

THREE NEW SPECIES OF THE CIMICOMORPHA FROM JAPAN (HEMIPTERA)

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THREE NEW SPECIES OF THE CIMICOMORPHA FROM JAPAN (HEMIPTERA)

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In the present article one species of the Microphysidae and 2 species of the Termatophylini, Miridae are described, and these groups are newly added to the Japanese fauna.

***Loricula pillosella* Miyamoto, sp. nov.**

(Pl. 11; Textfigs. 1—4)

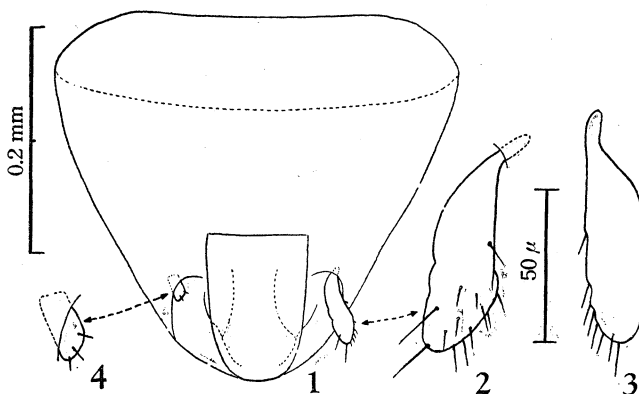
Size: For male body length 2.9 mm., width across humeri 0.67 mm. and greatest width across hemelytra 0.91 mm.

Coloration: General colour brownish. Head chestnut brown, reddish toward apex, with eyes dark brown; antennae with the basal segment broadly pale, 2nd segment dark brown and 2 apical ones blackish; rostrum with 2 basal segments reddish and the others pale. Pronotum and scutellum brown, darker along the transverse impression behind collar. Hemelytra pale brown, with a narrow pale marking before and behind cuneus, costal margin somewhat reddish, and cuneus brown with reddish outer and inner margins. Legs with femora yellowish orange and tibiae pale excepting darkened base of anterior pair. Ventral side brownish.

Structure: Body large and elongate, covered with hairs. Head shagreen and somewhat shining, furnished with sparse long hairs, longer than wide across eyes (.50 : .41), narrowed toward both apices, with a broadly rounded impression between ocelli; eyes rather small, width distinctly less than half a distance between eyes, interocellar distance about half as wide as head. Antennae relatively long, about half as long as body, distinctly pilose on three apical segments, relative lengths of the segments from I to IV=.17 : .50 : .39 : .41. Rostrum extending over apices of anterior coxae, furnished with several sensory hairs on each segment, proportions of the segments from I to IV=.10 : .22 : .23 : ca. .20.

Pronotum divergent posteriorly, markedly behind middle, with carinate lateral sides, with distinct collar which is about half as long as

anterior lobe in median length; anterior lobe with a pair of obscure low swellings and not elevated on lateral sides, posterior lobe with a broadly concaved hind margin; scutellum subtriangular, somewhat wider than



Textfigs. 1—4. *Loricula pilosella*, ♂. 1 genital segment, dorsal view, 2 & 3 right-hand parameres, dorsal & outer views respectively, 4 left-hand paramere, dorsal view.

long, distinctly elevated before middle, with an impression in middle of base, and posterior area not broadly flattened. Hemelytra covered coarsely with hairs, with a rather distinct fracture before cuneus, apex of cuneus rounded but not angulated, a small narrow membrane cell inside the cuneus, and with 4 membrane veins, 3 of which originate from the cell. Legs pilose, particularly on tibiae, and hind tibiae with erect long hairs on inner side excepting base, those hairs much longer than diameter of tibiae; tarsi 2-segmented.

Male genital segment (Textfig. 1) symmetrical, somewhat flattened dorso-ventrally and covered with long hairs; parameres (Textfigs. 2—4) of dissimilar shape; right-hand one distinctly larger than the left-hand, which is rudimental.

Holotype ♂, macropterous, Akan, Hokkaido, 4. vii. 1958, S. Miyamoto, by sweeping plants; the type is kept in the collection of Entomological Laboratory, Kyushu University.

