

# New material of Central Palaearctic *Platycheirus* (Diptera, Syrphidae) with description of three new species

ANATOLII V. BARKALOV & TORE R. NIELSEN

Barkalov, A. V. & Nielsen, T. R. 2009. New material of Central Palaearctic *Platycheirus* (Diptera, Syrphidae) with description of three new species. *Norw. J. Entomol.* 56, 1–8.

*Platycheirus dudkoi* sp. n. of the *stegnus*-group, *P. pamiricus* sp. n. and female *Platycheirus latens* Mutin, 1999 of the *albimanus*-group and *P. transbaikalicus* sp. n. of the *ambiguus*-group are described and figured.

Key words: *Platycheirus*, *dudkoi*, *pamiricus*, *latens*, *transbaikalicus*, new species, Altai, Pamir, Transbaikal, Russia.

Anatolii V. Barkalov, Institute of Animal Systematics and Ecology of RAS, Siberian Branch, Novosibirsk-91, Frunze str., 11, Russia. E-mail: bark@eco.nsc.ru

Tore R. Nielsen, Sandvehagen 8, NO-4318 Sandnes, Norway. E-mail: tore@nielsen.cc

## Introduction

In some previous papers (Barkalov & Nielsen 2004, 2007a, 2007b, 2008a, 2008b) we have reported on the *Platycheirus* fauna of central parts of the Palaearctic region. The present paper adds three new species and describes the female of *P. latens* Mutin, 1999.

## Material and methods

The material of this article derives from different expeditions to Transbaikal, Altai and Pamir by Zoological Museum of the Institute of Systematics and Ecology of Animals RAS, Novosibirsk, Russia (ZMN).

The drawings have been made with the aid of a drawing mirror attached to a Wild M5 microscope. The photos were taken with an electronic camera.

## The species

*Platycheirus dudkoi* sp. n.  
Figures 1A–D, 2.

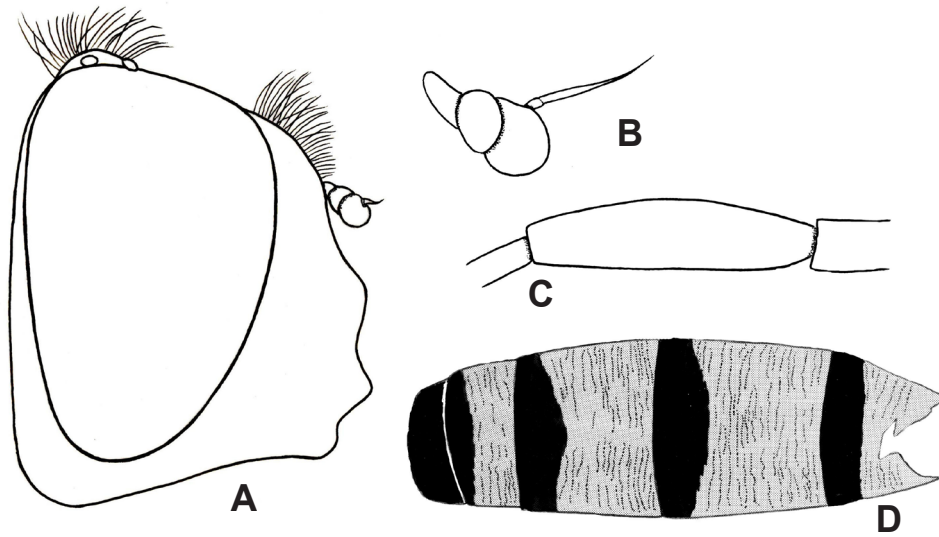
**Holotype:** Male, labelled in Russian letters “Republic Altai, Ulaganskij district, Kurajskij mountain range, 2500–2800 m a.s.l. 50,33° N, 87,75° E, tundra 1.–4.07.2008 leg. R. Dudko.” The holotype is kept at ZMN.

**Diagnosis and comparison with related species:** fore and mid tibia with short hairs only, without posterolateral bristles and thus similar to male *P. fallax* Barkalov & Nielsen, 2008. *P. dudkoi* sp. n. differs from *fallax* in body hairs all white (mainly black in *fallax*), thorax and hind part of frons steel blue (dark greyish in *fallax*), hairs on head and thorax white (black in *fallax*), dusting on frons whitish (grey in *fallax*), haltere pale orange yellow (greyish brown in *fallax*) and abdomen with dull, light grey bands (dull grey spots in *fallax*).

