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## **A new species group of Oriental *Microvelia* s.l. (Insecta: Heteroptera: Veliidae), with descriptions of three new species**

H. Zettel\* & V.P. Gapud\*\*

### **Abstract**

The *Microvelia somnokrene* species group is newly described. At present three species are included: *Microvelia somnokrene* sp.n., *M. atroelegans* sp.n. (both from Luzon, Philippines), and *M. jaechi* sp.n. (from Lombok, Indonesia). Within the genus *Microvelia* s.l., species of this group are defined by a combination of several mostly primitive characters: body large; antenna long, segment 3 longest; hemelytron with 4 - 6 white spots; male protibial grasping comb long; male abdominal segment 8 with ventral groove; parameres symmetrical, elongate (more or less reduced); gonocoxa of female uncovered.

*Microvelia leveillei* (LETHIERRY, 1877), described from Manila, Philippines, is recognized as a senior synonym of the Oriental, widely distributed *M. diluta* DISTANT, 1909 (syn.n.).

**Key words:** Veliidae, *Microvelia*, new species group, new species, new synonymy, Philippines, Indonesia, Luzon, Lombok.

### **Zusammenfassung**

Die *Microvelia somnokrene* Artengruppe wird neu beschrieben. Derzeit werden drei Arten in diese Gruppe gestellt: *Microvelia somnokrene* sp.n. und *M. atroelegans* sp.n. (beide von Luzon, Philippinen) sowie *M. jaechi* sp.n. (von Lombok, Indonesien). Innerhalb des Genus *Microvelia* s.l. sind Arten dieser Gruppe durch mehrere, in der Mehrzahl ursprüngliche Merkmale gekennzeichnet: Körper groß; Antenne lang, 3. Glied am längsten; Hemelytron mit 4 - 6 weißen Flecken; Protibia-Kamm des Männchens lang; Abdominalsegment 8 des Männchens mit ventraler Grube; Parameren symmetrisch, gestreckt (mehr oder weniger reduziert); Gonocoxa des Weibchens freiliegend.

*Microvelia leveillei* (LETHIERRY, 1877), beschrieben von Manila, Philippinen, wird als älteres Synonym der in der Orientalis weit verbreiteten *M. diluta* DISTANT, 1909 erkannt (syn.n.).

### **Introduction**

This is the first part of a revision of the Philippine species of the genus *Microvelia* WESTWOOD, 1833. This world-wide genus is considered to be an assemblage of different clades of Microveliinae, and probably paraphyletic. In its present form, *Microvelia* is the second largest veliid genus in the world, as well as in the Oriental Realm and the Philippines (ranked behind *Rhagovelia* MAYR, 1860, of the subfamily Rhagoveliinae). *Microvelia* may be distinguished from other Oriental Veliidae genera by the key published

\* Dr. Herbert Zettel, Naturhistorisches Museum in Wien, 2. Zoologische Abteilung, Burgring 7, A-1014 Vienna, Austria.

\*\* Prof. Dr. Victor P. Gapud, Department of Entomology, University of the Philippines, Los Baños, College, Laguna 4031, Philippines.

by HECHER (1998). The last revision of Oriental species (including some from the Eastern Palearctic and the West Pacific Realms) was given by LUNDBLAD (1933). However, Lundblad did not know those two species which at that time were described from the Philippines, *M. atrolineata* BERGROTH, 1918 and *M. leveillei* (LETHIERRY, 1877).

YANO & al. (1981) ranked *Microvelia atrolineata* as a subspecies of the widely distributed *M. douglasi* SCOTT, 1874; the first author has studied the type series of *M. atrolineata*, which is deposited in the Naturhistoriska Riksmuseet, Stockholm, and confirms this interpretation.

The type of *Microvelia leveillei* (described as *Hydroessa leveillei*; listed as *Microvelia leveillei* by LUNDBLAD 1933) is a macropterous female deposited in the coll. Noualhier in the Museum National d'Histoire Naturelle, Paris. It was studied by the first author and clearly belongs to the widely distributed *M. diluta* DISTANT, 1909 (**syn.n.**), which was originally described from India, redescribed by LUNDBLAD (1933), and recorded from the Philippines for the first time by POLHEMUS & REISEN (1976).

*Microvelia* is definitely the least known genus of Veliidae in the Oriental Realm. Only two species are recorded from the Philippine Islands so far, but about twenty species are represented in the collections of the authors; most of them are undescribed. The two Philippine species described in this paper have very striking characters setting them far apart from all other described Oriental *Microvelia* species. However, an undescribed species from Lombok Island (Indonesia) is apparently closely related, and therefore included in this paper.

