

Marine Invertebrates

Nudibranchs

Aldisa pikokai Ardeadoris scottjohnsoni Chromodoris vibrata Glossodoris poliahu Halgerda terramtuentis Hypselodoris andersoni Melibe megaceras Peltodoris fellowsi Sclerodoris paliensis

SPECIES STATUS:

IUCN Red List - Not considered Endemic

SPECIES INFORMATION: The pitted nudibranch (*Aldisa pikokai*), Scott Johnson's nudibranch (*Ardeadoris scottjohnsoni*), trembling nudibranch (*Chromodoris vibrata*), snow goddess nudibranch (*Glossodoris poliahu*), gold lace nudibranch (*Halgerda terramtuentis*), Anderson's nudibranch (*Hypselodoris andersoni*), *Melibe megaceras* (no common name), Fellow's nudibranch (*Peltodoris fellowsi*), and pali nudibranch (*Sclerodoris paliensis*) are carnivores and feed on a variety of organisms ranging from sponges, hydroids, and corals to other nudibranchs. The only nocturnal feeder is the pitted nudibranch. All nudibranchs are hermaphroditic and mate through mutual insemination. Eggs are laid in coiled ribbons. Eggs hatch and trochopore larvae develop into planktonic veligers that lose their shell once they settle. Most nudibranchs do not live longer than one year. It is interesting to note that nudibranchs have few natural predators. They are usually toxic, although they do not produce their own toxins, but recycle those of their prey.

DISTRIBUTION: Most species are found throughout the Hawaiian archipelago; however, the gold lace nudibranch is only found in the Main Hawaiian Islands.

ABUNDANCE: Snow goddess nudibranch is uncommon. There is little quantitative abundance or trend data for any of the species.

LOCATION AND CONDITION OF KEY HABITAT: The pitted nudibranch's key habitat is in waters two to nine meters (six to 30 feet), but they can be found in waters up to 24 meters (80 feet) deep. They prefer areas with stones and crevices. Primary habitat for the trembling nudibranch is sea level to water down to 24 meters (80 feet) deep. Gold lace nudibranchs are found around caves in waters from approximately five to 30 meters (15 to 100 feet). Anderson's

nudibranch's primary habitat is in caves as well as under overhangs on exposed rocky shores from five to 18 meters (15 to 60 feet). Anderson's nudibranchs also live on the yellow sponge *Luffariella metachromia*. Additionally, they occasionally have been found in shallower waters of harbors and boat channels. Fellow's nudibranch is found at the entrance of caves from six to fifteen meters (20 to 50 feet) or more and live on sponges. The pali nudibranch's primary habitat is waters from two to six meters (six to 20 feet) deep. Specific habitat for the other species has not been delineated.

THREATS:

• The aquarium trade targets gold lace, Fellow's, and pali nudibranchs.

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:

 Maintain healthy populations with appropriate aquarium fishing regulations, enforcement, and education.

MONITORING:

Survey for populations and distribution in known and likely habitats.

RESEARCH PRIORITIES:

Improve understanding of factors affecting the species population sizes and distributions.

References:

Gulko D. 2004. Hawaiian marine species for ESA Candidate listing revised Candidate list. Honolulu, HI: Division of Aquatic Resources, State of Hawai`i.

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

Kay AE. 1979. Hawaiian marine shells reef and shore fauna of Hawai'i, section 4: Mollusca. Honolulu, HI: Bishop Museum Press. 653 pp.