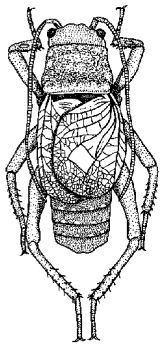

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A REVIEW OF THE GENUS *DIPLONEVRA* LIOY (DIPTERA, PHORIDAE) FROM THE RUSSIAN FAR EAST

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Eight species of the genus *Diplonevra* are recorded from the Russian Far East. *D. hirsuta* **sp. n.** (Primorskii krai) is described. A new synonymy is proposed: *D. peregrina* (Wiedemann, 1830) = *D. rubiginosa* Michailovskaya, 1990, **syn. n.** A revised key to the males of the Far Eastern species of *Diplonevra* is given.

KEY WORDS: Diptera, Phoridae, Far East, taxonomy.

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Для Дальнего Востока России приводятся 8 видов рода *Diplonevra*. Из Приморского края описан *D. hirsuta* **sp. n.** Установлена новая синонимия: *D. peregrina* (Wiedemann, 1830) = *D. rubiginosa* Michailovskaya, 1990, **syn. n.** Дана новая определительная таблица для самцов видов *Diplonevra*.

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INTRODUCTION

My previous paper (Michailovskaya, 1990) has been based on the pinned specimens of *Diplonevra* without preparation of the slides. Very reliable characters proposed

by Disney (1983, 1990) were not used. This paper based on the additional specimens of this genus preserved in alcohol. As a result, one new species is found, a new synonymy and a revised key to the males of Far Eastern species of *Diplonevra* are propoused.

Holotype and paratypes of a new species are deposited in the collection of the Institute of Biology and Soil Sciences, Vladivostok, Russia. The following abbreviation are used: MT - Malaise trap, YPT - yellow pan trap.

Genus *Diplonevra* Lioy, 1864

Diplonevra Lioy, 1864: Atti Ist. Veneto. Sci. (3)10: 77.

Key to species (males)

1. Hind tibia with 3 hair palisades. Base of hind femur without sensory complex 2
– Hind tibia with 2 hair palisades only. Posterior face of hind femur basally and hind trochanter with spines or bristles (Figs 1-6) 3
2. Hind tibia with 3 antero-dorsal bristles. Pleural region mostly dark brown. Stenopleuron and hypopleuron in basal half pale yellow. Hypopygium – Fig. 7 . . . . . ***D. abbreviata*** **(von Roser)**
– Hind tibia with a single antero-dorsal bristles. Pleural region uniformly white. Hypopygium – Fig. 8 . . . . . ***D. bifasciata*** **(Walker)**
3. Hind tibia with a row of antero-ventral bristles 5
– Hind tibia without antero-ventral bristles 4
4. Hind tibia with 2 antero-dorsal bristles. Posterior face of hind femur with 4 blunt spines, hind trochanter with one bristles and stout spines (Fig.1). Hypopygium – Fig. 9 . . . . . ***D. florea*** **(Fabricius)**
– Hind tibia without antero-dorsal bristles. Posterior face of hind femur basally with ascending process bearing 2 ribbon-like processes and 4 strong blunted bristles plus 3 tapered bristles, hind trochanter with 4 bristles (Fig. 4). Hypopygium – Fig.14 . . . . . ***D. taigaensis*** **Michailovskaya**
5. Hind tibia with antero-ventral bristles only 6
– Hind tibia with 3 additional antero-dorsal bristles to 3-4 antero-ventral ones. Basal sensory complex of hind femur – Fig. 2. Hypopygium – Fig.10 . . . . . ***D. peregrina*** **(Wiedemann)**
6. Hind tibia with 3 antero-ventral bristles. Base of posterior face of hind femur with an ascending process, bearing the simple or widening in distal half spines at the tip (Figs 5, 6) 7
– Hind tibia with 1 antero-ventral bristles. Base of posterior face of hind femur without process, but with 4 tooth-like spines (Fig.3). Hypopygium – Fig. 11 . . . . . ***D. pachycera*** **(Schmitz)**
7. Hind trochanter without bristles and with the few rows of short spines (Fig. 5). Hypopygium – Fig.12 . . . . . ***D. funebris*** **(Meigen)**

– Hind trochanter with 4 tapered bristles on lower margin and with four S-shaped stout blunted bristles above them (Fig. 6). Hypopygium – Fig.13 . . . . ***D. hirsuta* Michailovskaya, sp. n.**

