Acanthophora spicifera

Identification

Coloration varies with exposure to sunlight, from yellow in shallow waters exposed to bright light, to green, red or dark brown in areas with lower irradiation. The distinctive solid, cylindrical, spiny branches can grow up to a foot high.

Description

The short main branches are hook-like and brittle, fragmenting easily in high water motion. Its large holdfast is irregularly shaped to attach to hard substrate. Branch morphology can change under varying conditions. Under low have energy conditions, it can reach greater heights. Kilar and McLachlan (1986) found that A. spicifera in Panama reached only about one-third the height in heavily wave influenced fore-reefs as those residing in low energy back reef areas.

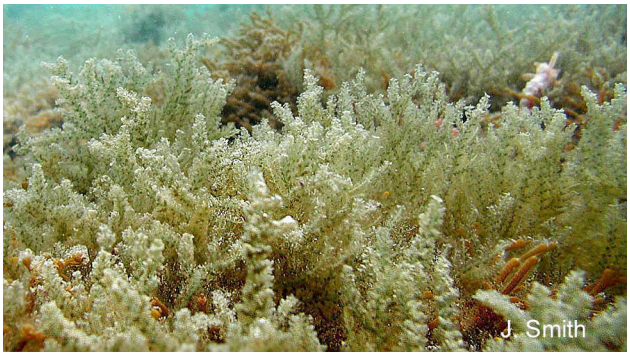
Impact

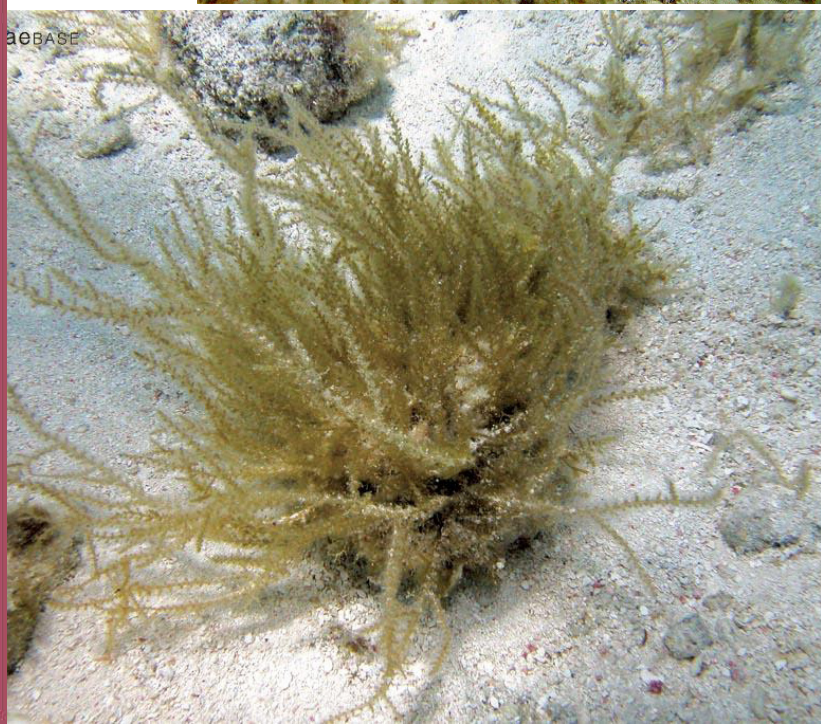
Overgrows and smothers benthic organisms.

Habitat

Acanthophora spicifera is widely distributed throughout tropical and subtropical regions in tidal and subtidal zones (Kilar and McLachlan, 1986).

It is typically found in shallow reef flats between 1-8 m although has been reported to depths of 22 m in Florida, the Virgin Islands and Puerto Rico. In Hawai'i, A. spicifera can be found on all main islands particularly in shallow intertidal zones and has been reported as one of the most abundant rhodopyhtes occurring on reef flats (Jokiel and Morrissey, 1986). It can be found on a diversity of substrate types. It is particularly abundant on hard bottom substrate, attached as an epiphyte on other algae or unattached as drift algae.



