

Two new species of *Pseudovelgia* (Insecta: Heteroptera: Veliidae) from Vietnam

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Abstract

Two new species of *Pseudovelgia* HOBERLANDT, 1950, are described: *Pseudovelgia intonsa* sp.n. and *P. pusilla* sp.n. They represent the first records of *Pseudovelgia* from Vietnam.

Key words: Veliidae, *Pseudovelgia*, new species, Vietnam.

Zusammenfassung

Zwei neue Arten der Gattung *Pseudovelgia* HOBERLANDT, 1950, werden beschrieben: *Pseudovelgia intonsa* sp.n. und *P. pusilla* sp.n. Damit wird die Gattung *Pseudovelgia* erstmals für Vietnam nachgewiesen.

Introduction

Pseudovelgia HOBERLANDT, 1950, was originally established as a subgenus of *Microvelgia* WESTWOOD, 1834, but soon raised to generic rank by ESAKI & MIYAMOTO (1955). As far as known at present, *Pseudovelgia* is widely distributed over South-east Asia and West and Central Africa (LINNAVOURI 1977, POLHEMUS & POLHEMUS 1990). Up to now, 19 species are described from the Oriental Realm (ANDERSEN 1983, LUNDBLAD 1933, NIESER 1995, POLHEMUS & REISEN 1976) and 6 species from adjacent palaeartic areas in Japan and Korea (ESAKI & MIYAMOTO 1955, MIYAMOTO 1959). From Vietnam *Pseudovelgia* has not been recorded previously, because the insect fauna of this country has hardly been studied yet.

Abbreviations: NHMV = Natural History Museum, Vienna; apt. = apterous.

Acknowledgements

I am especially grateful to Dr. Herbert Zettel (NHMV) for his critical advice, to Dr. John T. Polhemus (Colorado Entomological Museum, Englewood, Colorado) for reviewing the manuscript, and to Janet Margerison-Knight (The Natural History Museum, London) for the linguistic review. Thanks are also due to Peter Sehnal (NHMV) for producing the electron-microscope photographs, and to Harald Schillhammer (NHMV) for reading the manuscript.

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Pseudovelia intonsa sp.n.

Type locality: South Vietnam, 10 km south of Dalat (11°54' N, 108°27' E).

Holotype: ♂ (apt.) [S-VIETNAM: 16.4.1995\ 10km S Dalat, 1500m\ 11°54'N 108°27'E\ Pacholatko & Dembicky] (NHMV). **Paratypes:** 4 ♂♂ (apt.), 7 ♀♀ (apt.): same data as holotype (NHMV). **Further material:** 1 larva: same data as holotype (NHMV).

Diagnosis. Eyes with short hairs; grasping comb on fore tibia of males 0.44 times as long as tibia (Fig. 11); segment 1 of hind tarsus 0.75 times as long as segment 2 and in males with a row of long, bristle-like hairs along entire length (Fig. 14); segment 8 of males with specific ventral structure (Figs. 2, 9).

Description:

Length: 2.5 - 2.6 mm (♂♂), 2.9 - 3.1 mm (♀♀); maximum width in ♂♂ across metanotum: 0.9 - 1.0 mm, in ♀♀ across abdominal tergite 4: 1.1 - 1.2 mm; width of head: 0.6 - 0.7 mm (♂♂ and ♀♀); width of pronotum: 0.8 - 0.9 mm (♂♂ and ♀♀).

Apterous male: Colour. Head light brown, with median, impressed line and indentations on vertex dark. Rostrum with segment 1, ventral stripe on segment 3, and entire segment 4 dark, remaining parts yellow. Antennae with apex of segment 1, apical part of segment 2, and entire segments 3 and 4 brown, remaining parts yellow. Pronotum light brown, with horizontal stripe near anterior margin and low, median ridge dark yellow, and with black punctures irregularly distributed over dorsal portion except stripe and ridge (number and size of punctures rather variable). Legs with apex of femora, of tibiae, and of tarsal segments, and base of tibiae dark, proximal two thirds of middle tibiae brown, remaining parts yellow. Metanotum, tergites, laterotergite 1, inner parts of laterotergites 2 - 7, and sutures between laterotergites dark brown, outer parts of laterotergites 2 - 7 slightly lighter; laterotergite 7 with dark, narrow, glabrous stripe on lateral edge. Meso- and metasternum, pleurae, sutures between sternites, and stripe near lateral margins of sternites dark brown, with small, black, shiny, glabrous spots on stripes of sternites 2 - 7, remaining parts of ventral body surface lighter brown.

