



Marine Invertebrates

Sponges

SPECIES STATUS:

IUCN Red List - Not considered
Endemic

SPECIES INFORMATION: Only a few of the SGCN sponges have common names: Hawaiian Lissodendoryx (*Lissodendoryx hawaiiiana*), Staining sponge (*Iotrochota protea*), and black reef sponge (*Spongia oceania*). A complete list of Hawai'i bivalves of greatest conservation need is at the end of this fact sheet. Sponges are filter feeders, using their collar cells to filter out organic material from the water passing through its cells. Most sponges are hermaphroditic. Many often also reproduce 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. Sponges of the class Calcarea have no spongin but hard calcareous spicules. The Demospongia have skeletons of silica, spongin, or both. The Staining sponge grows on sand or rubble in protected bays. Although the black reef sponge has no spicules, it and the other species are 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. Distribution is poorly known as sampling has been inadequate for most other species.

ABUNDANCE: Previously, black reef sponge 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. Quantitative monitoring of sponges is rare.

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. *A. valentis*, *C. haematodes*, *X. zuckerani*, *S. rhoda*, *A. solenoides*, *H. anamesa*, and *H. distincta* occur in deep waters and little is known about key habitat needs.

THREATS: Pollution or degradation from human interactions such as trampling.

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

- Manage for healthy 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 pp.

Sponge SGCNs

Class	Family	Scientific Name	Hawaiian Name	Common Name
Calcarea	Leucosoleniidae	<i>Leucosolenia vesicula</i>	None	None
Calcarea	Grantiidae	<i>Leuconia kaiana</i>	None	None
Calcarea	Sycettidae	<i>Sycandra parvula</i>	None	None
Calcarea	Sycettidae	<i>Sycandra staurifera</i>	None	None
Demospongiae	Ancorinidae	<i>Asteropus kaena</i>	None	None
Demospongiae	Ancorinidae	<i>Rhabdastrella pleopora</i>	None	None
Demospongiae	Ancorinidae	<i>Zaplethea digonoxea</i>	None	None
Demospongiae	Geodiidae	<i>Erylus rotundus</i>	None	None
Demospongiae	Geodiidae	<i>Geodia gibberella</i>	None	None
Demospongiae	Spirastrellidae	<i>Anthosigmella valentis</i>	None	None
Demospongiae	Spirastrellidae	<i>Spirastrella keaukaha</i>	None	None
Demospongiae	Suberitidae	<i>Prosuberites oleteira</i>	None	None
Demospongiae	Timeidae	<i>Timea xena</i>	None	None
Demospongiae	Microcionidae	<i>Clathria haematodes</i>	None	None
Demospongiae	Microcionidae	<i>Clathria kilauea</i>	None	None
Demospongiae	Microcionidae	<i>Clathria maunaloa</i>	None	None
Demospongiae	Raspailiidae	<i>Axechina lissa</i>	None	None
Demospongiae	Raspailiidae	<i>Eurypon nigra</i>	None	None
Demospongiae	Coelosphaeridae	<i>Lissodendoryx hawaiiiana</i>	None	Hawaiian lissodendoryx
Demospongiae	Crellidae	<i>Naniupi ula</i>	None	None
Demospongiae	Myxillidae	<i>Iotrochota protea</i>	None	Staining sponge
Demospongiae	Phoriospongiidae	<i>Strongylacidon kaneohe</i>	None	None
Demospongiae	Phoriospongiidae	<i>Strongylacidon meganese</i>	None	None
Demospongiae	Phoriospongiidae	<i>Xytopsues zuckerani</i>	None	None
Demospongiae	Mycalidae	<i>Stylinos rhoda</i>	None	None
Demospongiae	Axinellidae	<i>Axinella solenoides</i>	None	None
Demospongiae	Axinellidae	<i>Homaxinella anamesa</i>	None	None
Demospongiae	Halichondriidae	<i>Halichondria coerulea</i>	None	None
Demospongiae	Halichondriidae	<i>Halichondria distincta</i>	None	None
Demospongiae	Halichondriidae	<i>Hymeniacidon chlorida</i>	None	None
Demospongiae	Chalinidae	<i>Haliclona myxa</i>	None	None
Demospongiae	Petrosiidae	<i>Petrosia puna</i>	None	None
Demospongiae	Spongiidae	<i>Hippospongia densa</i>	None	None

Class	Family	Scientific Name	Hawaiian Name	Common Name
Demospongiae	Spongiidae	<i>Spongia oceania</i>	None	Black reef sponge
Demospongiae	Darwinellidae	<i>Pleraplysilla hyalina</i>	None	None
Demospongiae	Tethyidae	<i>Tethya ornata</i>	None	None