*Microvelia* s.l. species generally inhabit stagnant water bodies, but some species have very specialized demands on their microhabitats. Certain widely distributed species (e.g. *M. douglasi* and *M. leveillei*) live on several types of stagnant waters including paddy fields, pasture pools, and path puddles. By contrast, several other species live in puddles and pools on the banks of streams or in the forests, or are found in the most lentic areas of running waters.

#### Repositories:

CNTN Coll. Nieser, Tiel, The Netherlands

CZW Coll. Zettel, Vienna, Austria

NHMW Naturhistorisches Museum in Wien, Vienna, Austria

UPLB Museum of Natural History, University of the Philippines, Los Baños, Laguna, Philippines

### The *Microvelia somnokrene* species group

**Diagnosis:** Body relatively large (2.67 - 3.42 mm) and stout (Fig. 1), with more or less converging sides of abdomen; body partly covered with long bristles (e.g. on all basal veins of the forewing); head relatively small, weakly deflected ventrad (Fig. 3); antenna very long and slender, segment 3 distinctly longer than segment 4 and 1.7 - 2.2 times as long as segment 2 (Figs. 7 - 9); forewing with 5 (rarely 4 or 6) white patches and two large distal cells, distal cubital cell distinctly larger than distal medial cell (Figs. 15 - 17); legs long and slender, especially the tarsi (Figs. 4 - 6); protibia of male with a long, thin grasping comb extended to basal half of tibia (Figs. 13, 14); mesotibia of male without grasping comb; segment 8 of male small, depress, with ventral groove, with ventroapical opening



Fig. 1: Habitus of *Microvelia somnokrene* sp.n., ♂.

as in other *Microvelia* species, see Figures 18 - 20 (not apical as in *Pseudovelie* HOBBERLANDT, 1950); pygophore of both sexes small; parameres of male symmetrical, elongate, more or less reduced (Figs. 27 - 29); female with gonocoxae large, not covered by the small proctiger (Figs. 10 - 12).

All the three species are only known in the macropterous morph, which is typical for those Gerromorpha, which inhabit small temporary stagnant water bodies.

**Discussion:** Species of the *M. somnokrene* group are defined by the following combination of characters: (1) Male with long protibial grasping comb and without mesotibial grasping comb. (2) Parameres symmetrical and elongate. (3) Female gonocoxa large, exposed. (4) Antennal segment 3 longest. (5) Hemelytron with 4 - 6 white spots and with distal cells reaching apical fourth. (6) Body length more than 2.6 mm. (7) Tarsi long and slender.

As a phylogenetic system for *Microvelia* s.l. and related genera is not yet established, the present classification of these characters is hypothetical. However, a large, exposed female gonocoxa, symmetrical elongate parameres, and large cells in the hemelytron are probably plesiomorphic, because they are found in several genera, which are supposed to be rather primitive within Microveliinae. The same is likely for the long male protibial grasping comb and a relatively large body size. The long tarsi are presently consi-

dered as an autapomorphy of the species group. The long antennal segment 3 and a similar pattern of white spots on the hemelytron is shared with *M. albolineolata* BUENO, 1927, and closely related undescribed species. Species of the *M. albolineolata* group differ from the *M. somnokrene* group by a very slender body, shorter tarsi, a decumbent pilosity along veins of the hemelytron, and bluish-frosted (not white) spots in the two distal cells; further, except in an undescribed species from the Philippines, the male protibial grasping comb is shorter and the two distal cells in the hemelytron are of similar size.

Within Oriental *Microvelia*, species of the *M. somnokrene* group can be defined as follows:

- 1 Antennal segment 3 longest, distinctly longer than segment 4. .... 2
- Antennal segments 1 or 4 longest, or 3 and 4 subequal in length ..... **other species groups**
- 2 Hemelytron along veins with decumbent pilosity, with bluish frosted-spots; metatarsus shorter than 0.5 times metatibial length; body slender. .... ***M. albolineolata* group**
- Hemelytron along veins with long, erect pilosity, without bluish-frosted spots; metatarsus longer than 0.5 times metatibial length; body stout. .... ***M. somnokrene* group**

