

## On A New Species of Water Skater, *Ptilomera* Amyot and Serville, 1843 from India (Hemiptera : Heteroptera, Gerridae)



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**Abstract :** The genus *Ptilomera* Amyot and Seville, is hitherto represented by four species viz., *Ptilomera* (Proptilomera) *himalayensis* Hungerford and Matsuda, 1958; *Ptilomera* (s.str.) *laticaudata* Hardwick, 1825; *Ptilomera* (s.str.) *assamensis* Hungerford and Matsuda, 1965 and *Ptilomera* (s.str.) *agroides* Schmidt, 1926 from India. A new species of *Ptilomera*, *Ptilomera* (s.str.) *Schmidti* sp.nov. is described from Uttar Pradesh, India.

**Key words :** Skaler, Hemiptera, heteroptera, *Ptilomera*.

### Introduction

*Ptilomera* Amyot and Serville, 1843 is an important genus of sub family Ptilomerinae Esaki, 1927 of family Gerridae Leach, 1815. This genus was first described by Amyot and Serville in 1843 for *Gerris laticaudata*. Hardwicke, 1825 as type species (Mis-spelled *laticaudata*). A new species of the genus *Ptilomera* recorded during the survey of fresh water bugs of Uttar Pradesh is being described here.

#### **Genus : *Ptilomera* Amyot and Serville, 1843**

*Ptilomera* Amyot & Serville, 1843. Hist. Nat. Ins. Hemipt. 1: 413.

*Ptilomera* Herrich-Scaeffler, 1853. Wanz. Insekten, 9: 65, Tab. 305, fig. 940.

*Ptilomera* Breddin, 1901. Abh. Naturf. Ges. Halle. 24: 86-89, Tab. 1, figs. 10-14.

*Ptilomera* Distant, 1903. Faun. Brit. India Rhynchota, 2 : 185.

**Type species :** *Gerris laticaudata* Hardwick, 1825.

Antenna shorter than body length, first segment longer than three following segments together. Anterior margin of head not rounded. Middle leg shorter than hind leg, femure a little less than twice as long as tibia; with a fringe of long hairs except in basal one fourth in male. Hind tarsal segment fused. Claws present on second

tarsal segment of all legs. Anterior margin of first abdominal tergite distinct. Abdominal spiracles situated more towards the anterior margin than the posterior margin of each segment. Connexivum nearly flattened or a little reflexed. Males usually larger than females (an unusual feature in the Gerridae).

**Distribution :** Oriental realm (Annam, Burma, Celebes, Ceylon, China, Formosa, India, Java, Nepal, Philippines, Sumatra, Thailand), Australian realm (New Guinea, Ceram, Timor).

This genus includes two subgenera.

#### **Key to the subgenera :**

- Rear margin of metacoxa without thorn like projection. Female without connexival spines ..... *Ptilomera* (Proptilomera) Hungerford and Matsuda, 1958.

- Rear margin of metacoxa with thorn like projection. Female with distinct connexival spines ..... *Ptilomera* (*Ptilomera*) Amyot and Serville, 1843.

#### **Subgenus : *Ptilomera* (s.str.) Amyot and Serville, 1843**

It was described as a distinct genus by Amyot and Serville (1843). Hungerford and Matsuda (1958) reduced it to the rank of subgenus.

Body larger. Middle coxa with a distinct spinous process on apical margin. Male eighth

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abdominal segment with median longitudinal elevation on ventral surface; pygophore prolonged; parameres bent apically with a mass of hairs. Female seventh abdominal segment modified posterolaterally; lobate ventral projection large.

**Ptilomera (s. str.) schmidti sp. nov.**

(Pl. I, Figs. 1-5 and Pl. II, Figs. 6-10)

**Size :** Apterous male 16.29 mm long; width of head including eyes 2.18 mm; width of pronotum 2.51 mm; greatest width of body across mesoacetabula 4.12 mm. Apterous female 15.26 mm long; width of head including eyes 2.13 mm; width of pronotum 2.26 mm; greatest width of body across mesoacetabula 4.11 mm.

**Colour :** General colour ferrugineous reddish. Clypeus and apices of antenniferous tubercles black, mesopleural region blackish with dark black longitudinal stripes clothed with silvery pubescence. Abdominal tergites black laterally. Body below covered totally with silvery pubescence. Antennae and legs brown.