## Description

Male

**Head:** Figure 1A–B. Eye angle 110°, frons heavily dulled by white dusting, the hairs white. Antennae black; 3<sup>rd</sup> segment short, scarcely as long as wide. Face, genae and occiput dulled by greyish white dusting; white haired.



**Figure 1.** *Platycheirus dudkoi* sp. n., male holotype. **A:** head in lateral view; **B:** antenna; **C:** hind basitarsus; **D:** abdomen.



**Figure 2.** The collecting site for *Platycheirus dudkoi* sp. n.

*Thorax*: Figure 1C. Scutum, scutellum and pleurae bluish black, somewhat dulled by greyish white dusting, the hairs are white. – *Wings*: wing cells br and bm microtrichose, except for anterior part of br and extreme base of bm bare. Haltere pale orange yellow, calypter whitish yellow. – *Legs* all black, only the knees narrowly yellow. Tibia 1–2 without bristles, only with short whitish yellow hairs. Fore femur behind with white hairs, none of the hairs are longer than thickness of femur. Hind femur with long white hairs.

*Abdomen*: Figure 1D. Tergites 2–5 black with broad and dull, light greyish bands; the terminalia shining black. Sternites metallic bluish black with light dusting. The hairs on tergites and sternites white.

*Body length*: (from frons till tip of abdomen) 8.5 mm. Wing length: 6.3 mm.

*Female*: unknown.

*Etymology*. The species is named after Dr. Roman Y. Dudko, Novosibirsk who participated in several expeditions to high mountain areas, and who collected this unknown *Platycheirus*.

*Ecology*: The specimen was caught on high mountain tundra, hovering near stones (Figure 2).

***Platycheirus pamiricus* sp. n.**

Figures 3A–D, 4.

**Holotype**: Russia, ♂ labelled "Ur. Chattukay, the outlet of river West Pshart, 3350 m Pamir, Salix, Gorodkov 26.vi.1958". Paratype, ♂ with same label information as the holotype. The holotype is kept in coll. ZI. St. Petersburg, the paratype in ZMN.

**Diagnosis and comparison with related species:**

*P. pamiricus* sp. n. belongs to the *albimanus*-group (Vockeroth 1990) and the *P. scutatus* (Meigen, 1822) species complex. The male differs from all other species of the complex in sabre-like bristles on ventral side of mid tibia. The frons is wide.

**Description**

Male

*Head*. Figure 3A. Eye angle 105°. Frons black haired, dulled by grey dusting, somewhat contrasting with facial dusting. Face, genae and occiput with light grey dusting. Upper part of face with black hairs, lower part of face, genae and occiput mainly pale haired. The black, undusted median stripe occupying only 1/6 the width of the face. Antenna: 1<sup>st</sup> and 2<sup>nd</sup> segments blackish brown, 3<sup>rd</sup> segment grey brown, reddish below at base. Arista greyish brown.

*Thorax*. Figures 3B–C, 4. Scutum and scutellum shining, yellow haired. Pleurae with light greyish yellow dusting, the hairs yellow white. – *Wing*: veins greyish brown, orange brown at base. Wing stigma pale yellowish grey. Haltere pale orange. Calypter greyish yellow, the rim light greyish brown. – *Legs*: fore tarsus, see Figure 3B. Tibia 2 ventrally with strong, sabre-like yellowish bristles, dorsoposteriorly with long bristly hairs.

*Abdomen*. Figure 3D. Tergites 1 and 5 metallic greyish black, lightly shining. Tergites 2–4 dull black with blue reflections, each with a couple of light grey spots. The spots on tergite 2 are roundish and small. The dark area between the spots on tergite 3 is about 1.5 times longer than wide. The posterior margin of the spots on tergites 3 and 4 are oblique. Terminalia shining black. The lateral hairs of the tergites are white yellow. The sternites are shining black with light dusting.

