the hair-pores of the interlamellar hairs. The dorsal hairs, of 14 pairs, are considerably long, finely feathered, ending in a sharp point. On the lateral part of the hysterosoma four pairs of unknown organs are present; they are round protuberances with a central opening, from which a short rod projects. The anterior part of the hysterosoma exhibits on each side, through the integument, a kind of network which seems radiating from the shoulder region. All tarsi have three claws.

Measurement: 557(560)563 × 397(404)410 μ.

Holotype: 1 ex. and paratypes 2 exs. Himeji-Shi, Hyogo-Ken. XII. 17. 1960.

This new species is clearly distinguishable from the long hairy members of *Peloribates*, *P. hungaricus* Balogh, *P. longicoma* Hammer and *P. longisetosus* Willmann, by the pseudostigmatic organs which taper into sharp point and the strongly arched anterior border of the hysterosoma.

***Pergalumna capillaris* n. sp.**

(Figs. 3 and 7)

The rostrum forms a round tip, which projects beyond the outline of the propodosma.

Fig. 2 *Peloribates acutus* n. sp.

- 2a) The pseudostigmatic organ. 2b, 2c) The small protuberances on the hysterosoma.
2d) Network on the anterior part of the hysterosoma.

Fig. 3~6 Dorsal view and the pseudostigmatic organs of four new species of Galumnidae

3) *Pergalumna capillaris* n. sp.

4) *Pergalumna harunaensis* n. sp.

5) *Pergalumna akitaensis* n. sp.

6) *Galumna cuneata* n. sp.

The lamellar and sublamellar carina run almost parallel; the interspace between them is rather narrow. The rostral and lamellar hairs are short fine bristles, bend inwards and upwards. The interlamellar hairs are more or less thicker than the remaining hairs and directed upwards. The pseudostigmatic organ is a smooth whip-like hair, tapering into a thin thread. Just

interior to the pseudostigmatic cup *areae porosae* are found. The border line between the propodosoma and the hysterosoma is hardly seen. The pteromorphae are well developed and rather flat, extending almost the tip of the rostrum; it is constricted at the anterolateral margin; from this constriction a S-formed ridge runs toward the joint; the slit is

distinct. On the hysterosoma any hair can not be seen. Three pairs of *areae porosae* (Aa , A_1 , A_3) are found; they are large and oblong. The hair-pore r_3 is found at the middle point between *im* and A_1 .

Measurement: $742(810)845 \times 589(637)653 \mu$.

Holotype: 1 ex. Shichizuka, Hiroshima-Ken. I. 26. 1961. Paratypes: 3 exs. ditto; 1 ex. Ôme-Shi, Tokyo. XI. 14. 1960.

***Pergalumna harunaensis* n. sp.**

(Figs. 4 and 8)

The propodosomal hairs are comparatively

thick and long, their anterior half seems slightly rough. The rostral hairs are shorter than the lamellar or the interlamellar hairs, the latter are almost of equal length each other; the interlamellar hairs are strongly curved, directed at first inwards and upwards and then outwards. The pseudostigmatic organ is directed outwards, a slender club, being thickened toward the rough tip.

The pteromorphae are rounded ventrally, so that the constriction at outer margin cannot be seen fully; a chitinous ridge starts from median point of the joint, being extinguished

Fig. 7~10 Lateral view of the propodosoma, showing the rostral, lamellar and interlamellar hairs, the lamellar and sublamellar carinae.

7) *Pergalumna capillaris* n. sp. 8) *Pergalumna harunaensis* n. sp.

9) *Pergalumna akitaensis* n. sp. 10) *Galumna cuneata* n. sp.

halfway; the slit (*ia*) is present. The border line between the propodosoma and the hysterosoma is distinct; behind them *hy*, which have irregular uneven margin, are found. Four pairs of *areae porosae* (*Aa*, *A*₁, *A*₂, *A*₃) are found on the dorsum; *Aa* is largest, oblong or longitudinal triangle, three times as long as its breadth; the remaining pores are oval. The slit (*im*) can not be seen. Lateral to *A*₁ a fairly large gland opening is present. The hair-pore *r*₃ is found between them; *r*₁ and *A*₃ are very close together. At the posterior end of the hysterosoma we can find many small pores, which vary in their size.

Measurement: 538(561)576 × 397(416)435 μ.

Holotype: 1 ex. and paratypes: 13 exs. Haruna-Ko, Gumma-Ken. XI. 12. 1960.

***Pergalumna akitaensis* n. sp.**

(Figs. 5 and 9)

The propodosomal hairs are fine, smooth bristles; the rostral hairs are the longest; the lamellar hairs are three-fourth as long as the former; the interlamellar hairs are very minute, directed inwards. Just behind them, along the anterior margin of the hysterosoma, a pair of small slender *areae porosae* can be seen. The pseudostigmatic organ is a slender club, slightly thickened toward the tip, which shows little rough appearance.

