# *Platycheirus* species (Diptera, Syrphidae) from the Altai Mountains, SE Siberia, with description of five new species

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The paper reports 38 *Platycheirus* species from the Altai Mountains and describes the following new species, *P. alpigenus* sp. n., *P. altaicus* sp. n., *P. atratus* sp. n., *P. fallax* sp. n. and *P. gunillae* sp. n.

Keywords: *Platycheirus,* new species, Syrphidae, Altai Mountains.

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## INTRODUCTION

The Altai Mountains are a mountain range in eastern Asia where Russia, China, Mongolia and Kazakhstan come together. The larger part of the Altai Mountains is on Russian territory, in the Republic of Altai. The nature of the Altai Mountains is highly variable, with several peaks exceeding 4000 meters (Mount Belukha reaches 4,506 m a.s.l.). The region represents the most complete sequence of altitudinal vegetation zones in central Siberia, from steppe, forest-steppe, mixed forest, subalpine vegetation to alpine vegetation. The climate is continental. The winters are cold with snowfall, the summers warm and mainly dry in the south, but with considerable rain in north-east. The large diversity of habitats has resulted in originating of a very rich flora and fauna with a large number of endemics. The material studied shows a high number (thirty eight species) of *Platycheirus* in the area.

## MATERIAL AND METHODS

Zoological Museum, Novosibirsk, had several expeditions to the Altai Mountains, resulting in essential material from the high mountains of SW Altai, from 1963 and onwards. It has been collected by N. Violovitsh, A. Barkalov, V. Zinchenko, R. Dudko, V. Sorokina and others. The collecting of hoverfly material by A. Barkalov started in 1977 and has proceeded until recently.

Our study is devoted to species of the genus *Platycheirus* Le Peletier & Serville, 1828 from only the Russian and Kazakh parts of the area. The genus comprises rather small, slender to robust species characterized by expanded, flattened front legs in the males of most species and/or with stiff bristles, modified hairs or hair tufts below on fore femur.

Most of the material has been collected by sweeping forest and tundra vegetation, and netting specimens hovering near and above mountain tops. In recent years Malaise traps has also been an effective collecting method. The drawings were made with the aid of a drawing mirror attached to a Wild M5 stereomicroscope.

## NEW SPECIES

Three of the following five new species, *P. alpigenus* sp. n., *P. altaicus* sp. n. and *P. gunillae* sp. n. belong to the *stegnus* group, *carinatus* subgroup, given by Vockeroth (1990). The *stegnus* group is characterized by slender legs, fore femur posteriorly with fine hairs, ventrally at base sometimes with a few stiff setae. Fore and mid tibiae posteriorly on at least apical half with a single row of short and rather weak to long and strong black bristles. Abdomen with paired subrectangular to subtriangular silvery to submetallic spots on tergites 2-4. The characters of the *carinatus* subgroup is face with uniform dusting, and with a weak to strong keel between the antennal bases. *P. atratus* sp. n. and *P. fallax* sp. n. may belong to the same group and subgroup, but are without bristles on fore and mid tibiae. Also the abdomen of *P. atratus* sp. n. is all black, without paired spots on the tergites. However, all five species are included in the key below.

Note: The holotypes carry a locality label with Russian and English text, the paratypes with Russian text.

### *Platycheirus alpigenus* sp. n.

Holotype: ♂ labelled "Алтай, 45 км восточней Усть-Улагана, 2050-2200 м, 50,5 N 88.6 E 20.06. 2005 А. Баркалов" (= Altai, 45 km East of Ust'-Ulagan, 2050-2200 m, 50,5°N, 88,6°E 20.06.2005, leg. A. Barkalov). Paratypes: Ulaganskij district: 1 ♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50,5°N, 88,6°E 18 June 2005 (V. Zinchenko) meadow; Kosh-Agachskij district: 1 ♂ plateau Ukok, near lake Muzdy-Bulak, 2400 m a.s.l. 49,3°N, 87,7°E 29 June 2005 (V. Sorokina); 2 ♂ upper part of Akturu river, upper border of forest zone, 2030-2100 m a.s.l., 50,1°N, 87,8°E 3-9 July 2006 (A. Barkalov) Malaise trap. Holotype and three paratypes in coll. ZMN, one paratype in coll. T.R. Nielsen.

Diagnosis: a small black species with grey, paired spots on tergites 2-4. It resembles *Platycheirus gunillae* sp. n. (see below) but differs as follows: fore tibia posterolaterally with long black bristles, the longest reaching well beyond tip of tibia. Fore femur behind with long soft bristly hairs, those on apical half at least as long as those on basal half. The abdominal spots are not reaching to the fore margin of the tergites. – *P. alpigenus* sp. n. differs from *P. setitarsis* Vockeroth, 1990 in a less nosy face, in simple mid basitarsus (without black setae) and in a more slender abdomen.

**Description**
Male

Head: Figures 1A,B. Eye angle 95-105º. Profile of face: face not much protruded but facial tubercle more so than upper mouth edge. Frons, face and jowls bluish black, black haired. Frons with light greyish yellow dusting, upper part of face (especially below the antennae) more heavily dusted. Antennae black, third joint longer (1,4x) than wide. Arista distinctly thickenend on basal half. Occiput moderately dusted; dorsally black haired, ventrally with whitish yellow hairs.

Thorax: Figures 1C—E. Scutum, scutellum and pleurae shining bluish black, pleurae lightly dulled by greyish white dusting. Scutum and scutellum with brown or yellow and black hairs, pleurae with yellowish pile. – Legs: mainly black; femorae with yellow tips, fore and mid tibia with about basal 1/3 yellow, their extreme tip yellow. Fore femur behind with long and rather soft hairs, those on apical half are at least as long as those on basal half. Fore tibia posterolaterally with black strong bristles; basal 1/3 of tibia with short, apical 2/3 with long bristles, the longest reaching middle of basitarsus. Mid tibia posterolaterally on basal 2/3 with a set of bristles, the longest reaching at least to tip of tibia. Hind basitarsus slim but slightly thicker than tip of tibia. – Wing: veins, stigma and calypter greyish yellow. Haltere blackish.

Abdomen: Figure 1F. Tergites dull black with light bluish reflections. Tergites 2-4 each with a couple of grey spots; the spots on tergite 2 small and roundish, those on tergites 3-4 subtriangular, wider than long and widening outwards. The