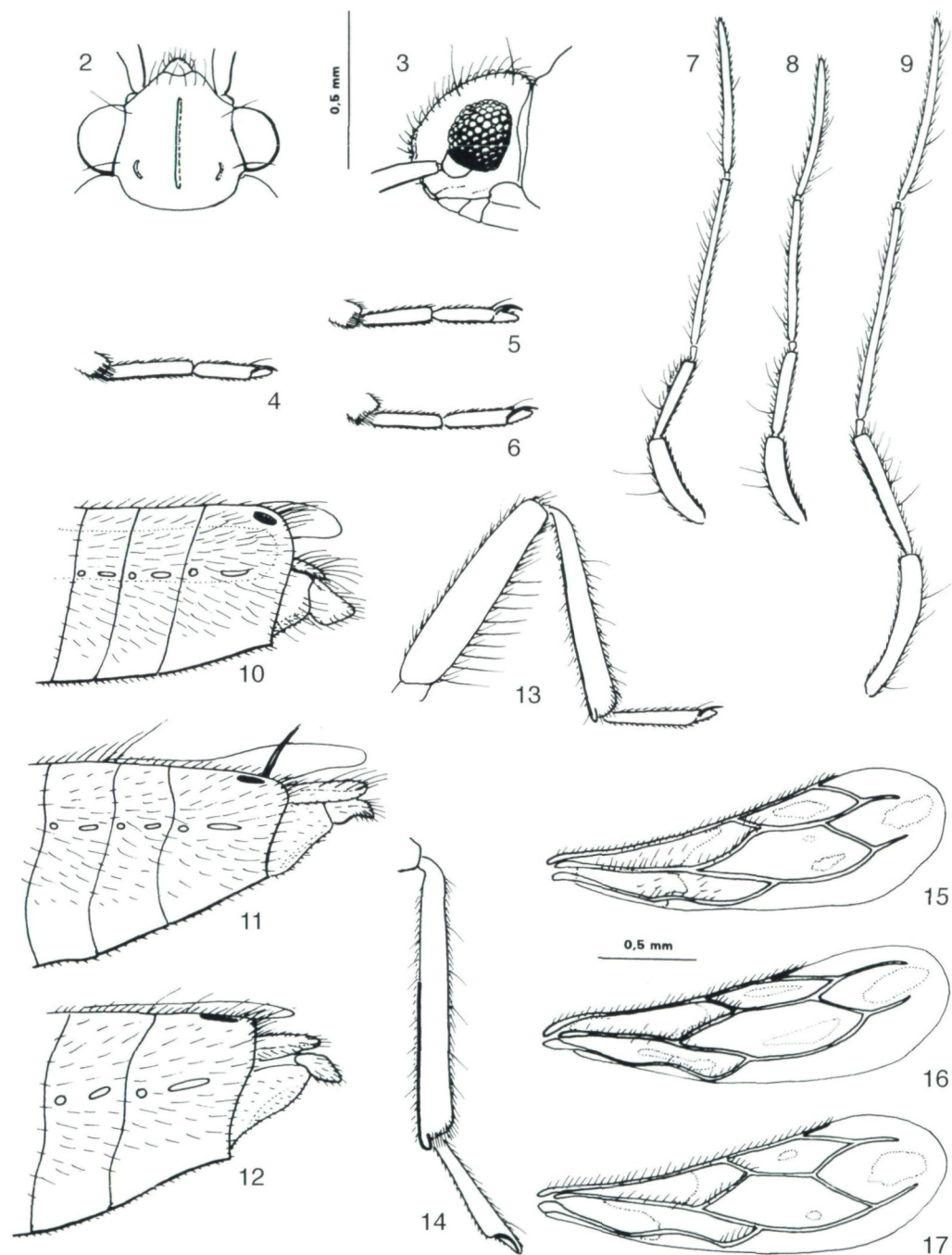
#### Key to the species of the *Microvelia somnokrene* group

- 1 Antennal segment 3 about 2.0 - 2.2 times as long as segment 2 (Fig. 7); segments 1 and 2 of mesotarsus subequal in length (Fig. 4); body dark brownish; sides of abdomen posteriorly slightly convergent, body length 2.67 - 2.84 mm; ♂: length of grasping comb 0.75 times protibial length (Fig. 13), pygophore and proctiger with very long bristles (Figs. 21, 24); ♀: sternite 7 with posterodorsal corner broadly rounded (Fig. 10); (Luzon: Laguna, Albay) ..... ***M. somnokrene* sp.n.**
- Antennal segment 3 about 1.7 - 1.9 times as long as segment 2 (Figs. 8, 9); segment 1 of mesotarsus distinctly shorter than segment 2 (Figs. 5, 6); ♂: length of grasping comb 0.52 - 0.53 times protibial length (Fig. 14), pygophore and proctiger without very long bristles (Figs. 22, 23, 25, 26); other characters not in the same combination. .... 2
- 2 Body mainly black, narrower, and in average smaller (length 2.69 - 3.03 mm), sides of abdomen posteriorly distinctly converging, especially in female; ♂: paramere small, elongate-triangular with upcurved apex (Fig. 28); ♀: laterotergite 7 posteriorly with a dense tuft of long black bristles partly covered by the wings (Fig. 11); (Luzon: Quezon). .... ***M. atroelegans* sp.n.**
- Body mainly yellowish brown, broader, and in average larger (length 3.01 - 3.42 mm), sides of abdomen not posteriorly obviously converging; ♂: paramere long, hook-shaped (Fig. 29); ♀: laterotergite 7 posteriorly without a tuft of bristles (Fig. 12); (Indonesia: Lombok). .... ***M. jaechi* sp.n.**

