



NOAA
FISHERIES

Pacific Islands Region

corals

Acropora tenella

:: Biological Information

MORPHOLOGY

Colonies of *Acropora tenella* have horizontal, plate-like colonies with flattened branches that usually have a central ridge. Colonies are cream colored with blue or white tips.



Photos copyright: Paul Muir

REPRODUCTION

The reproductive characteristics of *Acropora tenella* have not been determined, but other similar species of *Acropora* are hermaphroditic (having both male and female gametes) spawners with lecithotrophic (yolk-sac) larvae.

:: Spatial Information

GEOGRAPHIC RANGE

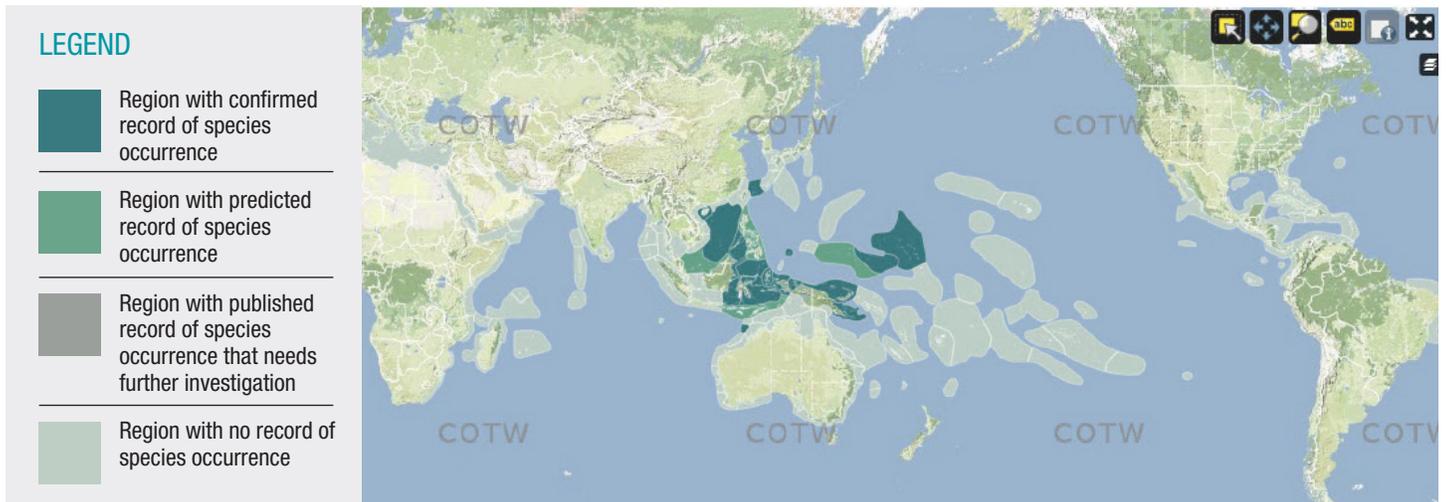
Based on confirmed observations and strong predictions of occurrence in areas that have not yet been surveyed sufficiently, *Acropora tenella* is likely distributed mostly in the Coral Triangle area (the Philippines to Timor Leste and east to the Solomon Islands). There are also confirmed records of this species in southern Japan, Micronesia and the Marshall Islands.

For more information contact:

NMFS Pacific Islands Regional Office
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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 tenella has not yet been confirmed in any U.S. jurisdictions in the Indo-Pacific.

HABITAT TYPES AND DEPTH

Acropora tenella is found on lower reef slopes and shelves in mesophotic areas with a depth range of 40 to 70 meters; it is apparently specialized for calm, deep conditions.

:: 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 tenella* occupied 0.4 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 tenella* had a mean abundance rating of 1.25. Based on this semi-quantitative system, the species' abundance was characterized as "rare."

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 tenella* had the 7th lowest population of the 15 rare *Acropora* species they studied. They provided a population estimate of 5,207,000 colonies, and an effective population size of 573,000 colonies.

:: Why is this Species Threatened?

Acropora tenella 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 to 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. In addition, the best available information indicates that *Acropora tenella* has an effective population size of 573,000 colonies. Because of the widespread nature of the global threats to corals, a threat event has the potential to impact many colonies at once so a species with a relatively small effective population size may have a high proportion of genetically unique individuals affected by threats at any given time within 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 tenella*.

Literature Cited

- 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.