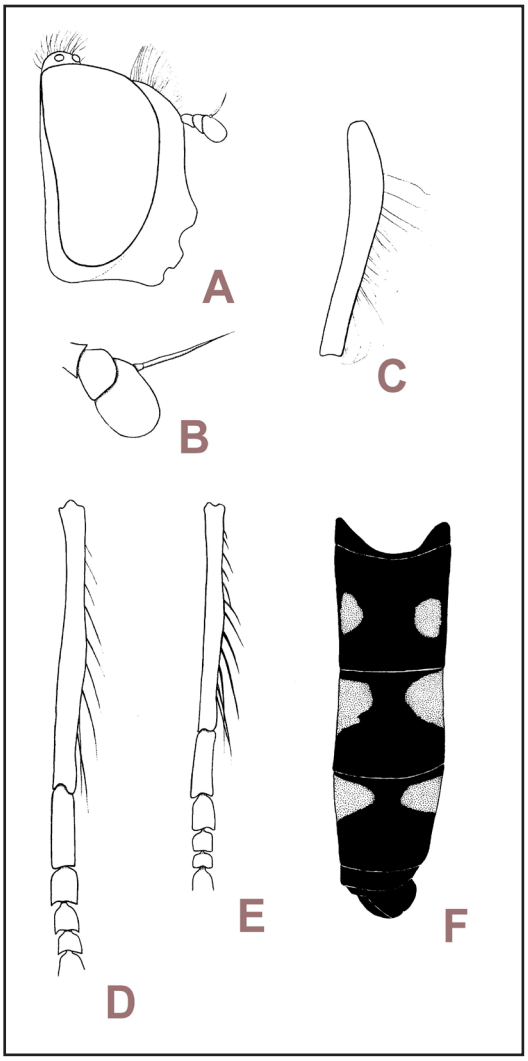


**Figure 1 A–F.** *Platycheirus alpigenus* sp. n., male. A: Head in profile, B: antenna, C: fore femur, D: fore tibia and tarsus, E: mid tibia and tarsus, F: abdomen

sternites shining black.

Body length: 6,9-8,3 mm, wing length: 5,7-6,8 mm.

Female: unknown.

Etymology: *Alpigenus* (latin) means coming from the mountains.

**Figure 1G.** Altai, 45 km East of Ust'-Ulagan, 2050-2200 m a.s.l., type locality of *Platycheirus alpigenus* sp. n.

Preferred environment: Tundra and high-mountain meadows with *Ranunculus* sp. and grasses on upper border of forest zone, figure 1G.

### *Platycheirus altaicus* sp. n.

Holotype: ♂, labelled "Алтай, Кош-Агачский р-н плато Укок, 2800-3000 м, 49,3 с.ш., 87,7 в.д., окр. оз. Музды-Булак 2.07.2005, сб. А. Баркалов" (= Kosh-Agachskij district: plateau Ukok, near lake Muzdy-Bulak, 2800-3000 m a.s.l., 49,3° N, 87,7° E, 2 July 2005 (A. Barkalov)). Paratypes: 8♂, 9♀ with the same label data. Holotype and most paratypes in coll. ZM Novosibirsk, 2♂, 2♀ in coll. T.R. Nielsen.

Diagnosis: similar to *Platycheirus carinatus* (Curran, 1927) and the nearctic *P. yukonensis* Vockeroth, 1990, but differing in setae of the legs, in the abdominal pattern and in all black pile of the body.

**Description**
Male

Head: Figure 2A. Eye angle 95° (110° in *P. yukonensis* and 115° in *P. carinatus*), the eyes are meeting for a distance which equals the distance between the ocelli of the vertical triangle. Profile of face nosy. Frons and face bluish black, covered by very light greyish white dusting, the hairs black. Antennae with first and second joint black, third joint and arista brownish black. Ocellar triangle and occiput black-haired, ventral part of occiput covered by greyish white dusting, black haired.

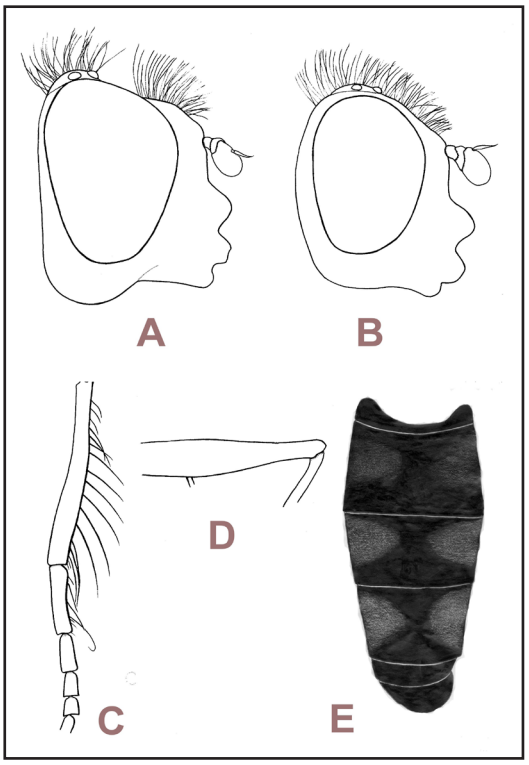


**Figure 2A–E.** *Platycheirus altaicus* sp. n. A: Head in lateral view, male holotype, B: Do, female paratype, C: male, left fore tibia and tarsus, D: male, mid femur, E: male abdomen

**Figure 2F.** Altai, Kosh-Agachskij district: plateau Ukok, near lake Muzdy-Bulak, 2800-3000 m a.s.l., type locality of Platycheirus altaicus sp. n.

Thorax: Figures 2C,D. Scutum, scutellum and pleurae bluish black, shining, the hairs black. – Legs all black, except for extreme tip of fore femur, base of fore tibia and fore tarsus brownish black. The hairs on the legs are all black. Basitarsus of p1 with four long posterior bristles, the last one or two with curved tips and nearly as long as the tarsal joint. Femur 1 and 2 behind each with a row of long soft and black hairs. Femur 1 below with a row of seven black stiff setae. Tibia 1 and 2 posterolaterally with long black bristles and bristly hairs. Femur 2 below in the middle with a cluster of two short strong black bristles which are not longer than apex of femur. Femur 3 with long black hairs posterolaterally and below, the tibia short haired. Hind basitarsus slender, only slightly thicker than tibia at apex. – Wing: the veins dark brown, stigma light brown. Calypter yellowish white, the rim brownish yellow. Haltere light brown.

Abdomen: Figure 2E. The tergites 1-4 dull black, black haired. Tergites 2-4 each with a pair of faint bluish spots which are dulled by light greyish dusting. Tergite 5 shining black. Sternites shining black, lightly greyish brown dusted. The hairs are black.

Female

Head: Figure 2B. Frons and face shining black, face lightly greyish white dusted (best seen from above), the hairs black. Antennae black. Occiput and genae black, black haired or with a mixture of black and whitish hairs on the genae.

Thorax: shining black, lightly dusted. The hairs on thorax black. – Legs all black; femorae with long black hairs, tibiae and tarsi also with short yellowish brown hairs. – Wings and halteres as in the male.

Abdomen: tergites and sternites shining black; the hairs black, except for the side margins of tergites 3-5 mainly white haired.

Body length: male 7,4 mm, female 7,5 mm. Wing length: male 5,9 mm, female 6,7 mm.

Etymology: The species name refers to Altai where the species was found.

Preferred environment: High-mountain tundra and mountain tops, on and near stones, figure 2F. Specimens were on wings only when the sun was out. When the sun was obscured by clouds, the flies abated immediately. Females visited flowers of *Dryas punctata* Juz.

### *Platycheirus atratus* sp. n.

Holotype: ♂ from Ust'-Koksinskij district, labelled "Алтай с. Теректа 14 vi 73 Сб. Левина" (Terekta 14 June 1973, L. Levina). Paratype: ♂, "Tyva, northern slope of Khundurgun range 24.vii.1963, N. Violovitsh", both types in coll. ZM Novosibirsk.

