

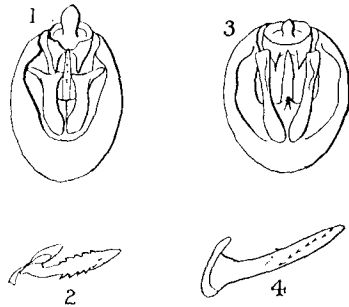
nearly one and one-half times the length of first (1.4); hind tibia longer than the tarsi, first tarsal joint slightly longer than the other two together. Tegmina reaching to the base of pygophor.

Green to yellowish brown in fresh specimens, the green turning yellowish and the yellow turning reddish in old specimens; infuscate between carinae of head, on pleura, coxae and over most of the abdomen. Tegmina hyaline, yellowish or greenish, veins concolorous with membrane with a few small granules bearing black hairs, a small dark mark at the apex of clavus and another at the apex of costal cell.

Genitalia figured (figs. Nos. 3, 4). The armature on the diaphragm below the aedeagus is produced into two curved spines; anal spines small, wide apart.

Length 2.5 mm.; tegmen 1.5 mm.

♀ Similar to male but the average color is lighter, some specimens being with little or no infuscation.



EXPLANATION OF FIGURES.

- Figure 1. *Nesosydne cyrtandricola*, full view of pygophor.  
 2. *N. cyrtandricola*, lateral view of aedeagus.  
 3. *N. phyllostegiae*, full view of pygophor.  
 4. *N. phyllostegiae*, lateral view of aedeagus.

Hab. Puuwaawaa, North Kona, Hawaii, 3700 feet elevation; a long series of both sexes and young feeding on *Phyllostegia racemosa* Benth. (W. M. Giffard). There are two fairly distinct series including both sexes, one with the ground color light green, the other light brown or yellow. The aedeagus shows relationship to *N. cyrtandrae* but the genital styles are quite distinct. Type deposited in the collection of the H. S. P. A. Experiment Station.

*Nesosydne cyrtandricola* sp. nov.

♂ Vertex longer than wide, length of face 2.5 times the width, slightly narrowed between the eyes, the sides subparallel, median carina furcate about one-third from base; antennae reaching beyond the middle of the clypeus, second joint 1.7 times the length of first; first joint of hind tarsi distinctly longer than the other two together.

Light green, a fuscous or black line between the carinae of face, clypeus, genae and thorax; pleura and first and second legs (especially the tibiae) light fuscous, hind legs with a longitudinal line along femora and tibiae, the tarsi fuscous; pygophor and styles dark brown, a few fuscous marks or spots along the medio-lateral line of abdominal tergites. Tegmina hyaline, yellowish, a small dark mark at apex of costal cell and dark along the costa, a larger dark mark at apex of clavus which spreads out over the middle of the tegmen, becoming lighter as it reaches the radius where it reaches to near the apex and to near the base; veins thick, especially the radius, with minute granules bearing black hairs, apical veins and border light.

Genitalia figured (figs. Nos. 1, 2). Armature of diaphragm forming a thin, small, perpendicular plate below the aedeagus.

Length 2.6 mm.; tegmen 1.5 mm.

♀ Similar to male but somewhat lighter, the ovipositor brown.

Length 2.9 mm.; tegmen 1.7 mm.

Hab. Glenwood, Olaa, Hawaii, 2300 feet elevation; a long series of both sexes and young from *Cyrtandra* sp. Also some young reared to adults on *Charpentiera obovata* Gaud. (W. M. Giffard). The young nymphs are light green, later acquiring dark marks similar to the adults. This species comes near to *N. anceps* but is quite distinct. Type deposited in the collection H. S. P. A. Experiment Station.

**Notes on Delphacids Collected on a Short Visit to Portions of the Intermediate Forests in Olaa and in North and South Kona, Island of Hawaii.**

BY WALTER M. GIFFARD.

