

Records and notes on some Oriental *Platycheirus* species and description of the female *P. himalayensis* Brunetti, 1915 (Diptera, Syrphidae)

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The paper reports on six *Platycheirus* Le Peletier & Serville, 1828 species from the Oriental region. The female of *P. himalayensis* Brunetti, 1915 is described and figured, and a key is given to separate the species from the similar *P. manicatus* (Meigen, 1822).

Key words: *Platycheirus*, the Oriental region, description, key, Diptera, Syrphidae.

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Introduction

The hoverfly genus *Platycheirus* Le Peletier & Serville, 1828 is mainly northern and alpine in its distribution. Still rather few species have been recorded from the Oriental region, and it is expected that more species will show up, especially in the montane parts of the area. The present paper deals with six species of the genus; *Platycheirus alpigenus* Barkalov & Nielsen, 2008, *P. altotibeticus* Nielsen, 2001, *P. formosanus* Shiraki, 1930, *P. himalayensis* Brunetti, 1915, *P. immaculatus* Ôhara, 1980 & *P. urakawensis* (Matsumura, 1919).

Material and methods

Material collected in Nepal, Bhutan and NW India by the following persons and collections have been studied: **IBSJW/NME** = Institut für Biologische Studien Jörg Weipert/Naturhistorisches Museum Erfurt; **MHS** = Martin Hauser, Sacramento; **NME** = Naturkunde Museum Erfurt, and **USS** =

Ulrich Schmid, Stuttgart. In addition, one male of *Platycheirus formosanus* from Taiwan, from coll. Kenji Ôhara, Fukuoka has been studied.

The species

Platycheirus alpigenus Barkalov & Nielsen, 2008

Material studied: NEPAL, Distr. Humla 20 km NW Simikot 3,8 km SE Chala 3500 m 29°58'49"N 81°38'23"E 27–28 June 2001 *Juniper* meadows, 1♂ leg. F. Creutzburg (in coll. IBSJW/NME). The species was described from Altai, Russia at 2030–2400 m a.s.l. The species belongs to the *stegnus* group and *carinatus* subgroup (Vockeroth 1990). The reported specimen has been compared with a male paratype in the author's collection.

Platycheirus altotibeticus Nielsen, 2001

(Figures 1A–C)