Pilosity (Fig. 1). Entire body surface covered with silvery, short, decumbent hairs. Eyes with short, dense, erect hairs. Clypeus, vertex along margin of eyes and along median, impressed line, pronotum, metanotum, tergites, laterotergites, and lateral areas of sternites with long, bristle-like hairs. Scattered erect hairs also on antennae, femora, and tibiae. Distinct narrow stripes on vertex along margin of eyes (in most specimens), metanotum, lateral areas of tergite 1, medio-distal spots on tergites 2 and 3, entire tergites 6 and 7, laterotergites 1 and 5 - 7, and distal inner parts of laterotergites 2 - 4 with silvery pubescence of variable density (in one specimen all tergites and laterotergites with silvery pubescence). Hind tibia with small distal patch of spinose hairs (Figs. 14 - 16); segment 1 of hind tarsus with a row of long, bristle-like hairs along entire length (Fig. 14).

Structural characters. Habitus as in figure 1. Ventral lobe of head not produced backward. Antennae 0.60 times as long as body, relative length of segments 1 - 4 as 1.7 : 1.0 : 1.2 : 1.7. Pronotum 0.66 times as long as wide, with low, median ridge. Ratio of femur : tibia : tarsus (length of hind tibia = 1): fore leg 0.63 : 0.58 : 0.30; middle leg 0.84 : 0.88 : 0.53 (0.21 + 0.32); hind leg 0.84 : 1.00 : 0.65 (0.28 + 0.37). Grasping comb on fore

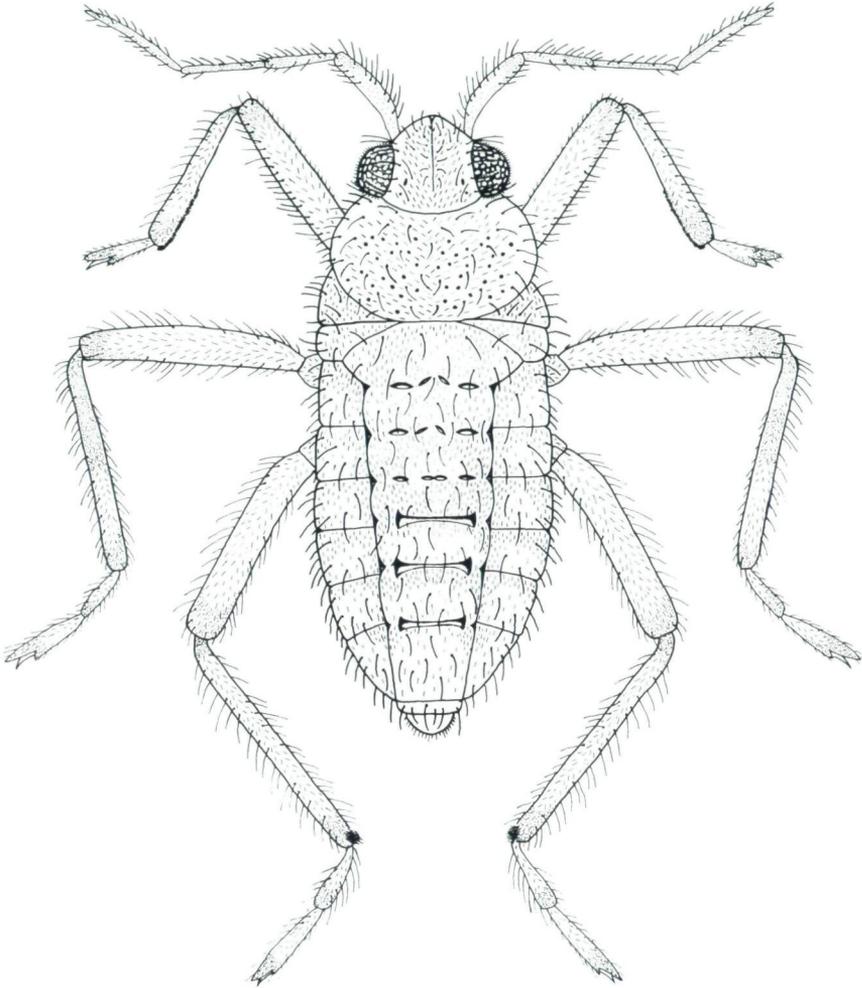
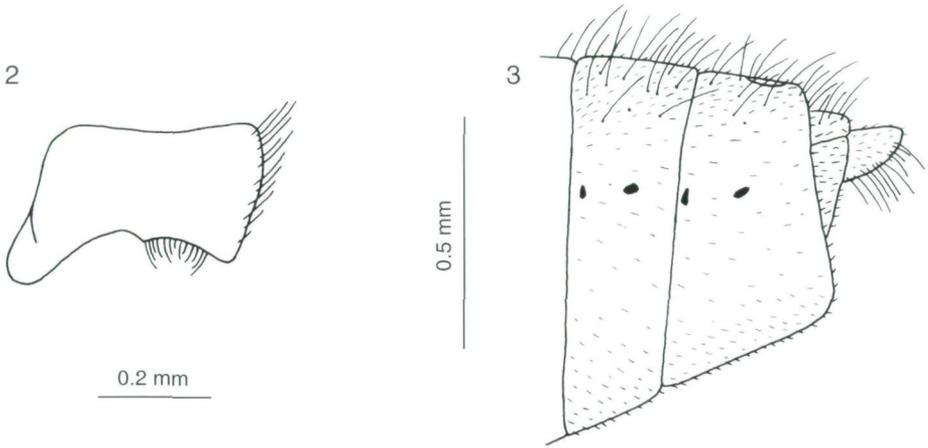