**Head :** Proportional length of antennal segments of apterous male : 1st : 2nd : 3rd : 4th : : 166 : 4 : 54 : 32, total length of antenna 12.12 mm of apterous female : 1st : 2nd : 3rd : 4th : : 144 : 34 : 42 : 33, total length of antenna 11.96 mm. Head with anterior region not bent beneath, widened posteriorly between eyes, posterior margin nearly straight, including eyes as wide as pronotum (46 :

45 in male and 45:44.5 in female). Antenniferous tubercles distinctly divert anteriorly. Clypeus well defined basally. Mandibular and maxillary plates distinct. Rostrum short, slender, just surpassing apical margin of prosternum, third segment a little more than three times as long as last segment (25 : 8 in male and 25.5 : 8.2 in female).

**Thorax :** Pronotum wider than long, rounded laterally, feebly concave posteriorly. Mesonotum about three times longer than pronotum (26 : 9 in male and 25.5 : 8.7 in female), without median longitudinal sulcus, lateral longitudinal suture separating mesonotum from Mesopleuron greatly obliterated. Intersegmental suture between mesonotum and metanotum well demarcated. Mesosternum nine times as long as metasternum (99 : 11 in male and 96 : 10.72 in female). Median longitudinal sulcus of metanotum conspicuous. Metaacetabular suture strongly oblique, ventrolateral margin of metaacetabulum deeply concave. Omphalium reduced. Omphalial groove absent. Fore leg with femur simple, a little longer than tibia; with a distinct process at inner apical corner. Mid leg relatively longer in male than in female, femur robust with a fringe of long hairs in basal one fourth. Hind leg longer than mid leg, both femur and tibia without fringe of long hairs in basal one fourth. Hind leg longer than mid leg, both femur and tibia without fringe of hairs. Claws arising from near apex.

**Relative length of leg segments :**

**Apterous male (16.8 mm)**

	femur	tibia	tarsus	First tarsal segment	Second tarsal segment
Fore leg	118	100	20	13	33
Mid leg	298	216	94	36	130
Hind leg	302	136	28	24	52

**Apterous female (17.2 mm)**

	femur	tibia	tarsus	First tarsal segment	Second tarsal segment
Fore leg	122	108	21	14	35
Mid leg	302	220	96	37	133
Hind leg	308	239	29	26	55

**Abdomen :** Length of abdomen to thorax : 158 : 128. Abdomen long, parallel sided upto sixth segment. Anterior margin of first tergite well demarcated, anterolateral angle triangular; second tergite a little longer than first tergite; second to sixth tergite nearly equal in length. Connexivum slight reflexed. Abdominal spiracles located closer to anterior than to posterior margin of each segment. Second to sixth sterna nearly subequal.

**Male genitalia :** Genitalia segment : pregenital segments : : 72 : 86. Suranal plate not reaching posteriorly beyond the median lobe, their front and rear margins not parallel. Pygophore normal in shape, its caudal tip is blunt. Dorsolateral projections of pygophore slender, pointed and extending laterally about as far as lateral wings of suranal plate; shaft of parameres longer than the laterally turned arm. In rear view, arm has a distinct keel on its lower margin as shown in figure. The endosoma with dorsal plate reaching apically much beyond the apex of dorsal margin and sharply curved behind, apical plate truncate, basal plate fused with dorsal plate and provide support to membranous ventral lobe lateral plates two pairs.

**Female genitalia :** Seventh abdominal tergite equal to sixth tergite. Connexival spines of moderate length arising from end of connexivum, dorsal lobe short, directed obliquely downwards,

separated from ventrolateral lobe by a narrow deep incision. Distal lobe of seventh abdominal sternite partly covered by lateral lobes, distal margin truncate. First valvulae with apical cleft dividing the valvulae into two lobes at apex. Second valvulae with lateral margins thickly sclerotized, narrowly rounded apically. Intervalvular membrane with a pair and oblique dark spots at the bases.

**Material examined :** Holotype one apterous male on pin, allotype one apterous female on pin, paratypes apterous 7 males and 3 females, Uttar Pradesh, Ram Nagar, 20.viii.2005 (Coll. Dinesh Kumar Chaturvedi).

**Distribution :** INDIA : Uttar Pradesh.

### Remarks

This species closely resembles *Ptilomera* (s. str.) *laticaudata* (Hardwick), 1825 but is easily recognised due to median lobe of suranal plate being not very large, slightly surpassing lateral wings caudally nearly straight dorsal margin of seventh abdominal connexivum and in female due to a ventrolateral lobe of seventh abdominal segment.

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### *Ptilomera* (s. str.) *schmidti* sp. nov.

