

***Halictus pinguismentus* Janjic and Packer, 2000 (Halictidae: Halictinae: Halictini)**

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SUMMARY

Halictus pinguismentus is known only from four specimens, collected approximately one hundred years ago from Guadeloupe Island in the Pacific Ocean, off the coast of Baja California. Given the ecological devastation that has affected this island as a result of the introduction of goats and other animals, it may be extinct. But so little entomological work has been done in this area that we are far from sure of this. The fact that related bee species are “weedy” suggests that it may have survived the ecological damage due to invasive species.

CONSERVATION STATUS

Xerces Red List Status: Data Deficient

Other Rankings:

Canada – Species at Risk Act:	N/A
Canada – provincial status:	N/A
Mexico:	None
USA – Endangered Species Act	N/A
USA – state status:	N/A
Nature Serve:	N/A
IUCN Red List:	N/A

SPECIES PROFILE

DESCRIPTION

Halictus pinguismentus is a member of the subgenus *Seladonia*. This is the only subgenus of Halictine bee in North America that has the combination of greenish metallic coloration and apical bands of pale hairs on the metasomal terga. Halictine bees can be readily identified on the basis of the strongly curved basal vein and, except in certain cleptoparasitic forms, by the pseudopygidial area on female T5. Identification of bees of this subgenus cannot be made on the basis of the apical bands on pubescence in old, or worn specimens. In such instances, the absence of a cleft in the apex of T5 combined

with strong apical wing veins and greenish coloration, are sufficient to diagnose a specimen as belonging to the correct subgenus.

Halictus pinguismentus is easily separated from other *Seladonia* species in North America by virtue of the shape of its head in lateral view (the postero-ventral margin varies from forming a right angle in smaller specimens to being expanded into a broad lobe in larger ones), having an almost bidentate antero-lateral margin to the pronotum in dorsal view and in having the basal tooth of the mandible dorsally concave. It also has unusually elongate mandibles. The most likely bees to be confused with *Seladonia* are *Lasioglossum* (*Dialictus*) species, but these have weakened apical forewing veins and, if they have bands of pubescence on the metasoma, these are basal rather than apical. Few species of *Dialictus* are as large as *H. (S.) pinguismentus* and none have the head, mandible and pronotal characteristics noted above. The common species *Halictus ligatus* and its southeastern USA and Caribbean sister species *H. poeyi* also sometimes have a right angled postero-ventral margin to the head but these species are dark brownish-black in color, not metallic greenish. The females of *H. pinguismentus* described vary in length from 7 to somewhat over 8mm in length.

TAXONOMIC STATUS

Halictus (Seladonia) pinguismentus Janjic and Packer, 2000.

The subgeneric and generic level classifications of bees in *Halictus* has long been inconsistent with different authors incorporating different concepts. The most commonly accepted concept is that *Halictus* comprises those strongly veined, non-parasitic members of the tribe Halictini that have apical bands of hairs on the metasomal terga and with an obtuse epistomal lobe. The latter feature differentiates the genus from *Pseudagapostemon*, a genus that is restricted to South America. Past authors sometimes considered those taxa with weakened apical wing veins as belonging here. In North America, all such weakened veined bees are generally considered to be members of the speciose genus *Lasioglossum* which itself has a checkered and complex subgeneric classification.

Halictus has been considered to be comprised of three subgenera by most North American researchers. These are *Halictus* sensu stricto, *Seladonia*, and *Vestitohalictus*. Only the former two subgenera are found in the New World. Pesenko considers both subgenera to deserve generic rank but with *Vestitohalictus* sunk within *Seladonia*, and he recognizes numerous subgenera within both *Halictus* and *Seladonia*.

There are seven species of *Seladonia* in North America, the most common of which, *H. confuses*, is a Holarctic species. *H. virgatellus* is found at high altitude in the rocky mountains, *H. tripartitus* is known from the U.S. southwest where it is common.

LIFE HISTORY

Nothing is known of the life history of this species as only four specimens have been collected and even the date of their collection has not been recorded. However, based upon comparisons with related species such as *H. (S.) tripartitus*, it is expected to have a

primitively eusocial colony cycle, with only potential queens overwintering, provisioning a worker brood in spring and with at least one worker brood in late spring/early summer before males and the overwintering next generation queens are produced. The size variation and associated allometric variation in head shape among the 4 females known is also suggestive of this type of social organization. If true, then this life history would make rediscovery of the species more likely, if it persists, because individuals should be in flight for much of late spring and summer.

The fact that related species are generally “weedy”, being able to forage from a wide variety of plants and nest in a variety of disturbed habitats suggests that this species may have survived the ecological changes that have occurred in its only known locality.

The floral relationships and identity of any potential natural enemies remain unknown.

Based upon comparisons with related species, the nests of this species are expected to consist of narrow burrows in the soil, perhaps branched during the summer provisioning phase, and with brood cells arising from the burrows directly rather than being at the end of their own separate lateral burrow extensions. Cavity construction around the brood cells, as is known for some bees in the subfamily, is not expected.

DISTRIBUTION

This species is known only from the type locality: Guadeloupe Island, which is situated off the west coast of Baja California. The date of collection of these specimens is unknown, but they are thought to have been collected in the late 1800’s or early 1900’s. No other collections of bees from the sole locality are known.

THREATS

Unknown, but damage to the habitat, particularly by goats has been recorded. As noted above, it is possible that this species may be able to survive under such circumstances.

CONSERVATION STATUS

A narrowly endemic species known only from one island. The status of its population is completely unknown.

CONSERVATION NEEDS

As it is unlikely that this species is narrowly specialized on any particular flower or to a highly specific nesting site, it is possible that its conservation needs might be comparatively easily met, assuming it persists.

RESEARCH NEEDS

Nothing is known about this species other than its type locality and the appearance of the females. The most pressing research need is to see whether it still persists at the type locality. A visit to Guadeloupe Island by anyone willing to take a few pan traps into the field and place them out near flowering plants during late spring or during summer would likely find the species if it is common on the island. Because the technique is a very easy one to use this need not be done by an entomologist. It would also be useful to investigate

whether the species has a primitively eusocial colony organization and to find males which are currently undescribed.

RESOURCES

CONTACTS

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REFERENCES

Janjic, J., and L. Packer. 2001. New descriptions of *Halictus (Seladonia)* from the New World (Hymenoptera: Halictidae). *Journal of Hymenoptera Research* 10:55-75.

WEBSITES

This bee has no web presence.