Fig. 1: *Pseudovelgia intonsa* sp.n., habitus of male holotype.

tibia 0.44 times as long as tibia (Figs. 11, 13). Tarsal segment 1 of hind leg 0.75 times as long as segment 2. Tergites partly fused (Fig. 1), tergite 1 with medial impression and a few punctures. Laterotergites slightly raised.

Genital segments. Ventral depression of segment 8 large, with long hairs on anterior and antero-lateral margin (Figs. 2, 9). Segment 9 with dense, short, erect hairs on proctiger and pygophore.

Apterous female: Colour. Pronotum entirely dark brown, with black punctures as in males. Tergites, laterotergite 1, inner parts of laterotergites 2 - 7, and ventral surface blackish, remaining parts of body of same colour as in males. In one female specimen pronotum with conspicuous yellow stripe near anterior margin, and black punctures very indistinct.



Figs. 2 - 3: *Pseudovelia intonsa* sp.n.: (2) segment 8 of male paratype, lateral view, (3) apical part of abdomen of female paratype, lateral view.

Pilosity. Decumbent hairs covering entire body surface and hairs of eyes, head, antennae, pronotum, metanotum, legs, tergites 1 - 3, laterotergites, and lateral areas of sternites as in males, but small distal patch of spinose hairs on hind tibia missing, tergites 4 - 8 with short, decumbent and long, erect hairs only on lateral areas. Vertex along margin of eyes, metanotum, all tergites except 4 and 5, laterotergite 1, inner parts of laterotergites 2 - 7, and lateral areas of sternites with silvery pubescence. In some specimens short decumbent hairs and pubescence on head denser than in males, one specimen with silvery pubescence only on vertex along margin of eyes, metanotum, lateral areas of tergite 1, and entire laterotergite 1.

