

## Range Extensions of *Hylaeus* (Hymenoptera: Colletidae) on Kauai

DAVID HOPPER (Department of Zoology, University of Hawaii at Manoa, Honolulu, Hawaii 96822, USA) and HOWELL V. DALY (Department of Entomology, Plant and Soil Microbiology, University of California, Berkeley, California 94720, USA)

On 2 February 1994, 3 species of *Hylaeus* (Colletidae), were collected from the Polihale/Barking Sands area of west Kauai. Observations on their natural history at this location are reported. The 2 species of native Hawaiian *Hylaeus* were collected while they visited the flowers of the native plant *Sida cordifolia* (Malvaceae). While only 1 specimen of each was collected, other individuals of *Hylaeus* were present at the site of the collection. Bees of this genus were most active around *S. cordifolia*, which was the most abundant flower at that time. These 2 bees were identified by one of us (HVD). The non-native species was identified by R. Snelling of the Los Angeles County Museum. Voucher specimens of all 3 species to be deposited in Bishop Museum at the study's end.

### *Hylaeus (Nesoprotopis) anthracina* (Perkins) **New island record**

Previously reported from Hawaiian islands to the east (Perkins 1913, Nishida 1992). Also recollected recently on coastal Oahu where it was reported by Perkins (1913). Members of this genus appear to be abundant at one coastal location where one of us (DH) is currently studying its ecology with native coastal plants. *Hylaeus anthracina* is listed as extremely rare by the U.S. Fish and Wildlife Service (1994).

### *Hylaeus (Nesoprotopis) hostilis* (Perkins)

Endemic to Kauai (Perkins 1913, Nishida 1992) from elevations of 3000–4000 ft. Finding this and other species at sea level may be noteworthy especially in light of invasive arthropod assemblages at lower elevations (Howarth 1985).

### *Hylaeus (Gnathoprotopis) albonitens* (Cockerell) **New state record**

This is an introduced species native to northern and northeastern Australia (Houston 1981). Numerous individuals of this species, along with honey bees (*Apis mellifera* L.) were observed visiting the flowers of beach heliotrope (*Tournefortia argentea* L. f.), a species of plant indigenous throughout much of the Pacific, but introduced to Hawaii.

## References

- Houston, T.F. 1981. A revision of the Australian hylaeine bees (Hymenoptera: Colletidae). II. *Aust. J. Zool., Suppl. Ser.* **80**: 1-128.
- Howarth, F.G. 1985. Impacts of alien land arthropods and mollusks on native plants and animals in Hawaii, p. 147–74. In: Stone, C.P. & J.M. Scott, eds., *Hawaii's terrestrial ecosystems: preservation and management*. Coop. Natl. Park Stud. Unit, Univ. Hawaii, Manoa.
- Nishida, G.M., ed. 1992. Hawaii terrestrial arthropod checklist. *Bishop Mus. Tech. Rep.* [1]: viii + 262 p.
- Perkins, R.C.L. 1913. Hymenoptera Aculeata. *Fauna Hawaiiensis* 1: 74–115.
- United States Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants; animal candidate review for listing as endangered or threatened species. *Fed. Reg.* **59**(219): 58982–59028.