

东海角海星科一新种——细腕蔷薇海星*

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中国科学院海洋研究所最近在东海水深250米的一个站采到48个海星标本,属于蔷薇海星属 *Rosaster* Perrier, 1894 的一个新种。描述如下:

角海星科 GONIASTERIDAE Forbes, 1841

细腕蔷薇海星(新种) *Rosaster attenuatus* sp. nov. (图版 I; 图 1)

鉴别特征 R/r 为 3.1。体稍呈星形,腕远端颇细;上缘板颇狭,从上面看,板形成的边缘不明显,腕远端大部分上缘板彼此相接;反口面骨板呈板状,有内放射连接骨;侧步带板边缘直,有一行 9—10 个规则的栉状沟棘,远离沟棘有菱形亚步带颗粒 12—16 个,排成不规则的 2 或 3 行;偶尔有小的沟状叉棘;生殖腺成行排列。

描述 48 个标本大小差不多,辐径 R 45—58mm, 间辐径 r 14—18mm, 辐径为间辐径的 3.0—3.2 倍,平均为 3.1 倍。正模辐径 53mm, 间辐径 17 毫米,辐径为间辐径的 3.1 倍。

盘比较大而薄,反口面稍高起,口面平。腕 5, 从基部到末端逐渐尖细,腕远端很细,直径约 1.5mm, 横切面圆形。腕间弧宽圆。反口面骨板呈板状而低,近六角形,排列规则;中辐板宽大于长,较大的辐板周围有 18—24 个截形颗粒,中央有 40—50 个,近六角形,平而密集的颗粒。原始基板明显,稍大于其他反口面骨板。从体腔面看,六角形的辐板和侧辐板两侧有椭圆形内骨板相连,而板的前后则缺连接内骨板,因此,各板周围仅有 4 个(侧面)板(图 1:a)。各板有约 6 个皮鳃。无反口面叉棘。

上缘板狭,从上面看,长比宽大得多,在间辐弧,板略垂直,使身体边缘不明显。从间辐部中线到腕顶的上缘板数目为 29—32 个,平均为 31 个。第 15 板在辐中线和相对的板连接,从连接点向外,腕很快变狭细。所有上缘板盖有密集的和反口面相似的截形颗粒。上缘板偶尔有少数两个细颚的沟状叉棘。

下缘板在间辐部和上缘板相当,但在腕远端则和下缘板交错排列。颗粒和上缘板的相似。

口面间辐板四边形,排成 5 或 6 个规则的“ \wedge ”形,外行板延伸到第 4 下缘板,板面平,盖有比反口面骨板稍大的多角形颗粒。

侧步带板长大于宽,边缘直,具有一行 9—10 个规则的栉状方柱形沟棘,近口的一个沟棘较短。沟棘和亚步带棘之间有一宽的裸出区,亚步带棘呈菱形颗粒,数目为 12—16 个,排成不规则的 2 或 3 行(图 1:b)。

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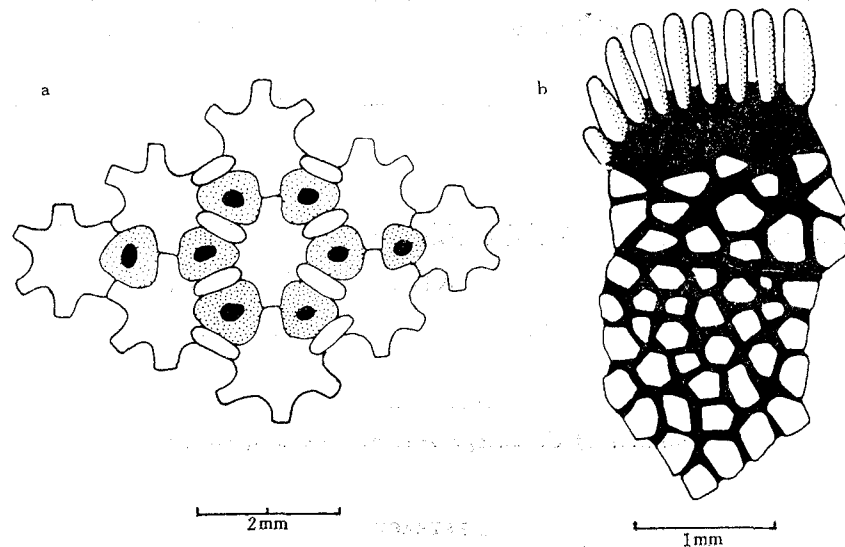


图1 细腕蔷薇海星 *Rosaster attenuatus* sp. nov.