***Diplonevra hirsuta* Michailovskaya, sp. n.**
Figs 6, 13, 15, 16

DESCRIPTION. MALE: Frons black. Median furrow absent. Supra-antennals well developed. Antials a little farther apart from each other than the pre-ocellars. Third antennal segment yellow-orange, subglobose, enlarged and slightly pointed at tip. Arista dorsally shortly haired. Palps yellow, inflated with six apical bristles, almost equal. Proboscis small, labella shorter than palps. Thorax blackish-brown. Mesopleuron bare. Notopleuron with four bristles: three strong bristles and one (second) is weaker and shorter than others. Scutellum with four bristles of equal length. Abdomen with brown tergites and minute hairs, which are longer on the posterior margin of tergite VI. Venter grey. Hypopygium as on Fig.13. Anal tube brown, apically yellow. Legs dark brown, fore ones yellow. Fore tibia with short dorsal bristle in basal third and 9-10 dorsal spines in apical half. Mid tibia with two hair palisades: dorsal(reaching to tip) and anterior (not reaching 1/3 distance to tip). The basal pair of bristles of equal length, but anterior bristle lower than dorsal. Hind tibia with two longitudinal, hair palisades, two-three ventral bristles. Sensory complex of hind femur as on Fig. 6. Wing length 2.3 mm (Fig.16). Costal index 0.45. Costal ratio 10:1.2:1. Costal cilia length 0.08 mm. Vein 3 with long (as costal cilia) hair basally. Axillary ridge with five strong bristles. The thin veins not reach wing margin. Costal section 2 and 3 thickened. Membrane lightly brownish. Haltere dark brown.

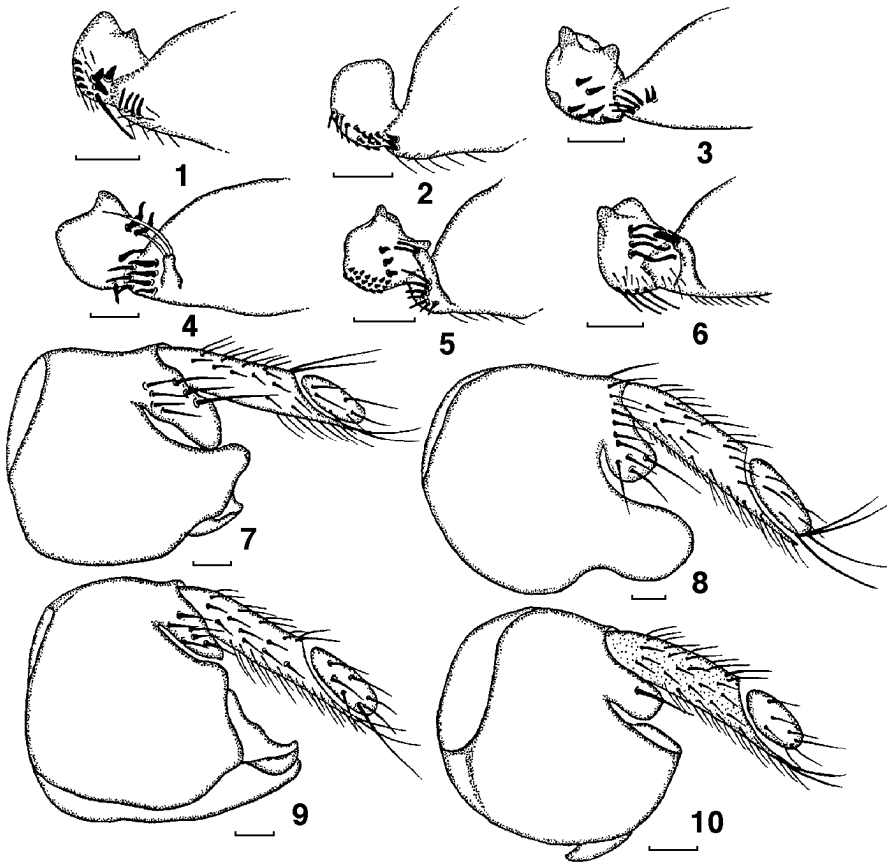
FEMALE. Head similar to male, but with following differences: third antennal segment smaller, darker, proboscis much longer and massive. Thorax as in male. Abdomen with three tergites shortly haired. Tergite III likes a small pigmented patch (Fig.15). Tergites IV-VI are represented by hairs only. Legs as in male, but fore tibia with 7 dorsal spines in apical half and posterior face of hind femur without sensory complex basally. Wing length 2.2 mm, costal index 0.46, costal ratio 11:1.2:1, costal cilia length 0.07 mm. Haltere dark brown.

MATERIAL. Holotype - ♂, Russia: Primorskii krai, 18 km SE Ussuryisk, Gornotayozhnoe, 4-5.VIII 1999 (M. Michailovskaya). Paratypes - the same locality, 4-5.VIII 1999, 3♂; 13-14.VIII 1999, YPT, 2♀ (M. Michailovskaya).

DISTRIBUTION. Russia: Primorskii krai.

ETYMOLOGY. The name refers a long strong blunted bristles on the posterior face of hind femur basally and originates from the Latin adjective – *hirsutus* (haired).