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#### (Pl. I, Figs. 1-5)

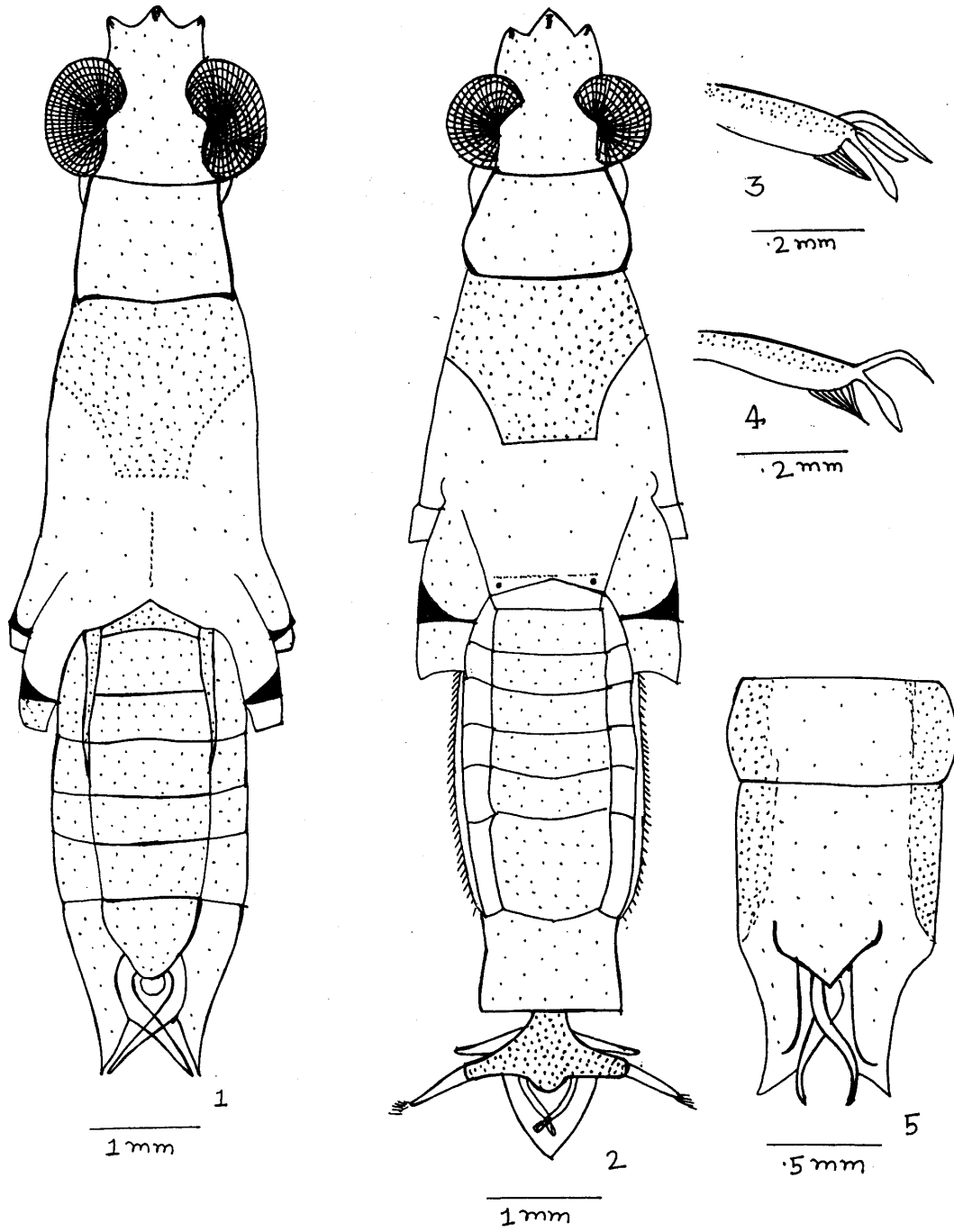
Fig.1. Dorsal view, apterous female.

