

The Green Sphinx of Kauai (Lepidoptera: Sphingidae)

E. H. BRYAN, JR.
BERNICE P. BISHOP MUSEUM
HONOLULU, HAWAII

(Submitted for publication August, 1961)

A specimen of a sphingid moth believed to be *Tinostoma smaragditis* (Meyrick), the famous "green sphinx of Kauai," was collected at Halemanu, near Kokee, on July 7, 1961, by Kenneth E. Gouveia (fig. 1). While a student at the Kamehameha Schools, Honolulu, Mr. Gouveia had learned about this rare and elusive moth and had been watching for it many years. So when he saw a greenish-winged sphinx moth resting on the lid of a garbage can on the side of the Kokee Road, he promptly captured it and later brought it to Bishop Museum to make sure of its identity.

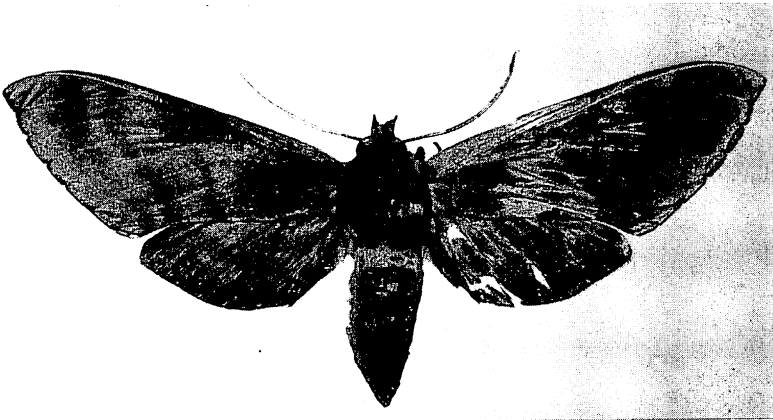


FIG. 1. *Tinostoma smaragditis* (Meyrick), Halemanu, Kauai.

This is the second known specimen of this moth. The first one had been taken more than 65 years ago by ladies of the Gay family at their mountain home at Makaweli, Kauai, and given to Dr. R. C. L. Perkins. It was made the type of a new species by Edward Meyrick; the description and a colored plate appear in his paper on Hawaiian Macrolepidoptera [FAUNA HAWAIIENSIS 1(2):191, 1899]. He remarked at the time that "this example has lost one antenna and the apical half of the other, and also both posterior legs; it is therefore impossible to determine its generic position . . . It is a remarkable and beautiful species and its

fair captors might earn additional praise by discovering further specimens, and enabling its affinities to be accurately ascertained." Walter Rothschild and Karl Jordan, in their huge monograph on the Sphingidae of the world, described a new genus for this single specimen which is preserved in the British Museum (Natural History), London.

As years went by, various entomologists tried to discover more specimens of this moth. B. Preston Clark, whose extensive sphingid collection lacked only a few of all the described species, employed J. August Kuschel to make a special search for the green sphinx. According to Zimmerman's account (INSECTS OF HAWAII 7:429, 1958), Kuschel went to Kauai in 1919 and searched in the area from Kokee to Kaholuamano without success, returning again to renew his efforts in April 1920. No green sphinxes were caught though he reported that he had seen them flying about the *Metrosideros* trees always too high for him to capture, and that he had collected, but failed to rear caterpillars which he considered to be those of the moth. However, Kuschel's accounts were not always reliable, and it is rather doubtful that he saw either the adults or caterpillars of the green sphinx. As late as 1928 Clark was still offering one hundred dollars for a good specimen of the moth. On his death his collection, still minus the green sphinx, was left to the Carnegie Institute Museum, Pittsburg.

Superficially, the Kokee specimen differs from the type in details of coloration. The main differences are the absence of the dark spot on each forewing, with the apical margin only very narrowly brown; except for a basal purplish blotch on the forewing, the undersides of both wings are green instead of purplish ochreous; and the abdomen is green instead of purple fuscous, with no trace of orange on the dorsum as indicated for *T. smaragdita* by Zimmerman.