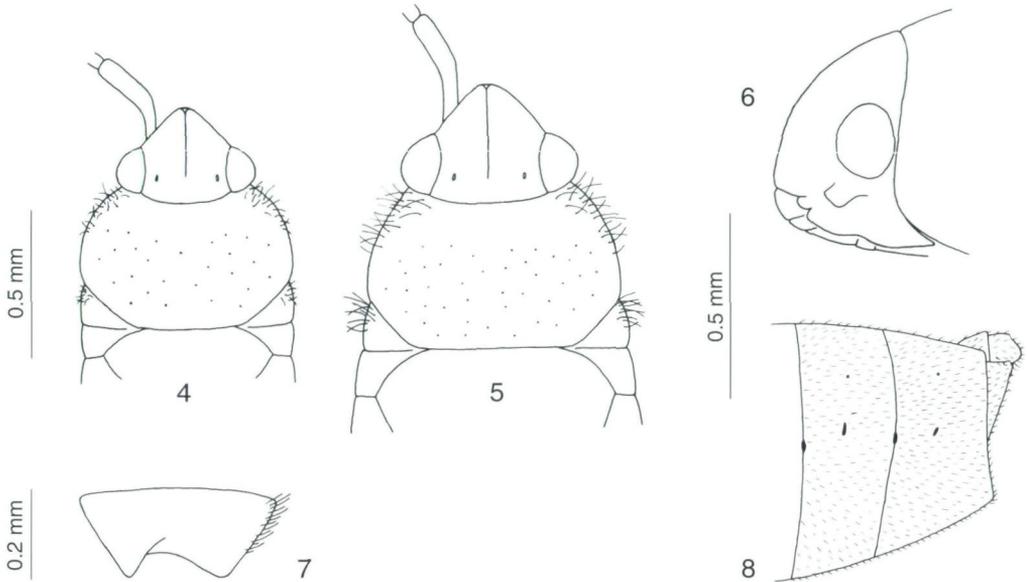
Structural characters. Ventral lobe of head as in males. Antennae 0.53 times as long as body, relative length of segments 1 - 4 as 1.5 : 1.0 : 1.1 : 1.3. Pronotum 0.69 times as long as wide, with median ridge as in males. Legs without modifications as apparent in males. Hind leg with tarsus 0.57 times as long as tibia. Relative length of tarsal segments of hind leg and fusion of tergites as in males. Laterotergites wider and in some specimens more strongly raised than in males.

Genital segments. Proctiger with short, dense, erect hairs especially on ventral portion; external genital structures as in figure 3.

Macropterous form unknown.

Etymology: "intonsa" (Latin, meaning "unshorn") refers to the long hairs on the abdomen, especially in males.

Comparative notes: Because of the hairs on the eyes, the new species is closely related to *Pseudovelia sexualis* (PAIVA, 1917) and *P. longitarsa* ANDERSEN, 1983. *Pseudovelia intonsa* sp.n. can be easily distinguished from these species by the structure of the male genitalia and the length of the grasping comb on the fore tibia of the males. In *P. intonsa* the ventral depression on segment 8 is of a different shape and furnished with longer hairs than in *P. sexualis* and *P. longitarsa* (ANDERSEN 1983: figs. 13, 14, 20, 21). The grasping comb in *P. sexualis* and *P. longitarsa* is longer (0.6 times as



Figs. 4 - 8: *Pseudovelia pusilla* sp.n.: (4 - 5) head, thorax, and basal part of abdomen, dorsal view, of (4) male holotype and (5) female paratype, (6) head, lateral view, (7) segment 8 of male holotype, lateral view, (8) apical part of abdomen of female paratype, lateral view.

long as tibia) than in *P. intonsa* (0.44 times as long as tibia). Additionally, males of the new species can be distinguished from *P. longitarsa* by the hind tarsus, which in *P. intonsa* is shorter than the hind tibia and has a row of bristle-like hairs along the entire length of segment 1, whereas in *P. longitarsa* the hind tarsus is longer than the tibia and has only a tuft of long bristles on the basal part of segment 1.

Distribution: Known only from the type locality.

Pseudovelia pusilla sp.n.

Type locality: South Vietnam, 12 km north of Dalat, Langbian Plateau.

Holotype: ♂ (apt.) [S VIETNAM, 28.-30.4.1994\ 12 km N Dalat - Lang Bian\ P. Pacholátko & L. Dembicky leg.] (NHMV). **Paratype:** 1 ♀ (apt.): same data as holotype (NHMV).

Diagnosis. Eyes without hairs except for two ocular setae; ventral lobe of head produced backward, surpassing anterior margin of prosternum (Fig. 6); length of hind tarsus about 0.5 times as long as hind tibia; grasping comb on fore tibia of males 0.65 times as long as tibia (Fig. 12); segment 1 of hind tarsus in males about 0.7 times as long as segment 2 and without long hairs; segment 8 of males with specific ventral structure (Figs. 7, 10).

Description:

Length: 1.8 mm (♂), 2.55 mm (♀); maximum width in ♂ across pronotal lobe: 0.7 mm, in ♀ across abdominal tergite 4: 0.8 mm; width of head: 0.5 mm (♂), 0.6 mm (♀); width of pronotum: 0.8 mm (♀) (Female conspicuously larger than male).

