

Notes on the Mitridae of the Eastern Pacific II

The Genus *Thala*, with the Description of a New Species

BY

GALE G. SPHON

Los Angeles County Museum of Natural History, Los Angeles, California 90007

(Plate 6; 2 Text figures; 1 Map)

AMONG THE ALLAN HANCOCK FOUNDATION gastropods that are on loan to the Los Angeles County Museum of Natural History and in material at the California Academy of Sciences is an undescribed species of the family Mitridae from the Galápagos Islands. The morphological characteristics of this form indicate that it should be placed in the genus *Thala* H. & A. ADAMS, 1853. I would also place two other Eastern Pacific species, *Mitra gratiosa* REEVE, 1845, and *M. solitaria* C. B. ADAMS, 1852, in *Thala*.

Thala was used for some Eastern Pacific members of the Mitridae (DALL, 1921; OLDROYD, 1927), but was dropped in favor of *Mitromica* BERRY, 1958. However, I regard the latter as a synonym for reasons that are discussed later in this paper.

Thala H. & A. ADAMS, 1853

Thala H. & A. ADAMS, 1853, p. 178 (as a subgenus of *Mitra*).

Type species by S. D., COSSMANN, 1889: *Mitra mirifica* REEVE, 1845a. Recent, Capul, Philippine Islands. REEVE, 1845b, Conch. Icon. pl. 34, spec. 277

Micromitra BELLARDI, 1888, p. 147. Type species by S. D., COAN, 1966, *Micromitra taurina* BELLARDI, 1888. Middle Miocene, Europe

Mitromica BERRY, 1958, p. 94. Type species by O. D., *Mitra solitaria* C. B. ADAMS, 1852

DISCUSSION

Thala is a genus of small species that can very roughly be divided into 3 groups, but the groups are far too indistinct to form subgenera. The first group has a recurved canal and includes the type species *T. mirifica* (REEVE, 1845) and such species as *T. recurva* (REEVE, 1845) and *T. todilla* (MIGHELS, 1845). Unfortunately, the radula of no member of this group has been illustrated.

The second group is intermediate, with a slightly recurved canal; it includes such species as *Thala cernica* (SOWERBY, 1874), *T. milium* (REEVE, 1845), and *T. solitaria* (C. B. ADAMS, 1852).

The third group has a more truncate canal and includes *Thala floridana* (DALL, 1884), *T. gratiosa* (REEVE, 1845), and *T. ogasawarana* (PILSBRY, 1904). All the radulae of the genus *Thala* that have been figured (MCLEAN, 1967; CERNOHORSKY, 1966; HABA, 1943; and THIELE, 1931) seem to belong to this group.

BERRY's diagnosis of his taxon, *Mitromica*, was based on what is actually *Thala gratiosa* although he cited as the type species *Mitra solitaria*. *Mitromica* must remain with the species named as type, whatever BERRY's concept of *Mitra solitaria*.

THIELE (1931) considered *Thala* to be a subgenus of *Pusia*, based on the 3 prominent cusps of the rachidian plate and the sickle-shaped lateral plates. However, *Thala* has several morphological features not shared by *Pusia*. The most significant of these are the prominence of the lirations on the inner side of the labrum, the presence or suggestion of an anal sulcus, cancellate sculpture, and a subsutural band. These characters, as well as some features of the radula, make a distinguishable genus.

Both DALL (1921) and OLDROYD (1927) listed *Mitra orcutti* DALL, 1920, in the "section" *Thala* of the genus *Mitra*. However, MCLEAN (personal communication) has examined the holotype and finds the species to be a synonym of the turrid *Mitromorpha gracilior* (TRYON, 1884).

Thala gratiosa (REEVE, 1845)

(Plate 6, Figures 1, 2)

Mitra gratiosa REEVE, 1845, p. 53

Thala gratiosa (REEVE, 1845). - TRYON, 1882, p. 161

Mitra (Thala) solitaria C. B. ADAMS, 1852. - DALL, 1921, p.

87. - OLDROYD, 1927, p. 173. - SMITH, 1944, p. 33

- Mitromica solitaria* (C. B. ADAMS, 1852). - BERRY, 1958, p. 44. - McLEAN, 1967, p. 58, text fig. 1 (radula)
Mitra (Mitromica) solitaria C. B. ADAMS, 1852. - KEEN, 1958, p. 428
Mitra (? *Costellaria*) *nodocancellata* STEARNS, 1890, p. 213

Diagnosis: Shell small for the genus, adult specimens to 10 mm in length; black; ovate; sculpture cancellate; canal truncate; aperture narrow; labrum lirate within; anal sulcus becomes more pronounced with age.