#### Descriptions of species

##### 1. *Microvelia somnokrene* sp.n. (Figs. 1 - 4, 7, 10, 13, 15, 18, 21, 24, 27, 30)

**Holotype** (macropterous ♂): "PHILIPPINEN: Laguna\ Mt.Makiling, 500-1144m\ 14.11.1993\ leg. H. Zettel (21a)" (UPLB); **paratypes** (all macropterous): 6 ♂♂, 5 ♀♀, same label data (UPLB, NHMW, CNTN); 9 ♂♂, 8 ♀♀ "LAGUNA: MtMakiling\ VGapud 10ct75" (UPLB); 4 ♂♂ "MAYON VOLCANO NAT\ PARK: 800 FT. 6 DEC.'76\ H.O. SAN VALENTIN" (UPLB, NHMW).



Figs. 2 - 17: (2, 3) Head in (2) dorsal and (3) lateral view; (4 - 6) mesotarsus; (7 - 9) antenna; (10 - 12) posterior part of female abdomen in lateral view; (13) foreleg; (14) protibia; (15 - 17) forewing; (2 - 4, 7, 13, 15) *M. somnokrene* sp.n., ♂; (10) same species, ♀; (5, 8, 11, 16) *M. atrolebens* sp.n., ♀; (6, 9, 14, 17) *M. jaechi* sp.n., ♂; (12) same species, ♀.

## Description:

**Macropterous male** (Fig. 1): body length 2.67 - 2.79 mm; body width (at pronotal humeri) 1.01 - 1.08 mm; length of metatibia 1.09 - 1.18 mm; length of second antennal segment 0.27 - 0.29 mm.

Colour and pilosity: brown, head and abdominal venter lighter than pleurae and thoracic venter; pronotum with a yellow transverse band; antenna brownish yellow; metacetabula and legs yellow, tibiae, tarsi, and apex of femora brownish infuscated; hemelytron with (4 -) 5 whitish spots (with one large basal spot; Fig. 15); body, antenna and legs with inconspicuous, thin, subcumbent pilosity and with long, erect, dark hairs, which are shorter on thoracic pleura and lacking on venter, but present also along basal veins of hemelytra.

Structural characters: head weakly deflected ventrad (Fig. 3), weakly inserted in anterior margin of pronotum (Fig. 2); head width 1.6 times head length; relative length of antennal segments 1 - 4 as 1.2 : 1 : 2.0 : 1.75 (holotype); segment 1 thickest, segment 2 slightly thicker than the very slender segments 3 and 4 (Fig. 7); rostrum surpassing anterior margin of mesosternum, segments 3+4 about 2.0 times as long as antennal segment 1.

Pronotum with rows of punctures along anterior margin laterally and behind yellow stripe, pronotal lobe with scattered punctures, more sparse on disc and humeri; pronotum length 2.2 times head length, pronotum width 1.65 times head width; thoracic pleurae only with a few punctures; legs long, very slender; relative lengths of leg segments (holotype; in relation to metatibia = 100): profemur: 66, protibia: 62, protarsus: 31, mesofemur: 78, mesotibia: 79, mesotarsus: 25+24 (Fig. 4), metafemur: 88, metatibia: 100, metatarsus: 29+24; protibia in distal 0.75 with long, linear, thin, inconspicuous grasping comb, which is apically weakly curved and shortly surpassing the apex of the tibia (Fig. 13); compared with female, femora of male not incrassate; hemelytron with four closed cells (Fig. 15), surpassing posterior margin of tergite 7.