During the latter part of August, 1917, I had occasion to make a very hurried visit by automobile from Kilauea to Puuwaawaa, North Kona, Hawaii, via the belt road through the districts of Kau and South Kona. Accompanying me were

Prof. J. E. Rock of Honolulu and A. Holm of San Francisco, who were botanizing and collecting seeds from our indigenous forest trees for the Golden Gate Park in San Francisco. Our stay of one and one-half days at Puuwaawaa was quite too brief for systematic collecting of the insect fauna of that interesting region and I therefore utilized the few hours at my disposal searching for Delphacids and other Homoptera and such Heteroptera and Coleoptera as could be incidentally captured. The rough nature of this region, covered as it is with old lava flows of the a-a type, makes very slow walking or riding and by the time the interesting forest region is reached much of the day has been wasted getting there, and even then due to loose scoria it is most difficult walking and collecting amongst the sparse vegetation. Much of the latter, including the lower foliage of the trees, has been destroyed of late years by cattle and very many of the trees themselves destroyed by continuous drought and from other causes. A full week or ten days insect collecting in these forests would undoubtedly produce very satisfactory results but due to the limited time at my disposal (five hours in all of actual collecting) I endeavored to confine myself to the Delphacids none of which had as yet been recorded from this particular region in the district of North Kona. As a result only one new species (*Nesosydne phyllostegiae*) was collected, but several new food plants of certain known species of Delphacids were found which in itself was well worth the trip. These latter and the fact that a series of *Aloha svezeyi* was captured for the first time on any other island than Oahu, will be referred to in detail in the accompanying field notes. Incidentally, I believe this to be the third species of the Genus *Aloha* taken on the Island of Hawaii.

Before returning to Hilo from Kilauea a portion of the "inside" forests located at 29 Miles (so-called) about two miles north of the Volcano House, were visited for a few hours but nothing of any special importance not already published was captured. Due to a protracted drought in the neighborhood of Glenwood and "25 Miles" (so-called) Oloo, much interesting

data as to the insects of this almost continuously wet region might have been gathered had it been possible for me to remain at Kilauea for a sufficient length of time. As it was I was able to visit and collect at these latter places for a few hours on two separate days with satisfactory results. Besides the discovery of one new species of Delphacid (*Nesosydne cyrtandricola*) the hitherto unknown food plant of the single male *N. anceps* taken by Muir in 1915 was found to be *Freycinetia arnotti* (ieie vine). A good series of both sexes of the last named Delphacid was taken. Undoubtedly the absence of moisture overhead and on foot in the boggy forests of this region would have produced much better collecting had I been able to stay over another week, as insects in general were more plentiful there at the time than I had ever found them on previous visits, which were always attended by more or less precipitation and consequent inability to properly collect.

I am indebted to my friends Messrs. Muir and Rock for assistance, by the former in the determination of the Delphacids collected and by the latter of the food plants.

Following are the detailed field notes\* covering certain of the species taken during the visits referred to, viz.:

*Leialoha lehuae hawaiiensis* Muir. Oloo 29 miles (Nos. 7 and 30. Long series males and females off *Metrosideros polymorpha* var. *incana* (Ohia lehua). Also reared a number of adults from nymphs on the leaves of this food plant. One male (No. 44) Oloo 25 miles, 3000 ft. elev., off *Platydesma* sp. Probably this was an accidental capture although no ohia was growing in this particular section of forest.

*Nesodryas dryope* Kirk. Glenwood 22 miles, 2300 ft. elev. (Nos. 26, 34 and 38) 12 males and 3 females off *Antidesma platyphyllum*.

*Nesodryas maculata* Muir. Kapua, South Kona, 2000 ft.

\*Numbers refer to writer's field notes.

elev., near main road. Long series males and females (No. 9) off *Maba sandwicensis*.