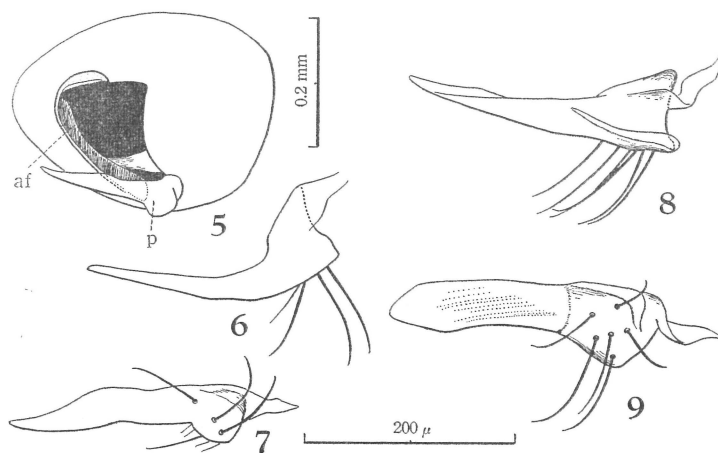
This may be most related to *L. elegantula* (Baelensprung) but easily distinguished from the latter by the larger size, distinct hairs on antennae, hemelytra and on legs, shagreen head, smaller eyes, an impression on vertex, carinate sides of prothorax and many other points. *Loricula* has been previously known from Europe and North Africa but not from eastern parts of the Palearctic Region.

***Termtophylum hikosanum* Miyamoto, sp. nov.**

(Pl. 11, fig. a; Textfigs. 5—7)

Size: For male body length 2.85 mm., width across humeri 0.83 mm. and greatest width across hemelytra 0.89 mm. Those for females 3.02—3.34 mm. long, 0.86—0.94 mm. wide and 1.06—1.20 mm. wide.

Coloration: General colour brownish. Head dark brown with eyes blackish, 2 basal segments of antennae brown excepting apical half of 2nd dark and with the rest of antennae and rostrum pale. Pronotum dark brown with furrows blackish and postero-lateral corners paler, scutellum dark. Hemelytra brown, lighter on outer half of corium, cuneus more or less reddish brown, membrane somewhat infuscated, with vein dark but both its apices pale. Legs pale brown. Undersides of head and anterior half of prosternum pruinose, meso- and metasterna shining dark brown except for evaporating area brown pruinose and abdomen shining brown.



Textfigs. 5—7. *Teratophylum hikosanum*, ♂. 5 genital capsule, caudal view, *af* anal flap, *p* left-hand paramere, 6 & 7 left-hand paramere, ventral (from above in the relative situation of textfig. 5) & outer views respectively.

8 & 9 *T. orientalis*, left-hand paramere, ventral and outer views respectively.

Structure: Elongate, covered with silvery, distinct, suberect hairs on dorsum. Head horizontal, nearly as long as wide across eyes (.50 : .475), distinctly produced forward between eyes, which are large, prominent and erectly pilose, interocular space noticeably narrower than width of an eye (.115 : .18), with a shallow inverted Y-shaped impression on vertex between eyes. Antennae less than half the length of body; 1st segment somewhat thick, covered with a few sparse hairs, slightly extending over tip of head; 2nd segment the longest, pubescent, widened toward apex, with the apical portion in male thicker than 1st but as thick as in female; 2 apical segments slender and pubescent; relative lengths of the

segments from I to IV=.22 : .50 : .26 : .22 in male, .20 : .47 : .26 : .22 in female. Rostrum long, the apex very slightly extending beyond apices of anterior coxae, 2nd segment distinctly longer than others, 3rd longer than 4th; proportions of the segments from I to IV=.12 : .44 : .27 : .16.

Pronotum rather long but wider than long (.83 : .60), with 2 transverse punctured furrows and sinuate lateral sides, apex of the disc about one-third as wide as the base which is broadly straight in middle, lateral margins obtusely carinate but not edged; collar almost one-fifth as long in middle as pronotum; anterior lobe with a pair of very long, antero-laterally directed bristles before middle of sides, with a median longitudinal furrow punctured at bottom and with lateral similar ones continued to the posterior transverse groove; posterior lobe distinctly longer than anterior lobe, or ca. 1.5 times as long as the latter; scutellum wider than long (.46 : .34), faintly, transversely rastrated, with a shallow impression at middle of base. Hemelytra well extending over apex of abdomen, somewhat deflected behind cuneal fracture; clavus with a row of punctures along claval vein, length of claval commissure a little more than scutellum long; corium very narrowly margined along costal margin, with a row of punctures (along R-vein) between costal margin and corial furrow, but the row evanescent halfway, the area in front of puncture row thickened, corial furrow evanescent apically; cuneus about two-thirds as wide as long; membrane with a rather broad cell, the vein with 2 short branchlets before middle. Femora thick, posterior femora with 2 or 3 long erect hairs on ventral side behind middle, basal segment of tarsi subequal to the distal but distinctly longer than 2nd (.13 : .10 : .12), claws with a basal lobe. Evaporating area triangular, prominent and occupying medial half of metapleuron.

Male genital capsule (Textfig. 5) or 9th abdominal segment asymmetrical and rotated ca. 120° to the left and then anal flap situating ventro-laterally on left side and left-hand paramere dislocated to the right. Right-hand paramere reduced; left-hand one (Textfigs. 6 & 7) well-developed, slightly sinuate, with apical half narrowed toward tip and the base thick and furnished with several bristles.

