

been no evidence to that hypothesis. Our search for *D. mercatorum* in large settlements of Western Siberia to the south of Novosibirsk had not yielded any positive result until 1999. *D. mercatorum* species had not been found by other researchers in Eastern Siberia and Russian Far East despite their keen and extensive surveys of Drosophilidae fauna there (Toda, *et al.*, 1996). Our collections of synantropic *Drosophila* in Eastern Europe (including Russia) over the period of 1991-1999 also did not contain *D. mercatorum* specimens.

The situation began to change in 1998 when Dr. Yu. Novikov sent us a collection of synantropic *Drosophila* from Tomsk city, 200 km north of Novosibirsk. That collection contained two species - *D. mercatorum* and *D. busckii*. In summer and fall of 1999 *D. mercatorum* was also found in two more places - in the Chermal area of Altai Republic, 500 km south of Novosibirsk and among *Drosophila* collected by undergraduate K. Gunbin in Udmurt Republic in European part of Russia, 2000 km west of Novosibirsk. Therefore, two facts regarding the occurrence of *D. mercatorum* in Russia as well as in inner regions of Eurasia can be established at present: first, an occurrence of this species in the European part of Russia and, second, a spreading trend of this species in the Asian part of Russia.

The above-stated facts can make one form an opinion that into every region where we found *D. mercatorum* in 1998 and 1999 it migrated from the Novosibirsk population. To a certain extent that can be true as far as Siberian populations are concerned, but it is rather unlikely for the populations of Eastern Europe.

References: Ivannikov, A.V., and I.K. Zakharov 1994, Dros. Inf. Serv. 75: 108-109; Ivannikov, A.V., and I.K. Zakharov 1995, Dros. Inf. Serv. 76: 107; Toda, M.J., V.S. Sidorenko, H. Watabe, S.K. Kholin, and N.N. Vinokurov 1996, A revision of the Drosophilidae (Diptera) in East Siberia and Russian Far East: taxonomy and biogeography. Zoological Science 13: 455-477.



An interesting fly from Siberia, similar to *Drosophila hydei* but not that one.

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In February 2000 I was studying the collections obtained during my field work in Altai Republic (southern part of Western Siberia) in 1999. Among the Drosophilidae collected in village Askat, Chermal area in August-September 1999, I found 10 flies (4 females and 6 males) of a species previously unknown to me. These flies in my collection were labelled as D.sp.99-19-01(IvAn). Judging by the external morphology of male genitalia, the unknown species is close to the species of the *repleta* group, but the coloration of integuments of the unknown species is very much different from those of the familiar synantropic species of the *repleta* group ever found in the former USSR. I compared D.sp.99-19-01(IvAn) flies with *D. hydei* flies of the strain maintained in the lab of Professor I. Zhimulev as well as with *D. mercatorum* from the Siberian populations. This comparison showed that the unknown flies were very similar to *D. hydei* species but differed from it in several important characters.

The similar and differing characters are as follows: morphological analysis of male genitalia showed that penis of D.sp.99-19-01(IvAn) is almost identical in shape to that of *D. hydei*. Although all chitinous structures of male genitalia of D.sp.99-19-01(IvAn) are slightly bigger in size than those of *D. hydei*, the shape of the penis is virtually the same. At least, as far as the shape of the penis is

concerned, such species as *D. eohydei* and *D. neohydei* differ each from *D. hydei* in a more evident manner than *D.sp.99-19-01(IvAn)* does (this comparison I carried out making use of photos in Glatzer, K.H., 1973. The Status of *Drosophila pseudoneohydei*, Dros. Inf. Serv. 50: 47). At the same time, in coloration of integuments *D.sp.99-19-01(IvAn)* differs from *D. hydei* as well as from *D. mercatorum* and *D. repleta*, i.e. from all cosmopolitan species of the *repleta* group. These differences are as below: 1. Background coloration of integuments of *D.sp.99-19-01(IvAn)* is much brighter than that of *D. hydei* and is similar to that of *D. immigrans*; 2. *D.sp.99-19-01(IvAn)* lacks the spotted coloration of mesotonum typical for all cosmopolitan species of the *repleta* group (for *D. hydei*, in particular) but has instead a plain dark-yellow mesotonum. In some flies an even brown stripe can be seen along the central line of mesotonum at its full length. The only similarity in coloration of integuments between *D.sp.99-19-01(IvAn)* and *D. hydei* is the coloration pattern of abdominal segments: dark stripes at the back edge of tergites, which is typical for the last of these two species. These stripes are gapped at the back midline and dilated on the sides to the full width of the segment. It is worthwhile to note another remarkable fact about *D.sp.99-19-01(IvAn)* morphology. In two males a wing aberration was detected, which is absolutely identical to the aberration found everywhere and with high frequency in Russian populations of *D. mercatorum* and which we designated as phenA (see our communication "The fashion on mutation in Russian populations of *D. mercatorum*" in that volume of DIS). In both *D.sp.99-19-01(IvAn)* males the aberration is asymmetrical and affects only the left wing. Expression of that aberration in both males can be described as weak.



Drosophila repleta - the first record in Siberia.

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Over several recent years *Drosophila mercatorum* has been the most numerous species among synantropic *Drosophila* in Novosibirsk city (Western Siberia) (Ivannikov and Zakharov, 1995). In late 1999 and early 2000 we obtained collections of synantropic *Drosophila* of Novosibirsk in order to study population genetics of that species. One of eight collections contained 149 *Drosophila mercatorum* and 3 *Drosophila repleta* flies. Synantropic species *Drosophila repleta* is new for Western Siberia. The recently published and rather representative record of Drosophilidae of Eastern Siberia and Russian Far East presented by Masanori J. Toda with co-authors is also lacking *Drosophila repleta* (Toda *et al.*, 1996).

It is worth noting that over the vast territory of former USSR this species is rather rare. In the list of species of the genus *Drosophila* in Key to Insecta of European USSR, *Drosophila repleta* is also lacking (Stackelberg, 1970). There are reports about occurrence of *Drosophila repleta* in the Caucasus and Transcaucasian area (Mitrofanov, 1977). We found this species only once in Uman city, Ukraine (Eastern Europe) in 1990 (Ivannikov and Zakharov, 1994).

References: Ivannikov A.V., and I.K. Zakharov 1994, Dros. Inf. Serv. 75: 108-109; Ivannikov, A.V., and I.K. Zakharov 1995, Dros. Inf. Serv. 76: 107; Mitrofanov, V.G., 1977, In: Problemy genetiki v issledovaniyakh na drozofile (*The Problems of Genetics in Drosophila Studies*), (Khvostova, V.V. *et al.*, eds.), pp. 7-18. Nauka, Novosibirsk. [in Russian]; Stackelberg, A.A., 1970, Fam. Drosophilidae. In: Opredelitel nasekomykh evropeiskoi tchasti SSSR (Key to Insecta of