

White didemnid

Phylum	Chordata
Subphylum	Urochordata
Class	Ascidiacea
Order	Enterogona
Family	Didemnidae



Photo by R. DeFelice

DESCRIPTION

Didemnum candidum is a common white or gray colonial ascidian that forms patches or mounds. These patches can be quite extensive, overgrowing worm tubes, sponges, ascidians, and algae in the fouling community.

Didemnids are very difficult to identify, even for an expert. They can not be identified in the field. The tiny zooids must be extracted from the tunic, which is nearly impossible, and this has led to the confusion of didemnid taxonomy. *Didemnum candidum* is one of 4 or 5 white or gray species in this Family in Hawaii, and examination of a taxonomic key (e.g. Abbott et al. 1997) is required for positive identification.

HABITAT

In shallow water, primarily in the fouling community of protected harbors and embayment, but also on the reefs in Kaneohe Bay. Grows on all substrates, even living animals and algae.

DISTRIBUTION

HAWAIIAN ISLANDS

Throughout the main Islands, and possibly Northwestern Hawaiian Islands

NATIVE RANGE

Unclear, perhaps Indo-Pacific

PRESENT DISTRIBUTION

Worldwide in warm seas

MECHANISM OF INTRODUCTION

Unintentional, as fouling on ships' hulls.

IMPACT

Fouling species. Ecological impact unstudied in Hawaii, observations suggest some competition for space with other shallow-water species in harbors and embayments.

ECOLOGY

(see Feeding and Reproduction for previously discussed ascidians)

REMARKS

The name *Didemnum candidum* has been applied to a staggering number of populations of a similar-looking taxon around the world; the species may be one of the most widely-recorded ascidians in the world (Van Name, 1945; Eldredge, 1966). Its cosmopolitan nature recalls Van Name's (1945) famous statement regarding this species: "I am far from being able to overcome the fear that I am confusing more than one species...". More than 50 years later, the species is still in need of revision.

Records from Hawaii commence with Paul Galtsoff's collections in 1930 from Pearl and Hermes Reefs (Tokioka, 1967). Eldredge (1967) reported it from several stations on Oahu (Kaneohe Bay, Ala Wai Yacht Harbor, Pearl Harbor, and off Barber's Point) based upon collections from 1961 to 1963. Long (1974) and Hurlbut (1991) further reported upon Pearl Harbor populations.

Hurlbut (1991) examined patterns of larval abundance, settlement, and juvenile mortality in Pearl Harbor. *Didemnum candidum*'s greater abundance at shallow depths on floats as compared to greater depths on pilings is due to greater larval settlement near the water surface directly related to the surface location of larvae-producing adults, and to the larvae being photopositive and geonegative. She also noted that colonies of *Didemnum candidum* on settling plates at 0.5 meter depth are capable of releasing larvae at 6 to 8 weeks of age.

Originally described from the Red Sea, it was reported in the 1880s and 1890s from stations as far spread as Brazil, New Zealand, the Antilles, and off Mozambique indicating that some measure of wide-spread dispersal by ships had already been achieved. It now also occurs in Australia and New Zealand, the western Pacific Ocean, Indian Ocean, the western Atlantic Ocean, and the Mediterranean, as well as western Europe, and the Philippines, Gilbert, Palau, and Galapagos Islands (Tokioka, 1967). Whether it originated in the Indo-Pacific, or elsewhere, is not clear.

REFERENCES

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