Diagnosis: body all black, resembling *P. immaculatus* Ôhara, 1980 but with a produced face and fore femora posteriorly with only soft hairs (without the row of black stout bristles and the curled apical bristle as in the *ambiguus* group).

**Description**
Male

Head: Figures 3A,B. Eye angle 105-110º. Head in profile somewhat produced. Antennae black, third joint small, slightly shorter than wide. Frons and face shining black with light brassy reflections, the hairs black. Jowls black, white haired. Occiput dulled by whitish dusting, dorsally with black, ventrally with white hairs.

Thorax: scutum and scutellum shining black, dark brown haired. Pleurae black with light yellowish dusting. Katepisternum and meron more densely dusted, the hairs mainly dark brown. - Legs: legs predominantly black, but all knees yellow and basal third of fore tibia and extreme tip of all tibiae yellow. Fore and mid femur behind with long soft dark brown hairs. The legs otherwise with short pale hairs. Hind basitarsus slender, only slightly more swollen than tip of tibia. - Wing: veins and stigma light brown, wing membrane with yellow

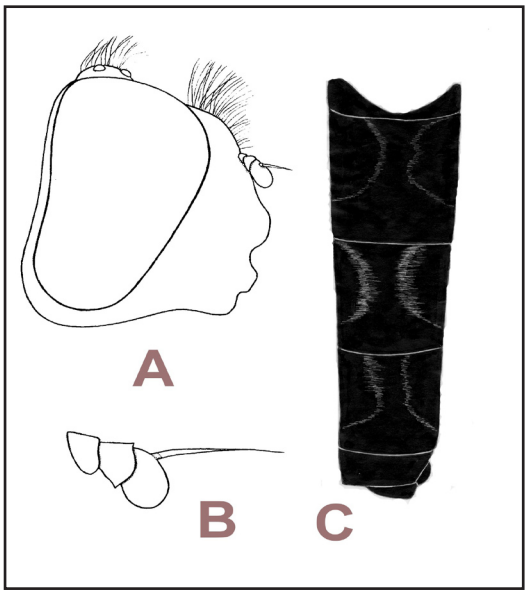


**Figure 3A–C**. *Platycheirus atratus* sp. n. male. A: Head in profile, B: antenna, C: abdomen.

brown tinge. Calypter light yellowish brown. Haltere greyish brown, the knob darkened.

Abdomen: Figure 3C. Tergites 1-5 dull black with light bluish reflections laterally on tergites 1-2. There are traces of transverse dust stripes on tergites 2-4. The short hairs are mainly black, but side margins of tergites 1-4 with light yellowish brown hairs. Sternites shining black, the hairs pale.

Body length: 8,5 mm. Wing length: 7,2 mm.

Female: unknown.

Etymology: *Atratus* (latin) means black or dressed in black and refers to the overall dark body of this species.

Preferred environment: unknown.

### *Platycheirus fallax* sp. n.

Holotype ♂, Russia labelled "Алтай, Шапшальский перевал 2740-2876 м 50,5° N, 89,8° E, тундра 23-25.7.2007 Сб. А. Баркалов"

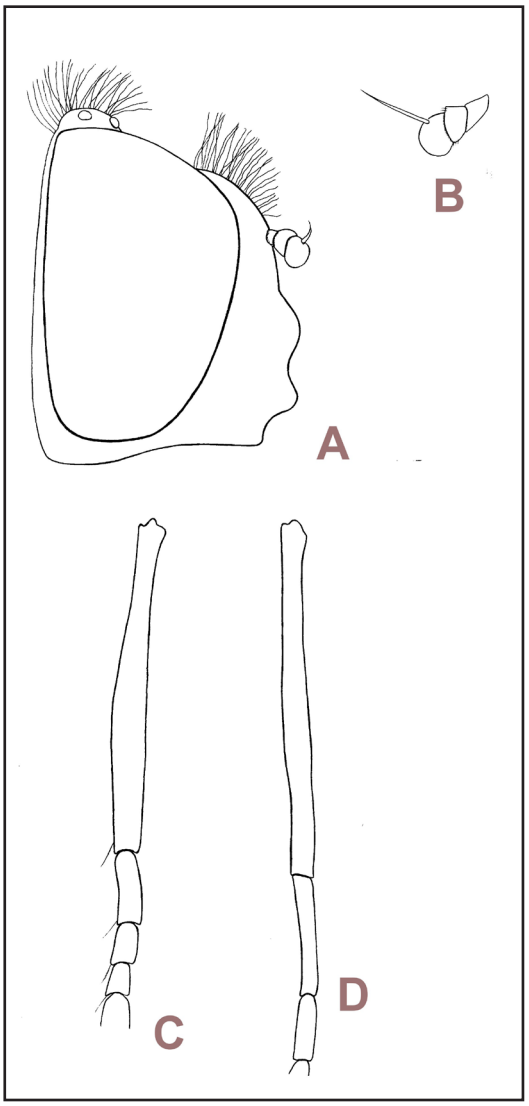


**Figure 4A**–**D**. *Platycheirus fallax* sp. n., holotype. A: head in lateral view, B: antenna, C: left fore tibia and tarsus, D: left mid tibia and tarsus.

(= Altai, Shapshal'skij pass, 2740-2876 m a.s.l. 50,5° N, 89,8° E, tundra 23-25 July 2007 leg. A. Barkalov). In coll. ZM Novosibirsk.

Diagnosis: a small and dark grey species of the *stegnus* group (Vockeroth 1990). Differs from *P. alpigenus* sp. n. and *P. gunillae* sp. n. in having all tarsi and tibiae without bristles and in a very short third antennal joint.

**Figure 4E**. Altai, Shapshal'skij pass, 2740-2876 m a.s.l., type locality of *Platycheirus fallax* sp. n.

**Description**

Male

Head: Figures 4A,B. Eye angle 100º. Head in profile moderately produced, central prominence about as much as upper mouth-edge. Frons, face and occiput rather heavily greyish-yellow dusted, the dusting of face slightly rippled. Head black haired. Antenna black, third joint very short, shorter than wide.

Thorax: Figures 4C,D. Scutum and scutellum subshining, somewhat dulled by grey dusting and also with two weak longitudinal dust stripes in the middle of scutum. Humerus and pleurae more densely dusted than scutum. – Legs: all legs black, except for the knees narrowly orange yellow. Tibiae and tarsi of all legs without bristles, short haired. Fore femur behind with a mixture of black and whitish yellow long hairs. – Wing: all wing membrane microtrichose. The veins are greyish black, stigma dark grey. Calypter white, haltere dark greyish brown.

Abdomen (partly damaged): tergites 2-4 with silvery greyish spots.

Body length: difficult to measure due to damage

on the abdomen, but size of *P. alpigenus*.

Etymology: *Fallax* (latin) means false or similar, referring to its similarity to *P. alpigenus* and *P.gunillae*.

Preferred environment: High mountain tundra (about 2800 m a.s.l.) on flowers of *Schulzia crinita* (Pall.) Spreng (figure 4E).

