

### New records for introduced *Drosophilidae* (Diptera) in Hawai'i

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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 Additional unpublished records from specimens present in the University of Hawaii Entomology collection are also included here.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, *Samanea saman* (Fabaecae), trees.

*Material examined.* **MOLOKA'I:** Kakahāhai County Park, 3 ft, on monkeypod flux, 14.iv.1995, WDP (UHM). **O'AHU:** Keehi Lagoon Beach Park, 5 ft, on monkeypod flux, 1.i.1998, WDP (UHM). **HAWAI'I:** Kealakekua, 5 ft, on monkeypod flux, 19.v.1999, WDP (UHM).

#### *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 *Exalloscaptopmyza*. 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.

*Material examined.* **MAUI:** Waikamoi Forest Preserve, 4000 ft, 8.iii.1999, MPK, EMC, & PMO (AMNH). Other collections at the same site: 16-18.iii.1999, PMO & JS; 2.vi.1999, PMO (AMNH); 4.ii.2000, PMO (AMNH).

***Mycodrosophila* sp****New state record**

*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.

*Material examined.* O'AHU: Makaleha Valley, 1.vii.1969, MM (UHM). Keālia Trail, Wai'anana Mountains, 800 ft, 26.iii.1992, WDP (UHM). MAUI: Waikamoi, JPM (UHM). Upper Waikamoi Foreset Preserve, 6.vii.1998, on fungus, SLM & PMO (AMNH).

***Stegana coleoprata* (Scopoli)****New state record**

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.

*Material examined.* O'AHU: Pearl City, light trap, 10.xi.1976, JWB (UHM). Makiki Stream, Makiki, 300 ft, 23.vii.1983, WDP (UHM). Makiki Stream, Makiki, 250 ft., 29.i.1991, WDP (UHM). Wiliwilinui Ridge, 1800 ft, 21.v.1992, on fluxing *Acacia koa* tree, WDP (UHM). Pūpūkea, 11.iv.1999, reared from *Pisonia* stems, MPK, SLM & PMO (AMNH). MOLOKA'I: Mapulehu, near Ili'ili'ōpae Heiau, ca 40 ft, 5.i.1996, WDP (UHM).

***Zaprionus ghesquierei* Collart****New state record**

This species 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.

*Material examined.* O'AHU: Honolulu International Airport, light trap, 26.iv.1978, JWB (UHM). MOLOKA'I: Pāpio Stream, 600 ft, yellow sticky board trap, 16–30.ix.1994, WDP (UHM).

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