Holotypy ♂, allotype ♀ and one paratype ♀, Hikosan, Buzen, Kyushu, 23. viii. 1961, S. Miyamoto, at light; 1 ♀, Korasan, Kurume, Kyushu, 2. v. 1952, S. Miyamoto, on a tree-blossom; the holotype and allotype are kept in the collection of Entomological Laboratory, Kyushu University.

The new species resembles *T. orientalis* Poppius from Formosa but it is separated from the latter by distinctly paler colour or pale brown colour, relatively longer but thinner 2nd segment of antennae, slenderer hairs on dorsum and structure of left-hand paramere. Left-hand paramere of *T. orientalis* * is shown in Textfigs. 8 & 9.

* Formosan material determined from literature by S. Miyamoto.

***Termatophylloides pallipes* Miyamoto, sp. nov.**

(Pl. 12, fig. b)

Size: For female body length 2.46 mm., width across humeri 0.86 mm. and greatest width across hemelytra 1.11 mm.

Coloration: General colour dark brown. Head reddish brown and slightly paler on apex; eyes dark brown; basal segment of antennae dark brown, 2nd pale yellow and tinged with red on basal half, 3rd uniformly pale yellow and 4th slightly infuscated; rostrum yellowish excepting the basal segment brownish. Pronotum dark brown, along the furrows blackish, with collar somewhat pale; scutellum brown, darker on base and the apical portion yellowish. Hemelytra brown, darkened along claval suture and interior to embolium, cuneus dark brown, membrane infuscated, with a pale marking posterior to cuneus, an obscure longitudinal pale marking in middle and with a blackish one between the pale markings. Legs yellowish, with middle and hind femora broadly brown except for both apices. Ventral side shining, brownish on head and sterna and blackish on abdomen; evaporating area grayish and pruinose.

Structure: Body oval, covered with long suberect hairs; hairs on dorsum nearly equal to the length of 1st antennal segment, mixed with some longer and shorter ones, those hairs on dorsum excluding apical portion of head toward backward but each pair of long hairs near base and on lateral sides of pronotum near anterior corners toward anterolaterally. Head distinctly produced anteriorly between eyes but slightly shorter, in full view, than wide across eyes (.37 : .44); eyes large, elongate, hirsute, broadly rounded exteriorly, width of an eye a little more than half as wide as interocular space. Antennae relatively short, pubescent on 3 distal segments, 1st segment the thickest, but shortest, with a few hairs near apex, 2nd the longest and widened toward apex, 3rd and 4th thin, equal in length with each other; ratios of antennal segments from I to IV = .15 : .32 : .21 : .21. Underside of head shallowly concaved between eyes. Rostrum rather long with apex slightly extending over apices of anterior coxae, 3rd segment shorter than 4th; relative lengths of the segment from I to IV = .10 : .33 : .22 : .25.

Pronotum wider than long (.86 : .55), lateral margins very slightly sinuate and almost carinate behind collar which is distinguished from anterior lobe, and hind margin broadly straight in middle. Pronotal disc with 2 distinct transverse furrows punctured at bottom; anterior lobe with 3 longitudinal grooves, one median and a pair of submarginal; posterior lobe broad. Mesoscutum narrowly exposed on hinder portion. Scutellum broader than long (.43 : .35) somewhat convexed, with a transverse impression at base and a few transverse faint rastration. Hemelytra surpassing over tip of abdomen, with a distinct cuneal fracture and deflected behind it; clavus long, with a row of punctures along claval

vein, length of claval commissure distinctly more than length of scutellum; corium thickened along costal margin but not margined, with a row of punctures along R-vein and obscure rough rastration near claval suture, both the submarginal puncture row and corial furrow divergent posteriorly and evanescent on apical sixth, the area between costal thickening and puncture row depressed except the basal third; cuneus rather broad, about two-thirds as wide as long; membrane with an elongate cell, the vein enclosing it thickened near apex and with a trace of branch near base. Posterior femora furnished with 3 very long erect hairs on apical third, 2 on ventral and one on ventro-lateral sides, tarsal segments subequal in length to each other but 3rd segment very slightly longer, claws with a lobe at base. Evaporatory area triangular, more or less elevated, spreading over medial two-thirds of metapleuron.

Holotype ♀, Kashii, Fukuoka, Kyushu, 10. viii. 1958, S. Miyamoto, sweeping herbs; the type is preserved in the collection of Entomological Laboratory, Kyushu University.

