

SHORT COMMUNICATION

M. G. Krivosheina. RESTORATION OF THE NAME *DICHAETA USSURICA* KRIVOSHEINA, 1986 (DIPTERA: EPHYDRIDAE). – Far Eastern Entomologist. 2012. N 252: 27-31.

Summary. Type materials of the two species of the genus *Dichaeta* Meigen, 1830 (Diptera: Ephydriidae), *D. transversa* Walker, 1853 and *D. ussurica* Krivosheina, 1986, were revised. The differences in the structure of male abdominal sternites and terminalia as well as the distribution of these species showed that *D. ussurica* is a distinct species, not a synonym of *D. transversa*. Key to Russian species of the genus *Dichaeta* is given.

Key words: Diptera, Ephydriidae, *Dichaeta*, taxonomy.

М. Г. Кривошеина. Восстановление названия *Dichaeta ussurica* Krivosheina, 1986 (Diptera, Ephydriidae) // Дальневосточный энтомолог. 2012. N 252. С. 27-31.

Резюме. Ревизованы типовые материалы по двум видам мух-береговушек рода *Dichaeta* Meigen, 1830 (Diptera: Ephydriidae): *D. transversa* Walker, 1853 и *D. ussurica* Krivosheina, 1986. Установленные четкие отличия в строении гениталий и стернитов брюшка самцов этих видов, а также специфическое их распространение показали, что *D. ussurica* является самостоятельным видом, а не синонимом *D. transversa*. Приведена определительная таблица видов рода *Dichaeta* фауны России.

INTRODUCTION

The flies of the genus *Dichaeta* Meigen, 1830 are easily recognized because of their relatively large size (body length 3-5 mm, complete size with abdominal bristles 5-7 mm), costal vein reaching R_{4+5} , dark brown or black coloration, modified 5th abdominal tergite forming a slender tube with 2 long terminal setae and 4th abdominal tergite with 6-16 long posteriorly directed setae. The representatives of the genus *Dichaeta* differ from those of the close genus *Notiphila* Fallén, 1810 in well developed thick and long anterior proclinate fronto-orbital seta. The genus *Dichaeta* was proposed by Meigen (1830) and kept its generic status apart from related genus *Notiphila*. Mathis proposed *Dichaeta* as a species-group only (Mathis, 1979), later basing on cladistic relationships this taxon was treated as subgenus (Mathis & Zarwarnicki, 1995). However some authors basing on larval characters mainly (Krivosheina, 1986, 1993) didn't accept this subgeneric status and kept treating *Dichaeta* as separate genus. Finally Mathis & Zarwarnicki (2007) accepted this point of view and restored generic status of *Dichaeta*.

Two species of *Dichaeta* were known previously in Palaearctic Region: *D. caudata* (Fallén, 1813) and *D. ussurica* Krivosheina, 1986. The former species has wide Holarctic distribution and the latter was known from the Russia Far East only. The examination of the type materials of *Notiphila transversa* Walker, 1853 known from the south-east of the United States demonstrated significant similarity of this species with *Dichaeta ussurica* (Mathis & Zarwarnicki, 2007), therefore these authors synonymized *D. ussurica* with *D. transversa*. However significant disjunction of both species areas caused serious doubt in such interpretation. So we decided again to re-examine the type materials of *D. transversa* and *D. ussurica*. The result of this investigation is given below.

RESULTS AND DISCUSSION

Dichaeta transversa (Walker, 1853)

Figs 1, 2–3, 6–7, 10

MATERIAL EXAMINED. Lectotype, ♂, with handwritten label “transversa” and several additional labels (Fig. 1), kept in BMNH. This specimen was designated as lectotype by Mathis & Zatwarnicki (2007).



Fig. 1. Labels of the lectotype of *Dichaeta transversa* Walker, 1853.