DIAGNOSIS. The new species closely related to *D. funebris* (Meigen) and *D. glabra* Schmitz, but well distinguished from them by characteristic sensory complex at the base of hind femur.

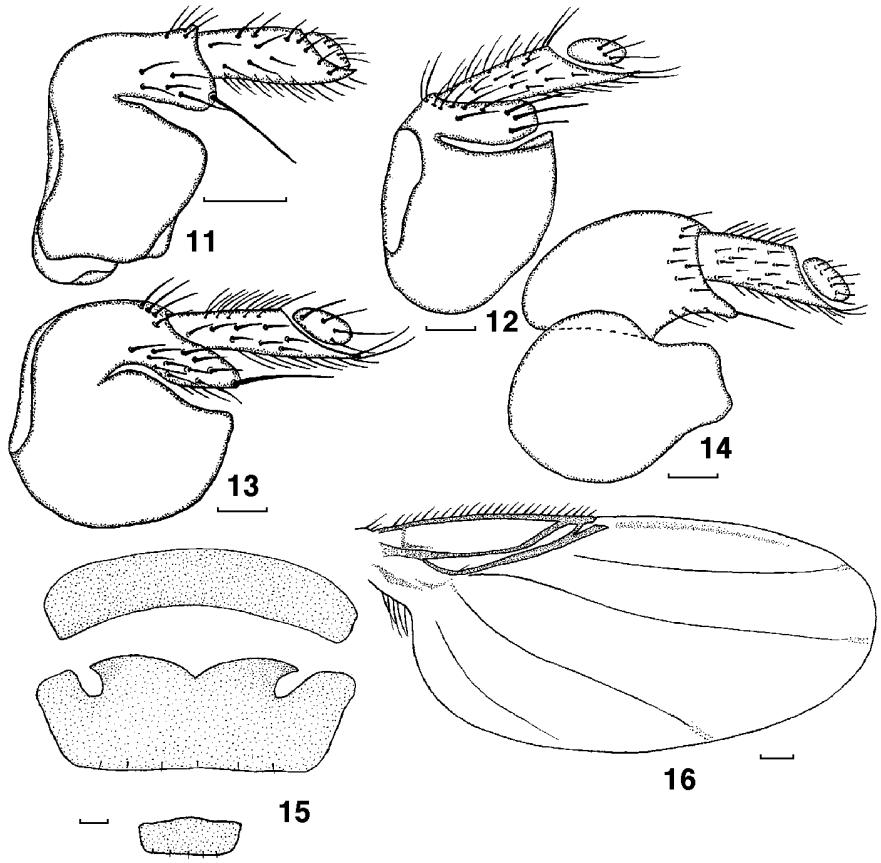


Figs 1-10. *Diplonevra*. 1-6) male posterior face of hind femur basally and trochanter: 1) *D. florea*, 2) *D. peregrina*, 3) *D. pachycera*, 4) *D. taigaensis*, 5) *D. funebris*, 6) *D. hirsuta* sp. n.; 7-10) male hypopygium, left side: 7) *D. abbreviata*, 8) *D. bifasciata*, 9) *D. florea*, 10) *D. peregrina*. Scale = 0.1 mm.

***Diplonevra abbreviata* (von Roser, 1840)**
Fig. 7

MATERIAL. Russia, Primorskii krai, 18 km SE Ussuryisk, Gornotayozhnoe, 24.VII 1995 2♂, 2♀; 17.VII-29.VII 1997,13♂, 2♀; 13.VII-13.VIII 1998, 8♂, 8♀; 23-30.VI 1999, 1♂, 2♀; 2-30.VII 1999, 31♂, 2♀; 1-29.VIII 1999, 57♂, 22♀; 17-18.IX 1999, YPT, 1♂; 16.VI-26.VIII 1999, MT, 5♂, 1♀ (M. Michailovskaya).

DISTRIBUTION. Russia: Primorskii krai, north of European part.- Europe.



Figs 11-16. *Diplonevra*. 7-14) male hypopygium, left side: 11) *D. pachycera*; 12) *D. funebris*; 13) *D. hirsuta* sp.n.; 14) *D. taigaensis*; 15-16) *D. hirsuta* sp. n.: 15) female abdominal tergites I-III; 16) male wing. Scale = 0.1 mm.

***Diplonevra funebris* (Meigen, 1830)**

Figs 5, 12

Diplonevra praealpina: Michailovskaya, 1990: 695, figs 15-17 (misidentification).

MATERIAL. Russia: Primorskii krai, 18 km SE Ussuryisk, Gornotayozhnoe, 13.VI 1985, 2♂; 6-7.IX 1999, 1♀; 11-24.X 1999, YPT, 4♂; 28.VI-18.VII 1999, 3♂; 5.VIII-5.IX 1999, 22♂, 3♀; 6-27.IX 1999, 5♂; 27.IX-28.X 1999, MT, 4♂ (M. Michailovskaya).