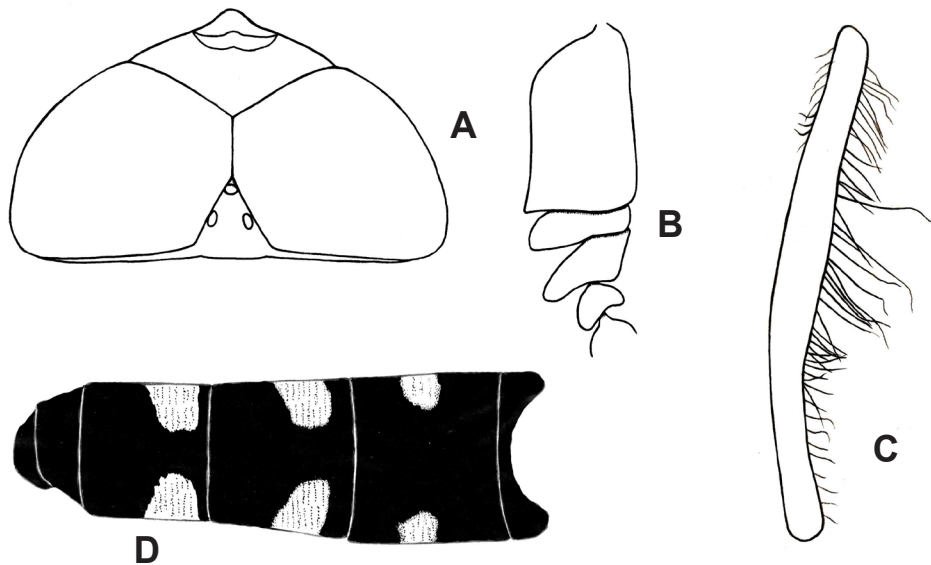
*Body length* (from frons till tip of abdomen) 8.6 mm; wing length 7.3 mm.

*Female*: unknown.

*Etymology*. The species name *pamiricus* refers to the Central Asian Pamir mountains where the species was found.

*Ecology*: unknown.

A comparison between *P. pamiricus* sp. n. and related species is given in Table 1.



**Figure 3.** *Platycheirus pamiricus* sp. n., male holotype. **A:** head in dorsal view; **B:** tarsus of fore leg; **C:** tibia of mid leg with posterolateral setae. **D:** abdomen.



**Figure 4.** *Platycheirus pamiricus* sp. n., mid tibia.

**Table 1.** Some male characters of *Platycheirus pamiricus* sp. n. and other species of the *scutatus*-complex (from Doczkal et al., 2002, Barkalov & Nielsen, 2007).

Character / species	<i>scutatus</i>	<i>aurolateralis</i>	<i>splendidus</i>	<i>speighti</i>	<i>sibiricus</i>	<i>pamiricus</i>
Angle of approx. eyes	90°	100°	94°	99°	95°	105°
Predominant colour of facial hairs	pale	black	black	black	black	black
Pollinosity on gena	present/ +/- scattered	absent	absent	absent	present but weak	present but weak
Angle between dorsal outline of bent apical part of t2 with the straight basal part	ca. 20°	ca. 20°	ca. 20°	ca. 30°	ca. 25°	ca. 25°
Length of hairs on ventral surface of tibia 2	at most half as long as min. width of tibia 2	about as long as min. width of tibia 2	at most half as long as min. width of tibia 2	at most half as long as min. width of tibia 2	nearly as long as min. width of tibia 2	+/- as long as maximum width of tibia 2
Shape of hairs on ventral surface of tibia 2	thin hairs	thin hairs	thin hairs	thin hairs	thin hairs	strong, sabre-like bristles

### *Platycheirus transbaikalicus* sp. n.

Figures 5A–D

**Holotype:** Russia, ♂ “Transbaikalia Sokhondo res. Agutsa 14.06.1991 B.P. Zacharov”. The area is some 250 km south-east of lake Baikal. The holotype is kept in ZMN.

**Diagnosis and comparison with related species:** the new species belongs to the *ambiguus*-group (Vockeroth 1990) and has great resemblance to *P. transfugus* (Zetterstedt, 1838). Both species have a shiny metallic mesonotum, tergites 2–4 with oblique orange spots and fore tibia short-haired, without long setae postero-laterally. The *Platycheirus transbaikalicus* male differs from male *P. transfugus* (Figures 5E–G) in a longer 3<sup>rd</sup> antennal joint, a less swollen frons, eye angle about 90° (105–110° in *transfugus*), face narrower and lower part of face more nosy. Fore femur behind with pin like setae (soft hairs in *transfugus*), and tergites 2–3 of the abdomen narrower. The yellow spots on tergite 3 are close to front margin of tergite (less so in *transfugus*).