DESCRIPTION. The lectotype is in a poor condition, directly pinned, with only the thorax on the pin, without wings, forelegs and right midleg, dissected terminalia are placed in plastic vial. Basal fused part of surstyli broad, apical parts of surstyli directed inside (Fig. 2), curved surstyli longer than adjoining part of epandrium (Fig. 3), the shape of surstyli in lateral view differing from those of “ussurica”. Abdominal sternite 5th of male 2 times as long as wide, bilobed anteriorly, abdominal sternite 4th as long as wide (Figs 6-7).

DISTRIBUTION (Fig. 10). Nearctic: United States (Florida, Maryland, New Jersey, Ohio, Tennessee, Texas, Virginia) (Mathis & Zatwarnicki, 2007).

Dichaeta ussurica Krivosheina, 1986, nom. ressur.

Figs 4–5, 8–9, 11

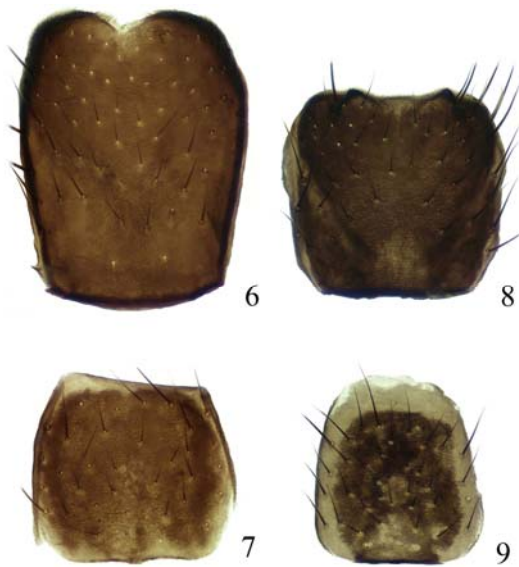
MATERIAL EXAMINED. Holotype, ♂, the south part of Primorskii krai, 40 km SE Ussurijsk, 14.VIII 1984 (A. Ozerov) and paratypes: 10 ♂, the same label; 2 ♂, Amurskaya oblast, Zeya River, 27.VI 1982, 28.VII 1982 (M. Krivosheina) (ZMUM).

DESCRIPTION. Body length 3-4,5 mm. Black in dark-brown microtomentum. Frons with 2 black isolated stripes; orbita and ocellar triangle brown. Face in dark brown, occiput in grey microtomentum. Face with 2 strong setae and 1 shorter hair below them. Palpae yellow. Arista with 6 rays. Thorax brown, scutum with 3 greyish stripes, katepisternum grey. Both *npl* setae are equal in size. Halteres brown. Wings grayish almost hyaline or brownish, veins black. Legs black, tarsi yellowish, darkened dorsally. Abdomen black. Tergite IV with 4-10 long posteriorly directed setae, tergite V elongated in slender tube with 2 apical setae. Basal fused part of surstyli narrow, apical parts of surstyli directed outside (Fig. 4), curved surstyli equal to adjoining part of epandrium (Fig. 5), the shape of surstyli in lateral view differing from those of “transversa”. Male abdominal sternite 5th as long as wide, with 4 projections anteriorly; abdominal sternite 4th longer than wide (Figs 8-9).

DISTRIBUTION (Fig. 11). Palaearctic: Russian Far East (Primorskii krai, Amurskaya oblast).



Figs 2–5. Epandrium and fused surstyli of *Dichaeta*. 2, 3 – *D. transversa*: 2 – dorsal view, 3 – lateral view; 4, 5 – *D. ussurica*: 4 – dorsal view, 5 – lateral view.



Figs. 6–9. Abdominal sternites V and IV, ventral view: 6, 7 – *Dichaeta transversa*: 6 – 5th sternite, 7 – 4th sternite; 8, 9 – *D. ussurica*: 8 – 5th sternite, 7 – 4th sternite.



Figs. 10–11. Distribution maps. 10 – *Dichaeta transversa* (after Mathis & Zarwarnicki, 2007); 11 – *D. ussurica* (original).

