

Spiny cup-and-saucer shell

Phylum Mollusca
Class Gastropoda
Subclass Prosobranchia
Order Neotaenioglossa
Family Calyptraeidae



Photo R. DeFelice

DESCRIPTION

Low conical limpet-like shell with apex spirally coiled. Dorsal surface of shell ray-white with spirally arranged spines or knobby projections. Ventral surface of shell purple or black and smooth with a distinct cup-like projection (from Kay 1979).

Another introduced intertidal gastropod, *Crepidula aculeata* (Gmelin, 1791), is superficially similar to *Crucibulum* when viewed dorsally. The ventral is smooth with similar coloration, but with a shelf or deck, rather than a cup.

Another alien gastropod, *Crepidula aculeata*. (Photo R.DeFelice)

HABITAT

In harbors and embayments, on pier pilings, coral rubble and basalt rocks from the intertidal to 8 m.

DISTRIBUTION

HAWAIIAN ISLANDS

Throughout the main islands

NATIVE RANGE

Southern California to Chile

PRESENT DISTRIBUTION

World-wide in warm seas

MECHANISM OF INTRODUCTION

Unintentional, as fouling on ships' hulls

IMPACT

Fouling organism. Ecological impact unstudied, some competition for space with native intertidal species likely.

ECOLOGY

Feeding

Crucibulum spinosum is a ciliary feeder.

Reproduction

These gastropods are protandrous hermaphrodites, changing during the course of their life from a small

male into a full-grown female (Kay 1979). They spawn throughout the year in Kaneohe Bay and can account for 90 percent of the veliger component in the Bay in certain areas (Taylor 1975).

REMARKS

Like many nonindigenous species, this small fouling gastropod species appeared in the Hawaiian fauna soon after World War II. Keen (1971) noted an Eastern Pacific distribution from California to the Gulf to Tomé, Chile. Springsteen and Leobrera (1986) report it as introduced to the Philippines. Given the volume of ship traffic between Pearl and Honolulu Harbors and the Philippines, the appearance of *C. spinosum* in other Pacific harbors is not a surprise. It is probably now much more widespread, but goes unreported.

Edmondson (1946) appears to have been the first to remark on its presence in Honolulu Harbor. By the late 1950s it was widespread around Oahu (Burgess 1959). Ulbrick (1969) reported that it occurred on pieces of dead coral or basalt rocks dredged from sand and rock bottom at 5 to 8 meters in Kaneohe Bay and that it was also found on seawalls and experimental trays put out for oyster spat. It is now a common intertidal and shallow water throughout the main islands, and continues to be reported in the literature.

REFERENCES

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