New records for introduced Drosophilidae (Diptera) in Hawai‘i

P.M. O’Grady (American Museum of Natural History, Division of Invertebrates, Central Park West at 79th Street, New York, New York 10024, USA), J.W. Beardsley†1 (1026 Oak Dale Lane, Arcadia, California 91006, USA) & W.D. Perreira (P.O. Box 61547, Honolulu, Hawai‘i 96839, USA).

This note reports 4 new state and 2 new island records for the family Drosophilidae. All species reported here are introduced to the Hawaiian Islands. Methods involved baiting with rotting bananas and mushrooms, general sweeping of vegetation, light trapping, aspirating flies from substrates, and rearing specimens. It is significant to note that the introduced Stegana species has been reared from wood of a native Pisonia species on O‘ahu. This is an important host plant for native Drosophilidae (Heed, 1968; Montgomery, 1975) and may eventually place a stress on the endemic drosophilid populations. Additional unpublished records from specimens present in the University of Hawaii Entomology collection are also included here.

Museum and collector abbreviations used in this note are: AMNH (American Museum of Natural History, New York), UHM (University of Hawai‘i at Mānoa, Entomology Collection, Honolulu), EMC (Elysse M. Craddock), JPM (J. P. Murphy), JS (Julian Stark), JWB (J.W. Beardsley), MM (M. Muraoka), MPK (Michael P. Kambysellis), PMO (Patrick M. O’Grady), SLM (Steven L. Montgomery), and WDP (William D. Perreira).

Drosophila carbonaria Patterson & Wheeler New state record
This species is commonly found in the southwest United States and northern Mexico (Patterson & Stone, 1952). It is known to use sap fluxes on mesquite (Prosopis sp.). Although Prosopis has been widely introduced in Hawai‘i (Wagner et al., 1990), all specimens of this species have been collected in association with sap fluxes on monkeypod, Sumanea saman (Fabaceae), trees.


Drosophila floricola Sturtevant New island record
The traditional range of this species extends along the Pacific coast from the southwest United States to Colombia. It is a flower breeding species and in Hawai‘i can be found in Ipomea species, sometimes sympatrically with the endemic species of Exalloscaptomyza. This species has been previously recorded from Hawai‘i and O‘ahu (Nishida, 1997).

Material examined. MAUI: Haleakalā Highway, 16.iii.1999, on Ipomea flowers, PMO & JS (AMNH).

Drosophila suzukii (Matsumura) New island record
This species is known from Kaua‘i, O‘ahu, Moloka‘i, and Hawai‘i (Nishida, 1997). It was described from Japan, China, Korea and Thailand, although it has become cosmopolitan in the past few decades. Recent collections on Maui and Moloka‘i have also found this species, even at higher elevations in mostly pristine rainforest.

Mycodrosophila sp  

*Mycodrosophila* is a mycophagous genus of primarily circumtropical distribution, although some representatives are found in the Nearctic and Palearctic regions (Wheeler, 1981). Based on the material on hand, we were not able to identify the exact species. It is possible that these may represent one or more new species from southeast Asia or the Pacific.


Stegana coleoptrata (Scopoli)  

The ecology of the genus *Stegana* is not well understood. Few rearing records exist, although they are often collected in association with leaf litter, rotting bark and other plant material (Wheeler, 1954). In Hawai‘i, this species has been reared from *Pisonia*, a native member of the Nyctaginaceae.


Zaprionus ghesquierei Collart  

This species is is known from central Africa, where it is widespread (Wheeler, 1981). The Moloka‘i record suggests that this species has spread into the lower elevation rainforest.


**Literature Cited**