### Description

Male

**Head.** Figure 5A–B. Eye angle about 90°. Ocellar triangle bluish black with white and a few black

hairs. Frons, face, genae and occiput silvery white dusted. Frons black haired, face, genae and occiput white haired. Antennae: 1<sup>st</sup> and 2<sup>nd</sup> segments brownish black, 3<sup>rd</sup> segment about 1.6 times longer than wide; dark brown, reddish below at extreme base. Arista brown.

**Thorax.** Figure 5C. Scutum, scutellum and pleurae shining metallic black, only with light greyish dusting, white haired. – **Wing:** veins greyish brown, on basal half light brown. Stigma yellow. Calypter light greyish yellow, the rim orange yellow. Haltere light orange yellow. – **Legs:** fore femur orange yellow, posteriorly with a row of thin black, blunt ending setae on apical 2/3, white hairs towards femur base. Fore tibia orange yellow, darkened on apical 1/3. Tibia mainly short haired, laterally only with two short white bristly hairs after the middle of left tibia. Tarsus of fore legs greyish brown. Mid and hind femur brownish black, yellow at base and apex. Mid tibia dark yellow with a black ring near the base, hind tibia dark greyish on apical 2/3. Tarsi of mid and hind legs dark grey.

**Abdomen.** Tergites 1 and 5, and terminalia shining black. Tergites 2–4 dull black, each with a couple of oblique orange spots, all tergites white haired. Sternites light greyish yellow, white haired.

Body length (from frons till tip of abdomen) 7.4 mm, wing length 5.6 mm.

**Description**

Female

*Female*: unknown.

*Etymology*. The species name reflects the mountainous region to the east of Lake Baikal from where the species has been described.

*Ecology*: unknown.

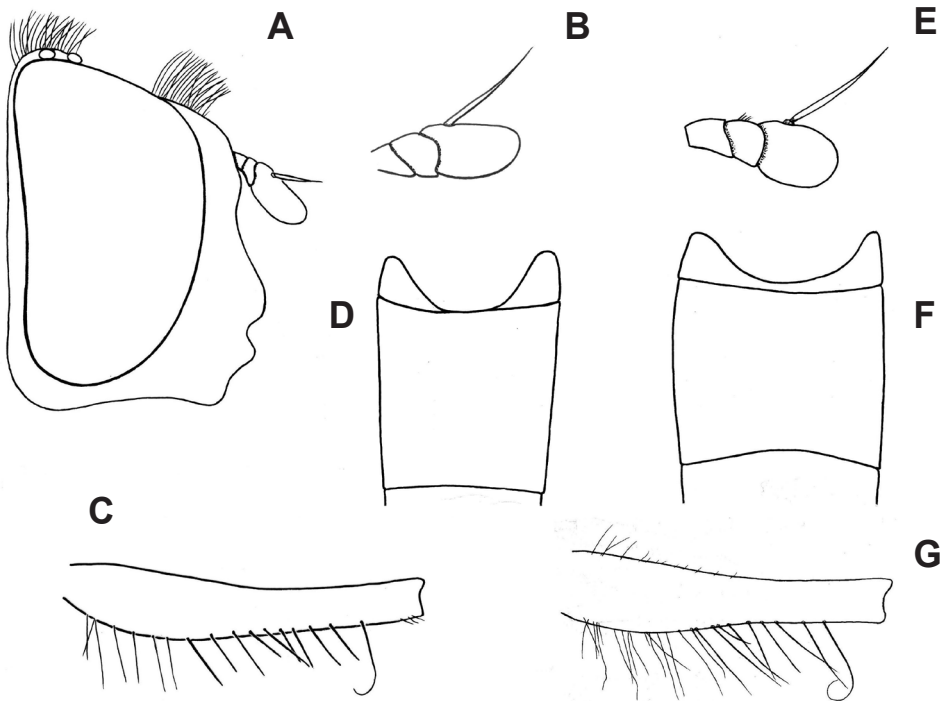
***Platycheirus latens* Mutin, 1999 female**

Figures 6A–D

**Diagnosis**: The *Platycheirus latens* female has orange spots on the abdomen and resembles *P. clypeatus* (Meigen, 1822), but is slightly larger and with a more longish abdomen. The female in our material is from a couple collected by the first author, see below.