Material studied: NEPAL, Prov. Seti 29°53,4'N 81°36,2'E 25 km SW Simikot, Kuwadi

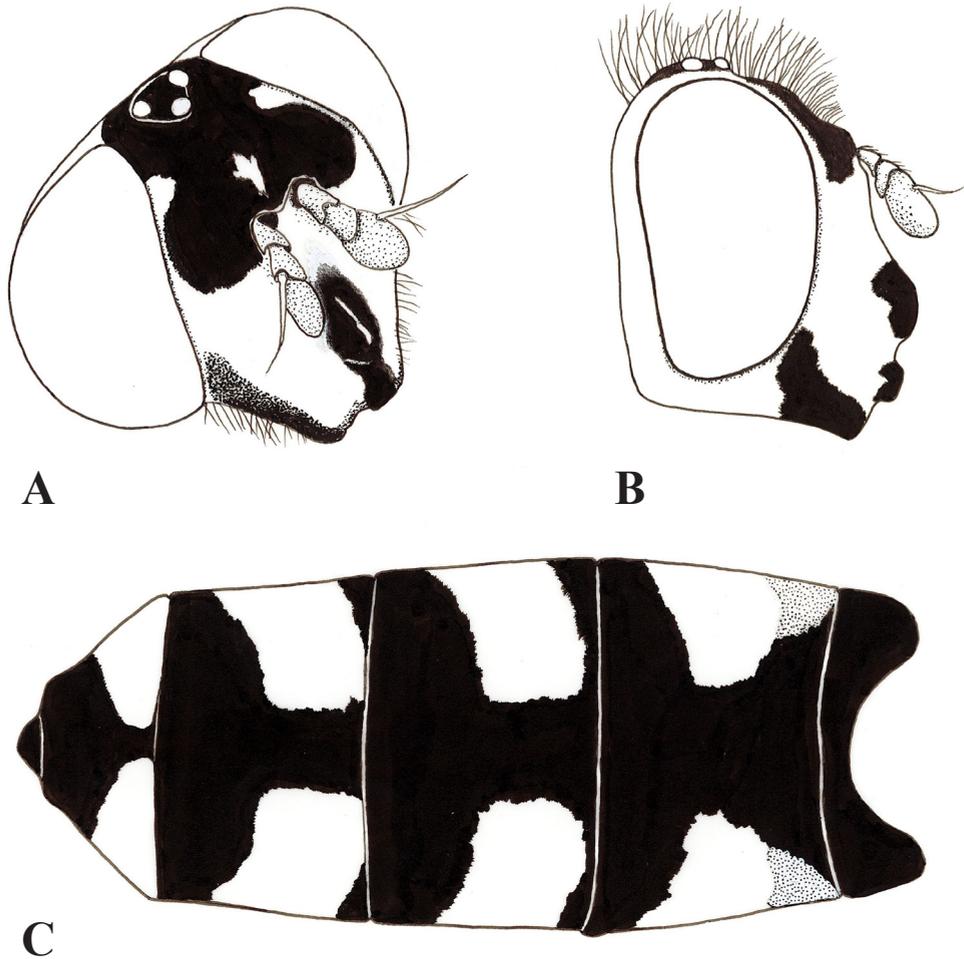


FIGURE 1. *Platycheirus altotibeticus* Nielsen, 2001 female. **A.** Head in dorsal view. **B.** Head in lateral view. **C.** Abdomen.

Khola E Saipal, 3600 m NN 4 July 2001, 1♀ leg. J. Weipert (in coll. IBSJW/NME). The male was described from China, like the female by Nielsen & Romig (2010). The species is of the *albimanus* group (Vockeroth 1990).

***Platycheirus formosanus* Shiraki, 1930**

(Figures 2A–B)

Material studied: TAIWAN, Mt. Ali Shan, Chiai Hsien, 17 June 1975, 1♂, leg. K. Setoya, det. K. Ôhara. The species was described from Japan and is of the *albimanus* species group, resembling

albimanus (Fabricius, 1781) and *urakawensis* (Matsumura, 1919). However, it differs markedly in the male fore legs. In femur the basal bristles have their tips expanded, spade like. The tibia is widening evenly from base to tip, and segment 1 of the tarsus is narrower and more longish than the same segment at *albimanus* and *urakawensis* (Figure 4).

***Platycheirus himalayensis* Brunetti, 1915**

(Figures 3C–F)

Material studied: NEPAL, Prov. Karnali,

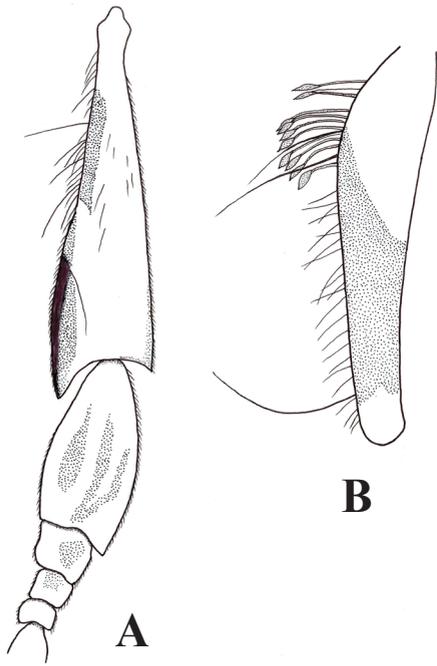


FIGURE 2. *Platycheirus formosanus* Shiraki, 1930. **A.** Fore tibia and tarsus. **B.** Fore femur. Both in dorsal view.

