

Several males without wing patch were regularly found in that stock. However, the number of males without patch is very low in all the stocks used during the present study. Thus the number of males without patch is gradually decreasing in the stocks during their maintenance in the laboratory. We have initiated selection experiments to study the genetic basis of wing patch in *D. biarmipes*.

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Pavković Lučić, S., and V. Kekić. Institute of Zoology, Faculty of Biology, University of Belgrade, Studentski trg 16, 11000 Belgrade, Yugoslavia. *Drosophila (Lordiphosa) miki* Duda, first record for Yugoslavia.

were collected by sweeping net over fruit-fermenting baits (banana, apple, small amount of seasonal fruit with baker's yeast and sugar) distributed over the studied habitat - in a quite dense green belt following the river, where the trees of old willows and poplars dominate. The habitat of Kamarište, compared to the other investigated habitats along the Danube, is most wild. For illustration, while collecting flies we have seen wild pigs and deer. So far we have analyzed only a part of a rather rich Drosophilidae collection, and among them we have identified a male of *Drosophila (Lordiphosa) miki* Duda, 1924 (see also Laštovka and Máca, 1978). *D. (L.) miki* is a very rare European species whose taxonomic status is not yet defined (Gimaldi, 1990; Máca, 1991); up to now it was only recorded in Austria (Duda, 1924), Hungary (Papp and Pescenye, 1988), Czechoslovakia (Máca, 1991), Switzerland (Bächli, 1996) and now in Yugoslavia.

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Sultana, F. Institute of Low Temperature Science, Hokkaido University, Sapporo, Japan. Drosophilidae from Bangladesh.

surrounding areas: 262 spp. from India (Gupta, 1993; Singh and Fartyal, 1997), 71 spp. from Nepal (Okada, 1966), 148 spp. from Sri Lanka (Okada, 1988; Toda, pers. comm.), 127 spp. from Myanmar (Toda, pers. comm.) and 20 spp. from Bhutan (Gupta and Abhijit De, 1996).

Our knowledge about drosophilid flies of Bangladesh is still very meagre and fragmentary, in comparison with other countries of the Indian subcontinent. It remains as a virgin field to be explored. Only eight species of Drosophilidae have been recorded from Bangladesh: *Drosophila (Sophophora) kikkawai*, *D. (So.) ananassae*, *D. (So.) bipectinata*, *D. (So.) melanogaster*, *D. (Dorsilopha) busckii*, *D. (Drosophila) repleta*, *D. (D.) latifshahi*, and *Scaptodrosophila mejerei* (Anwara Begum et al., 1977).

The present report deals with the result of a preliminary survey carried out at two localities, Dhaka and Rajshahi (Table 1). Flies were collected near human habitations by traps baited with various kinds of fruits in 1997. The collected species were mostly domestic ones. In total, 750 flies were caught, belonging to seven species and three subgenera of the genus *Drosophila*. Two species, *D. (So.) takahashii* and *D. (D.) sulfurigaster albostrigata*, were recorded for the first

In our investigations of *Drosophila* fauna in habitats on the Yugoslav coasts of the river Danube, we have found 26 species (Kekić, 1997). Continuing these investigations, in June 1996, we have collected flies on the locality of the Kamarište (about 1360 km far from the mouth of the Danube to the Black Sea). Following the methodology applied in previous researches, flies

The family Drosophilidae is a large family of muscomorphan Diptera, containing very nearly 3,500 species around the world (Wheeler, 1986; Toda, pers. comm.). A considerable number of species have been recorded from the Indian subcontinent and its

Table 1. Numbers of drosophilid flies collected from Bangladesh

Genus	Subgenus	Species	Dhaka	Rajshahi
			Total (M / F)	Total (M / F)
<i>Drosophila</i>	<i>Sophophora</i>	<i>kikkawai</i>	172(105 / 67)	180 (113 / 67)
		<i>ananassae</i>	166 (67 / 99)	158 (79 / 79)
		<i>melanogaster</i>	17 (8 / 9)	23 (10 / 13)
		<i>takahashii</i>	8 (2 / 6)	13 (5 / 8)
		<i>bipectinata</i>	- - -	3 (1 / 2)
	<i>Dorsilopha</i>	<i>busckii</i>	5 (2 / 3)	4 (2 / 2)
	<i>Drosophila</i>	<i>sulfurigaster albostrigata</i>	- - -	1 (1 / 0)
	Total		368 (184 / 184)	382 (211 / 171)

time from Bangladesh. The present data in no way provide a complete picture about the drosophilid fauna of Bangladesh since many areas of this country still remain unexplored.

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Acharyya, M., and R.N. Chatterjee. Department of Zoology, University of Calcutta, 35 Ballygunge Circular Road, Calcutta, India. Differentiation of the male specific internal reproductive organs of *Drosophila melanogaster* does not require the sex determining gene *transformer* (*tra*).

In the adults of *D. melanogaster*, the last abdominal segments, the anal plates, and the genitalia show a strong sexual dimorphism. Clearly, all the structures derived from the genital disc in the female are different from those in the male. Various lines of evidence indicate that the sexual dimorphism which appears at the end of the second instar larva gives rise to different structures according to the positions of the

cells within each disc (Nothiger *et al.*, 1977; Lauge, 1980, 1982). Littlefield and Bryant (1979) noted that male and female genital discs begin development with initially identical arrays of positional values *i.e.*, they represent a single field. Later, the anal plates develop in response to the same positional values in both sexes whereas the genitalia would develop in response to different subsets of positional values according to the sexes. Thus, the entire adult terminalia (*i.e.*, the analia and the whole genital apparatus without gonads) are produced by the genital disc.

Several lines of evidence indicate that the recessive mutation *tra* (*transformer*) alleles have no effects on males but transform females into sterile pseudomales that are identical to males in every respect except for their non-functional gonads and female size (Sturtevant, 1945; Baker and Ridge, 1980; Baker and Belote, 1983). In order to know how sexual morphology of XX, *tra/tra* flies is specifically sculpted the internal organization of terminal abdominal segments, we have examined the histological structures of the terminal segment of the body of XX, *tra/tra* flies of *D. melanogaster*.

For the investigations, the histological preparations of terminal abdominal segments of adult flies were made as described by Miller (1950). The tissues were stained in eosin hematoxylin as described by Chayen *et al.* (1973).

Figure 1a-d shows the histological differences including the skeletal musculature pattern of wild type male and female. As noted earlier (Miller, 1950), our data also reveal that there is strong sexual dimorphism in the internal organization and histological structures of the adult flies. Segment specific muscle patterns are also apparent in the histological sections of the adult flies of the two sexes (Figure 1a,c), although the muscles of the genital organs are comparatively few and are concerned with the morphological interpretation of some of the skeletal frame work of the body to such an extent that they should be considered. Most of the muscles appear to be special adaptations to the functions of the fly genitalia. In males, two pairs of movable structures are associated with the genitalia. These are the