DISTRIBUTION. Russia: Primorskii krai.- Europe, Israel, Algeria, Azores, Madeira, Canary Is, Nearctic Region.

REMARKS. Recently I discovered that specimens identified by my (Michailovskaya, 1990) as *D. praealpina* (Schmitz, 1948) belong to *D. funebris*.

***Diplonevra bifasciata* (Walker,1860)**
Fig.8

MATERIAL. Russia: Primorskii krai, 18 km SE Ussuryisk, Gornotayozhnoe, 12.VIII 1997, 2♂; 1-18.VIII 1999, 4♂, 3♀(M. Michailovskaya).

DISTRIBUTION. Russia: Primorskii krai.- Japan, Oriental Region.

***Diplonevra florea* (Fabricius, 1794)**
Figs 1, 9

MATERIAL. Russia: Primorskii krai, 18 km SE Ussuryisk, Gornotayozhnoe, 13.VI 1995, 10♂,5♀; 14-22.VI 1999, 4♂; 22-28.VII 1999, 1♂, 1♀; 4-23.VIII 1999, 7♂, 2♀; 8-9.IX 1999, YPT, 1♂; 6.VI-17.VIII 1999, MT, 2♂,1♀ (M. Michailovskaya).

DISTRIBUTION. Russia: Primorskii krai.- Europe.

***Diplonevra pachycera* (Schmitz, 1918)**
Figs 3, 11

MATERIAL. Russia: Primorskii krai, 18 km SE Ussuryisk, Gornotayozhnoe, 15.VII 1984, 2♂,(M. Michailovskaya); Khasan district, Zanadvorovka, 15.VII 1984, 4♂ (M. Michailovskaya); Kuril Islands: Brat Chirpoev, 20.VIII 1997, 8♂, 1♀ (A. Lelej, S. Storozhenko).

DISTRIBUTION. Russia: Primorskii krai, Kuril Islands (Michailovskaya, 1998).- Europe.

***Diplonevra peregrina* (Wiedemann, 1830)**
Fig.2,10

Phora peregrina Wiedemann, 1830: 600

Diplonevra rubiginosa Michailovskaya, 1990: 696, figs 1-5 [holotype - ♂, Primorskii krai, 40 km SE Ussuryisk, 5.IX 1984, (A.Ozerov); deposited in the collection of Zoological Institute RAN, St.-Petersburg; studied], **syn. n.**

MATERIAL. Russia: Amurskaya oblast', Zeya River, 12.VIII 1984, 1♂,1♀; 5.IX 1984, 2♂ (A. Ozerov); Primorskii krai: 18 km SE Ussuryisk, Gornotayozhnoe, 17-21.V 1996, YPT, 27♂, 7♀; the same locality: 23-30.VI 1999, 5♂, 1♀; 3-30.VII 1999, 23♂, 9♀; 1-25.VIII 1999, 36♀, 7♀; 10-11.IX 1999, YPT, 1♂ (M. Michailovskaya).

DISTRIBUTION. Russia: Primorskii krai, Amurskaya oblast'. - China, Japan; Australian and Oriental Regions.

REMARKS. A detailed comparison of the *D. rubiginosa* with the characters of the *D. peregrina* reveals that the differences between these species are insignificant. The size of the third antennal segment and length of arista of the *D. rubiginosa* are somewhat variable while the structure of sensory complex, which is very characteristic, is the same as in *D. peregrina*.

***Diplonevra taigaensis* Michailovskaya, 1990**
Figs 4, 14

MATERIAL. Russia: Khasan district, Zanadvorovka, 23.VII 1984,1♂ (M. Michailovskaya).

DISTRIBUTION. Russia: Primorskii krai.

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SHORT COMMUNICATION

V. S. Sidorenko. NEW DATA ON THE DIASTATIDAE AND DROSOPHILIDAE (DIPTERA) OF KURIL ISLANDS. - Far Eastern Entomologist. 2000. N 84: 7-8.

В. С. Сидоренко. Новые данные по Diastatidae и Drosophilidae (Diptera) Курильских островов. // Дальневосточный энтомолог. 2000. N 84. С. 7-8.

One species of Diastatidae [1] and 26 species of Drosophilidae [2, 3, 4, 5] are known from Kuril Islands. New distribution data are listed below. The follow abbreviations are used: VS - V.Sidorenko, AL - A. Lelej, SS- S.Storozhenko, asterisk (*) - new records.

Family Diastatidae

***Diastata costata* Meigen, 1830** – 1♂, 2♀, *Matua, 15.VIII 1996 (AL); *Shiashkotan, 2.VIII 1999 (AL &SS); *Rasshua: Malenkaya Bay, 4. VIII 1999(AL&SS). Firstly recorded from Russia.