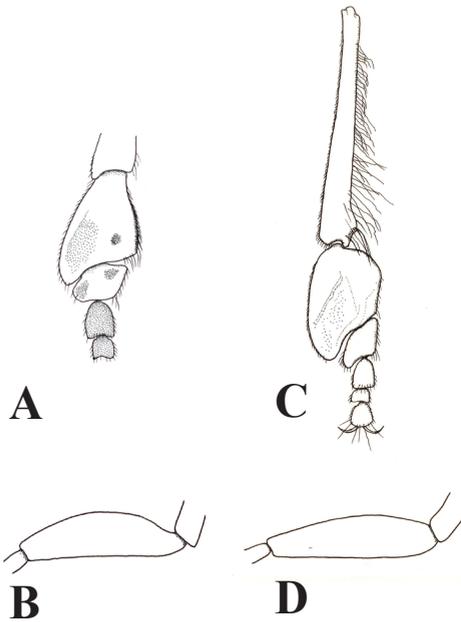
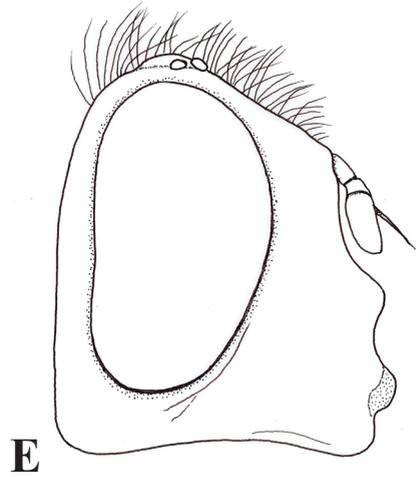


FIGURE 3. *Platycheirus manicatus* (Meigen, 1822). **A.** Male right fore tarsus, in dorsal view. **B.** Hind basitarsus, lateral view. *Platycheirus himalayensis* Brunetti, 1915. **C.** Male fore tibia and tarsus, dorsal view. **D.** Male hind basitarsus in lateral view. **E.** Female head in profile, **F.** Female abdomen in dorsal view.

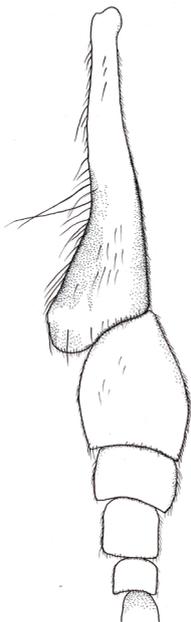


FIGURE 4. *Platycheirus urakawensis* (Matsumura, 1919) male fore tibia and tarsus, dorsal view.

Garpung-Tal E Hurikot 3100–3600 m NN 14 May 1995 1♂; Prov. Karnali, Umgebung Churta 2900–3500 m NN 18–19 May 1995 1♀; Prov. Karnali, 29°12, 10'N, 82°18, 56'E Hochtal Gothichaur 2900 m NN; 13 May 1997 1♀; Prov. Karnali, 29°58, 49'N, 81°38, 25'E 5 km SE Chala, Bergwiese 3500 m NN 27 June 2001 1♂1♀, all leg. J. Weipert (in coll. IBSJW/NME). Prov. Mahakali, Hochlager vor Api bis Lager am Chamliya Khola bei Shinae, 3400–2800 m, 10 June 2005 4♂. Prov. Mahakali 29°56'22"N, 80°54'20"E Hochlager vor Api 3400 m, 8 June 2005 1ex.; Hochlager vor Api bis Lager am Chamliya Khola bei Shinae 3400–2800 m 10 June 2005 1♂, all leg. J. Weipert (in coll. IBSJW/NME). Prov. Seti, 29°53'4"N, 36°2'E 25 km SW Simikot, Kuwadi Khola E Saipal 3600 NN 4 July 2001, 2♂4♀, leg. J. Weipert (in coll. IBSJW/NME). Distr. Humla 20 km NW Simikot 3,8 km SE Chala 3500 m 29°58'49"N, 81°38'23"E 27–28 June 2001 *Juniper* meadows, 1♂; 2 km S Chala 3200 m 29°59'27"N, 81°37'30"E 25–26 June 2001 Kairang Khola 1♀; 14 km W Simikot 3 km NW Sankha La 4300 m 29°57'18"N, 81°39'30"E, 29–30 June 2001, Tragant, yellow

trap 2♀, all leg. F. Creutzburg (in coll. IBSJW/NME).

