



NOAA
FISHERIES

Pacific Islands Region

corals

Acropora jacquelineae

:: Biological Information

MORPHOLOGY

Colonies of *Acropora jacquelineae* are flat plates up to 1 meter in diameter. The upper surface is covered with many very thin projections (corallites), which are smooth on their sides. Colonies are uniform grey-brown or pinkish in color.



Photos copyright: Douglas Fenner

REPRODUCTION

Acropora jacquelineae is a hermaphroditic (having both male and female gametes) spawner with lecithotrophic (yolk-sac) larvae.

:: Spatial Information

GEOGRAPHIC RANGE

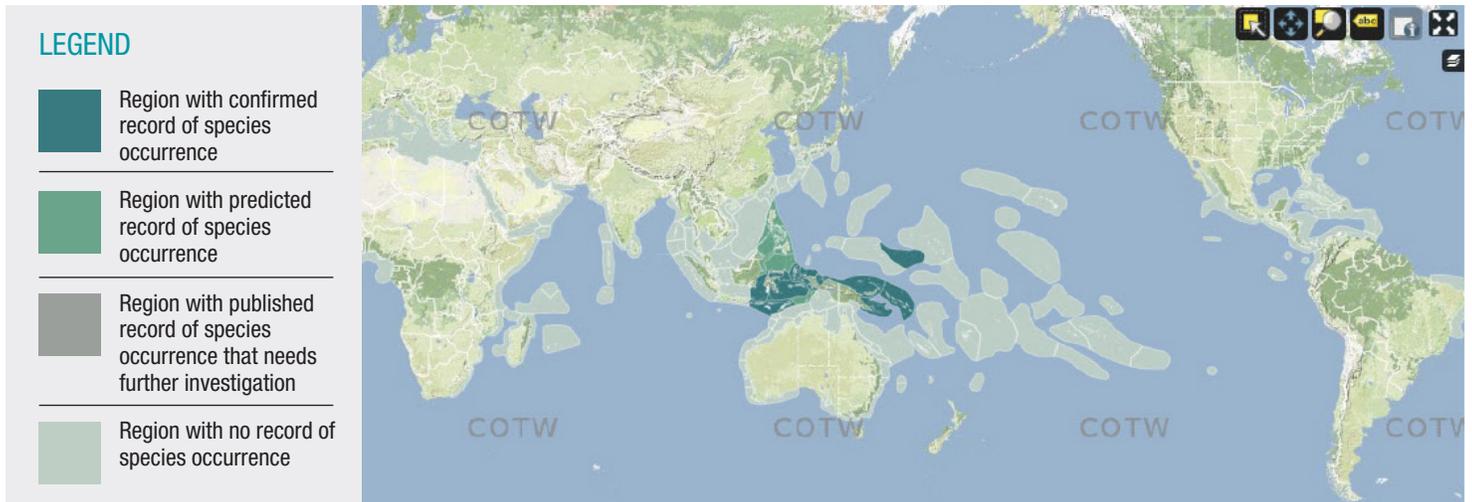
Based on confirmed observations and strong predictions of occurrence in areas that have not yet been surveyed sufficiently, *Acropora jacquelineae* is likely distributed mostly in the Coral Triangle area (the Philippines to Timor Leste and east to the Solomon Islands). There are also confirmed records of this species in eastern Micronesia, and it has been identified by two coral scientists in American Samoa.

For more information contact:

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Veron JEN, Stafford-Smith MG, Turak E and DeVantier LM (in prep.) Corals of the World www.coralsoftheworld.com

OCCURRENCE IN U.S. JURISDICTIONS

Acropora jacquelineae has not yet been reported from Guam, the Commonwealth of the Northern Mariana Islands (CNMI), or the Pacific Remote Island Areas (PRIA). Based on the information below we consider *Acropora jacquelineae* to occur in American Samoa.

American Samoa: Hughes (2012, p. 36) reports seeing it in American Samoa. Brainard *et al.* (2011) report it from American Samoa, based on Fenner (personal comm.), two photographs and a sample. Veron (2014) indicates he does not have information that it is in American Samoa. Wallace (1999) does not report it from American Samoa.

HABITAT TYPES AND DEPTH

Acropora jacquelineae is found in numerous subtidal reef slope and back-reef habitats, including but not limited to, lower reef slopes, walls and ledges, mid-slopes, and upper reef slopes protected from wave action, and its depth range is 10 to 35 meters.

:: Demographic Information

RELATIVE LOCALIZED ABUNDANCE

Relative localized abundance refers to how commonly a species is observed on surveys in a localized area. Veron (2014) reports that *Acropora jacquelineae* occupied 1.6 percent of 2,984 dive sites sampled in 30 ecoregions of the Indo-Pacific. It was given an abundance rating on a scale of 1 (low) to 5 (high) at each site where it occurred, based on how common it was at that site. *Acropora jacquelineae* had a mean abundance rating of 1.44. Based on this semi-quantitative system, the species' abundance was characterized as "uncommon."

ABSOLUTE OVERALL ABUNDANCE

Absolute overall abundance refers to a rough qualitative minimum estimate of the total number of colonies of a species that currently exist throughout its range. Based on information in Richards *et al.* (2008), *Acropora jacquelineae* had the 14th lowest population of the 15 rare *Acropora* species they studied. They report a population estimate of 31,599,000 colonies, and an effective population size of 3,476,000 colonies.

:: Why is this Species Threatened?

Acropora jacquelineae is susceptible to the three major threats identified for corals including ocean warming, disease, and ocean acidification, as well as many of the other threats to corals. Its current known geographic range is limited mostly within the Coral Triangle area. This area is projected to have the most rapid and severe impacts from climate change and localized human impacts for coral reefs over the 21st century. Multiple ocean warming events have already occurred within the western equatorial Pacific (which includes the Coral Triangle area) that suggest future ocean warming events may be more severe than average in this part of the world. A range constrained mostly to this particular geographic area that is likely to experience severe and increasing threats indicates that a high proportion of the population of this species is likely to be exposed to those threats over the foreseeable future. This in combination with its other biological, demographic, and spatial characteristics, contributes to a risk of extinction within the foreseeable future for *Acropora jacquelineae*.

Literature Cited

- Brainard, R. E., C. Birkeland, C. M. Eakin, P. McElhany, M. W. Miller, M. Patterson, and G. A. Piniak. 2011. Status review report of 82 candidate species petitioned under the U.S. Endangered Species Act. NOAA Technical Memorandum NMFS-PIFSC-27. 530 pp.
- Hughes, T. P. 2012. Review of NOAA Technical memorandum NMFS-PIFSC-XX: Status Review Report of 82 species of Corals under the US Endangered Species Act. 44 pp.
- Richards, Z. T., M. J. H. van Oppen, C. C. Wallace, B. L. Willis, and D. J. Miller. 2008. Some Rare Indo-Pacific Coral Species Are Probable Hybrids. PLoS ONE 3(9):e3240.
- Veron, J. E. N. 2014. Results of an update of the Corals of the World Information Base for the Listing Determination of 66 Coral Species under the Endangered Species Act. Report to the Western Pacific Regional Fishery Management Council, Honolulu.
- Wallace, C. C. 1999. Staghorn corals of the world: a revision of the coral genus *Acropora* (Scleractinia; Astrocoeniina; Acroporidae) worldwide, with emphasis on morphology, phylogeny and biogeography. CSIRO Publishing, Collingwood, Australia.

