

A New *Dictyophorodelphax* from Kauai (Homoptera: Delphacidae)

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The unusual endemic delphacid genus *Dictyophorodelphax* Swezey contains four previously described species; two from Oahu, and one each from Maui and Lanai. The discovery of a fifth species, described below, on the island of Kauai, suggests strongly that additional species probably await discovery elsewhere in the Hawaiian Islands.

Dictyophorodelphax zwaluwenburgi, new species

Female. Length, 5.5 mm.; cephalic horn from top of eye to tip, 2.4 mm. long, laterally compressed distad, apical third bent only slightly ventrad so that when viewed from side a forward prolongation of the straight portion of the ventral margin intersects the dorsal lateral carina at about its apex, ventral carinae becoming evanescent about half way to tip, apparently joining dorsal lateral carinae slightly less than three-fourths distance from bases of these, sparsely clothed with short fine hair; tegmina, 1.7 mm. long, 0.7 mm. wide, covering slightly more than half of abdomen.

Color predominately testaceous with dark markings. Cephalic horn brownish with fine light flecking, laterally becoming darker along anterior part of ventral margin. Frons testaceous, becoming slightly darker anteriorly, fine fuscous lines along edges of carinae. Clypeus with a median longitudinal pale streak and two broad lateral convergent fusco-testaceous streaks which become narrower and darker apically, and extend onto base of labrum. Scapes of antennae with a dorsal longitudinal fuscous stripe and a ventral fuscous spot.

Legs with longitudinal fuscous stripes on femora and tibiae, connected in a few places by irregular dorsal transverse fuscous bands, dark dorsal spot at apex of first segment of hind tarsi, apex of last segment of all tarsi dark. Tegmina with a narrow black mark along apical third of commissural margin of clavus, shorter but wider black mark near apex of costal margin, smaller less distinct black marks along apical margin between apical veins, small apparently non-serigerous black granules along veins.

Abdomen mottled with testaceous and darker areas, becoming flavous in a narrow stripe along median dorsal line; tip of ovipositor tinged with orange, anal style orange.

Male. Unknown.

Described from a single female collected near Kokee, Kauai, August 28, 1955, at an altitude of approximately 3,000 feet, by J. W. Beardsley. The specimen was swept from low vegetation, consisting primarily of *Euphorbia* sp. and *Styphelia tameiameia* (Cham.) F. v. Mueller. All other known species of *Dictyophorodelphax* feed upon native species of *Euphorbia*, and it seems probable that *D. zwaluwenburgi* is also attached to plants of this genus. The type is deposited in the collection of the Experiment Station of the Hawaiian Sugar Planters' Association. The species is named for Mr. R. H. Van Zwaluwenburg of the Experiment Station, H.S.P.A.

Dictyophorodelphax zwaluwenburgi is similar in general appearance to both *D. praedicta* Bridwell from Maui and *D. usingeri* Swezey from Lanai. The relative length of the cephalic horn is greater than that of *usingeri*, but is slightly less than that of *praedicta*. The apical portion of the horn of *zwaluwenburgi* is more bluntly rounded and less strongly bent downward than in either of these species (fig. 1). The tegmina of the new species are relatively longer and narrower than those of either *praedicta* or *usingeri*. In outline they more nearly resemble those of *D. swezeyi* Bridwell from Oahu, although not as large. The dark granules along the veins lack the conspicuous setae of *usingeri* and *swezeyi*. The general coloration of the type of *zwaluwenburgi* is somewhat darker than any specimens of the other four species of the genus which were examined, although these may have faded somewhat with age. The coloration of the clypeus of the type is distinctly lighter than in any other specimens of the genus seen.

The following modification of the key to the species of *Dictyophorodelphax* which is presented on page 169, Vol. 4, of INSECTS OF HAWAII, by E. C. Zimmerman, will facilitate the identification of the species described here. To use, refer the second half of Zimmerman's couplet 2 to 2A, and insert 2A between couplets 2 and 3.

- 2A. Tip of cephalic horn bent only slightly ventrad, a forward prolongation of the straight portion of the ventral margin intersects the dorsal lateral carina about at its apex; tegmina about $2\frac{1}{2}$ times as long as wide; Kauai *zwaluwenburgi* Beardsley
 Tip of cephalic horn bent more strongly ventrad, a forward prolongation of the straight portion of the ventral margin intersects the dorsal lateral carina well before its apex; tegmina less than twice as long as wide 3

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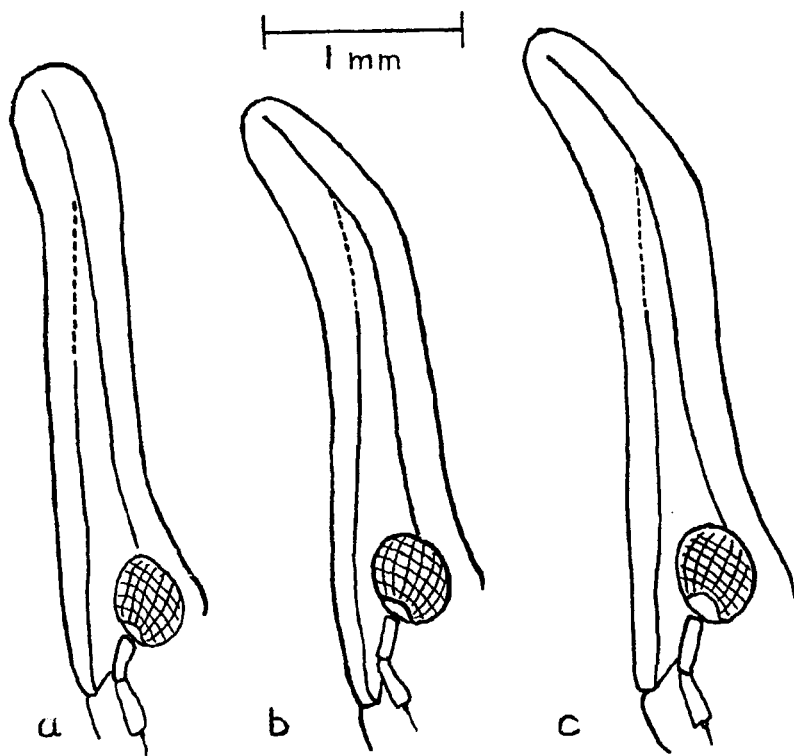


FIG. 1. *Dictyophorodelphax* spp., lateral view of cephalic horns: a, *D. zwaluwenburgi*, n. sp., holotype female; b, *D. usingeri* Swezey, female; c, *D. praedicta* Bridwell, female.