*Head*: Figure 6A–B. Frons shining black with two large light grey dust spots; frons black haired. Face densely greyish dusted (except for central prominence shining black), white haired. Genae light greyish dusted, occiput densely so, the hairs are white. Antennae black.

*Thorax*: Figure 6C. Scutum and scutellum shining metallic black, the hairs light yellow. Humerus, notopleuron and pleurae with dense greyish dusting. – *Legs*: fore and mid leg orange yellow, coxa and trochanter black. Hind legs orange yellow except for femur and tibia with a broad black ring after the middle. Basitarsus at apex and the following two segments yellow, tarsus otherwise blackish. – *Wings*: the veins dark brown, light brown at base; stigma greyish yellow. Calypter and haltere light yellow.



**Figure 5.** *Platycheirus transbaikalicus* sp. n., male holotype: A–D. **A:** head, lateral view; **B:** antenna; **C:** fore femur; **D:** abdomen, tergites 1–2. *Platycheirus transfugus* (Zetterstedt): E–G. **E:** antenna; **F:** abdomen, tergites 1–2; **G:** fore femur.

*Abdomen*: Figure 6D. Tergite 1 black with pale dusting. Tergites 2–5 each with a pair of orange spots, the following tergites black. Sternites yellow, except for sternite 1 and sternites 4–5 broadly brown on about apical half.

*Body length*: (from frons till tip of abdomen) 8.9 mm. Wing length: 7.8 mm

**Additional species**

***Platycheirus abruzzensis* van der Goot, 1969**

Tuva, Teli 10 June 1963 1♂, leg. N. Violovitsh and Russia, Chitinskaya Region, left bank of Onon river, near bridge, 8 km WNW from Nizhnij Tsasuchej settlement, southern slope 3 June 1995, 1♂ leg. I. Lubechanskij.

***Platycheirus aeratus* Coquillet, 1900**

Republic Altai, Kosh-Agachskij district, "Rodonovij istochnik", 2412 m a.s.l. 49,46°N,

88,05°E, 5 July 2008, 1♂ leg. A. Barkalov.

***Platycheirus albimanus* (Fabricius, 1781)**

NW Tuva, 20 km WNW Kara-Khol' lake, Kalash river, 1850 m a.s.l. 51°31'N, 89°13'E, 8-10 June 2008, 2♀♀ leg. R. Dudko and I. Lubechanskij.

***Platycheirus brunnifrons* Nielsen, 2004**

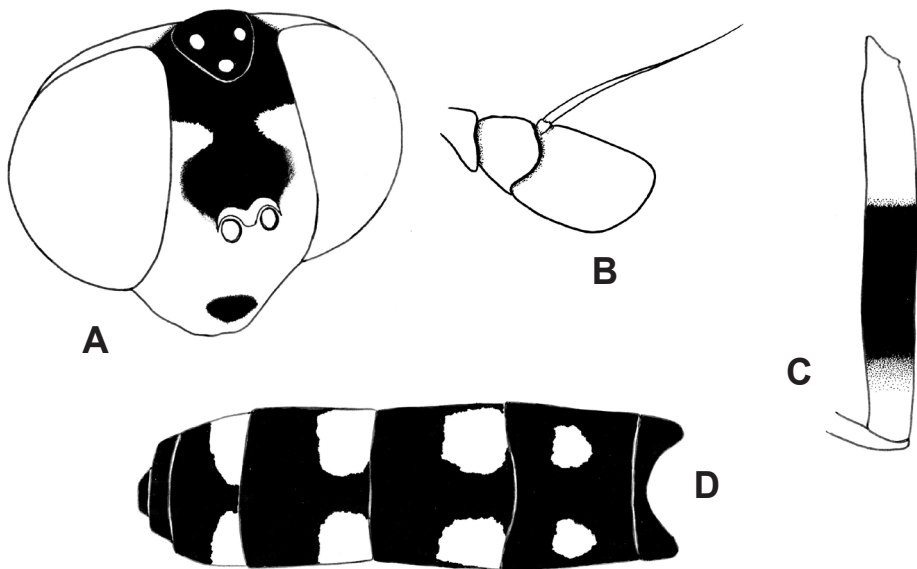
NW Tuva, Ustyu-Eldig-Khem river, 1800-1900 m a.s.l. 51°30'N, 89°36'E 15 June 2008, 1♂ leg. R. Dudko and I. Lubechanskij.