Diagnosis: The species belongs to the *manicatus* group and is much resembling *P. manicatus* (Meigen, 1822) It may be separated by characters given in the key below, Table 1.

Description of *Platycheirus himalayensis* female. *Head:* face protruded as in the male (Figure 3E), yellow grey pollinose except facial tubercle and mouth edge shining black; yellow haired. Vertical triangle and posterior part of frons shining black, lightly yellowish pollinose, anterior part of frons more densely pollinose. Lunula shining black. Antennae dull black to greyish black. Vertical triangle and frons black haired. Genae and postocular orbit yellowish grey pollinose, yellow haired. *Thorax:* scutum and scutellum shining black, scutellum with light yellowish grey pollinosity, scutum more heavily pollinose with more or less obvious stripes. Pleurae dull. Scutum with short yellow and longer black hairs, scutellum with a mixture of short and long yellow and black hairs. Pleurae yellow haired. *Legs:* fore and mid femur yellow on about apical half, narrowly yellow at base. Hind femur narrowly yellow at base and apex. Fore and mid tibia with a broad black ring on apical half, yellow on basal half and at apex, hind tibia black except extreme base and sometimes apex yellow. Mid tibia posteriorly at apex with some soft black bristles, otherwise yellow haired. *Wings:* microtrichose except for base of 2nd basal cell and anal cell bare. Veins and wings stigma dark greyish brown. Calypter yellow white, the rim somewhat darkened. Halter yellow to yellow white. *Abdomen:* tergite 1 black with a brassy lustre, light yellowish pollinose. Tergites 2–7 each with a pair of yellow subsquare spots (Figure 3F); the long hairs along the side margins yellow, the short hairs on dorsal part yellow and black. Sternites yellow with a more or less broad black longitudinal stripe in the middle.

Body length (from frons to the tip of abdomen): 10.5–12.2 mm, wing length 10.4–10.7 mm.

Ecology: Collected at 2800–4300 m a.s.l.

Flight period: May–July.

Distribution: Northern India, Nepal.

Table 1. Key to separate *Platycheirus himalayensis* Brunetti, 1915 and *P. manicatus* (Meigen, 1822). Both species have their scutum and scutellum somewhat dulled by greyish yellow pollinosity, pleurae more densely so.

Male (Figures 3A–B): ocellar triangle equilateral. Eyes meeting for a distance about equal to the distance between the ocelli of the ocellar triangle. Eye angle 90–95°. Facial pile yellow. Fore tibia only very little dilated at apex, fore and mid tibiae are orange on basal 1/3 and are mostly yellow pilose. Fore basitarsus with curved lateral margins, about as long as broad, dorsal surface without a lateral longitudinal keel (Figure 3A). Mid tibia with long rather sparse posterodorsal and posterior hairs on apical half. Hind basitarsis strongly swollen, with its maximum thickness in the middle of the segment (Figure 3B). – **Female**: frons totally covered by dense greyish yellow pollinosity. Scutum, scutellum and pleurae with dense greyish yellow pollinosity; scutellum entirely tawny pilose. Tergites 2–5 each with a pair of large elongate subrectangular spots. ♂♀ body length about 9 mm, wing length 8 mm..... *P. manicatus* (Meigen, 1822)

Male (Figures 3C–D): ocellar triangle anteroposteriorly elongate. Eyes meeting for a distance that is longer than the distance between the ocelli of the ocellar triangle. Eye angle 110°. Facial pile black. Fore tibia somewhat broadened at apex, laterally at apex with some long black hairs; fore and mid tibiae are orange on basal 1/2 and apical 1/6 and are almost black pilose. Fore basitarsus subrectangular, about 1.5 times as long as broad and dorsolaterally with a low longitudinal keel (Figure 3C). Mid tibia ventrally and on posterior surface with dense soft crinkly black hairs. Hind basitarsus less swollen and with its maximum thickness on basal half of the segment (Figure 3D). Tergites 2–5 each with a pair of subsquare yellow spots. – **Female** (Figures 3E–F): upper part of frons shining black, contrasting well from the lower, pollinose part of frons. Scutum and scutellum shining, only lightly pollinose; scutellum is mostly black pilose. Pleurae rather densely pollinose. Tergites 2–7 each with a pair of yellow spots (Figure 3F). ♂♀ body length about 11 mm, wing length 10 mm..... *P. himalayensis* Brunetti, 1915

***Platycheirus immaculatus* Ôhara, 1980**

Material studied: NEPAL, Prov. Karnali Umgebung Churta 2900–3500 m NN 18–19 May 1995 1♀, leg. J. Weipert (in coll. IBSJW/NME). A small and slender species of the *ambiguus* group (Vockeroth 1990), its abdomen is dull black.