a. 从体腔面观反口面骨板, 示内连接骨板; b. 第五侧步带板和口面间辐板。

口板具有一行 9—10 个与侧步带板相似的边缘棘, 但内侧 3 个棘逐渐增大, 且较平扁。亚口颗粒 15—20 个, 排成 2 或 3 行。

筛板小, 周围有 3 个大板, 其中最大的是原始基板。筛板位于中央到上缘板内缘之间三分之一处。肛门不明显, 靠近中央, 周围有 6 个颗粒。

讨论 这种海星因有附加的连接内骨板和很大的一部分上缘板在腕中线相接, 以及没有上步带板等特征, 故属于蔷薇海星属 *Rosaster*。但在蔷薇海星属内没有腕如此细, 上缘板如此狭的种。它的外观和其他已知的种大不相同。新种和采自新几内亚 (New Guinea) 外海的双点蔷薇海星 *Rosaster bipunctus* (Sladen) 有些相似, 但在缘板的形状和数目, 以及反口面骨板覆盖物上, 差别很大。

研究材料 正模采集号 KY12B-15, 登记号 IOAS-E00966, 东海, 北纬 $30^{\circ}30'$, 东经 $128^{\circ}30'$, 水深 250 米, 细沙底, 1981 年 8 月 5 日。副模采集号和正模相同, 登记号 IOAS-E00967。

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**ROSASTER ATTENUATUS, A NEW SPECIES OF THE
FAMILY GONIASTERIDAE (ASTEROIDEA)
FROM THE EAST CHINA SEA***

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ABSTRACT

Among the sea-stars collected recently by the Institute of Oceanology, Academia Sinica from the East China Sea at a station of 250 meters depth, 48 specimens representing a new species of the genus *Rosaster* Perrier, 1894 are described herein. The description is given below.

Family GONIASTERIDAE Forbes, 1841

Rosaster attenuatus sp. nov. (Pl. I; Fig. 1)

Diagnosis R/r 3.1. Form substellate, distal portion of rays rather attenuated; superomarginals rather narrow, not forming a distinct border to the body when viewed from above, and in contact distally for a considerable portion of rays; abactinal plates tabulate and with internal radiating connecting ossicles; adambulacral plates with a straight margin, bearing a regular comb of 9—10 furrow spines, widely spaced from these 12 to 16 prismatic subambulacral granules, arranged in 2 or 3 series; small entrenched pedicellariae occasionally present; gonads arranged in series.

Description The 48 specimens at hand are nearly the same size ranging from R. 45—58mm, r. 14—18 mm. R=3.0—3.2 r. The average of R/r is 3.1. In the holotype R=53 mm, r=17 mm, R=3.1 r.

Disc relatively large and thin, abactinal surface slightly elevated, actinal surface flat. Rays five, gradually tapering from base to a fine pointed tip, distal portion of the rays rather slender, about 1.5 mm in diameter, round in cross-section. Interbranchial arcs widely round. Abactinal plates low-tabulate, subhexagonal, arranged in regular series; median radial plates broader than long, larger radial plates with 18—24 truncate peripheral granules and 40—50 subhexagonal, flattened, crowded central granules. Primary basal plates distinct, slightly larger than the other plates. Seen from the coelomic, the hexagonal radial and adradial plates joined by internal elliptical ossicles at the laterals of the plates, and lack the ossicles binding consecutive plates so that there are only 4 (laterals) around each plate (fig. 1:a). Papulae six about each plate. No abactinal pedicellariae.

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Superomarginals narrow, much longer than wide as seen from above, and in interradial they are more or less vertical, forming an inconspicuous border to the body. From the median interradial line to the extremity, the number of superomarginals is 29—32, the average is 31. The fifteenth meets its fellow in the median line of ray, from this meeting point outward the rays become rapidly narrow and attenuated. All plates covered closely with truncate granules similar to those on the abactinal surface. A few small, entrenched slender 2-jawed pedicellariae occasionally found in the superomarginals.

Inferomarginals correspond to the superomarginals on the interradius and alternated with superomarginals distally. Granulation similar to that of superomarginals.

Actinal intermediate plates four-sided, arranged in 5 or 6 regular chevrons, the outer reaching fourth inferomarginal. The plates are plane and covered with polygonal granules, slightly coarser than those of abactinal plates. No pedicellariae.