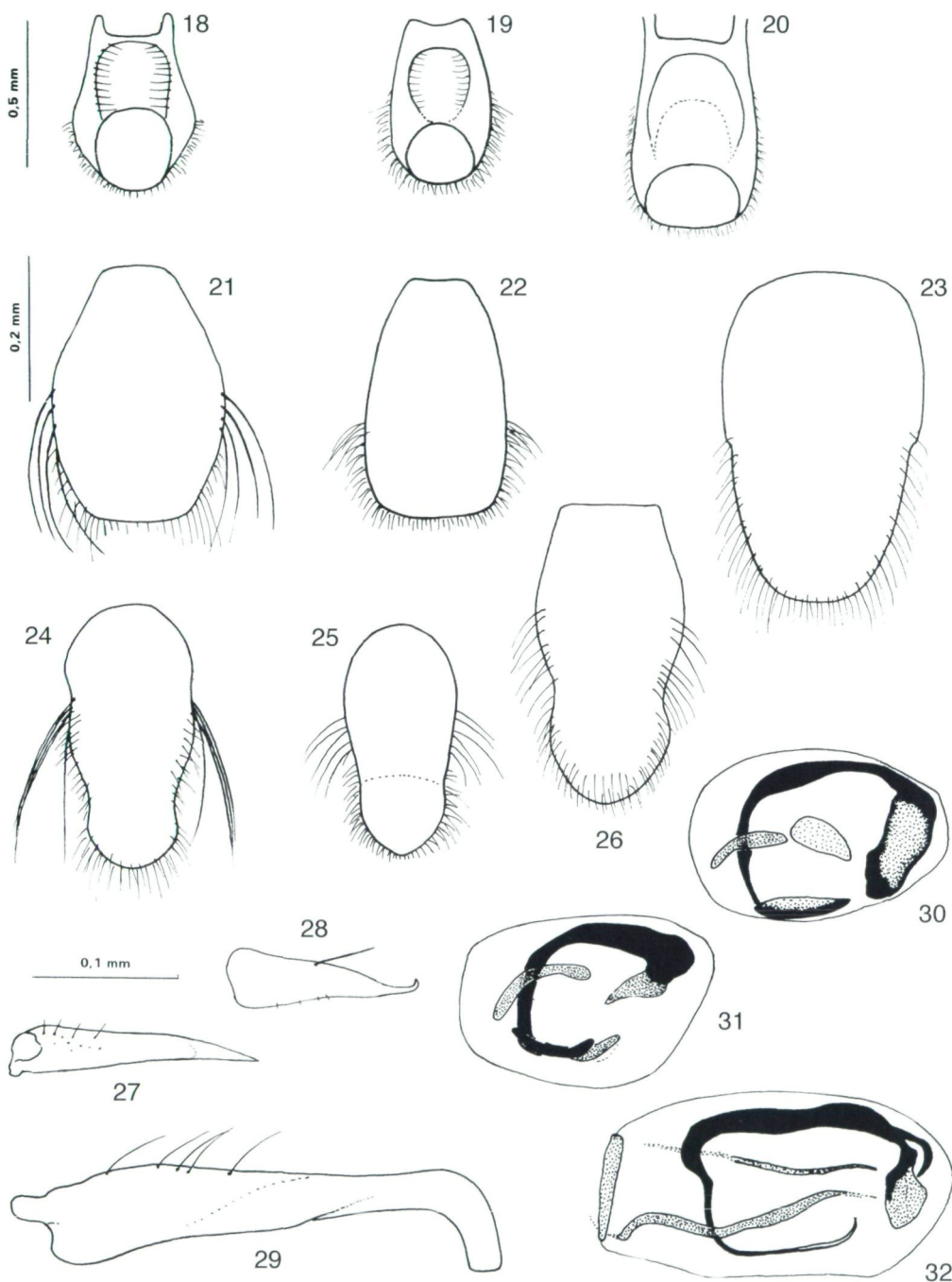
Abdomen with sides anteriorly subparallel, posteriorly weakly narrowed; connexiva nearly vertical; tergites mat, with thin, indistinct glabrous midline on tergites 6 - 7; abdominal carinae on tergites 2 and 3; sternite 7 with weakly impressed midline, with posterior margin deeply excavate; segment 8 depress, ventrally with a shallow half-ovate groove well delimited by long mediad directed hairs (Fig. 18); pygophore depress, apically truncate, laterally in basal third with tufts of long bristles surpassing apex (Fig. 21); proctiger long and narrow, in basal fifth laterally with long bristles nearly reaching apex (Fig. 24); parameres symmetrical, short, but of elongate shape, with tapered apex, apically thin, transparent (Fig. 27); vesicula sclerites as in Figure 30.

**Macropterous female:** body length 2.64 - 2.84 mm; body width (at pronotal humeri) 1.02 - 1.10 mm; length of metatibia 1.12 - 1.18 mm; length of second antennal segment 0.26 - 0.28 mm.

Colour and pubescence as in male.

Structural characters as in male except the following: relative length of antennal segments 1 - 4 as 1.2 : 1 : 2.2 : 1.85; relative lengths of leg segments (in relation to metatibia = 100): profemur: 66, protibia: 62, protarsus: 31, mesofemur: 76, mesotibia: 79, mesotarsus: 23+24, metafemur: 90, metatibia: 100, metatarsus: 29+25; protibia simple.





