

Studies on Wild *Drosophila* Populations

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Preliminary work was conducted along two major lines:

1. Survey of *Drosophila* species. Trapping records were kept for three large study areas in the Jackson Hole region. Sites within these areas were chosen to coincide with the trapping sites of previous investigators when this was feasible.
2. Survey of *Drosophila* populations on Signal Mountain. A continuing record of the numbers and kinds of flies was kept for some thirty sites from the base of the mountain to the summit. These records were obtained for dates through June, July and August.

The survey records for corresponding sites and dates indicate that there has been no major change in the distribution of *Drosophila* species in Jackson Hole since Spencer's (1948) survey. The relative numbers of flies collected through the summer in each area gives some indication of seasonal fluctuations in species composition for the region. *Drosophila pseudoobscura* remains exceedingly rare. A total of 57 flies of this species were collected through the summer and these individuals came exclusively from five sites.

The rarity of *D. pseudoobscura* in the region may indicate either that the species is a low-density resident form or that a yearly influx of immigrants from other regions occurs. If the latter interpretation is valid, collections should vary considerably in genetic constitution from year to year and successful collection sites should be different from year to year. The resolution of this question will require annual surveys and a comparison of cytological and biochemical variability over a period of several years.

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