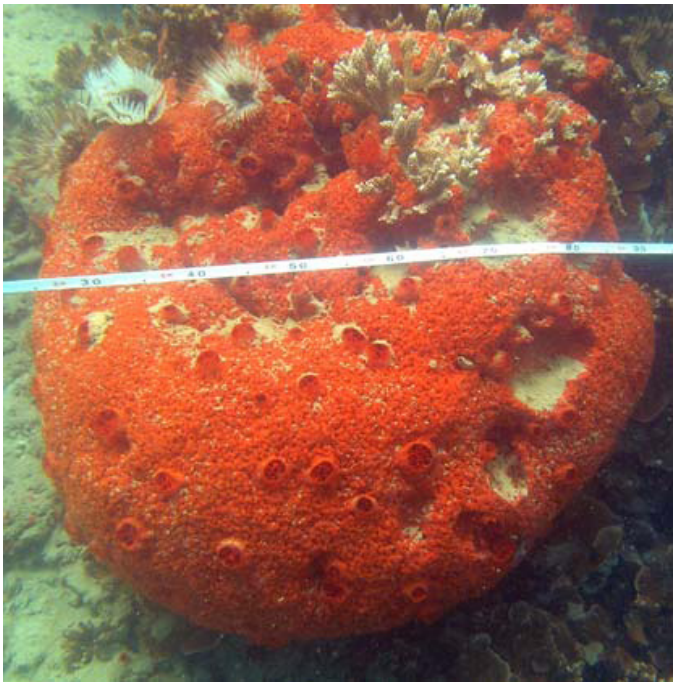


Mycale grandis

Identification
Orange sponge. Sponge identification requires high quality in situ images and properly preserved specimens.

Description
The diversity of marine sponges provides never-ending challenges to taxonomists. Sponges are extremely variable in their morphology, even within a species, and this makes positive identifications difficult, except for highly knowledgeable experts. They can be large and colorful or cryptic and small and are a common component of marine fouling communities. Mycale grandis is bright orange externally and internally with a firm but compressible texture. It has large excurrent openings (osculum) and numerous incurrent openings (ostia) located all over the body.

Impact
Overgrows and smothers corals.



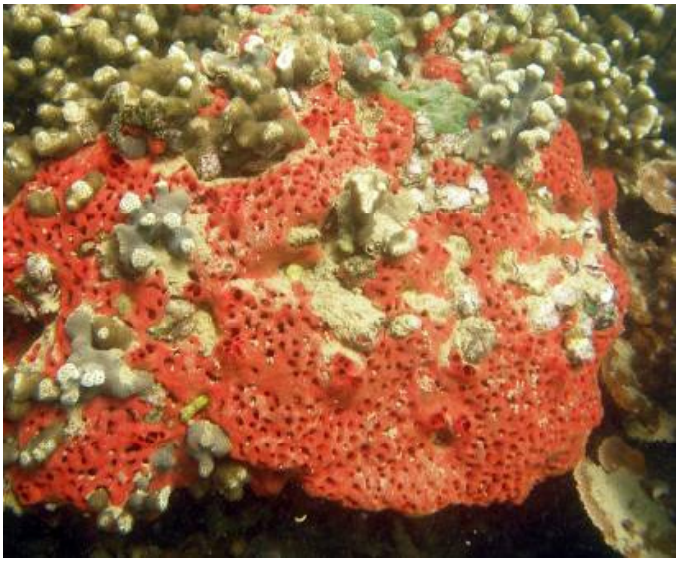
Scott Coles and Holly Bolick

History
Mycale grandis is considered a recent unintentional introduction to the southeastern Hawaiian Archipelago due to its sudden appearance in recent decades. It has begun to compete for space and displace corals on patch reefs in Kaneohe Bay, Oahu.

The orange keyhole sponge *Mycale grandis* Gray was first reported in Hawai‘i in 1996.

