

***Hylaeus ombrias* (Perkins, 1899)**
(Hymenoptera: Colletidae: Hylaeinae)

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SUMMARY

Hylaeus ombrias is a coastal and dry forest bee endemic to the island of Hawaii in Hawaii. It is distinguished by its large size compared to other coastal species, and reduced facial marks. It is typically found as scattered individuals, and habitat destruction has caused its range to contract significantly.

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: Face with yellow lateral marks narrowing dorsally; clypeal mark not filling the entire plate, sometimes absent. Scape widest near the middle. Process of the eighth sternum narrowly dilated. Hairs of abdominal apex brown, appressed.

Females: Entirely black, lacking coloration. Large, but without distinct punctation on the abdomen.

Hylaeus ombrias is sister to *H. assimulans* in the *flavipes* species group; males can be told apart by the reduced facial markings of *H. ombrias*, but females cannot be reliably distinguished except by distribution. The two species are considerably larger (especially in the females) than any other Hawaiian species except those in the *pubescens* group, which have the abdomen punctate.

TAXONOMIC STATUS

Hylaeus ombrias was described as *Nesoprosopis ombrias* 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 ombrias inhabits coastal strand and dry forest. It is frequently collected on *Sida fallax* (ilima); its greater size may be an adaptation to handling the large pollen of that plant. In recent collections, it appears to be less restricted to the coast and more often found in higher elevation forest than other species of similar habit. Such a tendency may be related to the dense areas of *Sida* that can be sometimes be found in the understory of dry forest. Unlike other species collected in the Puu Waawaa/Pohakuloa dry forest area, it does not appear to be strongly associated with *Chamaesyce olowaluana*. Nesting habits are unknown, but it probably nests in the ground like related species.

DISTRIBUTION

Historic collections of *H. ombrias* are from South Kona. Recent collections have come from two widely disjunct populations: one coastal population at South Point, and a montane one in the dry forest area between Mauna Kea, Mauna Loa and Hualalai.

THREATS

The greatest threat to *H. ombrias* is habitat loss. Dry forest has been heavily impacted by feral ungulates and invasive plants, and much coastal strand has been destroyed by development.

CONSERVATION STATUS

This species was not widely collected by Perkins, possibly because coastal habitat in Kona was already degraded by that time. The habitat available to *H. ombrias* has certainly constricted in historic times as invasive plants have moved in and the diversity of dry forest has been reduced. Although *H. ombrias* is not associated with *Chamaesyce* like other sympatric dry forest species, it does require some diversity in available plants, such as *Bidens* and *Sida*.

Originally, U.S. Federal listings of rare and endangered species classed *H. ombrias* 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

All known montane populations of *H. ombrias* 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. These sites are highly susceptible to fire. The coastal population is not protected and may be affected by the large number of visitors to the area. Maintenance of remaining habitat is the highest priority.

RESEARCH NEEDS

Determine life history requirements, including nest sites and pollen requirements.

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.

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. ombrias* as a Species of Concern. Updated February 21, 2000.