Fig.3. Rear view of left paramere

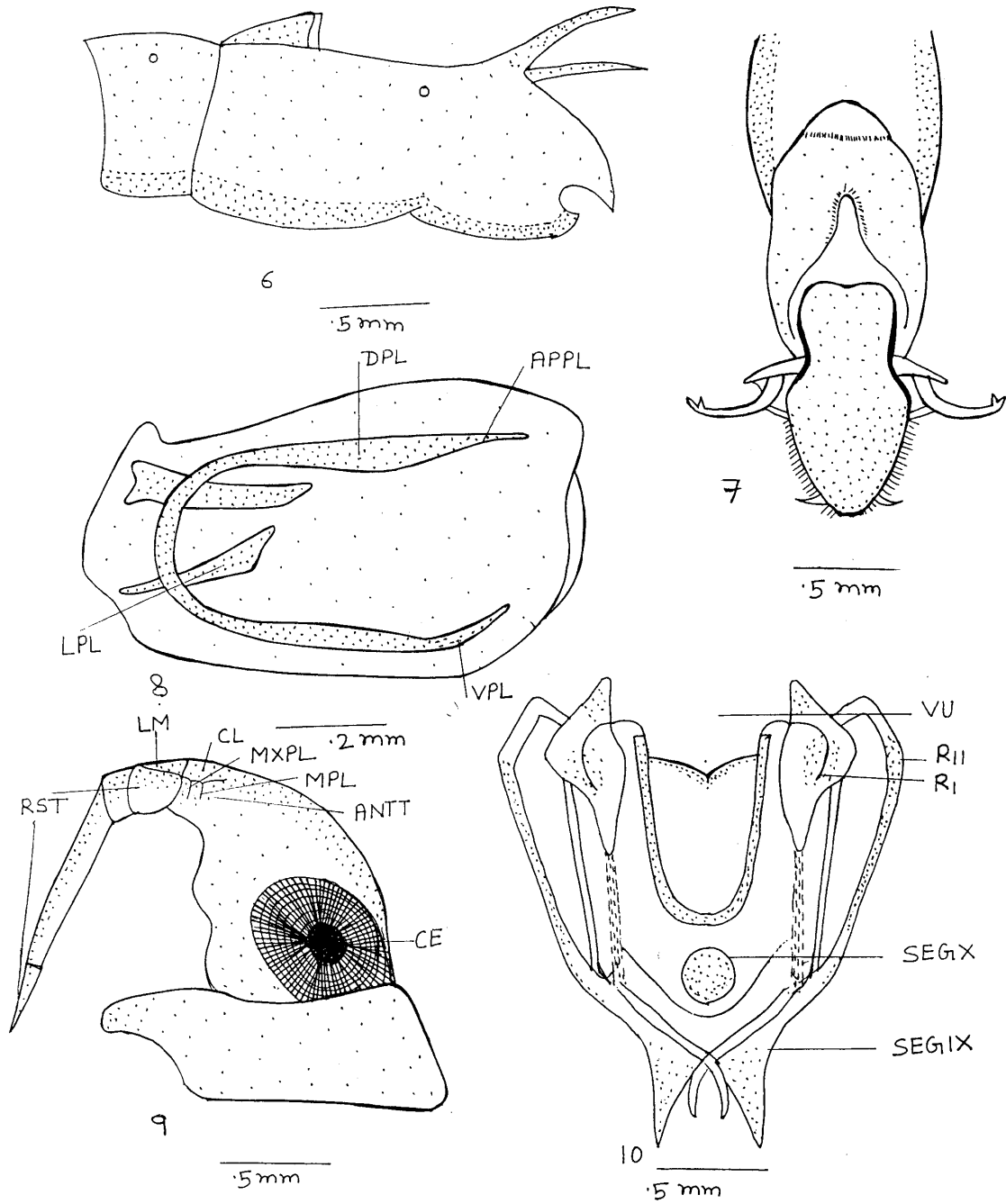
Fig.5. Ventral view of female apical abdominal segments.

Fig.2. Dorsal view, apterous male.

Fig.4. Side view of right paramere.



PL.I



PL. II

**(Plate - II, Figs. 6-10)**

- Fig.6. Lateral view of female apical abdominal segments.  
Fig.7. Ventral view of male apical abdominal segments.  
Fig.8. Apical abdominal segment of endosoma.  
Fig.9. Lateral view of Head.  
Fig.10. Female genitalia

**Key to Abbreviated Lettering of Figures**

APPL	=	Apical Plate
ANTT	=	Antenniferous tubercle
CL	=	Clypeus
DPL	=	Dorsal plate
LM	=	Labrum
LPL	=	Lateral plate
MPL	=	Mandibular Plate
MXPL	=	Maxillary Plate
R	=	Ramus
RST	=	Rostrum
SEG	=	Segment
VU	=	Vulva
VPL	=	Ventral Plate

**References**

- Amyot E. and Serville A. (1843): *Historie naturelle insects. Hemipteres.* pp. 675.
- Bredden G. (1901): *Die Hemipteren von Celebes Ein Beitrag Zur Faunistik der Insel Halle Abh. Natf. Ger.*, **24**, 1-215.
- Distant W. L. (1903): *The fauna of British India including Ceylone and Burma. Rhynchota, Heteroptera.*, **2** (1), 175-191.
- Hardwicke T. (1825): *Description of the Germatis longicornis and of three new Insects from Napaul.* *The Trans. Linnean Soc., London*, XIV.
- Herrich-Schaeffer (1853): *Die Wasserläufer der Ungarischen Hemiptera fauna wanz. Insekten*, 9 : 65, tab. 305, fig. 940.
- Hungerford H. B. and Matsuda R. (1958): *A new primitive Ptilomera from the Himalayas and other notes (Gerridae, Hemiptera).* *Bull. Brooklyn Ent. Soc.*, **53**(5), 117-123. 2 pls.