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Marine Invertebrates

Black reef sponge

Spongia oceania

SPECIES STATUS:

IUCN Red List - Not considered

Endemic

SPECIES INFORMATION: The black reef sponge is a filter feeder, using its collar cells to filter out organic material from the water passing through its cells. The black reef sponge is hermaphroditic. Most often it reproduces asexually through budding or fragmentation; however, sexual reproduction does occur. Gametes are produced at different times within a sponge; therefore, sponges depend on another sponge for fertilization. Sperm is released into the open ocean and other sponges retrieve the sperm to fertilize their eggs internally. These fertilized eggs hatch into free-swimming larvae. Although the black reef sponge has no spicules, it is still too hard to be exploited commercially.

DISTRIBUTION: Once widespread, the black reef sponge is primarily found in Hanauma Bay, O'ahu and along the Kona Coast on the island of Hawai'i.

ABUNDANCE: Previously, it was the most common large sponge in the Hawaiian Islands and was very abundant in Hanauma Bay, O'ahu in the 1940s. Today, numbers have decreased significantly.

LOCATION AND CONDITION OF KEY HABITAT: The black reef sponge primary habitat is in shallow waters on hard substrate that is in open areas with a strong surge or current. Its habitat is threatened by pollution and degradation from trampling of tourists.

THREATS: Although this sponge is not suitable for commercial use, it has severely declined since the 1940s.

- Pollution or degradation from human interactions such as trampling may have caused the decline.

CONSERVATION ACTIONS: The goals of conservation actions are to not only protect current populations, but to also establish further populations to reduce the risk of extinction. In addition to common state-wide and island conservation actions, specific actions include:

- Restore habitat.

MONITORING:

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

RESEARCH PRIORITIES:

- Improve understanding of factors affecting the species population size and distribution.

References:

Hoover JP. 1998. Hawaii's sea creatures: A guide to Hawaii's marine invertebrates. Honolulu, HI: Mutual Publishing. 366 p.