



Acabaria bicolor
Courtesy Keoki Stender

Marine Invertebrates

Octocorals

SPECIES STATUS:
IUCN Red List - Not considered
All Endemic

SPECIES INFORMATION: Species with common names include: bicolor gorgonian (*Acabaria bicolor*), blue octocoral (*Anthelia edmondsoni*), and Moloka'i leather coral (*Simularia molokaiensis*). A complete list of Hawai'i octocorals of greatest conservation need is at the end of this fact sheet. Octocorals are comprised of Gorgonians (families Briareidae, Chrysogorgiidae, Coralliidae, Isididae, Melithaeidae, Paramuriceidae, and Primnoidae), soft corals (families Alcyoniidae and Xenidiidae), and sea pens and pansies (order Pennatulacea). Octocorals can be distinguished from sea anemones and stony corals by their eight, pinnate tentacles (vs. six for stony corals and anemones) and internal skeleton. They also have no medusa life-stage and polyps are small. The endemic octocorals are all deep water except for the Alcyonians and *Candidella* and *Acanella*. The pink, bamboo, and gold corals are all potentially harvestable precious corals, though current harvest is minimal. The bicolor gorgonian, the blue octocoral, and the Moloka'i leather coral have less stinging cells than other cnidarians, and they feed on planktonic plant cells or other types of small particles. The blue octocoral also harbors symbiotic zooxanthellae. The bicolor gorgonian forms colonies that are five centimeters (two inches) across and three centimeters (1.2 inches) high. Blue octocoral polyps grow to one centimeter (0.2 inch) and colonies are eight to 30 centimeters (three to 12 inches) across, while leather corals can grow to about the same size. They asexually reproduce by budding, which enlarges the colonies. Octocorals use three methods to reproduce sexually. Alcyoniidae and some gorgonians release sperm and eggs into the water where fertilization takes place. Male Xenidiidae and many gorgonians release sperm into the water, but the eggs are not released and are fertilized and then brooded inside the females. Developed larvae are released later. Some species are external brooders, meaning the eggs develop in a mucous pouch on the mother colonies.

DISTRIBUTION: Moloka'i leather coral only occurs on the southeast side of Moloka'i. All other species are found throughout the Hawaiian Archipelago.

ABUNDANCE: Unknown.

LOCATION AND CONDITION OF KEY HABITAT: Gorgonians in Hawai'i primarily inhabit deep waters, such as the precious or pink corals and the bamboo corals, which occur at depths below 200 meters (600 feet). More generally, species in the families Primnoidae and Isididae also are found primarily in deep waters. However, gorgonians also can occur in shallow waters. Bicolor gorgonians (*Acabaria bicolor*) occur from depths of two to 430 meters (six to 1,400 feet) and prefer rocky crevices in areas that are "surgy" or directly in the current. Soft corals are found in both deep and shallow waters. The primary habitat of blue octocoral includes both hard and soft surfaces that are exposed. Moloka'i leather coral colonies encrust on limestone and volcanic rocks in waters approximately 35 meters (115 feet) or deeper; however, they also can be located in shallow water areas. Sea pens and pansies prefer areas with soft bottoms.

THREATS:

- Harvest for the precious coral trade;
- Competition from the introduced snowflake octocoral *Carijoa*.

CONSERVATION ACTIONS: In addition to common statewide and marine conservation actions, specific actions include:

- Maintain healthy populations with appropriate fishing regulations, enforcement, and education;
- Implement policies to prevent the further spread of *Carijoa*.

MONITORING:

- Survey for populations and distribution in known and likely habitats.

RESEARCH PRIORITIES:

- Research the effects of harvesting on the health of these anthozoans;
- Improve understanding of factors affecting the species population sizes and distributions.

References:

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Octocoral SGCNs

Order	Family	Scientific Name	Hawaiian name	Common Name
Alcyonacea	Alcyoniidae	<i>Bellonella molokaiensis</i>	None	None Hawaiian
Alcyonacea	Alcyoniidae	<i>Sinularia molokaiensis</i>	None	Leather Coral
Alcyonacea	Alcyoniidae	<i>Anthomastus fisheri</i>	None	None
Alcyonacea	Alcyoniidae	<i>Anthomastus granulatus</i>	None	None
Alcyonacea	Alcyoniidae	<i>Anthomastus steenstrupi</i>	None	None
Alcyonacea	Xeniidae	<i>Anthelia edmondsoni</i>	'Okole	Blue soft coral
Gorgonacea	Briareidae	<i>Paragorgia n. sp.</i>	None	None
Gorgonacea		<i>Testula spiculicola</i>	None	None
Gorgonacea	Anthothelidae	<i>Anthothelia nuttingi</i>	None	None
Gorgonacea	Chrysogorgiidae	<i>Irridogorgia bella</i>	None	None
Gorgonacea	Chrysogorgiidae	<i>Irridogorgia superba</i>	None	None
Gorgonacea	Coralliidae	<i>Corallium secundum</i>	None	Pink coral
Gorgonacea	Isididae	<i>Lepidisis olapa</i>	None	Bamboo coral
Gorgonacea	Isididae	<i>Acanella dispar</i>	None	None
Gorgonacea	Isididae	<i>Candidella helminthopora</i>	None	None
Gorgonacea	Isididae	<i>Keratoisis sp.</i>	None	None
Gorgonacea	Melithaeidae	<i>Acabaria bicolor</i>	None	Bicolor Gorgonian
Gorgonacea	Paramuriceidae	<i>Villogorgia sp new</i>	None	None
Gorgonacea	Paramuriceidae	<i>Villogorgia sp 2 new</i>	None	None
Gorgonacea	Paramuriceidae	<i>Swiftia sp.</i>	None	None
Gorgonacea	Paramuriceidae	<i>Swiftia sp. 2</i>	None	None
Gorgonacea	Paramuriceidae	<i>Anthomuricea tenuispina</i>	None	None
Gorgonacea	Paramuriceidae	<i>Paramuricea hawaiiensis</i>	None	None
Gorgonacea	Plexauridae	<i>Eunicella sp.</i>	None	None
Gorgonacea	Primnoidae	<i>Narella ornata</i>	None	None
Gorgonacea	Primnoidae	<i>Narella nuttingi</i>	None	Gold coral
Gorgonacea	Primnoidae	<i>Narella bowersi</i>	None	None
Gorgonacea	Primnoidae	<i>Callogorgia sp.</i>	None	None
Gorgonacea	Primnoidae	<i>Plumarella sp.</i>	None	None
Gorgonacea	Primnoidae	<i>Calyptrophora sp.</i>	None	None
Gorgonacea	Primnoidae	<i>Calyptrophora wyvillei</i>	None	None
Gorgonacea	Primnoidae	<i>Callogorgia gilberti</i>	None	Gold coral
Pennatulacea	Pennatulidae	<i>Pennatula flava</i>	None	None