Mycale grandis was first observed in Kane‘ohe Bay in the mid 1990s, and by 2004, was overgrowing and smothering *Porites compressa* and *Montipora capitata* reef corals on back reef flats and slopes. [excerpted from Coles And Bolick, 2007]

Habitat
The native distribution is northeast Australia and the Indo-Malay region. It has rapidly spread throughout the southeastern Hawaiian Archipelago, likely by maritime vessel fouling, where it can readily be found in man-made harbors and natural embayments/lagoons. This species has moved out of these habitats to natural patch reef environments, where it overgrows and smothers corals.



Scott Godwin

Avrainvillea amadelpha

University of Hawaii

University of Hawaii

University of Hawaii

For information see Univ of Hawaii datasheet

Heather Spaulding

Zoobotryon verticillatum

Identification

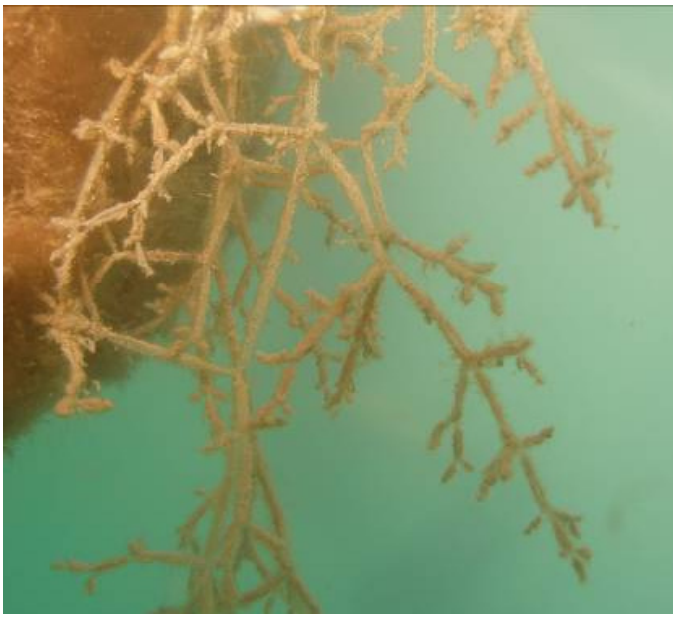
This colonial animal forms transparent to white or yellowish bushes comprised of spaghetti or straw-like stalks that can be up to 45 cm long. This bryozoan superficially resembles an alga, but is paler than most, and close examination reveals tiny clusters of animal tentacles along the branches. [excerpted from elkhornslough.org]

Description

Bryozoans are colonial and sessile suspension feeders made up of individual zooids. Each individual zooid in a colony has 8 ciliated tentacles that are extended to filter phytoplankton from the water column. Most bryozoans are encrusting but some genera, like Zoobotryon, are arborescent or bushy. Zoobotryon can develop into large bushy mats that look like drift algae but are attached to rubble or coral colonies

Impact

Invasive in close proximity to forereef habitat. (Godwin et al. In Prep)



Scott Godwin

Habitat

Z. verticillatum is widely distributed in warm temperate and tropical waters in the western Atlantic and the Caribbean. This arborescent species is found in harbors and man-made habitats throughout the tropical Pacific. Recorded in the southeastern Hawaiian Archipelago in the 1930's in Kaneohe Bay, Oahu (Carlton and Eldredge 2000, Unpublished data). It has recently (2008) been documented at Palmyra Atoll in the U.S. Line Islands.

Typical habitat for bryozoans include seagrasses, drift algae, oyster reef, dock, pilings, breakwaters, and man-made debris. In the southeastern Hawaiian Archipelgo, Z. verticillatum is typically found associated with fouling communities in man-made harbors, where it readily associates with docks, vessel hulls and mangrove habitats. Arborescent bryozoans can be found as epibionts associated with other species that act as support structures: seagrass, mangrove roots, drift algae, bivalve shells etc.