*Aloha myoporicola* Kirk. Puuwaawaa (Waihou) N. Kona, 3700 ft. elev., 2 males and 2 females and nymphs (No. 14) off *Myoporum sandwicense* var. *seratum*; one male and one female (No. 11) ex *Phyllostegia racemosa* and 1 adult (No. 19) ex *Acacia koa* (no *Myoporum* near, both are possibly accidental captures); at Huelue, N. Kona, 1800 ft. elev., 12 males and 5 females (No. 10), all typical, off *Myoporum sandwicense*.

*Aloha swezeyi* Muir. Puuwaawaa (below Waihou) N. Kona, 3000 ft. elev., 10 males, 5 females and nymphs (No. 17) ex *Cheirodendron gaudichaudii*. Puuwaawaa hill, N. Kona, 3800 ft. elev., 8 adults and 3 young, including 2 macropterous females (No. 20), off the lower branches of *Anona cherimolia* under which and almost touching were a mixture of weeds including *Bidens pilosa*, *Verbena bonariensis* and *Erigeron canadense*. At same spot 2 males and 5 females with 2 nymphs (No. 20a) were taken off the mixed weeds above mentioned. In same locality on a large area where there were no trees or shrubs but only large patches of dwarf *Bidens pilosa* growing amongst immature and almost dry Bermuda grass, 3 males and 4 females and nymphs, including 1 macropterous female (No. 21) were taken. The macropterous form was not previously known and the species has hitherto been taken only on Oahu viz.: in Palolo Valley and on Tantalus. In North Kona it is evidently attached to the obnoxious weed *Bidens pilosa* and *Cheirodendron gaudichaudii*, but unfortunately I had no opportunity to rear any of the nymphs taken. On Oahu, Timberlake has taken series of both sexes off *Campylothecha macrocarpa* and Swezey one male off *Lythrum* sp., which latter may have been accidental.

*Nesosydne koae* Kirk. Puuwaawaa (Waihou forest) N. Kona, 3700 ft. elev., 2 males and 1 female (No. 16), sweeping young leaves sprouting from large roots of *Acacia koa*. Olaa 25 miles, 3000 ft. elev., 1 female (No. 44) sweeping. Olaa 29

miles, 4000 ft. elev., 5 females (No. 5) off *Acacia koa* (phyllodia only).

*Nesosydne rubescens* Kirk. Puuwaawaa hill, N. Kona, 3800 ft. elev., 2 adults (No. 20) off *Anona cherimolia* growing under tall koa trees and 2 adults and nymphs off phyllodia of *Acacia koa*.

*Nesosydne rubescens* var. *pulla* Muir. Puuwaawaa, N. Kona, 3700 ft. elev., 3 specimens (Nos. 15 and 19) off phyllodia of *Acacia koa*. Olaa 29 miles, 4000 ft. elev., 3 adults (No. 5) off phyllodia of *Acacia koa* and several specimens (No. 2) from *Broussaisia pellucida* and *Cyrtandra* sp. growing below koa trees. Olaa 25 miles, 3000 ft. elev., several nymphs (No. 48) off *Platydesma companulata*, one male of which was reared from this latter food plant.

*Nesosydne pseudorubescens* Muir. Olaa 29 miles, 4000 ft. elev., 2 adults (No. 6) off *Clermontia parviflora*.

*Nesosydne anceps* Muir. Olaa 25 miles, 3000 ft. elev., 4 males and 4 females off *Freycinetia arnotti* (ieie vine). This species was only known by one male before; the female is similar to the male and both show the usual range of coloration, the thorax being either dark or light. Hitherto the food plant for this species was unknown.

*Nesosydne blackburni* Muir. South Kona on main road at 1400 ft. elev., 7 males and 15 females and nymphs (No. 23), a dark form, off *Charpentiera obovata*. Two of the nymphs were later on reared to maturity on leaves of this tree. At Glenwood, Olaa, 2300 ft. elev., 1 male (No. 33) off *Strongylodon lucidum* (Nukuiwi vine) and 2 males and 6 females and nymphs, dark form (No. 36), off *Touchardia latifolia*. In the inside forest at Olaa 29 miles, 4000 ft. elev., 3 males, 1 female and nymphs (No. 31) off *Clermontia parviflora*. This makes up to the present 7 food plants recorded from which large or small series of this species have been taken on the island of Hawaii.

