New Records of Two Asteroids *Calliaster childreni* Gray, 1840 and *Pentaceraster horridus* (Gray, 1840) from the Bay of Bengal

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Abstract: This research describes two new records of the Asteroidea *Calliaster childreni* Gray, 1840 and *Pentaceraster horridus* Gray, 1840, from the Bay of Bengal. A detailed description of the little known species of given in to photographs.

Keywords: *Calliaster childreni, Pentaceraster horridus* sea stars, new record of echinoderms

INTRODUCTION

The family Goniasteridae is one of the families of sea stars containing about 40 Goniasterids are found in all seas from the sub littoral zone to depth of over 5000 m (Halpern, 1970). Goniasteridae and Oreasteridae are well represented in the Indian sea. As a result of this efforts the echinoderms of Gulf of Mannar, Palk Bay and Andaman and Nicobar Islands are well known (James, 1969, 1986, 1997). Among the various inhabitants of the coral reef ecosystem of Andaman and Nicobar Islands, echinoderms are conspicuous by their size abundance and role in the ecosystem altogether 224 species of echinoderms (Saxty, 2002).

Systematic studies on the sea stars from of Indian coast are poorly known till the present authors took up the study. In present study two new records Asteroida *Calliaster childreni* and *Pentaceraster horridus* are described is detail with photographs.

Genus: *Calliaster* Gray, 1840

Body rigid marginal plates large forming a conspicuous side-wall. Abactinal plates naked, no granules or spines on surface except on midradial plates (carinal plates). Some midradial plates bearing high conical tubercles, which are arranged in a longitudinal series.

Species: *Calliaster childreni* Gray, 1840


Material

Periyakuppum (Southeast coast of India)-1 specimen (Oct. 5th, 2002)

R/t = 65 mm /26 mm; Nagapattinum (Southeast coast of India)-1 specimen (Aug. 17th, 2003) R/t = 60 mm /28 mm were collected.

Description

Single madreporite 4 mm in diameter convex and with numerous radiating striations adambulacral armature with 6-8 ambulacral furrow spines and 2 enlarged sub ambulacral spines. Abactinal surface

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high conical tubercles (8 mm). Arms either flattened. Marginal plates large forming a conspicuous sidewall to the body, the upper surface usually almost flat rarely some what convex. No papulae on the lower side; interradial area rounded. Abactinal though sometimes more or less convex, 22-24 coarse angular granules. Abactinal plates conspicuously naked, sometimes with single high conical tubercles occupying the radial plates; coarse angular granules around the periphery of each plate; Arms broad terminally, only one or two of the distal-most supero-marginals contiguous aborally, some midradial plates have conical tubercles number of supero-marginal plates interradial to arm tip 10-11.

**Distribution**

China, Southern Japan (Clark and Rowe, 1971) Northern Taiwan (Chao, 1999) and India (present report).

**Genus Pentaceraster Doderlein (1916)**

The distal marginals and other plates covered with more individually-distinct and even-sized, usually projecting granules, dorso-lateral areas usually distinctly reticulate, the primary plates at the nodes often more or less convex or capped with rounded or conical tubercles and arranged in longitudinal series, some at least in longitudinal series, some at least of distal infero-marginal plates usually with enlarged single spines or conical projections.

**Pentaceraster horridus** (Gray, 1840)

*Pentacerus gibbus* et *horridus* Linck 1733, pl. XXV Fig. 40 *Oreaster nodosus* Michelin (1845): 2 pl. V. Fig. 7-8 pl. VI, Fig. 11-12. *Oreaster nodosus* Latken (1864): 142 (with synonyms *Pentaceros* belli *P. grizi* and *P. ludenii* all of de Laio, 1885) Gray (1840): 276. (as *Pentaceros*) Doderlein (1916): 432; Doderlein (1936); 345; Clark and Rowe (1971): 56; Ebert (1979): 71 (as *Pentaceraster*) Clark (1993): 311.

**Material**

Cuddalore (Southeast coast of India) 1-specimen (Oct. 5th, 2002) R/t = 63 mm/32 mm was collected.

*Calliaster childreni* Gray. 1840 Fig. 1a and b

![Fig. 1: (a) Aboral view and (b) Oral View](image-url)
Pentaceraster horridus (Gray, 1840) Fig. 2a and b

Fig. 2: (a) Aboral view and (b) Oral view

Description
The arms tapering short, highest at the five primary radial plates which may each be crowned by a high conical prominence abactinal plates convex. If skin obscures the plates then it is rough in texture, often with more or less numerous tubercles and the actinal plates are conspicuous and the abactinal plates are conspicuously granule covered, single madreporite 4 mm in diameter, convex and with numerous radiating striations, interradially, intero-marginal spines 4-5 conical spines are present, supero-marginal plates except interradially other plates conical spines are present, centre of the disc five radial occupied enlarged conical spines are present. Abactinal plates large conspicuously bivalved pedicellariae 1 mm long, interradial abactinal plates pedicellariae very long conspicuously easily 2 mm abactinal surface cover densely large granules are present. The primary plates of the upper side with elevations and these tending to form regular longitudinal series pore-areas usually well-defined. The carinal spines considerably enlarged. Sometimes also the dorso-lateral ones. Ambulacral armature with 7-8 furrow spines and pedicellariae present. Dorso-lateral spines numerous at the arms as well as the disc colour of specimen dark reds.

Distribution
It is known from Mauritius and Seychelles. It is reported have for the first the from the Bay of Bengal.

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