

***Hylaeus satelles* (Blackburn, 1886)**
(Hymenoptera: Colletidae: Hylaeinae)

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

SUMMARY

Hylaeus satelles is a large bee endemic to the islands of Molokai, Lanai, and Maui in Hawaii. It is similar to *H. muranus*, differing by the lack of metallic sheen and its reddish-yellow facial marks. It has not been collected since the 1890's, but probably still exists in remote wet forests.

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:	Species of Concern
USA – state status:	HI: Species of Concern
NatureServe:	GNR
IUCN Red List:	N/A

SPECIES PROFILE

DESCRIPTION

Males: Black, clypeus partly or entirely dull red to reddish yellow. Scape extremely dilated, wider than long. Punctuation of abdomen distinct.

Females: Clypeus reddish yellow, scape partly or entirely reddish yellow.

Hylaeus satelles is a member of the *pubescens* species group, consisting of large species with a punctate abdomen. It is most similar to *H. muranus* of Hawaii, which is less robust, has white instead of brown hair on the scutum, has an even more dilated scape, and has a slight metallic sheen on the abdomen.

TAXONOMIC STATUS

Hylaeus satelles was described as *Prosopis satelles* by Blackburn (Blackburn and Cameron, 1886), and transferred to the new genus *Nesoprosopis* by Perkins (1899). *Nesoprosopis* was reduced to a subgenus of *Hylaeus* by Meade-Waldo (1923). The most recent taxonomic treatment was Daly and Magnacca (2003).

LIFE HISTORY

Hylaeus satelles inhabits wet forests. Nesting habits are not known, but based on related species it probably nests in wood.

DISTRIBUTION

Hylaeus satelles has been recorded from montane wet areas of Molokai, Lanai, and Maui.

THREATS

The rarity of *H. satelles* and lack of knowledge about its requirements make it difficult to assess threats. Wet forest is the most intact ecosystem in Hawaii, so habitat destruction is not likely a major factor. However, feral pigs and invasive plants have had an impact there, and certain native plants are especially susceptible.

CONSERVATION STATUS

This species is extremely rare; it has not been collected in over 100 years. However, rain forests are extremely difficult to collect bees in, and those of East Maui in particular are difficult to access and have not been searched for bees recently. Therefore, it is likely that *H. satelles* persists, though it may still be rare.

Originally, U.S. Federal listings of rare and endangered species classed *H. satelles* as a “Category 2” Candidate Species about which more information was needed before it could be considered for listing. This status was based on recognition that Hawaiian bees in general were becoming rarer and little was known about their conservation status. Data were never gathered to document whether or not this species should be proposed for listing. It is currently considered to be a “Species of Concern” or a “Special Status Species” by the U.S. Fish and Wildlife Service and the Hawaii Division of Forestry and Wildlife.

CONSERVATION NEEDS

The top priority is to identify extant populations and document the continued existence of the species. The areas where it is likely to be found, except on Lanai, are largely protected under the jurisdiction of the Nature Conservancy, the State of Hawaii, and the National Park Service. It is possible that, at least on Maui, this species is not even endangered, but simply overlooked.

RESEARCH NEEDS

Identify reasons for rarity and locate populations.

RESOURCES

CONTACTS

Karl Magnacca, USGS-BRD, Kilauea Field Station, Hawaii National Park, HI 96718

REFERENCES

Blackburn, T., and P. Cameron. 1886. On the Hymenoptera of the Hawaiian Islands. *Proc. Manchester Literary Philos. Soc.* 25:34-183.

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

Meade-Waldo, G. 1923. Hymenoptera, fam. Apidae, subfam. Prosopidae, fasc. 181. Pp. 1-45 in P. Wytsman (ed.), *Genera Insectorum*. L. Desmet-Verteneuil, Brussels.

Perkins, R. C. L. 1899. Hymenoptera, Aculeata. Pp. 1-115 in D. Sharp (ed.), *Fauna Hawaiiensis*, Vol. 1. Cambridge University Press, Cambridge, United Kingdom.

WEBSITES

Bishop Museum Arthropod Species of Concern checklist

<http://hbs.bishopmuseum.org/endangered/soc-artho.html>

Lists *H. satelles* as a Species of Concern. Updated February 21, 2000.