

***Hylaeus (Nesoprosopis) akoko* (Magnacca and Daly, 2003)
(Hymenoptera: Colletidae: Hylaeinae)**

Profile Prepared by Karl Magnacca, USGS-BRD, Kilauea Field Station.

SUMMARY

Hylaeus akoko is a large bee endemic to the island of Hawaii in Hawaii. It is closely related to the common wet forest species *H. fuscipennis* and *H. pubescens*, differing by the presence of facial marks. It was first collected in 2002, and is still known from only a few specimens from a single locality.

CONSERVATION STATUS

Xerces Red List Status: Critically Imperiled

Other Rankings:

Canada – Species at Risk Act:	N/A
Canada – provincial status:	N/A
Mexico:	N/A
USA – Endangered Species Act:	None
USA – state status:	None
NatureServe:	GNR
IUCN Red List:	N/A

SPECIES PROFILE

DESCRIPTION

Males: Black; clypeus with small irregular ivory marks near the apex (possibly sometimes absent), scape broadly ivory on the lateral margin, fore and mid tibiae and femora orange anteriorly, hind tibia and all basitarsi ivory for their entire length. Punctuation of abdomen distinct.

Females: Unknown; may be indistinguishable from *H. fuscipennis*.

Hylaeus akoko is larger and more robust than most Hawaiian species. It is a member of a group of species with distinct punctuation of the abdomen, including *H. anomalus* and *H. satelles*. It is most similar to *H. pubescens* of the island of Hawaii, which has dense reddish hairs on the apex of the abdomen and a distinctly humped T2; and *H. fuscipennis*, which differs in the genitalia and is found on Maui Nui and Oahu. Both of these species

lack facial marks and orange on the legs and are found in wet to mesic forest, while *H. akoko* has facial marks and has only been found in mesic forest.

TAXONOMIC STATUS

Hylaeus akoko was first collected in 2002 and described in Daly and Magnacca (2003).

LIFE HISTORY

So far as known, *H. akoko* inhabits mesic forests. All collections so far have come from *Chamaesyce olowaluana* (akoko) trees.

DISTRIBUTION

Hylaeus akoko is apparently restricted to mesic forest in the Puu Waawaa area at an elevation of approximately 4100 ft. Less than 10 specimens have been collected.

THREATS

The rarity of *H. akoko* and lack of knowledge about its requirements make it difficult to assess threats. In general, *Chamaesyce olowaluana* appears to support a much larger bee fauna than is found in nearby forest. It is also extremely vulnerable to grazing by sheep, which prevents reproduction. As a result, there are relatively few trees in the Puu Waawaa area. Dependence on *C. olowaluana* may therefore be an important factor in its distribution. Although *C. olowaluana* is found scattered throughout the area from Puu Waawaa to the Humuula saddle, the area where *H. akoko* was found is transitional between dry and mesic forest, a relatively rare habitat. Lack of nest sites due to declines in the populations of wood-boring *Plagithmysus* longhorn beetles may also be a factor, but has not been investigated.

CONSERVATION STATUS

This species is extremely rare; it is found in very low numbers and has a very narrow range.

CONSERVATION NEEDS

Currently, the top priority is to identify extant populations and document the continued existence of the species. All areas where *H. akoko* is likely to be found are protected under the auspices of the State of Hawaii or the U.S. Army, though they may not be actively managed for habitat conservation. The trees that *H. akoko* were collected on lie just outside a sheep fence; including them in the fenced area and/or planting *C. olowaluana* within the enclosure would help greatly.

RESEARCH NEEDS

Identify reasons for rarity, determine dependence on *C. olowaluana*, and locate new populations.

RESOURCES

CONTACTS

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REFERENCES

Daly, H. V., and K. N. Magnacca. 2003. *Insects of Hawaii, Vol. 17: Hawaiian Hylaeus (Nesoprosopis) Bees (Hymenoptera: Apoidea)*. University of Hawaii Press, Honolulu. 234 pp.

WEBSITES

This bee has no web presence.