

Wheeler, M.R. and L. Wheeler. University of Texas at Austin, Austin, Texas. Notes on some introduced *Drosophila* in Hawaii.

D. polychaeta was known from Hawaii for many years only from specimens taken by Gordon Mainland at banana baits on the University of Hawaii campus (March 1948). On August 30, 1970 we caught one female at Pupukea, Koolau Mountains, Oahu. A year later (June 1971) we found it on two other islands. It was collected on mangos in Hilo, at baits in Hilo and at Akaka Falls west of Hilo, at bait at both Kamuela and Honokaa; these localities are on the big island, Hawaii. One female was caught at Kokee State Park, Kauai. We got none on Maui although many collecting sites were tried.

D. virilis was found for the first time in Hawaii; one male, one female came to bait behind a small store at Kihei, Maui.

Kaneshiro (pers. Comm.) found *Leucophenga* in Hawaii for the first time in early 1971. It was *L. maculosa*, common in North America, and came from the Pohakuloa area, Saddle Road, Hawaii (ca. 6000 ft). He later found three more on Oahu. We captured nearly 40 *L. maculosa* at baits behind the Kamuela Inn, Kamuela, Hawaii in June, 1971. At least two species of *Mycodrosophila* have been found by Kaneshiro (pers. comm.), both unidentified but known not to be North American. With these new records, the number of introduced species of *Drosophilids* in Hawaii is now 22.

D. melanogaster is rare in Hawaii although *simulans* is common and widespread. We found both (*D. mel.* in small numbers) at Prince Kuhio Park, Kauai; at Pulehu Gulch on the upper Haleakala Road, upper Paia, Iao Needle area, and Kihei on Maui; and at the Hukilau Hotel, Hilo, Hawaii. In three localities the numbers were large enough to make comparative male counts, as follows: at Waihee Valley, Maui (*mel.* = 8.5% of male sample, $T = 82$); at Lower Paia, Maui (*mel.* = 22% of male sample, $T = 41$); and at Manoa Valley, Oahu (*mel.* = 32% of male sample, $T = 56$).

Rodinò, E. and G.A. Danieli University of Padua, Italy. Three more alleles at the locus *Est*⁶ in *D. melanogaster*.

Following the line of investigation previously carried out in our laboratory on the *Est*⁶ polymorphism (Zamburlini, 1971; Rodinò and Martini, 1971), an extensive sampling was made on *D. melanogaster* wild populations.

In a selected area (garden biotope) of about 500 m², samples of the local *Drosophila* populations were taken regularly from July to October, using fruit traps. *Drosophila melanogaster* females and other species were discarded while males were collected and examined by acrylamide gel electrophoresis. Details of the technique have been described previously (Zamburlini, 1971).

Six different forms can be identified on the gel slabs stained for Esterase, on the basis of their differential electrophoretic mobilities; two of them are the slow and the fast forms originally described by Wright (1963). A third form (V) with a much greater mobility was reported in a previous DIS research note (46:139). The three new forms found in our sampling can be identified as follows: Fl (faster than F, but slower than V), Sl (slower than S), S2 (slower than Sl).

If the relative mobility of each form is compared to the mobility of the most frequent form (S), the following values are obtained: S2 = 0.85; Sl = 0.97; F = 1.07; Fl = 1.11; V = 1.21. The distribution and the frequency of each allele in the population are: S2 = 0.2%; Sl = 1.2%; S = 80.7%; F = 15.7%; Fl = 1.0%; V = 1.2% over a total of 1536 alleles. An attempt was also made to isolate homozygous stocks for all the different electrophoretic variants. From the original population five different stocks have been isolated; specimens from each stock are shown in a slab in Fig. 1. From left to right Sl, S, F, Fl, V. We didn't succeed in the isolation of the S2 stock, because of the extreme rarity of this phenotype. Reciprocal crosses with flies from these stocks show that these characters segregate as true alleles.

References: Rodinò, E. and A. Martini 1971 DIS 46:139; Wright, T.R.F. 1963 Genetics 48:787; Zamburlini, P. 1971 DIS 46:51.