

Hermit crabs of the genus *Calcinus* Dana, 1851 (Decapoda: Anomura: Diogenidae) from the Austral Islands, French Polynesia, with description of a new species

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Abstract

Knowledge of morphology, coloration, and distribution of species of *Calcinus* Dana, 1851 from French Polynesia is expanded based primarily on collections obtained during the French BENTHAUS Expedition in 2002 to the Austral Islands, the southernmost of the French Polynesian islands. Six species of *Calcinus* were obtained from inshore to depths of 280 m. Of these, one proved to be a new species, *C. albengai*, and is fully described. This new species has two colour variants, one with pale pink to cream chelipeds that lives in shallow-water from the intertidal to about 50 m, the other with bright orange chelipeds, from deeper waters from about 50 to 280 m. Morphologically this new species is distinguished by differences in the armature of the ocular acicles, aspects of the left and right palms, ventrodistal pilosity of third pereopods, and telson armature. Five species were collected by dredging, trawling, or using traps, in depths of 40 to 280 m: *C. anani* Poupin & McLaughlin, 1998, *C. gouti* Poupin, 1997, *C. haigae* Wooster, 1984, *C. spicatus* Forest, 1951, and *C. aff. sirius* Morgan, 1991. Of these, *C. gouti* was previously known exclusively based on the holotype from Tuamotu, and a more complete diagnosis is presented; the others are also diagnosed, including new details on coloration. Inshore and scuba collecting on Rapa Island produced four additional, but better known species: *C. elegans* (H. Milne Edwards, 1836), *C. latens* (Randall, 1840), *C. laevimanus* (Randall, 1840), and *C. vachoni* Forest, 1958. The inshore *Calcinus* fauna of Rapa is briefly compared with its counterpart on Easter Island, located at the same latitude 3500 km to the east. A total of 19 (or possibly 20, should *C. sirius* be confirmed in the future) *Calcinus* species are now known from French Polynesia. Cases of sibling species of *Calcinus*, distinguished almost exclusively by coloration, are summarized.

Key words: Crustacea, Decapoda, Diogenidae, *Calcinus*, hermit crab, coral reef, French Polynesia, Austral Islands, systematics, sibling species.