New Record of Crinoid *Comanthina belli* (P.H. Carpanter, 1888) from Andaman and Nicobar Islands

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**Abstract:** A new report of Crinoid species *Comanthina belli* belonging to Order Comatulida and family Comasteridae was investigated from Andaman and Nicobar Islands of Indian subcontinent. The detail account of taxonomic characters and morphological features of this Crinoid is described in the present paper.

**Key words:** Crinoid • *Comanthina belli* • New Report • Morphological Features

**INTRODUCTION**

In the phylum Echinodermata, five extant classes are known of which Crinoidea exist at the top hierarchy level of these taxa. Crinoids represent 600 species all over the world of which only 80 species were reported from Indian subcontinent and 50 species from Andaman and Nicobar Islands [1]. This coastline provides other varied habitats such as rocks, sand, mud, mangroves which provide rich settlement of echinoderms in the coastal and offshore habitats of these islands. At earlier Clark [2-7] describes the taxonomy of crinoids from Indian subcontinent. Sastry [8, 9] also provided annotated checklist of Echinoderms in Andaman and Nicobar Islands as well as in India. Recently, Sadhukhan and Raghunathan [10, 11] reported two Ophiuroids and new record of sea star *Nardoa tuberculata* as new record from Andaman and Nicobar Islands. The present paper described newly recorded crinoid *Comanthina belli* from Ritchie’s Archipelago of South Andaman (Fig. 1a and 1b).

**MATERIALS AND METHODS**

During survey, Photographs (Sony-Cyber shot, Model-T900, marine pack, 12 megapixels) of this specimen was taken by SCUBA diving at a depth of 15m in Sir Huge Ross Island of Ritchie’s Archipelago, South Andaman. Identification was done on the basis of morphological features following literature of Clark [12] and Arguelles *et al.* [13] were used for this purpose.
Fig. 2: Details of *Comanthina belli*. A. Centrodorsal with division series. B. IIBR and IIIBr series. C. Structure of centrodorsal. D. IIBr showing syzygy at the base of the IIIBr. E. Brachial segments containing cirri. F. Orientation of brachial segments.

**RESULTS**

*Comanthina belli* (P. H. Carpanter, 1888), Fig. 1a and 1b  
**Systematic Position:**

- Class: Crinoidea, Miller, 1821
- Order: Comatulida, Clark, 1908
- Family: Comasteridae, Clark, 1908
- Genus: *Comanthina*, Clark, 1909

**Material Examined:** ZSI/ANRC-7794; Date and place of collection-21.05.2012, Sir Huge Ross Island (Lat: 11°47.433’N; Long: 93°05.045’E). No of example: 2 (Wet preservation/70%Alcohol) Diameter of centrodorsal: 185.387mm (Fig. 2C); Length between two segments: 177.839mm (Fig. 2F).

**Key Characters:** Proximal pinnules very flexible and with some of the terminal segments modified to form a comb; mouth near the edge of the disc and anal tube approximately central ………………………

**Family: Comasteridae:** The most external III Br series of each ray is usually two, the internal one four. Arms may present upto 200 …………………………………

**Genus: Comanthina:** 10-38 arms are present; anterior arms may be markedly longer; cirri XIII-XL with 12-18 segments……………………………………………………

……*Comanthina belli*

**Description:** Arms are ragged with few side branches varying from 10 to 38 in number and curled above the
body. Anterior arms may be markedly longer; cirri 13-40 with 12-18 segments; centrodorsal discoidal; radials hidden or with interradial corners visible; IIBr and following brachitaxes usually 4(3+4) (Fig. 2B), sometimes of 2 ossicles. Cirri are much reduced in size and number, often arranged discontinuously around the edge of the centrodorsal. The texture of the arms is smooth. Mouth is present at the edge of the disc and the interradial areas of the ventral surface of the disc nearly equally developed. The funnels are practically limited to the margin of the disc and the central or anal area is almost or quite destitute of them. Proximal and middle pinnules contain high dorsal process on their basal segments. Each distal segment bears dorsal tubercle (Fig. 2E).

**Colour:** The live specimen colour is yellow with brown patches on the pinnules. The colour also may vary in cream or white colour (Figs. 1a and 1b).

**Habitat:** Found under rocks or in cervices and often from dense clusters on shallow reefs up to the depth of 20 m.

**Distribution**

**India:** Andaman Islands (North Andaman, Middle Andaman and Ritchie’s Archipelago); Elsewhere: North Australia.

**DISCUSSION**

Echinoderms are efficient scavengers within their respective marine ecosystems and plays important ecological functions. Crinoids are among the least known echinoderms attributable to difficulty in their collection on account of their fragile nature, secretive habits and distribution in deep waters. Also, their identification requires patience and painstaking attention to morphological details [13]. In India, *Comanthina schlegeli* was enlisted earlier by Sastry [8]. Sadhukhan and Raghunathan [14, 15] reported five new reports of crinoids and four brittle star from Andaman and Nicobar Islands. The present report of *Comanthina belli* from Andaman coast increases total animal diversity index of these islands.

**REFERENCES**