

***Hylaeus flavifrons* (Kirby, 1880)**  
**(Hymenoptera: Colletidae: Hylaeinae)**

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

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**SUMMARY**

*Hylaeus flavifrons* is a coastal bee endemic to the islands of Kauai, Niihau, and Lehua in Hawaii. It is distinguished by the single large facial mark, filling the entire area below the antennae, and the extremely wide scape of the male. It is restricted to a few, small, and widely scattered sites and populations are vulnerable to extirpation.

**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

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**SPECIES PROFILE**

**DESCRIPTION**

**Males:** Face marks yellow, completely filling in the area below the antennae. Scape extremely dilated, nearly as wide as long. Hairs of abdominal apex black, erect.

**Females:** Entirely black, lacking coloration; mandibles tridentate, a trait shared only with the sister species *H. anthracinus*.

*Hylaeus flavifrons* is sister to *H. anthracinus* but otherwise not closely related to other Hawaiian species. The scape and face mark are unmistakable.

**TAXONOMIC STATUS**

*Hylaeus flavifrons* was described by Kirby (Blackburn and Kirby, 1880), 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 flavifrons* is only found in coastal strand. Nesting habits are unknown; it may nest in stems of coastal shrubs.

#### **DISTRIBUTION**

*Hylaeus flavifrons* has been recently collected only from Polihale/Barking Sands and the islet of Lehua near Niihau. It is historically known from Niihau, and may persist there. Additional sites may exist on Kauai, but it is likely that they will be small areas.

#### **THREATS**

The biggest threat to *H. flavifrons* is habitat loss. Although the species can be found in relative abundance at Polihale, native coastal strand vegetation is now extremely rare. Coastal habitat has been heavily impacted by development and invasive plants. Remaining habitat on Kauai is threatened by visitor impacts and development.

#### **CONSERVATION STATUS**

This species is restricted to small, potentially vulnerable populations.

Originally, U.S. Federal listings of rare and endangered species classed *H. flavifrons* 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 coastal site at Polihale and Barking Sands is protected by the State of Hawaii and the U.S. Air Force, but faces continued impacts from visitors and military activities. Other Kauai sites are not protected and may be destroyed by development. Sites on Lehua and Niihau are not threatened by development, but may be affected by invasive plants.

#### **RESEARCH NEEDS**

Find additional populations on Kauai.

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## **RESOURCES**

#### **CONTACTS**

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#### **REFERENCES**

Blackburn, T., and W. F. Kirby. 1880. Notes on species of Aculeate Hymenoptera occurring in the Hawaiian Islands. *Entomol. Mon. Mag.* 17:85-89.

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