Present new species possesses a little different characteristics in structure from those in the genus *Teratophyloides* Carvalho, e.g. shorter head, larger eyes, parallel-sided inner margins of eyes, longer 1st segment of antennae which is slightly extending over tip of head, unequal lengths of rostral segments, somewhat convexed scutellum and posteriorly widened embolium. But this should be a representative of the genus in the structure of hair-covering and punctured furrows of pronotum as well as in many points.

From *T. pilosus* Carvalho, in additions to the above-mentioned characteristics, *pallipes* is easily separated in paler colour of legs, yellowish apex of scutellum, larger size, distinctly longer 2nd segment of rostrum, relatively longer posterior lobe of pronotum, narrower cuneus, etc. Discovery of a species belonging to this Neotropical genus from the Old World is interesting.

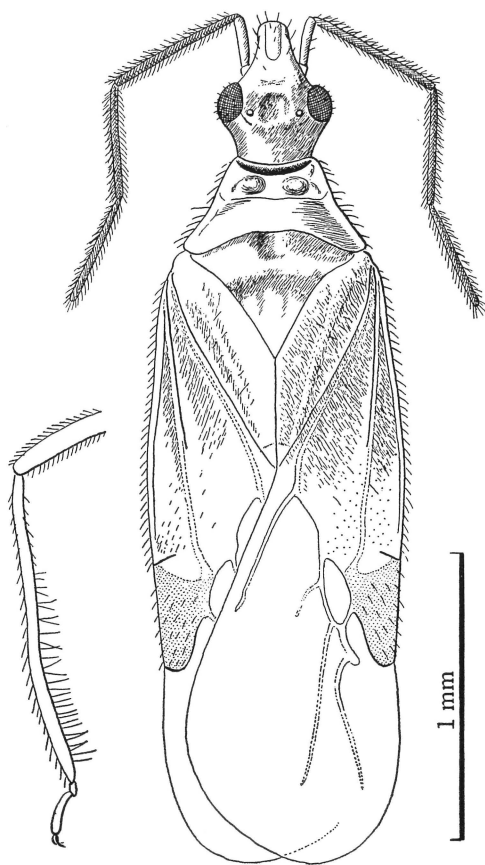
Explanation of plates 11 and 12

Pl. 11. *Loricula pilosella* Miyamoto, ♂.

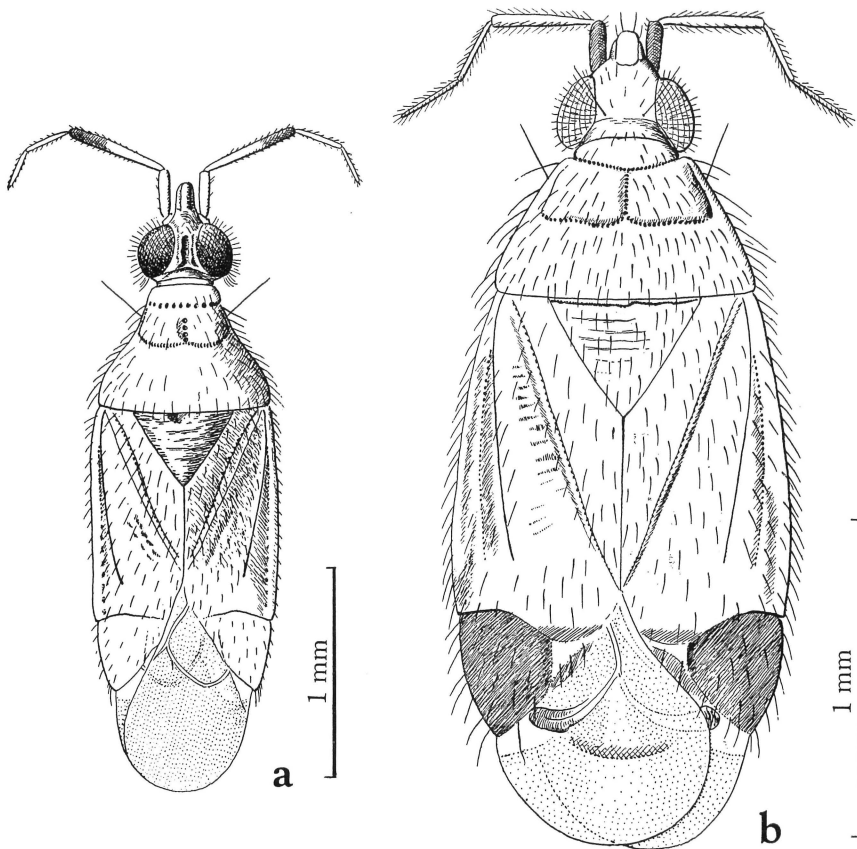
a hind leg of left side.

Pl. 12. a *Teratophyllum hikosanum* Miyamoto, ♂.

b *Teratophyloides pallipes* Miyamoto, ♀.



New species of *Cimicomorpha*



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