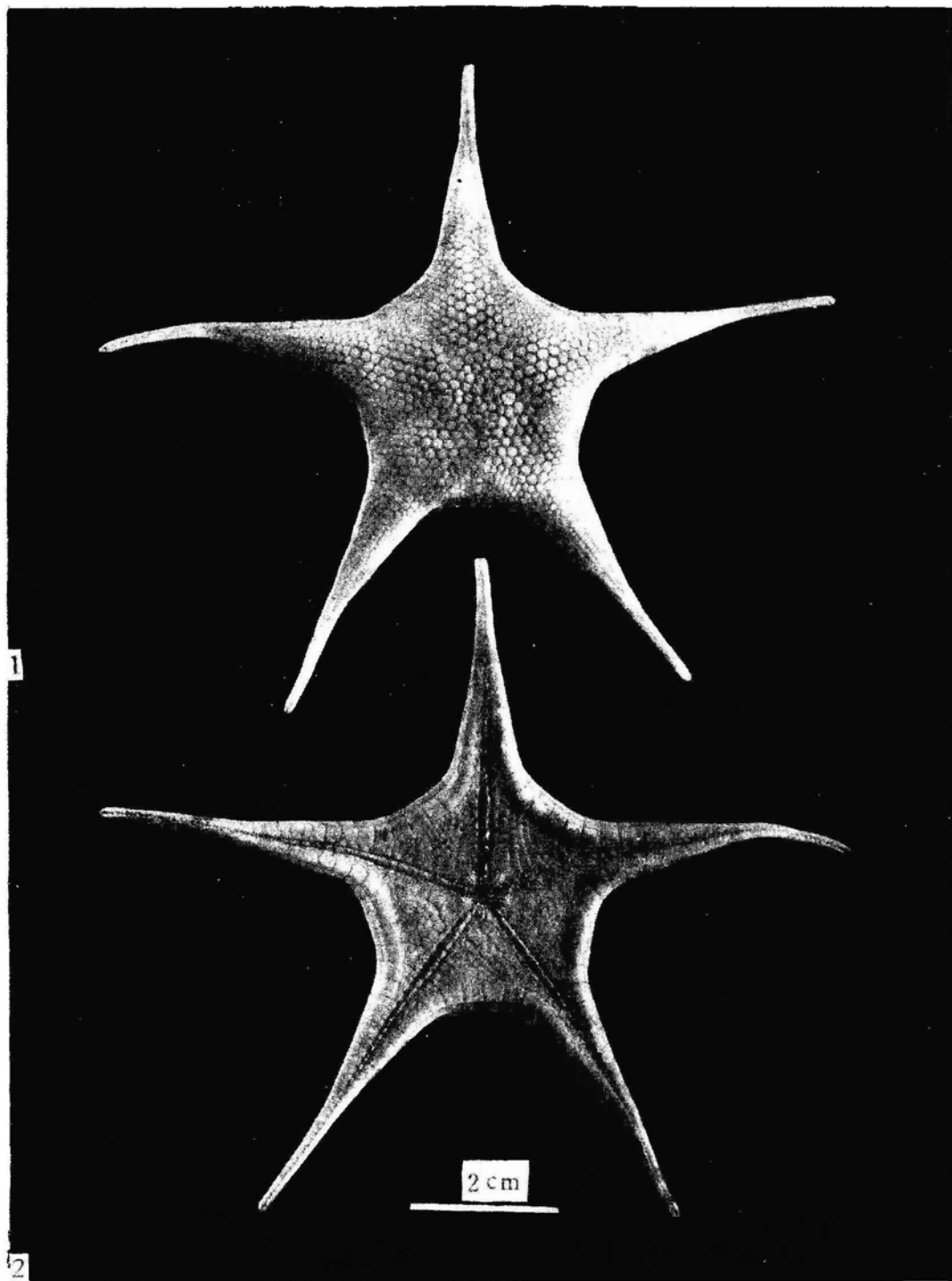
Adambulacral plates longer than wide, with a straight margin, bearing a regular comb of 9—10 four-sided furrow spines, of which the adoral one is shorter. There is a wide, bare area between the furrow spines and the subambulacral spines, which are in 2 or 3 irregular series of 12—16 prismatic granules (Fig. 1:b).

Mouth plates with a straight marginal series of 9—10 spines like the adambulacral plates except that the inner three become gradually enlarged and more compressed. Suboral granules 15—20, arranged in 2 or 3 series.

Madreporic body small, surrounded by 3 large plates, of which the largest is the primary basal plate. The madreporite is situated about one-third the distance between center and inner edge of superomarginals. Anus subcentral, not prominent, encircled by 6 granules.

Remarks This species which I am referring to the genus *Rosaster* agrees in having internal supplementary ossicle connecting the abactinal plates, and in having the superomarginals in contact medially over a considerable portion of the rays, and in lacking the superambulacral ossicles. So far as I know in the genus *Rosaster* there is no species with so slender rays and so narrow superomarginals. It has a very different appearance from any other known species. While in general this new species bears some resemblance to *Rosaster bipunctus* (Sladen) from off New Guinea, it differs very markedly in the shape and number of the marginal plates, and in the covering of the abactinal plates.

Material examined Holotype (IOAS-E00966), East China Sea, 30°30'N, 128°30'E, 250 meters, fine sand bottom, August 5, 1981. Paratypes (IOAS-E00967), same station as holotype. Both holotype and paratypes are deposited in the Institute of Oceanology, Academia Sinica.



细腕蔷薇海星 *Rosaster attenuatus* sp. nov.

1 正模,反口面; 2 正模,口面。