### *Platycheirus gunillae* sp. n.

Holotype ♂, Russia, labelled ”Респуб. Алтай, Кош-Агачский р-н, верх. р. Актуру 2104-2030 м 50,1 с.ш., 87,8 в.д. 3-9.07.006 сб. А. Баркалов” (= Republ. Altai, Kosh-Agachskij district, upper part of Akturu river, 2104-2030 m, 50,1ºN, 87,8º 3.-9.07.006, leg. A. Barkalov”. Paratypes: 3 ♂ from same locality and data. Holotype and two paratypes in coll. ZM Novosibirsk, one paratype in coll T.R. Nielsen.

Diagnosis: a dark, small species superficially resembling *P. setitarsis* Vockeroth, 1990, but differing in a narrower frons, a less nosy face, fore tibia only short haired (without posterolateral bristles), mid basitarsus without 3 strong black anteroventral bristles on apical two thirds, and in a narrower abdomen.

**Description**
Male

Head: Figures 5A,B,C. Profile of face rather flat. Head profile rounded in dorsal view. Eye angle 100º. Antennae black, third joint longer (1,4x) than wide. Arista distinctly thickenend on basal half. Frons, face and jowls black with light greyish dusting, black haired. The occiput mainly with light brown hairs.

Thorax: Figures 5D,E. Scutum, scutellum and pleurae shining black, the hairs light brown. – Legs: all legs predominantly black, but fore and mid femur with apical third yellow and hind femur with apex yellow. Fore and mid tibia with basal 1/3 and hind tibia with basal ¼ yellow. Fore tibia and tarsus with short hairs only; fore femur

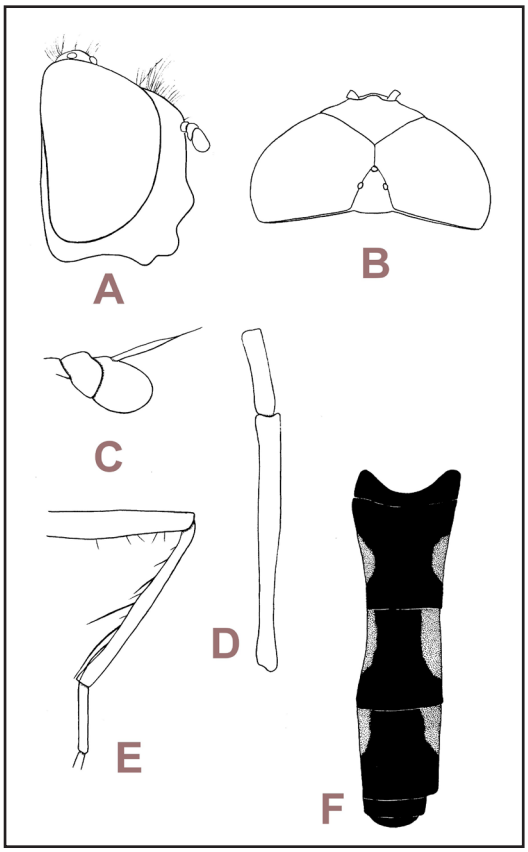


**Figure 5A–F**. *Platycheirus gunillae* sp. n. male. A: Head in lateral view, holotype, B: Head in dorsal view, C: antenna, D: left fore tibia and basitarsus, E: left mid leg, F: abdomen.

**Figure 5G**. Altai, Kosh-Agachskij district, upper part of Akturu river, 2104-2030 m.a.s.l., type locality of *Platycheirus gunillae* sp. n. and locality for *P. clausseni*.

behind with a row of straight hairs of about same length. Mid tibia ventrally with a row of strong black setae, the longest (on apical half) reaching the tip of tibia. Mid femur below with a few, scattered black setae. Hind basitarsus slender, about as thick as tibia at apex. – Wing: veins and stigma greyish brown. Calypter light, haltere dark greyish brown.

Abdomen: Figure 5F. Tergites 2-4 longer than wide, dull black, each with a pair of longish bluish grey spots; spots on tergites 3-4 close to base of the tergites. The sternites shining black, with short yellowish brown hairs.

Body length: 7,3 mm. Wing length: 5,8 mm.

Female: unknown.

Etymology: We name this species after Gunilla Ståhls-Mäkelä, Helsinki, for her many contributions to the knowledge of the taxonomy and phylogeny of hoverflies.

Preferred environment: meadows on upper border of forest zone, about 2100 m a.s.l. (figure 5G).

## OTHER SPECIES FROM THE AREA

***Platycheirus albimanus* (Fabricius, 1781)**
Ulaganskij district: 18 ♂, 1 ♀ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l. 50,5° N, 88,6° E 11-20 June 2005 (A. Barkalov, V. Zinchenko); Turochakskij district: 1 ♂ Obogo station, 950 m a.s.l. 25.08.2003 (D. Kropacheva); 13 ♂ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 12 June and 19-29 August 1983, 1990, 2003 (A. Barkalov, V. Sorokina); Ust'-Koksinskij district: 1 ♂ Terekta settlement 23 July 1973 (L. Levina); 1 ♂ Kurchumskij range, river Topolevka, 1600 m a.s.l. 6 July 1997 (R. Dudko, V. Zinchenko) forest; 1 ♂ 25 km S-W of Abaj settlement 21 June 1964 (N. Violovich); Shebalinskij district: 1 ♂ Seminskij pass 4 August 1964 (N. Violovitsh); Kosh-Agachskij district: 1 ♂ upper part of Akturu river, 2030-2100 m a.s.l., 50,1°N, 87,8° E 3 July 2006 (A. Barkalov), upper border of forest zone; 2 ♂ upper part of Akturu river, 2600-2800 m a.s.l. 4 July 2006 (A. Barkalov); 3 ♂ Akturu 17 June-4 July 2004 (D. Kropacheva); 1 ♂ Ust'-Koksa settlement 6 July 1964 (N. Violovitsh); Ulaganskij district: 1♀ Chulyshmanskoe plateau, S-E coast of Dzhulukol' lake, 2200-2300 m a.s.l., 50,4 Nº, 89,8 Eº 22-26 July 2007 (A. Barkalov). - KAZAKHSTAN, 1 ♂ E part of Usutau range, 10 km SW Urunkhajka settlement, 2200-2300 m a.s.l. 18 June 1997 (R. Dudko, V. Zinchenko).

Preferred environment: meadows in forest zone, high-mountain meadows with Ranunculus sp. and grasses on upper border of forest zone.

***Platycheirus amplus* Curran, 1927**
Turochakskij district: 1♂ Artybash settlement 22 June 1990 (A. Barkalov); Shebalinskij district: 1 ♂ 5 km north of Il'inka settlement 10 June 2001 (V. Zinchenko).

***Platycheirus angustatus* (Zetterstedt, 1843)**
Majminskij district: 2♂, 2♀ environs of Gorno-Altaisk town 8-17 August 1979 (A. Barkalov); Ust'-Koksinskij district: 1 ♂ 30 km of Abaj settlement 28 June- 4 July 1964 (N. Violovitsh); 1♀ Abaj settlement 4 July 1964 (N. Violovitsh); Kosh-Agachskij district: 2♂ upper part of Akturu river, 2030-2100 m a.s.l., 50,1°N, 87,8° E 3-9 July 2006 (A. Barkalov) upper border of forest zone; 1♂,1♀ Kurajskaya steppe, 1662 m a.s.l., 50,2° N, 87,8° E, 7 July 2006 (A. Barkalov); Chojskij district: 1♀ 20 km S of Paspaul settlement, Malaya Isha river 27 July 1999 (V. Zinchenko); Turochakskij district: 10 ♂ 9 ♀ Artybash settlement 20-23 June 1975 and 1990 (A. Barkalov, N. Violovitsh); 8 ♂3 ♀ Obogo station 950 m a.s.l. 13 June-4 July 2003 (D. Kropacheva); Shebolinskij district: 5 ♀ Cherga settlement 23 August 1992 (V. Marchenko).