The pteromorphae are rounded ventrally, having many distinct, radiating, irregular ridges which merge in distally: the slit (*ia*) is present. Four pairs of *areae porosae* (*Aa*, *A*₁, *A*₂, *A*₃) are situated on the dorsum of the hysterosoma; they are rather small; *Aa* is the largest, a slender pore, but it seems pear-shaped. The remaining pores (*A*₁, *A*₂, *A*₃) are rounded. Between *A*₁ and the gland opening (*gla*) the hair-pore *r*₃ is found. The slit (*im*) is situated closer to *ms* than to *r*₃.

Measurement: 678 × 546 μ.

Holotype: 1 ex. and paratype: 1 ex. Kamioka-Machi, Akita-Ken. XI. 9. 1960.

***Galumna cuneata* n. sp.**

(Figs. 6 and 10)

The propodosomal hairs are almost of similar appearance, showing rough structure throughout: the lamellar hairs are a little longer than the remainder: the interlamellar hairs are

directed upward, bending slightly. At the posterior margin of the propodosoma there are two pairs of *areae porosae*, the one just behind the interlamellar hairs and the other beside the pseudostigmatic cups. The pseudostigmatic organ has a club-shaped head, which is set with tiny hairs.

The pteromorphae are light in color: the radiating chitinous ridges on them are obscure, hardly seen. The *areae porosae* on the hysterosoma are much varied in size and form; the most large and characteristic are *Aa*, which are wedge-shaped. *A*₁ and *A*₂ are the smallest, almost rounded, while *A*₃ are elongate. The slit (*im*) is situated posterior to *A*₁, between the hair-pore *r*₃ and *gla*.

Measurement: 666 × 525 μ.

Holotype: 1 ex. Tomobe-Machi, Ibaraki-Ken. XI. 14. 1960. Paratypes: 1 ex. ditto; 2 exs. Hino-Machi, Shiga-Ken. XII. 9. 1960.

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日本産ノミバエ科に関する研究

第1報 1 未記録種を含むノミバエ 6 種について

Studies on phorid flies (Phoridae, Diptera) in Japan Part I. Key to subfamilies and important genera of Phoridae, and descriptions of six species belonging to five genera

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緒言

ノミバエ科に関する最も古い記録は、1796 年に Latreille が *Phora* (属) として記載したものである。その後今日までに多くの研究者によつて世界で約 1,600 種が報告されている。これらのうち本邦産のノミバエは 1938 年以来 Schmitz, H. および Brues, C. T. らによつて 8 属 18 種が紹介されているが、わが国からの報告は極めて少ない。1915, 6 年に松村が *Conicera japonica* (クロノミバエ), *Phora apicalis* (キイロノミバエ) の 2 種を発表したのが本邦からの最初の記載で、次で木下 (1918) が東大、伝染病研究所構内に放置されたモルモットの屍体を走行していた無翅ノミバエを *Puliciphora tokyoensis* として発表した。また素木は日本昆虫図鑑 (1932) に *Phora egregia* (キゴシノミバエ) をあげているが、Schmitz (1949) はこれを *Diploneura* (*Tristoechia*) *bifasciata* Walker, 1860 の synonym としている。その後佐々木 (1935) は松茸に寄生するものを松茸バエ, すなわち *Aphiochaeta matsutakei* として報告している。

ノミバエ科に属するものは微小なハエ類で、幼虫は植物の腐蝕したものまたは動物の屍体などに発生し、時と

して昆虫、カタツムリおよび白蟻の巣などに寄生する。今日まで日本ではノミバエ科のハエについてはあまり注意されていなかったが、最近これらのハエが食品類に混入したり、偶発性ハエ症の例が本邦各地でしばしば見出されるなど衛生学的にも重要視されるようになった。そこで著者らは Schmitz の分類を参考にして日本産ノミバエ科の亜科および重要属の検索表を作製し、合わせて普通種 5 種ならびに 1 未記録種を記載する。

ノミバエ科の特徴

本科のハエは甚だ小形で、胸背部は円く凸出してあたかも佝僂の如き形をなし、極めて活潑に飛翔または歩走する。従つて欧米では Humpbacked flies, Buckelfliegen などと呼ばれている。

頭部は小さく前後に扁平で、額は一般に特有な棘毛を有する。触角は 3 節からなり第 3 節は大形で、先端または亜先端部から触角刺毛 (端刺) を生ずる。脚は比較的大きく、脛節の剛毛の有無および数は、属、種の特徴として重要である。翅は通常存在するが、中には痕跡的なもの、全くないもの、あるいは雌のみ無翅のものなどがある。翅脈は双翅目中の他のものと著しく異なり、前縁脈、第 1 脈 (r_1), 第 2 脈 (r_4), および第 3 脈 (r_5) が太く、あとは細い縦脈であり横脈をもたない。(図 1)

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