NOTES. As for the lectotype specimen of the *Dichaeta transversa* is in poor condition, I couldn't compare external characters of *D. transversa* and *D. ussurica*. However the differences in the structure of abdominal sternites are distinct: abdominal sternite 5th of *D. transversa* 2 times as long as wide and bilobed anteriorly; this sternite is of about rectangular shape and with 4 small anterior projections in *D. ussurica*; the shape of abdominal sternite 4th is distinct also. Genitalia are also different: basal fused part of surstyli broad in *D. transversa* and narrow in *D. ussurica*, apical parts of surstyli directed inside in the former species and outside in the latter; curved surstyli longer than adjoining part of epandrium in *D. transversa* and equal to it in *D. ussurica*. The areas of two species are very different and testify to their geographical isolation. Herein I restore *Dichaeta ussurica* as a good species.

Two distributed in Russia species of *Dichaeta* can be distinguished by the following characters.

Key to Russian species of the genus *Dichaeta*

1. Frons with U-shaped black spot. Second *npl* seta is weaker than the first. Surstyli straight like extension of epandrium. Sternite 5th of male with 3 anterior projections *D. caudata*
- Frons with 2 black isolated stripes not connected above antennae. Both *npl* setae are equal in size. Surstyli curved inside. Sternite 5th of male with 4 anterior projections *D. ussurica*

ACKNOWLEDGEMENTS

The author is very grateful to Dr. Nigel Wyatt, Natural History Museum London (BMNH) for the help in the loan of the type specimen of *Dichaeta transversa* Walker, 1853 and to Dr. Andrey Ozerov (ZMUM) for the initiative for the completing of this investigation and for the photos prepared for this publication.

REFERENCES

- Krivosheina, M.G. 1986. Revision of Palaearctic species of the shore flies from the genus *Dichaeta* (Diptera, Ephydriidae). *Zoologicheskii Zhurnal*, 65(5): 809–813. (In Russian with English summary).
- Krivosheina, M.G. 1993. Larvae of the ephydrid flies of the genera *Notiphila* Fll. and *Dichaeta* Mg. (Diptera, Ephydriidae) and their significance for the understanding of the position of these genera in the system. *Entomologicheskoe Obozrenie*, 72(1): 222–231 (In Russian with English summary).
- Mathis, W.N. 1979. Studies of Notiphilinae (Diptera: Ephydriidae), I: Revision of the Nearctic species of *Notiphila* Fallén, excluding the *caudata* group. *Smithsonian Contributions to Zoology*, 430: 1–30.
- Mathis, W.N. & Zatwarnicki, T. 1995. A world catalog of the shore flies (Diptera: Ephydriidae). *Memoirs on Entomology. International*, 4: 1–423.
- Mathis, W.N. & Zatwarnicki, T. 2007. A Revision of the species of the genus *Dichaeta* Meigen (Diptera: Ephydriidae). *Annales Zoologici (Warszawa)*, 57(4): 783–822.
- Meigen, J.W. 1830. *Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten*. 6. Hamm: Schultz-Wundermann. 401 p.

Author's address:

A.N. Severtsov Institute of Ecology and Evolution,
Russian Academy of Sciences, Leninsky prospect 33,
119071 Moscow, Russia.
E-mail: dipteramarina@rambler.ru

© **Far Eastern entomologist (Far East. entomol.)** Journal published since October 1994.
Editor-in-Chief: S.Yu. Storozhenko
Editorial Board: A.S. Lelej, N.V. Kurzenko, M.G. Ponomarenko, E.A. Beljaev, V.A. Mutin,
E.A. Makarchenko, T.M. Tiunova, P.G. Nemkov, M.Yu. Proshchalykin, S.A. Shabalin
Address: Institute of Biology and Soil Science, Far East Branch of Russian Academy of
Sciences, 690022, Vladivostok-22, Russia.
E-mail: entomol@ibss.dvo.ru web-site: <http://www.biosoil.ru/fee>