Preferred environment: meadows in forest zone, high-mountain meadows on upper border of forest zone.

***Platycheirus barkalovi* Mutin, 1999**
Turochakskij district: 1♂ Artybash settlement 24 August 1983 (A. Barkalov)

**Table 1**. Key to separate *Platycheirus* species of the *stegnus* group (*carinatus* subgroup) found in the Altai Mountains.

♂ (eyes meeting on frons):

| | |
|---|---|
| 1. | Fore basitarsus with strong curved posterolateral setae (Figure 2C).....2 |
| - | Fore basitarsus with short hairs only (Figure 1E).....3 |
| 2. | Eye angle about 95°. Occiput laterally black haired. Scutum with long black hairs, the longest are as long as basitarsus of fore legs. All legs black, only tibia basally and tarsus of fore legs dark brownish black. Hind basitarsus as broad as apex of tibia. Tergites 2-4 each with a pair of obscure, bluish triangular spots (Figure 2E). Sternites black haired.....*altaicus* sp. n. |
| - | Eye angle 110-115°. Occiput laterally white haired. Scutum with a mixture of pale and dark hairs, the hairs are shorter than basitarsus of fore legs. Knees of all legs yellow, and base of fore tibia broadly brownish yellow. Hind basitarsus about 1,4 x thicker than apex of tibia. Tergite 2 with a pair of grey triangular spots, tergites 3-4 each with rectangular spots. Sternites white haired.....*carinatus* (Curran) |
| 3. | Fore and mid tibia short-haired only, without long setae (Figures 4C,D).....4 |
| - | At least mid tibia with long setae.....5 |
| 4. | Abdominal tergites all dull black.....*atratus* sp. n. |
| - | Abdominal tergites 2-4 with silvery grey spots.....*fallax* sp. n. |
| 5. | Fore tibia short haired, mid tibia ventrally with long setae (Figure 5E).....*gunillae* sp. n. |
| - | Fore and mid tibia posterolaterally with long setae (Figures 1D,E).....*alpigenus* sp. n. |

♀ (eyes widely separated on frons): only *P. altaicus* sp. n. and *carinatus* female are known:

| | |
|---|---|
| 1 | Occiput laterally and ventrally black haired. Pleurae black haired. Knees of p3 black. Side margins of tergites 1-2 black haired.....*altaicus* sp. n. |
| - | Occiput laterally and ventrally white haired. Pleurae white haired. Knees of p3 yellow. Side margins of tergites 1-2 white haired.....*carinatus* (Curran) |

***Platycheirus brunnifrons* Nielsen, 2004**
Turochakskij district: 1♂ Artybash settlement 19 July 1991 (A. Barkalov).

***Platycheirus carinatus* (Curran, 1927)**
Turochakskij district: 17 ♂, 6 ♀ SE of Teletskoe lake, Kolushta mountain 13 July 1987 (A. Barkalov, Yu. Chekanov); Ust'-Koksinskij district: 4 ♂ Katunskij range, 10-15 km S of Katanda settlement 14 July 1983 (A. Barkalov) mountain tundra; Kosh-Agachskij district: 6 ♂ upper part of Akturu river, 2985 m a.s.l., 50.1° N, 87.8° E, 4 July 2006 (A. Barkalov), on top of the mountain, on stones and near stones.

Preferred environment: typical mountain species. Specimens were collected only in mountain tundras and higher, on stones of mountain tops (males hovered near and on extreme tops of mountains).

***Platycheirus cheilosiaeformis* Smit & Barkalov, 2008**
Kosh-Agachskij district: 8 ♀ Aktru, S. of Kuray, 2500 m a.s.l., 6 July 2006 (Smit & Barkalov 2008).

Preferred environment: tundra zone.

***Platycheirus clausseni* Nielsen, 2004**
Ulaganskij district: 1 ♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50,5° N, 88,6° E 14 June 2005 (A. Barkalov).

Preferred environment: one specimen was collected in a subalpine meadow, figure 5G.

***Platycheirus clypeatus* (Meigen, 1822)**
Majminskij district: 10 ♂ environs of Gorno-Altajsk town 4-16 August 1979 (A. Barkalov); Turochakskij district: 11 ♂ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 11-26 June 1975 and 1990 (N. Violovitsh, A. Barkalov).

Preferred environment: meadows in forest zone.

***Platycheirus complicatus* (Becker, 1889)**
Ulaganskij district: 3 ♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50,5° N, 88,6° E 11-20 June 2005 (A. Barkalov, B. V. Sorokina); Turochakskij district: 6 ♂ 2 ♀ SE of Teletskoe lake, Kolushta mountain, 1750 m a.s.l. 11-15 July 1987 (A. Barkalov, Yu. Chekanov); 1 ♂ 19 km SW from Artybash settlement, 1600 m.a.s.l. 13 July 1991 (A. Barkalov); 3 ♀ 25 km SW from Artybash settlement, 2200 m a.s.l. 14 July 1991 (A. Barkalov) tundra; 1 ♂, 1 ♀ southern slope of Archa Mountain 26 June – 9 July 2003 (D. Kropacheva); Kosh-Agachskij district: 1 ♂ river Dzhazater, near lake Kara-Kul' 18 July 1964 (N. Violovitsh); 5 ♂ Akturu 17 June-1 July 2004 (D. Kropacheva); Ust'-Koksinskij district: 1 ♂ 25 km SW of Abaj settlement 30 June 1964 (N. Violovitsh); 9 ♂, 3 ♀ 30 km of Abaj settlement 27 June-7 July 1964 (N. Violovitsh); 36 ♂ Ust'-Koksa settlement 5-26 July 1965 (S. Bobrova, S. Chelyaev); 1 ♂ upper part of Boshtaly river, 2000 m a.s.l. 5 July 1965 (S. Bobrova); 2 ♂ 1 ♀ Ujmonskaya steppe 8 July 1965 (N. Violovitsh); Ust'-Kanskij district: 1 ♂ upper part of Koksa river 25 June 1964 (N. Violovitsh); 1 ♂, 2 ♀ Terektinskij range, 10 km N of Katanda settlement 21 July 1983 (A. Barkalov); 1 ♂, 1 ♀ Katunskij range, 15 km S of Katanda settlement 10 July 1983 (A. Barkalov); Shebalinskij district: 1 ♀ Seminskij pass 4 August 1964 (N. Violovitsh). - KAZAKHSTAN, 6 ♂, 1 ♀ E part of Usutau range, 10 km SW Urunkhajka settlement, 2200-2300 m a.s.l. 18 June 1997 (V. Zinchenko, R. Dudko).

Preferred environment: a common *Platycheirus* species in the area, present in all biotopes from steppe to high-mountain tundra.

***Platycheirus europaeus* Goeldlin, Maibach & Speight, 1990**
Turochakskij district: 1 ♂ Artybash settlement 22 June 1990 (A. Barkalov).

