Records of the Hawaii Biological Survey for 2009–2010. Edited by Neal L. Evenhuis & Lucius G. Eldredge. *Bishop Museum Occasional Papers* 109: 23–24 (2011)

Hylaeus strenuus (Hymenoptera: Colletidae), a new alien bee on O‘ahu

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Hymenoptera: **Colletidae**

Hylaeus strenuus (Cameron) **New state record**

The first specimens of this species, one male and two females, were collected at Magic Island, Ala Moana Beach Park, in early 2007 by Patrick Aldrich. These were sent to Roy Snelling at the Los Angeles County Museum and tentatively identified as a member of the African subgenus *Deranchylaeus*. Unfortunately, with Mr. Snelling’s sudden passing last year, the specimens were lost, and with no additional ones available, it was uncertain whether the species was established.

Recently, WTN rediscovered this species at several sites along the southeast coast between Ala Moana Beach Park and Koko Crater, in company with the introduced carpenter bee *Ceratina smaragdula*. Reevaluation of it by one of us (HHD) identified it as *Hylaeus strenuus* (Cameron, 1897), which is described from Barrackpore, West Bengal, India. Virtually nothing is known about it in its home range, possibly due in part to the poor original description—the type is a male, not a female as described, and does not match the text very well. *Hylaeus* bees are poorly known from the Oriental region in general, and nearly all are not assigned to a subgenus (Michener, 2000). How it arrived in Hawai‘i is unknown, but it nests in twigs like *C. smaragdula* does, thus could be easily transported in wood.

In Snelling’s (2003) key to alien bees of Hawai‘i, this species would partially run to *H. leptocephalus*, as both lack a posterior emargination on sternum 6 and possess well-defined punctures and a transverse carina on the propodeum. However, in *H. strenuus* the mesepisternum is not more coarsely punctate than the rest of the body; the basal area of the propodeum is rugose only medially, with distinct smooth patches laterad; and the transverse carina is incomplete medially. The two may be easily separated by the face marks: in *H. strenuus*, both males and females have elongate lateral marks and a small anteromedial clypeal mark, whereas *H. leptocephalus* males have the entire face pigmented and females have only the lateral marks, the clypeus being entirely black. Males of *H. strenuus* additionally have long, attenuate gonoforceps which protrude slightly beyond the apex of the abdomen even when retracted and pale markings on the mandibles; the females’ mandibles are black but are unusually broad. Both sexes have the apical area of metasomal tergite 2 distinctly depressed, with the posterior rim shining, impunctate, and reflexed upward.

At present, records of *H. strenuus* are restricted to the lowlands east of Honolulu, where it is uncommon and found in company with other exotic bees. Systematic searches have not yet been carried out, and it is likely to spread much further. Given its similar

size and habits, including an apparent preference for *naupaka* (*Scaevola sericea*), it will probably be a competitor with the native *Hylaeus*, particularly the threatened coastal species *H. anthracinus* and *H. longiceps*.

Material examined. **O'AHU**: 3♂, 1♀, Koko Crater Botanical Garden, around *Scaevola sericea*, 10 Feb 2010, W. Nagamine (HDOA). 2♂, Koko Crater Botanical Garden, around *Scaevola sericea*, 11 Mar 2010, K. Magnacca (Univ. Hawaii, Hilo).

Acknowledgements

Thanks to Patrick Aldrich (University of Hawai'i Mānoa) for bringing *H. strenuus* to our attention.

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