SCIENTIFIC NOTE

New State Records of Immigrant Planthoppers in Hawaii (Homoptera: Fulgoroidea)

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Three planthopper species are recorded from the Hawaiian Islands for the first time: *Syndelphax disonymus* (Kirkaldy) of the family Delphacidae from Kauai, Oahu, Lanai, and Hawaii Island, *Kallitaxila granulata* (Stål) of the family Tropiduchidae from Oahu, and *Cedusa* sp. of the family Derbidae from Oahu, the latter yet to be identified to species level.

Syndelphax disonymus (Kirkaldy)
Delphax disonymus Kirkaldy, 1907: 151, 156 (type locality in Fiji).
Syndelphax disonymus: Fennah, 1975: 109.
Delphax matanitu Kirkaldy, 1907: 151, 155 (type locality in Fiji); synonymized by Muir, 1920: 139.

Diagnosis: Small delphacid species: body length of brachypterous males 1.8–2.0 mm, of brachypterous females 2.0–2.3 mm, of macropterous males 2.8–3.2 mm, of macropterous females 3.3–3.5 mm. Coloration pale yellow to stramineous except for brownish abdomen and dark brown genital segment of males. Tegmina of translucent except shiny dark brown to black in brachypterous males; thus brachypters appear sexually dimorphic. Male genitalia with pygofer laterodorsally produced, rounded, diaphragm mediodorsally with elongate and ridged process; genital styles long, reaching to dorsolateral angles of pygofer, distally blunt; anal segment small, ring-like with two long spinose processes; aedeagus subtubular, distally with a short, acute dorsal projection.
Distribution and host plants: Widely distributed in Australia, the Oriental Region, Afrotropical Region, and South Pacific.
New records from Hawaii: 10 ♂ , 9 ♀, **KAUAI**: Kokee State Park, Awaawapuhi trail, 3.000–3.500 ft., on *Setaria* sp. (Gramineae); 7.VII.1997, M. Asche & H. Hoch; 1 ♀, **OAHU**: Ka'ena Natural Area Reserve, collected together with the immigrant delphacids *Sogatella kolophon* (Kirkaldy) and *Toya dryope* (Kirkaldy) on *Cynodon dactylon* (Gramineae), 12.VIII.1997, M. Asche, H. Hoch & S. Swift; 1 ♂, 9 ♀, **LANAI**: Munro-trail up to Lanaihale, 3,000–3,300 ft., on *Setaria gracilis*, 16–18.?.1997, M. Asche H. Hoch & S. Swift; 5 ♀, **HAWAII**: Hawaii Volcanoes National Park, Kilauea, along Steam Vents and Iliahi trails, on *Setaria* sp., 24.VIII. 1997; 1 ♂, 3 ♀; Volcano, near dump, on mixture of various grasses including *Cynodon dactylon*, 28.VIII.1997; 5 ♂, 7 ♀, near Kipuka Puaulu (Bird Park) at parking lot, on *Setaria*-like grass, 29.VIII. 1997; all: M. Asche & H. Hoch. Reference material is deposited in the collections of Bishop Museum, Hawaii Volcanoes National Park, and Museum of Natural History Berlin.

Remarks: This species is not mentioned as immigrant species in Beardsley (1990) and in the Hawaiian Terrestrial Arthropod Checklist (Nishida 1994). Apparently, it has a wide

distribution in all major Hawaiian Islands. It could not be found in samples from the Midway Islands. Its occurrence in Hawaii can be interpreted either as recent introduction and rapid dispersal potential of the species, or as a species which due to its wide distribution in the Pacific in fact belongs to the native though not endemic Hawaiian fauna and was so far overlooked. However, since this species could not be found in any of the numerous previous collections of Hawaiian planthoppers, a recent introduction or immigration seems more likely. The total of immigrant delphacids species in Hawaii is now 11 (see Asche 1997).

Kallitaxila granulata (Stål)
Taxila granulata Stål, 1870: 750 (type locality in the Philippine Islands: Luzon).
Kallitaxila granulata: Kirkaldy 1901: 6.

Diagnosis. Medium sized tropiduchid species of flattened appearance: body length of males 5.6–5.8 mm, of females 5.8–6.0 mm; only macropters. In life green to yellowish green, fading to pale yellow- brown in museum specimens; with conspicuous greenish or yellowish granules in tegminal cells before nodal line. Head apically broadly rounded. Male genitalia with simple, ring-like pygofer without processes; genital styles in lateral. view almost rectangular, distally rounded into lobes which are bent mediad, at middle of length each with a claw-like process on dorsal margin; anal segment subtubular, ventrally concave, about as long as pygofer high; anal style compressed, ventrally shallowly concave, about as long as anal segment; phallotheca tube-like, conical, little less long than anal segment; aedeagus tubular, long, slender and conspicuously sinuate, apically tapering.
Distribution and Hostplants: Previously known from the Philippine Islands (Luzon, Mindanao) and the Christmas Islands in the Indian Ocean. New records from Hawaii: numerous specimens, all collected by R. Heu, **OAHU**: Hickham Air Force Base, 26.VII.1995, on *Wedelia* and mixed weeds (#347), 28.IX. 1995, ibid., on *Wedelia* and mixed weeds (#397), 5. X.1995, ibid., on *Wedelia* and Ficus (# 413), on Milo tree (#414), on Ficus *benjamina (#* 415), on Aiea morning glory (# 416), on weeds with *Wedelia (#* 417, 426), on Mangrove, Pickleweed (# 427); 11.XII.1996; Pearl City, PCUGC Plot, on *Guava (# 545),* 18.XII.1996, ibid., on *Myoporum acuminatum* (# 555), on honeysuckle (# 556), on *Erythrina sandwicensis* (wikiwiki) (# 557), 17-18.XII.1996, ibid., on *Wikstroemia* (akia) (# 558), 18.XII.1996, ibid., on *Lantana montevidensis* (# 559), on white *Lantana* (# 560), on *Vitex* (# 561), 1 1.XII.1996, ibid., on *Euphorbia heterophila* (# 563), 24.XII.1996, ibid., on *Citrus* (# 564), 23.IV. 1997, Pearl City, wayside, on Lablab beans (white flowers) (# 153), 24.IV.1997, Ewa Beach, landscape trees, on sea grape (# 181), 20.VI.1997, Waimanalo, on coffee foliage (few specimens only), on tall *Erythrina* (many specimens, all stages). The specimens are deposited in the collections of the Hawaii State Department of Agriculture, Honolulu.
Remarks: This is the first record of a member of the family Tropiduchidae from Hawaii. This evidently polyphagous and apparently euryoecious species clearly is a recent immigrant from SE-Asia, possibly the Philippines. The identification of this species has been confirmed by comparison of Philippine individuals with Hawaiians. Due to its polyphagy which includes feeding on crops and native plants, it may be regarded as a potential pest species. The spreading of this species (as indicated by the finding in Waimanalo) within Oahu and eventually to other islands should be carefully observed.

Cedusa sp.
This species belongs to the family Derbidae. The identification of this species could not be finished yet. Evidently, it is an immigrant from the Americas representing the second finding of a derbid species in Hawaii (previously known: *Lamenia caliginia* (Stål). Several

specimens were collected by W.D. Perreira on 16.VIII.1996 in **OAHU**: Manoa Valley at Waiakeakua stream in an elevation of 600–800 ft. Hostplant data are not given on the labels. The specimens are preserved in the collections of the Hawaii State Department of Agriculture, Honolulu. A diagnosis will be given after the species identity is confirmed.

References

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