Preferred environment: the single specimen was collected in a meadow in the forest zone.

***Platycheirus fimbriatus* (Loew, 1871)**
Ulaganskij district: 1 ♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l. 50,5° N, 88,6° E 18-19 June 2005 in Malaise trap (A. Barkalov).

Preferred environment: upper border of forest zone with *Pinus sibiricus*.

***Platycheirus fulviventris* (Macquart, 1829)**
Turochakskij district: 4 ♂ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 1 ♂ 25 August 1983, 13-30 June 1987, 1990 and 26 August 2003 (A. Barkalov and V. Sorokina); Ongudajskij district: 1 ♀ Terektinskij range, mid part of Bol'shoj Yaloman river, 955 m a.s.l., 50,47° N, 86,32° E 2-4 August 2007 (A. Barkalov).

Preferred environment: meadows in forest zone.

***Platycheirus goeldlini* Nielsen, 2004**
Kosh-Agachskij district: 1♂, 1♀ river Dzhazater, near lake Kara-Kul' 18.07.1964 (N. Violovitsh); 1 ♂ mid part of Tarkhata river 22 July 1964 (N. Violovitsh); Republic Tyva: 1♀ E coast of Khindiktig-Khol' lake, 2334 m a.s.l. 50,4º N, 89,9º E 21 July 2007 leg. A. V. Barkalov).

Preferred environment: the female from Tyva was collected on leaf of grass near drying streamlet, above the tree line, in tundra-steppe zone.

***Platycheirus holarcticus* Vockeroth, 1990**
Turochakskij district: 4 ♂ SE of Teletskoe lake, Kolushta mountain, 1750 m a.s.l. 13-14 July 1987 (A. Barkalov, Yu. Chekanov); Ust'-Koksinskij district: 1 ♂ Katunskij range, 15 km S of Katanda settlement 10 July 1983 (A. Barkalov); Kosh-Agachskij district: 7 ♂ Akturu 18 June - 3 July 2004 (D. Kropacheva); 18 ♂, 4 ♀ upper part of Akturu river, 2030-2100 m a.s.l., 50,1° N, 87,8° E 3-9 July 2006 (A. Barkalov) upper border of forest zone. Republic Tyva: 1♀ E cost of Khindiktig-Khol' lake, 2334 m a.s.l. 50,4º N, 89,9º E 21 July 2007 leg. A. V. Barkalov; Ulaganskij district: 1♀ Chulyshmanskoe plateau, S-E coast of Dzhulukol' lake, 2200-2300 m a.s.l., 50,4º N, 89,8º E 22-26 July 2007 (A. Barkalov); Ongudajskij district: 1♀Terektinskij Range, middle part of river Bol'shoj Yaloman 955 m a.s.l., 50,47° N, 86,12° E 2-3 August 2007 (A. Barkalov).

Preferred environment: the species was collected from forest to tundra zones. Most specimens were caught on the border of forest zone on high-mountain meadows.

***Platycheirus hyperboreus* (Staeger, 1845)**
Ulaganskij district: 1 ♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50.5° N, 88,6° E 19 June 2005 (A. Barkalov); Kosh-Agachskij district: 1 ♂ plateau Ukok, near lake Muzdy-Bulak, 2400-2420 m a.s.l., 49,3° N, 87,7° E, 27 June 2005 (A. Barkalov); 2 ♂ 4 km E lake Kara-Kul' 20 July 1964 (N. Violovitsh).

Preferred environment: the species prefers mountain meadows and tundra with flowering *Ranunculus* ssp. and Apiaceae.

***Platycheirus immaculatus* Ôhara, 1980**
Ust'-Koksinskij district: 1 ♂ 32 km SSW of Ust'-Koksa settlement, upper part of Petrushkina river, 1400-1500 m a.s.l., 50°03´ N, 85°22´ E, forest 5-6 June 2005 (P. R. Dudko).

Preferred environment: the single specimen was collected in a meadow in the forest zone.

***Platycheirus lundbecki* (Collin, 1931)**
1♂ Tyva, E coast of Khindiktig-Khol' lake, 2334 m a.s.l. 50,4º N, 89,9º E 21 July 2007 (A.V. Barkalov).

Preferred environment: the single specimen was hovering above the water of a drying streamlet, above tree line, in the tundra-steppe zone.

***Platycheirus manicatus* (Meigen, 1822)**
Ulaganskij district: 1 ♀ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50.5° N, 88,6° E 20 June 2005 (A. Barkalov); Kosh-Agachskij district: 73 ♂ 21 ♀ Akturu 17 June-3 July 2004 (D. Kropacheva); 90 ♂ 16 ♀ upper part of Akturu river, 2030-2100 m a.s.l., 50,1° N, 87,8° E 3-7 July 2006 (A. Barkalov, V. Zinchenko); 2 ♂ plateau Ukok, lake Kal'dzhin-Kul'-Bas 2400-2550 m a.s.l., м 49° 19' N, 87° 26' E 16-21 July 2006 (R. Dudko); 3 ♂ 3♀ on southern slope of Yuzhno-Chujskij range, lower part of Tara river, 2200 m a.s.l. 49°39' N, 88°13' E 2-4 July 2006 (V. Sorokina); 1 ♂ plateau Ukok, river Akkol, 2190-2200 m a.s.l., 49°25' N, 87°3' E 12-14 July 2006 (R. Dudko); 3 ♂ plateau Ukok, 6 km N-E of Majtobe mountain, 2600-2800 m a.s.l., 49°3' N, 87°4' E 6-9 July 2006 (V. Sorokina); Ust'-Koksinskij district: 1 ♀ 25 km S-W of Abai settlement 13.06 1964 (N. Violovich); Turochakskij district: 2 ♂ 2 ♀ Kolushta mountain, 1750 m a.s.l. 15 July 1987 (A. Barkalov); - KAZAKHSTAN, 1 ♀ S-W part of Tarbagataj range, Bukhtar pass 24 June 1997 (R. Dudko, V. Zinchenko).

Preferred environment: all specimens were collected in mountain tundra and mountain meadows. Males hovered above small bushes of *Betula rotundifolia* Spach and *Salix glauca* L. or sat on stones and leaves.

***Platycheirus mongolicus* Stackelberg, 1974**
Ust'-Koksinskij district: 1 ♂ Terekta settlement 5 July 1973 (L. Levina).