*Nesosydne ipomoeicola* Kirk. Puuwaawaa, N. Kona, 3700 ft. elev., 1 male and 10 females and nymphs (No. 13) off *Lythrum maritimum* sparsely distributed amongst cover of weeds, also 20 males, 16 females and nymphs (No. 22) in a large sparsely covered area of the Lythrum and Bermuda grass at somewhat higher elevation. These are all of the light form similar to that taken on *Sadleria* at Kilauea. In S. Kona along the main road at 1600 ft. elev., 2 males (No. 24) off *Gouldia elongata*. At Glenwood, Olaa, 3 females and 3 young (No. 27) off *Antidesma* sp. and *Cyrtandra* sp. mixed. Also a long series of both sexes (18 males and 19 females and nymphs), all dark forms (No. 33), off *Strongylodon lucidum* (Nukuiwi vine). Later 1 male was reared on leaves of the latter vine.

*Nesosydne phyllostegiae* Muir. Puuwaawaa (Wailon forest), N. Kona, at 3700 ft. elev., 8 males, 21 females (greenish in color) (No. 11) with a few nymphs off *Phyllostegia racemosa*. This proved to be a new species and has just been described by Mr. Muir.

*Nesosydne cyrtandricola* Muir. Olaa 25 miles, 3000 ft. elev., and Glenwood, Olaa, 22 miles, 2300 ft. elev., 18 males and 9 females together with nymphs (Nos. 27, 37, 39 and 43) off a tall and branching species of *Cyrtandra* as yet not described. Several nymphs were later on reared to maturity on leaves of this tree. This new species (a brachypterous form) when first captured is of a very bright green color but in the course of a few days changes to a dullish green.

*Nesosydne* (undetermined). Puuwaawaa, N. Kona, 3700 ft. elev., 2 females off *Coprosma cynosa* (Pilo).

NOVEMBER 1st, 1917.

The one hundred forty-sixth meeting of the Society was held in the usual place, Vice-President Pemberton in the chair. Other members present: Messrs. Bridwell, Crawford, Ehrhorn, Fullaway, Kuhns and Swezey. Visitors: Mr. Robert Veitch and Mr. K. C. Brewster.

Minutes of previous meeting read and approved.

Mr. Swezey proposed the name of Francis X. Williams for active membership in the Society.

#### ENTOMOLOGICAL PROGRAM.

*Bruchus pruininus*.—Mr. Bridwell presented some observations on this weevil, which he has found infesting the seeds of *Leucaena glauca*.

*Heterospilus prosopidis*.—Mr. Bridwell gave some notes on this Braconid and gave it as his opinion that it was a parasite of the above Bruchid, from the fact of his collecting both of them in the same localities, tho he had not actually bred the parasite yet from the weevil.

*Omiodes blackburni*.—Mr. Bridwell remarked on the scarcity of the coconut leafroller at the present time.

*Odynerus oahuensis*.—A specimen of this wasp was exhibited by Mr. Bridwell, collected by him in Ainahau Park, Honolulu.

*Euscelinus* sp.—A specimen exhibited by Mr. Bridwell, collected in Honolulu.

*Bostrychid*.—A specimen of a hitherto undetermined Bostrychid beetle was exhibited by Mr. Bridwell. A small species with red marking on the elytra.

*Gelechia gossypiella*.—Mr. Swezey exhibited specimens of the pink boll worm bred by Mr. Giffard in September of this year, from fruits of *Hibiscadelphus hualalaiensis* collected by Mr. J. F. Rock at Puuwaawaa, Hawaii. Mr. Rock reported