Godbole, N.N. and V.G. Vaidya. University of Poona, India. Drosophilid survey of Mahabaleshwar.

Mahabaleshwar, a well-known hill station in the State of Maharashtra, India (Lat. 17°51' N, Long. 73°30' E), is situated at an altitude of about 1570 m above mean sea level. The township and the surrounding hilly area of about 130 sq km was chosen for the survey. Most of this area is covered by dense forest and underlying bushy vegetation. The temperature ranges between 18°C and 23°C. The average annual rainfall is about 625 cm. The wet season extends from July to October.

The survey of Drosophilidae was undertaken for a period of four years beginning in August 1969, during which frequent collections were made covering all the seasons of the year. The following localities were visited, which represented many different types of ecological habitats: 1) Bazar area, 2) Chinaman's Waterfall, 3) Bombay Point, 4) Lodwick Point, 5) Dhobi Waterfall Ride, 6) Arthur Seat, 7) Old Mahabaleshwar, 8) Venna Lake, 9) Wilson Point, 10) Babington Point and 11) Tigerpath Ride.

The collections were made mainly by sweeping with net and by placing banana baits. The flies were found on garbage, around decaying leaves, on exuding sap of trees, etc. and were abundant during the months of November to June. During the months of July to October, a period of heavy rainfall, very small numbers of flies could be collected. Most of the species collected except two (shown with asterisks) could be reared in the laboratory on the standard cornmeal-agar medium.

The following twelve species were collected which include two new species and a new report from India. Three genera, Drosophila, Leuphenga and Stegana, are represented.

1 Drosophila (Sophophora) biarmipes
2 Drosophila (Sophophora) melanogaster
3 Drosophila (Sophophora) ananassae
4 Drosophila (Sophophora) malerkotliana
5 Drosophila (Sophophora) jambulina
6 Species of Sophophora (new species)
7 Drosophila (Drosophila) nasuta
8 Drosophila (Drosophila) repleta
9 Drosophila (Scaptodrosophila) latifshahi
10 Leuphenga (Leucophenga) guttiventris
*11 Leuphenga (Leuphenga) subpollinosa (new report from India)
*12 Stegana (a new species of Steganina subgroup allied to S. excavata)

Acknowledgement: The authors are grateful to the Head of the Zoology Department of the Poona University for facilities.

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As there is not a significant difference in groups b and c, the results for XO chromosome loss are not conclusive.

Table 2. Percentage of X-chromosome recessive lethals

Control	2,500 r	BHT+ 2,500 r
0.37 (1/274) ± 0.37	3.06 (18/589) ± 0.71	0.70 (2/287) ± 0.49

The chi square and P values for the obtained deviations are as follows:
a. (2,500 r)-(control), $X^2 = 14.651$, $P < 0.001$
b. (2,500 r)-(BHT + 2,500 r), $X^2 = 11.223$, $P < 0.001$
c. (BHT + 2,500 r)-(control), $X^2 = 1.006$, $P > 0.020$

These data indicate that BHT added to the food medium of D. melanogaster is an effective radioprotector when the percentage of sex-linked recessive lethals is estimated.

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