***Platycheirus nielseni* Vockeroth, 1990**
Turochakskij district: 9 ♂ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 4 June-17 July 1967, 1979, 1987 (N. Kharitonova, A. Barkalov); Ust'-Koksinskij district: 1 ♂ Terektinskij range, 10 km N of Katanda settlement 20 July 1983 (A. Barkalov); 4 ♂ 7 km W of Katanda settlement 5 July 1983 (A. Barkalov); 1 ♀ 10 km SW of Katanda settlement 6 July 1983 (A. Barkalov); 4 ♂, 1 ♀ Abaj settlement 12-26 June 1964 (N. Violovitsh); 5 ♂ 25 km SW of Abaj settlement 14-24 June 1964 (N. Violovitsh); 4 ♂ 30 km of Abaj settlement 27 June -13 August 1964 (N. Violovitsh); 2 ♂ Terekta settlement 14 June 1973 (L. Levina); 3 ♂ Kajtanak settlement 26-27 June 1973 (L. Levina); Shebalinskij district: 1 ♂ Baragash settlement 14 June 1979 (A. Barkalov); 1 ♂ Belyj Anuj settlement 10 June 1979 (A. Barkalov); Kosh-Agachskij district: 2 ♂ upper part of Akturu river, upper border of forest zone 2030-2100 m a.s.l., 50,1°N, 87,8° E 3-9 July 2006 (A. Barkalov); 2 ♂, 2 ♀ Southern slope of Yuzhno-Chujskij range, lower part of Tara river, 2200 m a.s.l., 49°39' N, 88°13' E 2 July 2006 (V. Sorokina); Ulaganskij district: 22 ♂, 3 ♀ 45 km E Ust'-Ulagan settlement, 1500-2200 m a.s.l., 50.5° N, 88,6° E 13-20 June 2005 (A. Barkalov, V. Sorokina, V. Zinchenko ).

Preferred environment: The species was collected in meadows in

the forest zone, the highest localities were on the border between *Pinus sibiricus* Du Tour forest and mountain tundra.

***Platycheirus nigrofemoratus* Kanervo, 1934**
Ulaganskij district: 7♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50.5° N, 88,6° E 19-20 June 2005 (A. Barkalov,V. Zinchenko); Kosh-Agachskij district: 2 ♂ plateau Ukok, near lake Muzdy-Bulak, 2400-2420 m a.s.l., 49,3° N, 87,7° E, 29 June 2005 (A. Barkalov); 2 ♂ plateau Ukok, 6 km N-E of Majtobe mountain, 2600-2800 m a.s.l., 49° 3' N, 87° 4' E 8 June 2006 (V. Sorokina).

Preferred environment: meadows on the border of forest and tundra zones, and on typical mountain tundra.

***Platycheirus parmatus* Rondani, 1857**
Ulaganskij district:1 ♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50.5° N, 88,6° E 18 June 2005 (V. Zinchenko); 40♂,4♀ 46 km upper Ust'-Ulagan settlement by the river Bashkaus, 50,4° N, 88,4° E 12 June 2005 (A. Barkalov); Majminskij district: 21 ♂ environs of Gorno-Altaisk town 23 June-4 August 1979 (A. Barkalov); Turochakskij district: 5 ♂, 13 ♀ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 24 May-16 July 1972, 1987, 1990, 1991 (A. Barkalov, L. Levina); 2 ♂ SE of Teletskoe lake, Kolushta mountain, 1750 m a.s.l. 14 July 1987 (A. Barkalov); 2 ♀ Teletskoe lake, Chiri station, 9 July 1987 (A. Barkalov) high mountain meadow; 36 ♂, 20 ♀ 25 km SW from Artybash settlement 12-14 July 1991 (A. Barkalov) tundra; 3 ♀ Obogo station 950 m a.s.l. 25 May 2003 (D. Kropacheva); 2 ♂ southern slope of Archa Mountain 9 July 2003 (D. Rropacheva); Ust'-Koksinskij district: 1 ♂ valley of Koksa river 4 July 1964 (N. Violovitsh); 9 ♀ Terekta settlement 24 May-7 July 1973 (L. Levina); 1 ♂ Katunskij range, 15 km S. of Katanda settlement 10 July 1983 (A. Barkalov); 1 ♀ 10 km SW of Katanda settlement 6 July 1987 (A. Barkalov); 1 ♂ 25 km SW of Abaj settlement 24 June 1964 (N. Violovitsh); 1 ♀ Kajtanak settlement 29 July 1973 (L. Levina); 1 ♀ environs of Sauzar settlement 5 July 1964 (N. Violovitsh); Ongudajskij district: 1 ♀ Ongudaj settlement 15 July 1964 (N. Violovitsh); Kosh-Agachskij district: 1 ♂ pass Teplyj Kluch, 2800 m a.s.l. 24 June 2005 (T. Novgorodova); 4 ♂, 3 ♀ upper part of Akturu river, 2030-2100 m a.s.l., 50,1° N, 87,8° E 9 July 2006 (A. Barkalov) upper border of forest zone.

Preferred environment: on the border of steppe (in the southern slopes of the mountains) and at the edge of forests (on the northern slopes). Males were hovering in the shadow of trees at a level of 2-2.5 m, or were sitting on bushes.

***Platycheirus peckae* Bagatshanova, 1980**
Ulaganskij district: 1 ♂ 25 km upper Ust'-Ulagan settlement by river Bashkaus 50,4º N, 88,4º E 10 June 2005 (A. Barkalov).

Preferred environment: on catkins of *Salix* sp. near a stream in the forest zone.

***Platycheirus peltatus* (Meigen, 1822)**
Ulaganskij district: 1 ♀ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50,5° N, 88,6° E 20 June 2005 (A. Barkalov); 1 ♀ upper part of Koksa river 25 June 1964 (N. Violovitsh); Turochakskij district: 24 ♂, 89 ♀ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 27 May-20 August (L. Levina, N. Violovitsh, A. Barkalov); 2 ♂ SE of Teletskoe lake, Kolushta mountain, 1750 m a.s.l., 11-12 July 1987 (A. Barkalov) mountain meadow; 1 ♀ Obogo station, 950 m a.s.l. 8-9 August 2003 (D. Kropacheva); 2 ♂, 1 ♀ Southern slope of Archa mountain 9 July 2003 (D. Kropacheva); 1 ♂ 25 km SW from Artybash settlement, 2200 m a.s.l., 14 July 1991 (A. Barkalov), high mountain tundra; Ust'-Koksinskij district: 1 ♀ 25 km SW of Abaj settlement 12 June 1964 (N. Violovitsh); 1 ♀ 30 km of Abaj settlement 28 June 1964 (N. Violovitsh); 2 ♀ Katunskij range, 10-15 km S of Katanda settlement 8-9 July 1983 (A. Barkalov); 3 ♀ Terekta settlement 14 July 1973 (L. Levina); 3 ♀ Abaj settlement 12-22 June 1064 (N. Violovitsh); 1 ♀ Gromotukha river 17 June 1964 (N. Violovitsh); 1 ♀ Kajtanak settlement 7 July 1964 (N. Violovitsh); Shebolinskij district:1 ♂ village Verkh-Kukuya 5 June 2001 (V. Zinchenko); 1 ♀ Baragash settlement 14 June 1979 (A. Barkalov); Ust'-Kanskij district:1 ♀ Belanujskij range, 1700 m a.s.l., 10 June 1979 (A. Barkalov) high mountain

meadow; Kosh-Agachskij district: 1 ♀ 3-4 km E Kara-Kul' village 30 June 1964 (N. Violovitsh); Ongudajskij district: 1 ♀ Ongudaj settlement 15 July 1964 (N. Violovitsh);

Preferred environment: the commonest species of the genus in Altai. Specimens were collected in different biotopes, mostly on meadows in forest zone with flowing *Ranunculus* sp. and different Apiaceae. The highest point of catching this species is 2200 m, in meadows in the tundra zone.

