## SCIENTIFIC NOTE

## Pithitis smaragdula (Fabricius), an Asiatic Bee (Hymenoptera: Apidae) Now Apparently Established on Oahu

Keith T. Arakaki<sup>1</sup>, William D. Perreira<sup>2</sup>, David J. Preston<sup>1</sup>, and John W. Beardsley<sup>2,3</sup>

<sup>1</sup>B. P. Bishop Museum, 125 Bernice St., Honolulu, HI 96817, USA;

<sup>2</sup>Department of Entomology, University of Hawaii, 3050 Maile Way, Honolulu HI 96822, USA;

<sup>3</sup>Deceased February 5, 2001

In December 1984, one of us (JWB) found, in a collection made by an entomology student at the University of Hawaii, a single male specimen of a metallic green bee that he recognized as something previously unknown in the Hawaiian fauna. The specimen (cited below) was not reported at the time because of lack of confidence about the collection data. A second male specimen, also from an entomology student collection, was found in 1987 and was not reported for the same reason. However, a third male of this bee was collected in general sweeping of introduced vegetation at Barber's Pt., Oahu, in November 1996 by JWB and WDP, and a fourth male was taken by DJP at Pearl Harbor in December 1997. The species was determined by KTA as *Pithitis smaragdula* (Fabricius) in March 1998. Although it has been rarely collected, it appears likely that this bee is now established on Oahu.

Pithitis smaragdula was described by Fabricius (1787) in the genus Apis. The genus Pithitis was erected by Klug (1807) with A. smaragdula Fabricius as the type species. Pithitis was treated as a subgenus of Ceratina Latreille by van der Vecht (1952), but Hirashima (1966) gave it full generic status.

According to Hirashima (1969), *P. smaragdula* is widely distributed throughout south Asia, including Taiwan, Ryukyu Is., Philippines, Indonesia, south China, and west to India and Pakistan. Hirashima (1969) stated that this bee, incorrectly identified as *Ceratina binghami* Cockerell, has been utilized for pollination of alfalfa in India, and was purposely introduced into the USA (Utah) and Japan for experimental pollination studies. It is of interest that all four of the known Hawaiian specimens are males.

Specimens Examined: OAHU I.: Waimanalo, 27.X.1984, B. Brunson (1 of ); Waimanalo, 4.III.1987, L. Ruchi (1 of ); Barber's Pt., el. 3–10 ft, 14.XI.1996, J.W. Beardsley and W.D. Perreira, general sweeping (1 of ); Pearl Harbor, Kalauao Springs nr. bike path, 12.I.1998, D.J. Preston, sweep net (1 of ).

## **Literature Cited**

Fabricius, J. C. 1787. Mantissa insectorum sistens species nuper detectus adiectis characteribus, genericis, differentiis, specificis, emendationibus, observationibus. Tome I. Hafniae, xx + 348 pp.

Hirashima, Y. 1966. Comments on the genus Pithitis Klug, with record of a species new to the Philippines (Hymenoptera: Anthophoridae). Kontyu 34:315-316.

Hirashima, Y. 1969. Synopsis of the genus *Pithitis* Klug of the World (Hymenoptera: Anthophoridae). Pac. Insects 11:649-669.

Klug, J.C.F. 1807. Vergleichung der Gattungen der Hautflügler Piezata Fabr. Hymenoptera Linn. Jur. Mag. f. Insektenk., vol. 6: 189-199.

van der Vecht, J. 1952. A preliminary revision of the Oriental species of *Ceratina* (Hymenoptera, Apidae). Zool. Verh. 16:1-85.