Apterous male: Colour. Dorsal surface of head brown, with median, impressed line and semi-circular areas on vertex along margin of eyes blackish. Antennae, metanotum, tergites, and laterotergites brown, apical part of antennal segment 1 slightly darker. Pronotum brown, with horizontal stripe near anterior margin slightly lighter, and with very fine black punctures irregularly distributed over dorsal portion except stripe and ridge. Apex of femora, entire fore and middle tibiae, basal and apical part of hind tibiae, and tarsal segments brown, remaining parts of legs yellow to light brown. Laterotergite 7 with dark, narrow, glabrous stripe on lateral edge. Ventral surface of body blackish, sternites 2 - 7 laterally with small, shiny, black, glabrous spots, and lateral margins with brown stripes.

Pilosity. Entire body surface covered with short, suberect hairs. Eyes only with two ocular setae. Clypeus, antero-lateral parts of pronotum, and metanotum with short, dark, bristle-like hairs (Fig. 4). Vertex along margin of eyes with a few long, erect hairs. Scattered, erect hairs also on antennae and tibiae. Tergites, laterotergites, and lateral areas of sternites without erect hairs. Narrow stripes on vertex along margin of eyes, tergites 1 - 3, 6 and 7, and laterotergites 2 - 4 with dense, long, silvery pubescence. Hind tibia with small distal patch of spinose hairs; segment 1 of hind tarsus without long hairs.

Structural characters. Ventral lobe of head produced backward, surpassing anterior margin of prosternum (Fig. 6). Antennae 0.55 times as long as body, relative length of segments 1 - 4 as 1.4 : 1.0 : 1.0 : 1.6, segment 1 strongly curved (Fig. 4). Pronotum 0.57 times as long as wide, with low, median ridge, posterior margin straight. Maximal width of body across pronotal lobe, metanotum slightly narrower (Fig. 4). Ratio of femur : tibia : tarsus (length of hind tibia = 1): fore leg 0.69 : 0.69 : 0.31; middle leg 0.79 : 0.83 : 0.41 (0.14 + 0.27); hind leg 0.83 : 1.00 : 0.52 (0.21 + 0.31). Grasping comb on fore tibia 0.65 times as long as tibia (Fig. 12). Tarsal segment 1 of hind leg 0.67 times as long as segment 2. Tergites partly fused, tergite 1 with medial impression and a few punctures. Laterotergites slightly raised.