***Platycheirus urakawensis* (Matsumura, 1919)**

(Figure 4)

Material studied: INDIA, NW-Indien, Himalaya Himachal Pradesh Distr. Kullu, Solang-Valley, 4 km NW Solang-Nullah, 2500m 32 20 N, 77 09 E 15–17 September 1999 3♂3♀, V. Weisz leg.(in coll. USS); BHUTAN (West), Jhomolhari Trek, 5 km N Shana Zampa 3250 m, 30 June 2005, 1♂; Jhomolhari Trek, N Jangothang base camp, ca. 4100–4200 m, 31 July–2 August 2005, 1♂1♀ and 1 intersex, all leg. Hauenstein, Kautt. & Naumann (in coll. USS); NEPAL, Solukhumbu Goyom above Sete, 27°34'N, 86°27'E 3100

m, 1♀; Solukhumbu below Pangum 2500 m, 27°35'N, 86°43'E 2500 m, 1♂; Solukhumbu above Pangum 27°34'N, 86°45'E 2900–3000 m, 1♂ (all leg. and in coll. MHS). - Prov. Mahakali, Hochlager vor Api bis Lager am Chamliya Khola bei Shinae, 3400–2800 m, 10 June 2005 2♂, leg. J. Weipert (in coll. NME); Distr. Humla 20 km NW Simikot 3,8 km SE Chala 3500 m 29°58'49"N 81°38'23"E 27–28 June 2001 *Juniper* meadows, 1♂ leg. F. Creutzburg (in coll. IBSJW/NME). Prov. Seti 29°53,4'N, 81°36,2'E 25 km SW Simikot, Kuwadi Khola E Saipal, 3600 m NN 4 July 2001, 1♂ leg. J. Weipert (in coll. IBSJW/NME). Prov. Karnali, Pass SE Churta 3800 m NN 7 May 1995, 1♀; Umgebung Churta 2900–3500 m NN 18/19 May 1995 1♀; vor Pass SE Churta 3400 m, BF 17 May 1995 1♀; Prov. Karnali 29°12, 10'N, 82 18,56'E Hochtal Gothichaur 2900 m NN 9 June 1997 1♀; NW Simikot, Tuling bis Kermi 2300–2700 m NN 18–19 June 2001 1♀,

all leg. J Weipert (in coll. IBSJW/NME); Prov. Karnali 29°21,23'N82°23,41'E Maharigaon, N, Hochlager 1, 3680 m NN 6 July 1999 1♀ and 29°20,25'N82°23,16'E Maharigaon, N, Hochlager 2, 3220 m NN 9 July 1999 1♀, both leg. M. Hartmann (in coll. IBSJW/NME).

Comments: A widespread species, known also from the Nearctic and Palaearctic Regions (Mutin & Barkalov 1999, Vockeroth 1990, Sørensson 2001, Bartsch & al. 2009). *P. urakawensis* is belonging to the *albimanus* subgroup (Vockeroth 1990). The male differs from *P. albimanus* (Fabricius, 1781) in a wider eye angle (100–105° in *urakawensis*, 90° in *albimanus*) and in the fore tibia and tarsus. Furthermore, the male differs well from the male of *P. formosanus* Shiraki, 1930 in the fore tibia and tarsus (Figures 2A–B and 4).

Flight period: May–September.

Distribution: Bhutan, China, India (Jammu & Kashmir, Himachal Pradesh, Uttar Pradesh, Sikkim, West Bengal) and Nepal, at altitudes about 2500–4200 m.

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