

Finding of (Conidae - Gastropoda) from Pondicherry Coast, South East Coast of India

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Abstract: Marine gastropods *Conus virgo* (Linnaeus, 1758) and *C. bayani* (Jousseaume 1872) were reported for the first time from Pondicherry, South east coast of India. Two adult specimens are found in Kalapet region of Pondicherry coast, India in May 2010. These are the characteristic organisms of the molluscan fauna of the Bay of Bengal and the ecological features are discussed.

Key words: *Conus* • Gastropoda • Pondicherry • India

INTRODUCTION

The predatory cone snails are among the most successful marine animals. The genus *Conus* consists of a large number of species, belonging to the family Conidae and class Gastropoda. More than 500 species are found distributed throughout the tropical Pacific and Indian oceans [1]. Presently, determination of *Conus* species is based mostly on the morphology and colour of the shell [2]. A need for an unambiguous taxonomic classification of species of *Conus* Linnaeus, 1758 has become highly relevant due to the use of *Conus* venom in neurobiological research and in drug discovery [3]. Despite it being the most abundant species of east and west coast of India, little quantitative information has been gathered on key aspects of its biology and ecology. Among diverse molluscan fauna found at Kalapet of Pondicherry coast, species of *Conus virgo* and *C. bayani* (PUDEES- 2 & 3) is the first record and the key for diagnosis of the group was detailed here.

MATERIALS AND METHODS

Geographically the study area lies within the boundaries of latitudes 11°46'03" to 11°53'40" North and longitudes 79°49'45" to 79°48'00" East (Fig. 1). Collected species placed in labelled plastic tubs and fixed in 5 % of buffered formalin- seawater mixture. Identification based primarily on monograph, a field guide to the common invertebrates of the east coast of India [5].



Fig. 1:

SYSTEMATICS

Phylum: Mollusca
Class: Gastropoda
Sub class: Caenogastropoda
Order: Neogastropoda
Family: Conidae
Genus: *Conus*
Species: *virgo*
Conus virgo (Linnaeus 1758)

Diagnosis: A large solid species, spire low to medium height. Aperture narrow, fine spiral grooves and axial growth lines present. Young shells uniformly yellow, becoming white in mature specimens, with deep bluish violet at the base, somewhat darker towards apex; sometimes with several slightly darker transverse bands varying in width and position (Fig. 2). Periostracum is leathery, thick, opaque and brown; smooth except for Collabral growth lines.



Fig. 2 *Conus virgo*

Common Name: Virgin cone

Habitat: Shallow water sand and rubble of reef flats

Size: 150 mm

Feeding: *C. virgo* is a vermivore, feeding on terebellids and other polychaetes.

Distribution: Indo-Pacific, except Hawaii, India.

Conus bayani (Jousseaume 1872)

Genus: *Conus*

Species: *bayani*

Diagnosis: Moderately lightweight, with good gloss in fresh specimens; elongated Sides of the body whorl nearly straight and tapering to a narrow base; body whorl with about 12-15 moderately strong oblique ridges at the base, these separated by shallow grooves which are finely punctate; rest of the body whorl smooth (Fig. 3). Shoulder broad, carinate; spire moderately tall, extremely deeply concave; spire sharply pointed, the early 5-8 or more whorls finely nodulose in un-eroded specimens. The suture in concave, body whorl white to pinkish or cream, variously covered with deeply yellowish brown blotches and vertical streaks; these tend to form two broad broken spiral bands above and below the mid body whorl. Aperture is very narrow, straight; outer lip straight, sharp, thin and fragile.

Common Name: Bayani's Cone

Habitat: Shallow muddy bottoms

Size: 70 mm

Feeding: They feed on small crustaceans and marine worms

Distribution: India, Sri Lanka, Red Sea to Somalia; probably in Madagascar



Fig. 3 *Conus bayani*

DISCUSSION

In view of the rich diversity in the marine realm, there are innumerable predators and it has become necessary for these gastropods to develop an effective defence mechanism. The cone snails inject a highly poisonous paralyzing toxin by means of a harpoon-like mechanism. Few of the larger species can fatally sting Man. There have been 30 recorded cases of human envenomation by *Conus* species, some of which were fatal [5]. The venom possesses a diverse mixture of pharmacological agents that make them valuable tools in biomedical research. Pondicherry coastal area is polluted due to the discharge of industrial, domestic and agricultural wastes through small tributaries and channels into the Bay of Bengal [6]. In addition the study area Kalapet of Pondicherry coast has natural environmental handicaps which result from its isolated position and various manmade stresses are considered to be mainly responsible for a decline of *Conus*. Results from the present study mandate additional special searches for other specimens of the found species of Conidae are necessary in the coastal zone of Pondicherry to obtain additional information. Further study on Conidae of shallow water are necessary should be done in terms of monographic works and marine scientists should be encouraged to study the other aspects on this animal.

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