Figs. 18 - 32: Male terminalia: (18 - 20) segment 8, ventral view; (21 - 23) pygophore, ventral view; (24 - 26) proctiger, dorsal view; (27 - 29) left paramere, external view; (30 - 32) vesicula sclerites, lateral view; (18, 21, 24, 27, 30) *M. somnokrene* sp.n., (19, 22, 25, 28, 31) *M. atrolegens* sp.n., (20, 23, 26, 29, 32) *M. jaechi* sp.n.

Abdomen with sides anteriorly subparallel, posteriorly distinctly narrowed; connexiva vertical, only at extreme end weakly turned mediad; tergite 8 directed posteriad, about as long as wide, with rounded posterior corners; sternite 7 slightly longer than sternites 5 and 6 together, with posterior margin straight; connexivum of sternite 7 broadly rounded, with a few, disperse long hairs (Fig. 10); gonocoxa uncovered, with yellowish, erect hairs (Fig. 10), ventrally each with a shallow groove covered with whitish, appressed hairs.

**Apterous morphs** unknown.

**Comparative notes:** *Microvelia somnokrene* sp.n. differs from the following two species by the external characters presented in the key couplet 1.

**Distribution:** Philippines: Luzon (Laguna, Albay).

**Habitat notes:** *Microvelia somnokrene* sp.n. lives in small, shallow pools in the rain forests of the upper region (500 m a.s.l. and more) of Mount Makiling. Some of these pools are along and partly on the path to the peak. A few additional specimens were collected on the slopes of Mount Mayon at about 250 m a.s.l.

**Etymology:** This species is named after the strange fact that the first author dreamed about the discovery of a new veliid in pools near the summit of Mt. Makiling without knowing the locality beforehand.

## 2. *Microvelia atroelegans* sp.n. (Figs. 5, 8, 11, 16, 19, 22, 25, 28, 31)

**Holotype** (macropterous ♂): "Philippinen: LZ, Quezon\ Atimonan, Old Zigzag Road\ Quezon NP, 16.3.1999\ leg. H. Zettel (202)" (UPLB); **paratypes** (all macropterous): 1 ♂, same label data (NHMW); 2 ♀♀, "PHILIPPINEN: Quezon Pr.\ W Atimonan, Quezon NP\ Old Zigzag Road\ 12.2.1996, leg. H. Zettel (79a)" (UPLB, CZW); 1 ♀ "leg. Jäch (11)\ PHILIPPINEN - Luzon\ 30km E Lucena City\ Quezon NP 23.11.1992" (NHMW).

### Description:

**Macropterous male:** body length 2.69 - 2.71 mm; body width (at pronotal humeri) 1.04 - 1.06 mm; length of metatibia 1.01 - 1.02 mm; length of second antennal segment 0.26 - 0.27 mm.

Colour and pilosity: black; pronotum with narrow yellow transverse band; antenna dark brown; distal part of all acetabula and legs yellow, tibiae, tarsi, and apex of femora brown; hemelytron with 5 whitish spots (Fig. 16); body, antenna and legs with thin subcumbent, inconspicuous pilosity and with long, erect, dark hairs, which shorter on thoracic pleura and lacking on venter, but present also along basal veins of hemelytra; whitish hairs present along inner eye margins (in two pairs of spots), and along anterior margin of pronotum (more or less covering yellowish band); anterolateral margins of pronotum (in front of humeral angles) with whitish frosted marks.

Structural characters: head weakly deflected ventrad, weakly inserted in anterior margin of pronotum; head width 1.55 times head length; relative length of antennal segments 1 - 4 as 1.1 : 1 : 1.8 : 1.6 (holotype); segment 1 thickest, segment 2 slightly thicker than very slender segments 3 and 4; rostrum surpassing anterior margin of mesosternum, segments 3+4 about 2.0 times as long as antennal segment 1.

Pronotum with rows of punctures along anterior margin laterally and behind yellow stripe, pronotal lobe with scattered punctures, more sparse on disc and humeri; pronotum



length 2.3 times head length, pronotum width 1.75 times head width; thoracic pleurae only with a few punctures; legs long, very slender; relative lengths of leg segments (holotype; in relation to metatibia = 100): profemur: 65, protibia: 59, protarsus: 31, mesofemur: 80, mesotibia: 79, mesotarsus: 21+26, metafemur: 87, metatibia: 100, metatarsus: 25+27; protibia in distal 0.53 with long, linear, thin, inconspicuous grasping comb, which apically weakly curved and shortly surpassing apex of tibia; compared with female, femora of male not incrassate; hemelytron with four closed cells (Fig. 16), surpassing posterior margin of tergite 7.