***Platycheirus fallax* Barkalov & Nielsen, 2008**

Republic Altai, Ulaganskij district, Kurajskij mountain range, tundra, 2500-2700 m a.s.l. 50,33°N, 87,75°E, 1♂ 3 July 2008 leg. A. Barkalov. A second record of this little known tundra species.

***Platycheirus fimbriatus* (Loew, 1871)**

Republic Altai, Ulaganskij district, Kurajskij



**Figure 6.** *Platycheirus latens* Mutin, female. **A:** head; **B:** antenna. **C:** hind femur; **D:** abdomen.

mountain range, tundra, 2500-2700 m a.s.l. 50,33°N, 87,75°E, 1♂ 3 July 2008 leg. A. Barkalov.

***Platycheirus fulviventris* (Macquart, 1829)**

Altai, Shapshal'skij mountain range 2740-2876 m a.s.l. 50,5°N, 89,8°E, tundra, 23-25 July 2007, 1♀ on floscule of *Schultzia crinita* (Pall.) Spreng., leg. A. Barkalov.

***Platycheirus goeldlini* Nielsen, 2004**

NW Tuva, 20 km WNW Kara-Khol' lake, Kalash river, 1850 m a.s.l. 51°31'N, 89°13'E, 8-10 June 2008, 1♂ leg. R. Dudko and I. Lubechanskij; NW Tuva, Usty-eldig-Khem river, 1800-1900 m a.s.l. 51°30'N, 89°36'E 15 June 2008, 2♂♂ leg. R. Dudko and I. Lubechanskij.

***Platycheirus hyperboreus* (Stæger, 1845)**

Krasnoyarsk Territory, Ojskij pass, 1554 m 52,8°N 93,3°E 21 June 2004 1♂ leg. A. Barkalov.

***Platycheirus latens* Mutin, 1999**

Barguzinskij Reservation, 21 July 1972 1♂ leg. N. Antropova and Krasnoyarsk Territory, Ojskij pass, 1554 m 52,8°N 93,3° 21 June 2004 1♂, 1♀ leg. A. Barkalov.

***Platycheirus varipes* Curran, 1923**

Tuva, Zapadnyj Sajan, upper part of Ak-Khem river, 2100-2250 m a.s.l. 51°32'N 89°44'E, 16 June 2008, 1♂ leg. R. Dudko and I. Lubechanskij.

**Acknowledgement.** We are indebted to Karsten Sund, Natural History Museum, Oslo for taking the photo of the *Platycheirus pamiricus* holotype.

**References**

Barkalov, A.V. & Nielsen, T.R. 2004. On a new *Platycheirus* (Diptera, Syrphidae) from Turkmenistan. *Norw. J. Entomol.* 51, 123–126.  
Barkalov, A.V. & Nielsen, T.R. 2007a. A new *Platycheirus* species of the *manicatus* subgroup (Diptera, Syrphidae) from Caucasus. *Norw. J. Entomol.* 54, 129–134.  
Barkalov, A.V. & Nielsen, T.R. 2007b. *Platycheirus* species (Diptera, Syrphidae) from Yakutia, Eastern

Siberia, with description of two new species. *Volucella* 8, 87–94.

Barkalov, A.V. & Nielsen, T.R. 2008a. *Platycheirus* species (Diptera, Syrphidae) from the Altai Mountains, SE Siberia, with description of five new species. *Norw. J. Entomol.* 55, 91–104.

Barkalov, A.V. & Nielsen, T.R. 2008b. *Platycheirus* species (Diptera, Syrphidae) in the Tuva district of southern Siberia, with description of a new species. *Norw. J. Entomol.* 55, 223–227.

Doczkal, D., Stuke, J.-H. & Goeldlin de Tiefenau, P. 2002. The species of the *Platycheirus scutatus* (Meigen) complex, with description *Platycheirus speighti* spec. nov. from the Alps (Diptera, Syrphidae). *Volucella* 6, 23–40.

Nielsen, T.R. 2004. European species of the *Platycheirus ambiguus* group (Diptera, Syrphidae), with description of new species. *Volucella* 7, 1–30.

Vockeroth, J.R. 1990. Revision of the Nearctic species of *Platycheirus* (Diptera, Syrphidae). *Can. Ent.* 122, 659–766.

Received: 6 February 2009

Accepted: 16 March 2009