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DESCRIPTION OF EGG CASES AND EGG MASSES OF THE HELMET *CASSIS MADAGASGARENSIS*

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ABSTRACT

Cassis madagasgarensis egg masses are described. They are composed of vase-like structures, free standing, but joined at the base. Each vase is 2 mm wide by 8 mm tall. Inside each vase are 100 to 300 whitish spheres 0.5mm in diameter.

INTRODUCTION

The Queen Helmet, *Cassis madagasgarensis*, has been studied in terms of its habitat and food sources and some of its anatomy (Hughes and Hughes, 1971; Hughes and Hughes, 1981; Lindsay and Gerace, 1991; Moore, 1956). In June 1991 during the Fourth Symposium on the Natural History of the Bahamas one or two of the animals that were being maintained in an aquarium in the lab at the Bahamian Field Station laid three batches of eggs. A search of the literature has failed to turn up a description of these egg masses. A picture was published of one of the egg masses in our paper, but it does not show any details of the structures.

METHODS

Five Queen Helmets were obtained from the New Providence area and maintained for a study in aquaria at the Bahamian Field Station on San Salvador, Bahamas. The eggs were laid in the aquarium at this time.

DESCRIPTION

The egg masses were attached to the solid substrate of the fiberglass walls of the aquarium in which the animals were maintained. The egg masses were approximately four inches above the sandy bottom. A sandy habitat was available on the bottom, but the egg masses were not such that they could be deposited in a sandy environment. They needed a solid substrate such as would be provided by a rocky bottom, a reef outcrop, or perhaps a sponge wall.

The egg masses consisted of 23, 102 and 160 vase-like structures (Figure 1) that were free standing, but which were joined together at the foot of the vase to a flat base plate that was like an extension of the vase foot (Figure 2). The base plate was 2.5 to 7.5 cm in diameter and was almost circular. Each of the vases was 8 mm tall by 2 mm wide and each had a short extension from the upper rim that was thin and flexible.

Inside each vase was a clear fluid in which were suspended a number of spheres (170-300) of whitish material, presumably individual eggs. These spheres were approximately .5 mm in diameter.

CONCLUSIONS

The closely related King Helmet, *Cassis tuberosa*, feeds on many of the same echinoderms, and is often found on sandy bottoms in or near *Thalassia* beds feeding on *Lytechnius*, or on the sand dollar *Mellitus sexquiperforata*. Over the last three years three *C. tuberosa* have been found in places that did not fit this sandy habitat. Two were in rocky tide pool areas along the shore west of the pier at French Bay and one in the bar-bottom area towards the north end of

Figure 1. Drawing of a single vase of an egg mass of *Cassis madagasgarensis*. Drawing by Mary Jantzi.

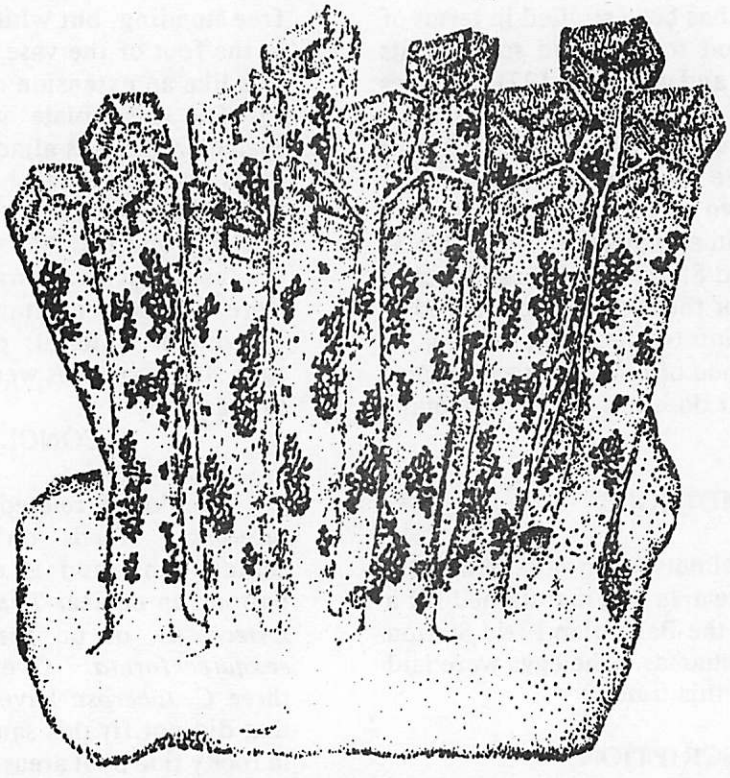

Figure 2. Drawing of an egg mass of *Cassis madagasgarensis* showing the individual vases on a common plate or base. Drawing by M. Jantzi.

Long Bay, along the shore opposite Snapshot Reef. It is true that they may have been hunting rock urchins. However, they have not been seen in April or early May in these rocky areas, but only in the middle to end of May. It is suggested that the *C. tuberosa* was looking for a site to deposit eggs.

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