Abdomen with sides evenly narrowed; connexiva nearly vertical; tergites mat, with a thin, indistinct glabrous midline on tergites 6 - 7; abdominal carinae not examined; sternite 7 with impressed midline, with posterior margin deeply excavate; male terminalia very small; segment 8 depress, ventrally with a shallow half-ovate groove well delimited by long mediad directed hairs (Fig. 19); pygophore depress, apically truncate, laterally in middle of length with a few short bristles (Fig. 22); proctiger long and narrow, in laterally in middle of length with some relatively long bristles (Fig. 25); parameres symmetrical, very short, but elongate, with tapered apex, apically thin, transparent, and upcurved (Fig. 28); vesicula sclerites as in Figure 31.

**Macropterous female:** body length 2.83 - 3.03 mm; body width (at pronotal humeri) 1.09 - 1.14 mm; length of metatibia 1.03 - 1.08 mm; length of second antennal segment 0.26 - 0.27 mm.

Colour and pubescence as in male.

Structural characters as in male except the following: relative length of antennal segments 1 - 4 as 1.15 : 1 : 1.7 : 1.55 (Fig. 8); relative lengths of leg segments (in relation to metatibia = 100): profemur: 64, protibia: 60, protarsus: 31, mesofemur: 76, mesotibia: 79, mesotarsus: 22+25 (Fig. 5); metafemur: 90, metatibia: 100, metatarsus: 25+26; protibia simple.

Abdomen with sides posteriad more narrowed than in male; connexiva nearly vertical; tergites mat, with a thin, indistinct glabrous midline on tergites 7 - 8; tergite 8 directed posteriad, about as long as wide, with rounded posterior corners; sternite 7 with posterior margin strongly concave, slightly shorter than sternites 5 and 6 together; connexivum of segment 5 posteriorly with a few thin long hairs; connexivum of segment 7 with a dense, dorsad directed tuft of black bristles, posteriorly broadly rounded (Fig. 11); gonocoxa uncovered, without conspicuous erect hairs, ventrally each with a shallow groove covered with whitish, appressed hairs.

**Apterous morphs** unknown.

**Comparative notes:** *Microvelia atroelegans* sp.n. is closely related to *M. somnokrene* sp.n., from which it differs by the characters presented in the key (couplet 1), by the black colouration and by a more slender body shape. Further, females may be distinguished by more convergent sides of the abdomen, concave posterior margin of sternite 7, and a very obvious tuft of black bristles on inner part of connexivum 7; and males by the shorter protibial grasping comb and by the different pilosity of the pygophore and the proctiger.

**Distribution:** Philippines: Luzon (Quezon).

**Habitat notes and behaviour:** The first specimen of this species was collected in the Quezon National Park by Dr. Manfred A. Jäch (NHMW) in 1992. In 1996 two females were collected by the first author in an approximately 1 m<sup>2</sup> large pool full with leaf debris, which was a remnant of a very small, steep rivulet in the rain forest of the same area. After the females were recognized as a rare, undescribed species, the locality was re-examined in 1998 to collect males; however, because of the effects of the "El Niño"-phenomenon, the rivulet was completely dry. A closeby larger streambed, which still contained a few remnant pools, did not yield further specimens. In 1999, the efforts of the first author were successful: two males were collected in the same steep rivulet as in 1996, on the surface of an about 5 dm<sup>2</sup> small and about 2 cm deep puddle very close to the rivulet. A third specimen escaped by flight. *Microvelia atroelegans* is an agile runner on the water surface, and - when caught with the net - it quickly flies up like species of the genus *Timasius* DISTANT, 1909 (Hebridae). Like some other tropical Gerromorpha of forest puddles, *M. atroelegans* must be regarded as very vulnerable to the destruction of the rain forests by man and by climatic changes.

**Etymology:** Named after the elegant, velvety black appearance of this species.

### 3. *Microvelia jaechi* sp.n. (Figs. 6, 9, 12, 14, 17, 20, 23, 26, 29, 32)

**Holotype** (macropterous ♂): "Mataram, lg.Jäch\ LOMBOK 10.2.[19]88\ Pemenang - (25)" (NHMW); **paratypes** (all macropterous): 1 ♂ "LOMBOK 7.2\ Tetebatu (22)\ lg.Jäch 1988" (NHMW); 4 ♀♀ "LOMBOK 10.2.[19]88\ Pemenang - (25)\ Mataram, lg.Jäch" (NHMW, UPLB).

#### **Description:**

**Macropterous male:** body length 3.01 - 3.15 mm; body width (at pronotal humeri) 1.14 - 1.19 mm; length of metatibia 1.32 - 1.46 mm; length of second antennal segment 0.35 - 0.39 mm.