Type Material: The holotype of *Mitra gratiosa* REEVE, 1845, is in the British Museum (Natural History). Type Locality: Six fathoms, Galápagos Islands, Ecuador, Hugh Cuming, collector. The holotype of *Mitra nodocancellata* STEARNS, 1890, is in the United States National Museum (no. 55490). Type Locality: Gulf of California, W. J. Fisher, collector.

Distribution: *Thala gratiosa* has been reported as *Mitra solitaria* from Point Loma, San Diego, California (DALL, 1921; OLDROYD, 1927; SMITH, 1944; KEEN, 1937). Apparently this is the northern limit of its distribution and it is rare in the San Diego area, for it has not been reported from there in over 30 years. It is unknown between San Diego and the Cape San Lucas area in Baja California. The species is found throughout the Gulf of California and south to Panama and the Galápagos Islands.

I have examined approximately 300 specimens of this species and while I do not consider it rare, it certainly is not a common species.

Discussion: DALL (1921) was apparently unaware of *Thala gratiosa* from the Galápagos Islands when he placed *Mitra nodocancellata* in synonymy with *T. solitaria*, because he cites the photograph of STEARNS' (1890) holotype as an example of *T. solitaria*. Apparently this error has been perpetuated for 2 reasons: 1) *Thala gratiosa* was originally described from the Galápagos Islands and never reported from the mainland, and 2) it was described as having a brown shell while *T. solitaria* was described as having a black one. This would indicate that Cuming had dredged a dead specimen, for *T. gratiosa* usually bleaches to a dark rust or brown color after the animal has died.

Thala gratiosa has an Atlantic analogue in *T. floridana* (DALL, 1884). The main differences between the 2 species, other than distribution, is that *T. floridana* is smaller and proportionally wider.

Thala solitaria (C. B. ADAMS, 1852)

(Plate 6, Figure 3)

Mitra solitaria C. B. ADAMS, 1852, p. 44. - TURNER, 1956, p. 87, plt. 5, fig. 1 (holotype)

Thala solitaria (C. B. ADAMS, 1852). - TRYON, 1882, p. 160, plt. 47, fig. 358

Mitromica solitaria (C. B. ADAMS, 1852. - BERRY, 1958, p. 44 (type designation only)

Mitra (Mitromica) solitaria C. B. ADAMS, 1852. - KEEN, 1958, p. 429, fig. 646 (figure on the right, after TURNER, 1956)
 Not "*Mitra solitaria*" of other authors

Diagnosis: Shell relatively large for the genus, adult specimens to 17 mm in length; black, occasionally with white nodes; sub-attenuate; sculpture cancellate; canal slightly recurved; aperture moderately narrow; labrum lirate within; anal sulcus becoming more pronounced with size and age; a subsutural band present.

Type Material: The holotype is in the Museum of Comparative Zoology at Harvard University, no. 186351. Type Locality: Panama, C. B. Adams, collector.

Distribution: The present report on the distribution of *Thala solitaria* is based on 10 specimens that show it to occur from Los Arcos, Banderas Bay, Jalisco, Mexico, to the Galápagos Islands.

With the exception of the holotype, one specimen from Panama in the Santa Barbara Museum of Natural History (cat. no. 06291), and 2 specimens from the Galápagos Islands in the California Academy of Sciences (loc. no. 27221), all other specimens examined are in the Los Angeles County Museum of Natural History.

Discussion: *Thala solitaria* is evidently rare and closely related to *T. gratiosa*. As in that species empty shells bleach to a dark rust or brown color. The 2 species have a very similar habitat. ADAMS (1852) said that *T. solitaria* was found "... Under stones near low water mark ...", and when *T. gratiosa* is found intertidally it is always found under rocks.

Thala jeancateae SPHON, spec. nov.

(Plate 6, Figure 4)

Diagnosis: Shell medium sized for the genus, white with brown markings, sub-acuminate; sculpture cancellate; canal slightly recurved; aperture moderately narrow; labrum lirate within; anal sulcus and subsutural band present.