***Platycheirus podagratus* (Zetterstedt, 1838)**
Ulaganskij district: 1 ♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50,5° N, 88,6° E 20 June 2005 (A. Barkalov); Turochakskij district: 15 ♂ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 3-24 June 1967, 1971, 1972, 1975, 1977, 1979, 1990 (A. Barkalov, N. Violovitsh, Zhdanova, L. Levina); Shebolinskij district:1 ♂ Cherga settlement 15 June 1979 (A. Barkalov).

Preferred environment: meadows in forest zone and on the border of forest and tundra.

***Platycheirus scambus* (Staeger, 1843)**
Turochakskij district: 96 ♂, 23 ♀ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 4 June-21 July 1971, 1974, 1975, 1987, 1990, 2006 (A. Barkalov, Yu. Chekanov, N. Violovitsh. L. Levina); 1 ♂ Yajlu settlement 2-4 July 1979 (A. Barkalov); Ust'-Koksinskij district: 1 ♂ 30 km SW of Abaj settlement 30 June 1964 (N. Violovitsh); 1 ♂ 7 km W of Katanda settlement 30 June 1983 (A. Barkalov); Shebalinskij district: 2 ♂ 1 ♀ Cherga settlement 15 June 1979 (A. Barkalov); Ust'-Koksinskij district:

Preferred environment: meadows in forest zone.

***Platycheirus scutatus* (Meigen, 1822)**
Ust'-Koksinskij district: 1 ♂ Gromotukha river 17 June 1964 (N. Violovitsh); 2 ♂ 30 km SW of Abaj settlement 28 June and 7 July 1964 (N. Violovitsh); Turochakskij district: 1 ♂ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 24 June 1990 (A. Barkalov); 1 ♂ Obogo staition, 950 m a.s.l. 30 June 2003 (D. Kropacheva); 2 ♂ 26 km South of Iogach settlement 747 m a.s.l., 51,64° N, 87,27° E 27 June 2006 (A. Barkalov); Ulaganskij district: 1 ♂ 46 km upper Ust'-Ulagan settlement by the river Bashkaus, 50,4° N, 88,4° E 12 June 2005 (A. Barkalov); Kosh-Agachskij district: 4 ♂ Southern slope of Yuzhno-Chujskij range, lower part of Tara river, 2200 m a.s.l., 49°39' N, 88°13' E 1-2 July 2006 (V. Sorokina); 3 ♂ 2 ♀ upper part of Akturu river, 2030-2100 m a.s.l., 50,1° N, 87,8° E 3-9 July 2006 (A. Barkalov), upper border of forest zone.

Preferred environment: mostly collected in meadows in the forest zone, some specimens were caught on the border of forest and tundra.

***Platycheirus sibiricus* Barkalov & Nielsen, 2007**
Turochakskij district: 1 ♂ 19 km SW from Artybash settlement, 1650 m a.s.l., 15 July 1991 (A. Barkalov), meadow; 8 ♂ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 25 May-22 June 1971 and 1990 (L. Levina, A. Barkalov), Malaise trap; 1 ♂ mountain Evrechala 22 June 2003 (D. Kropacheva); 1 ♂ Yajlu settlement 6 June 1961 (Loza); 1 ♂ Obogo station, 950 m a.s.l., 2 August 2003 (D. Kropacheva); Majminskij district: 1 ♂ environs of Gorno-Altajsk town 10 July 1979 (A. Barkalov); Ust'-Koksinskij district: 2 ♂ Terekta settlement 14 June 1973 (L. Levina); 1 ♂ 30 km SW of Abaj settlement 30 June 1964 (N. Violovitsh); 4 ♂ 25 km SW of Abaj settlement 13-24 June 1964 (N. Violovitsh); 1 ♂ Gromotukha river 17 June 1964 (N. Violovitsh); Ulaganskij district: 1♀ Chulyshmanskoe plateau, SE coast of Dzhulukol' lake, 2200-2300 m a.s.l., 50,4 N º, 89,8 Eº 22-26 July 2007 (A. Barkalov). - KAZAKHSTAN, 1 ♂ S part of Katunskij range, Rakhmanovskie Kluchi settlement, 1900-2100 m a.s.l. 28 June 1997 (R. Dudko, V. Zinchenko).

Preferred environment: mountain meadows in the forest zone, only one female was caught in tundra zone.

***Platycheirus subordinatus* (Becker, 1915)**
Ulaganskij district: 200 ♂, 138 ♀ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50,5° N, 88,6° E 16-19 June 2005 (A. Barkalov, B. V. Sorokina, V. Zinchenko); 1 ♂ Shapshal'skij

range, 2740 m a.s.l., 50,5° N, 89,8° E 23-27 July 2007 (A. Barkalov) mountain tundra; Kosh-Agachskij district: 10 ♂ Akturu 19-26 June 2004 (D. Kropacheva); Ust'-Koksinskij district: 2 ♂ Katunskij range, 15 km S of Katanda settlement 10-13 July 1983 (A. Barkalov); 1 ♂ 23 ♀ Terektinskij range, 10 km N of Katanda settlement 20-21 July 1983 (A. Barkalov); Turochakskij district: 2 ♂ SE of Teletskoe lake, Kolushta mountain, 1750 m a.s.l., 11-12 July 1987 (A. Barkalov, Yu. Chekanov); 3♀♀ Shapshal'skij pass, 2740-2876 m a.s.l. 50,5° N, 89,8° E, tundra, 23-25 July 2007 (A. Barkalov).

Preferred environment: a typical high-mountain species. All specimens were collected in different types of mountain tundra or on the border of tundra and forest.

***Platycheirus transfugus* (Zetterstedt, 1838)**

Ulaganskij district: 2 ♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50.5° N, 88,6° E 16-19 June 2005 (A. Barkalov).

Preferred environment: the two specimens were collected in a high-mountain meadow on *Ranunculus* sp.

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

Shebalinskij district: 1 ♂ Mugur-Cherginskij mountain 12 June 2001 (V. Zinchenko); Kosh-Agachskij district: 2 ♂ Akturu 8-16 June 2004 (D. Kropacheva); Turochakskij district: 1 ♂ Artybash settlement, Teletskoe lake, 443 m a.s.l., 51°49' N, 87°15' E 11 June 1971 and 27 August 1983 (A. Barkalov & L. Levina); 1 ♂ 25 km SW from Artybash settlement 14 July 1991 (A. Barkalov), tundra.

Preferred environment: one specimen in a meadow in the forest zone and one on mountain tundra.

***Platycheirus varipes* (Curran, 1923)**

Ulaganskij district: 4 ♂ 45 km E Ust'-Ulagan settlement, 2050-2200 m a.s.l., 50,5° N, 88,6° E 16-19 June 2005 (A. Barkalov, V. Zinchenko, B.V. Sorokina); Kosh-Agachskij district: 1 ♂ upper part of Akturu river, 2030-2100 m a.s.l., 50,1° N, 87,8° E (A. Barkalov) upper border of forest zone; 1 ♂ Akturu 20 June 2004 (D. Kropacheva); Ust'-Koksinskij district: 26 ♂, 2 ♀ Katunskij range, 10-15 km S of Katanda settlement 10-14 July 1983 (A. Barkalov); Turochakskij district: 5 ♂ 25 km SW from Artybash settlement 14 July 1991 (A. Barkalov).

Preferred environment: typical tundra species. All specimens were caught in mountain tundra or between tundra and forest zones.

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