Colour and pilosity: yellowish to brown, head and abdominal venter lighter than pleurae and thoracic venter; pronotum with yellow transverse band; antenna brownish, segment 1 yellowish; metacetaula and legs yellow, tibiae and tarsi weakly brownish infuscated; hemelytron with 5, rarely 6, whitish spots, inner basal and 2 - 3 medial spots small (Fig. 17); body, antenna and legs with thin subcumbent, inconspicuous pilosity and with long, erect, dark hairs, which shorter on thoracic pleura and lacking on venter, but present also along basal veins of hemelytra.

Structural characters: head less transverse than in *M. sonokrene* sp.n., weakly deflected ventrad, weakly inserted in anterior margin of pronotum; head width 1.4 times head length; relative length of antennal segments 1 - 4 as 1.2 : 1 : 1.8 : 1.55 (holotype); segment 1 thickest, segment 2 slightly thicker than very slender segments 3 and 4 (Fig. 9); rostrum reaching posterior margin of mesosternum, segments 3+4 about 2.1 times as long as antennal segment 1.

Pronotum with rows of punctures along anterior margin laterally and behind yellow stripe, pronotal lobe with scattered punctures, more sparse on disc and humeri; pronotum length 2.1 times head length, pronotum width 1.6 times head width; propleura with two rows of punctures, meso- and metapleura only with a few punctures; legs long, very

slender; relative lengths of leg segments (holotype; in relation to metatibia = 100): profemur: 67, protibia: 63, protarsus: 31, mesofemur: 79, mesotibia: 78, mesotarsus: 18+25 (Fig. 6), metafemur: 86, metatibia: 100, metatarsus: 24+24; protibia in distal 0.52 with long, linear, thin, inconspicuous grasping comb, which apically weakly curved and shortly surpassing apex of tibia (Fig. 14); compared with female, only profemora of male slightly incrassate; hemelytron with four closed cells (Fig. 17), surpassing posterior margin of tergite 7.

Abdomen with sides anteriorly subparallel, posteriorly weakly narrowed; connexiva nearly vertical; tergites mat; abdominal carinae on tergite 2; sternite 7 with weakly impressed midline, with posterior margin weakly excavate, straight in middle; segment 8 depress, ventrally with a small half-roundish groove (Fig. 20); pygophore depress, apically rounded, without long bristles (Fig. 23); proctiger long and narrow, with uniform pilosity (Fig. 26); parameres symmetrical, long, surpassing posterior margin of pygophor, widest in basal third, then evenly tapered, apex hooked (Fig. 29); vesicula sclerites as in Figure 32.

**Macropterous female:** body length 3.17 - 3.42 mm; body width (at pronotal humeri) 1.19 - 1.23 mm; length of metatibia 1.28 - 1.31 mm; length of second antennal segment 0.33 - 0.36 mm.

Colour and pubescence as in male, except white spots on hemelytron smaller, inner basal spot usually lacking, medial spots sometimes indistinct.

Structural characters as in male except the following: relative length of antennal segments 1 - 4 as 1.2 : 1 : 1.9 : 1.8; relative lengths of leg segments (in relation to metatibia = 100): profemur: 64, protibia: 59, protarsus: 31, mesofemur: 72, mesotibia: 74, mesotarsus: 16+24, metafemur: 86, metatibia: 100, metatarsus: 22+25; protibia simple.

Abdomen with sides anteriorly subparallel, posteriorly convexly narrowed; connexiva vertical, only at extreme end weakly turned mediad; tergite 7 slightly longer than tergite 6; tergite 8 directed posteriad, about as long as wide, with rounded posterior corners, with long posteriad directed hairs on posterior margin; sternite 7 slightly longer than sternites 5 and 6 together, with hind margin straight; connexivum of sternite 7 obtusely angulate, with a few, disperse long hairs (Fig. 12); gonocoxa uncovered, with yellowish, erect hairs, ventrally with area covered with whitish, appressed hairs.

**Apterous morphs** unknown.

**Comparative notes:** Differences in external characters are presented in the key. Males differ from *M. somnokrene* sp.n. by the lack of long bristles on the pygophore and proctiger; and from *M. somnokrene* sp.n. and *M. atroelegans* sp.n. by the relatively long, apically hooked paramere.

**Distribution:** Indonesia: Lombok Island.

**Habitat notes:** *Microvelia jaechi* sp.n. was collected in a small, one metre wide brook at an altitude of about 800 m a.s.l. (= locality 25) (Jäch, pers. commun.).

**Etymology:** Named after Dr. Manfred A. Jäch, coleopterist in NHMW, who collected the type series.

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