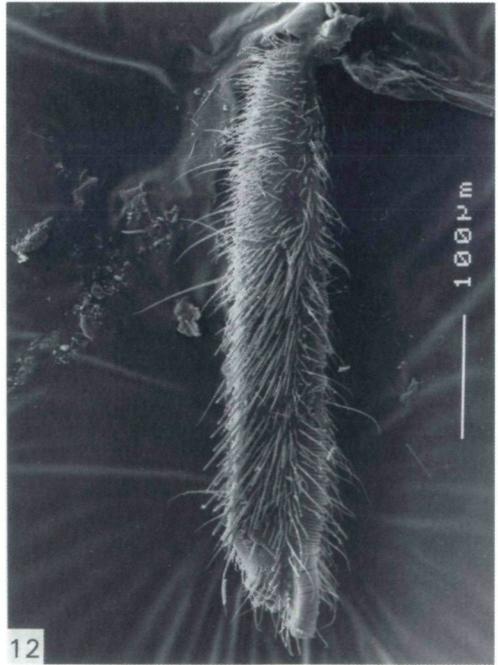
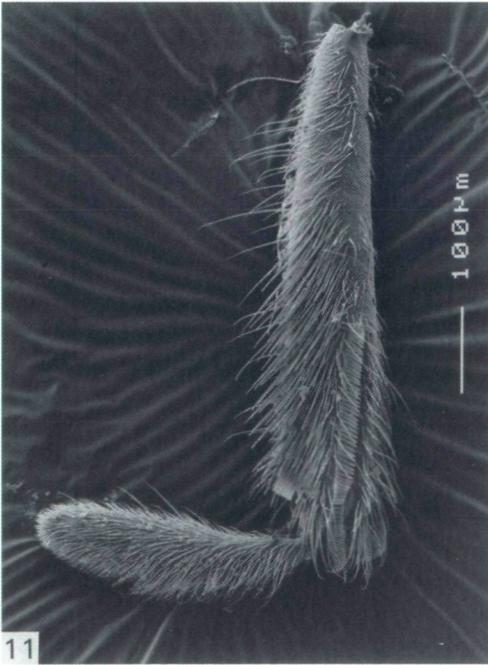
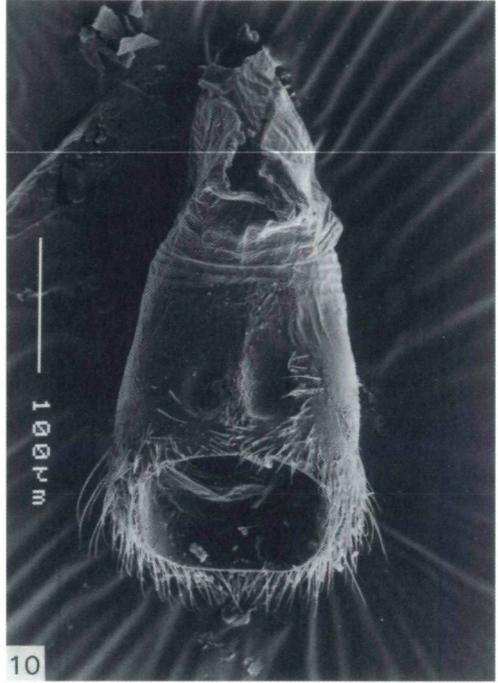
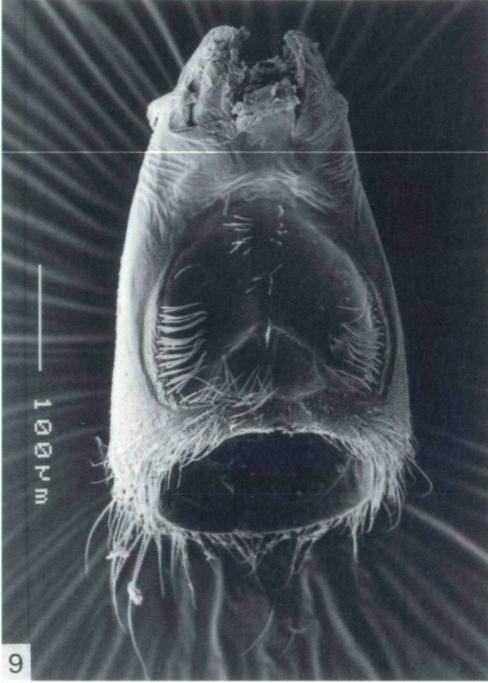
Genital segments. Ventral depression of segment 8 small and circular, divided into two parts by median ridge, with bristle-like hairs along anterior and lateral margin, and along median ridge (Figs. 7, 10). Segment 9 with short, erect hairs on proctiger and pygophore.

Apterous female: Colour as in male, blackish areas on vertex along margin of eyes more rectangular.

Pilosity. Short, suberect hairs covering entire body surface and hairs of eyes, vertex, antennae, and tibiae as in male, but small distal patch of spinose hairs on hind tibia missing. Clypeus, antero-lateral parts of pronotum, and metanotum with erect, dark, bristle-like hairs conspicuously longer than in male (Fig. 5), lateral parts of tergite 1, laterotergites 2 and 3, and lateral areas of sternites also furnished with such hairs. Lateral areas of tergite 1, entire tergites 2 and 3, and laterotergites 2 - 4 with long, silvery pubescence.

Structural characters. Ventral lobe of head as in male. Antennae 0.55 times as long as body, relative length of antennal segments 1 - 4 as 1.5 : 1.0 : 1.0 : 1.4, segment 1 not as strongly curved as in male (Fig. 5). Pronotum 0.59 times as long as wide, with median ridge and posterior margin as in male. Metanotum slightly wider than pronotal lobe (Fig. 5).

Legs without modifications as apparent in male. Hind leg with tarsus 0.50 times as long as tibia, relative length of tarsal segments 1 and 2 as 0.54 : 1.00. Fusion of tergites as in male. Laterotergites broader and more strongly raised than in male.



Figs. 9 - 12: Segment 8 of (9) *P. intonsa* sp.n., male paratype, and (10) *P. pusilla* sp.n., male holotype; fore tibia with grasping comb of (11) *P. intonsa* sp.n., male paratype, and (12) *P. pusilla* sp.n., male holotype.

