Dasmohapatra, D.P., N.K. Tripathy and C.C. Das. Berhampur University, Orissa, India. Distribution of different species of Drosophila in Khallikote Ghats, Ganjam District, Orissa, India.

The genus Drosophila has a wide range of distribution covering entire India. The available data on field collection cover most parts of the country, but there still remain large regions lacking dependable data on the Drosophila fauna. In this short communication we wish to report the Drosophila fauna from the Khallikote Ghats, Orissa, India, which are about 60 km to the north-east of Berhampur at 19°15' and 19°5' N latitude and 84°20' and 85°15' E longitude. This mountain range has woody plants at its foot while teak plantation and thick bushy vegetation occur in its upper ranges. The table gives the different species of Drosophila collected on banana bait during several collection trips conducted between the months of January and March, 1980. The average temperature during this period was 27°C. A total of 745 flies were collected which included eight different species belonging to two subgenera.

Species	No. of flies collected			Percentage
	Male	Female	Total	
Subgenus: Sophophora				
D. malerkotliana	245	189	434	58.25
D. kikkawai	78	50	128	15.83
D. takahashii	23	55	78	10.45
D. rajasekari	8	31	39	5.23
D. bipectinata	8	27	35	4.69
D. melanogaster	4	14	18	2.41
D. suzukii	1	1	2	0.26
Subgenus: Scaptodrosophila				
D. nigra	3	8	11	1.46

The dominant species in the collection belonged to melanogaster species group (especially D. malerkotliana and D. kikkawai) with males outnumbering the females; the sex ratio, however, was reversed in the case of D. takahashii, D. rajasekari, D. bipectinata and D. melanogaster.

Gilbert, D.G. Indiana University, Bloomington, Indiana. Effects of CO_2 vs. ether on two mating behavior components of D. melanogaster.

Various effects of two anesthetics, carbon dioxide and ethyl ether, on Drosophila have been reviewed by Ashburner and Thompson (1978). These authors indicate that carbon dioxide treatment can markedly reduce survival and fertility of adults if administered up to 3 hours post-eclosion, but shows no toxic effect if used 5 or more hours after eclosion. Light ether treatment does not produce similar toxic effects. Bingo (1971) found ether to have slighter effects on behavior of D. grimshawi than cold or carbon dioxide when flies were tested a few hours after anesthetization. To determine whether the type of anesthesia used in virgin collection had any long-term effects on reproductive behavior in D. melanogaster, virgin males and females were collected with carbon dioxide or ether and were paired 3 days later in a 2 x 2 factorial experiment. Latency to mounting and copula durations were measured.

Table 1. Analysis of variance in mating behavior components due to female and male anesthetic treatment 3 days previously.

	Mounting latency			Copula duration		
Term	Df	Ms	F	Df	Ms	F
Female treatment	1	0.6022	4.65*	1	0.00883	1.99
Male treatment	1	0.3554	2.74	1	0.00222	0.50
Interaction	1	0.0906	0.70	1	0.00047	0.11
Error	56	0.1294		49	0.00444	

* $p < 0.05$

The D. melanogaster stock tested was a strain homozygous for esterase 6 Slow derived from flies trapped in Bloomington, Indiana, and free of extreme CO_2 sensitivity associated with viruses. The stock was maintained in half-pint bottles of well yeasted cornmeal-molasses-agar media at 25±1°C, 60±10% humidity, on a 12:12 hour light/dark cycle. Eight hours after clearing the stock bottles of adults, newly eclosed flies were sexed and separated by first shaking flies into a transfer bottle. They were then either anesthetized on a CO_2 diffusion pad for the duration of sexing, up to 5 minutes, or anesthetized with ether until their surface clinging response was lost, about 30 seconds. Twenty males or females were housed per vial for 64 to 76 hours at 25°C.