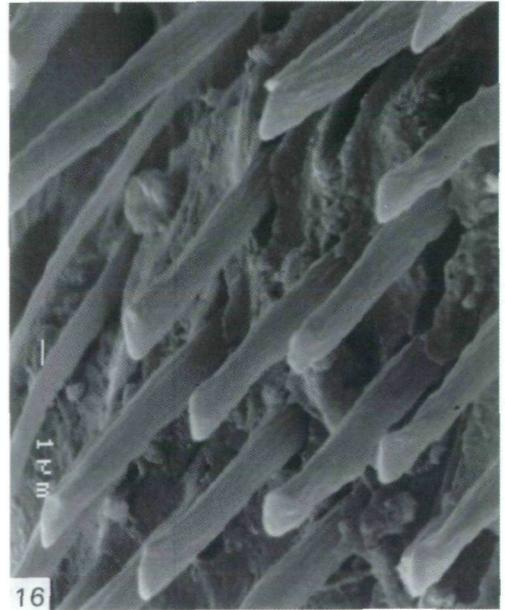
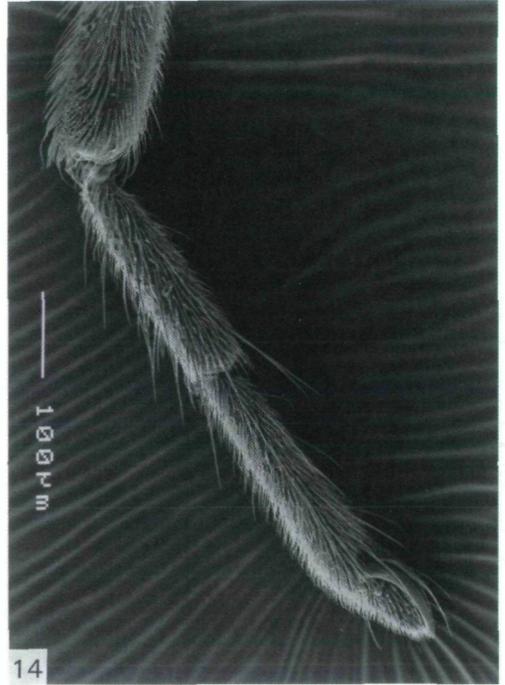


Fig. 13: Grasping comb on fore tibia of *P. intonsa* sp.n., male paratype.

Figs. 14 - 16: Distal patch of spinose hairs on hind tibia of *P. intonsa* sp.n., male paratype, different magnifications.

Genital segments. Proctiger and gonocoxa 1 entirely covered with very short, dense, erect hairs; external genital structures as in figure 8.

Macropterous form unknown.

Etymology: "pusilla" (Latin, meaning "very small") refers to the small size of the male specimen.

Comparative notes: The new species is closely related to *Pseudovelgia buccula* ANDERSEN, 1983, because of the ventral lobe of the head, which is produced backward and surpassing the anterior margin of the prosternum. *Pseudovelgia pusilla* sp.n. can be easily distinguished from *P. buccula* by the relative length of the hind tarsus and the hind tibia, which in *P. buccula* is 87 : 70 in males and 54 : 85 in females (ANDERSEN 1983), but 0.52 : 1.00 in the male and 0.50 : 1.00 in the female of *P. pusilla*. In male specimens of *P. buccula* the apical part of the fore tibia is widened, and the relative length of the grasping comb on the fore tibia is 0.43 : 1.00 (ANDERSEN 1983), but 0.65 : 1.00 in *P. pusilla*. The relative length of the tarsal segments 1 and 2 of the hind leg of males is 58 : 29 in *P. buccula* (ANDERSEN 1983) and 0.67 : 1.00 in *P. pusilla*, the tarsal segment 1 in *P. buccula* is furnished with a row of more than 10 bristles on its proximal part, but has no such hairs in *P. pusilla*. In *P. buccula* the ventral depression on the genital segment 8 is large and has four small tufts of hairs along its margin (ANDERSEN 1983: fig. 25), but in *P. pusilla* it is small, circular, and divided into two parts by a median ridge, and has bristle-like hairs along the anterior and lateral margin and the median ridge.

Distribution: Known only from the type locality.

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