Description of Holotype: Shell medium sized for the genus, length 9.4 mm, width 3.8 mm, length of aperture 2.4 mm; sub-acuminate; whorls 9; nucleus and first 3 postnuclear whorls smooth; sculpture of the remaining 6 of sharply incised spiral and axial lines giving a nodose-cancellate appearance; anal sulcus evident but faint; labrum thin with denticulations within; columella with 4 strong plaits; anterior canal short, slightly recurved; subsutural band set off by a row of nodose-cancellate bead-

ing; color white with lines and irregular smudges of brown, the base of a more intense brown; aperture, columella, and plaits porcelain-white.

Type Material: The holotype is in the Los Angeles County Museum of Natural History Invertebrate Zoology Type Collection (LACM-AHF 1202) and was dredged by the Allan Hancock Pacific Expedition of 1934 on January

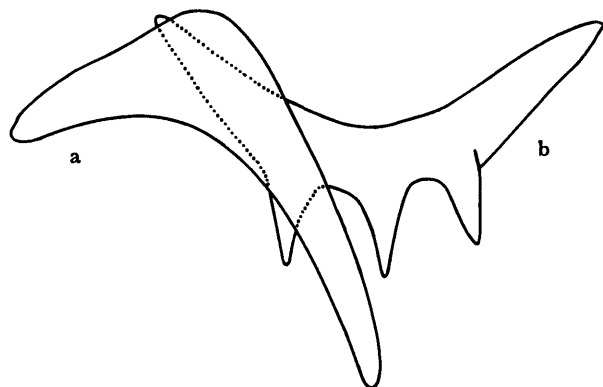


Figure 1

Radula of *Thala jeancateae* SPHON, spec. nov.
The rachidian plate and one lateral plate

15, 1934, station no. 155-34. There is one paratype (CAS 13204) and one hypotype in the California Academy of Sciences. The paratype is a dead specimen from the type locality, but no depth is given. The hypotype is a Pleisto-

cene fossil from James Island in the Galápagos Islands (CAS loc. no. 27255).

Type Locality: 50 - 60 fathoms off Tagus Cove, Albe-marle Island, Galápagos Islands, Ecuador ($0^{\circ}16'45''S$, $91^{\circ}22'52''W$).

Name: The name of this species, *jeancateae*, has been chosen in honor of Jean Cate (Mrs. Crawford N.) for her work with the Mitridae.

Discussion: *Thala jeancateae* can readily be distinguished from the 2 other Eastern Pacific members of the genus, *T. gratiosa* and *T. solitaria*, by the color. *Thala jeancateae* is white with brown streaks and smudges, while *T. gratiosa* and *T. solitaria* are black. *Thala jeancateae* differs in shape from *T. solitaria*, being more sharply attenuate, and from *T. gratiosa* in being acute rather than obtuse. The blunt spire of *T. gratiosa* also serves to separate it from the other 2 species which have sharp spires.

The sculpture on all 3 species is cancellate. The sculpture in *Thala jeancateae* and *T. solitaria* is very similar but differs from *T. gratiosa* in that both the spiral and axial ribs are wider and more nodose at their juncture. In *T. gratiosa* the sculpture is less nodose and the spaces between the ribs give the impression of forming squarish pits.

The radulae clearly separate 2 of the 3 Eastern Pacific species of *Thala*. (Unfortunately, I have not been able to obtain the radula of *T. solitaria*). *Thala jeancateae* has the typical three-cusped rachidian plate (see Text figure 1) indicated by CERNOHORSKY (1966, p. 120) for *T. ogasawarana* (PILSBRY, 1904) and *T. simulans* (VON MAR-

Explanation of Plate 6

Figure 1

Mitra gratiosa REEVE, 1845

Holotype. Galápagos Islands, Ecuador. Length 11.5 mm
Photograph courtesy of British Museum (Natural History)

Figure 2

Mitra nodocancellata STEARNS, 1890

Holotype. Gulf of California, Mexico. Length 10 mm
Photograph courtesy of Dr. James McLean, Los Angeles County
Museum of Natural History

Figure 3

Mitra solitaria C. B. ADAMS, 1852

Holotype. Panama. Length 0.68 inches
Photograph courtesy of Dr. Ruth Turner, Museum of Comparative
Zoology, Harvard University

Figure 4

Thala jeancateae SPHON, spec. nov.

Holotype. 50 - 60 fathoms off Tagus Cove, Albe-marle Island,
Galápagos Islands, Ecuador. Length 9.4 mm. Photograph courtesy
of Mr. Lawrence Reynolds, Los Angeles County Museum
of Natural History

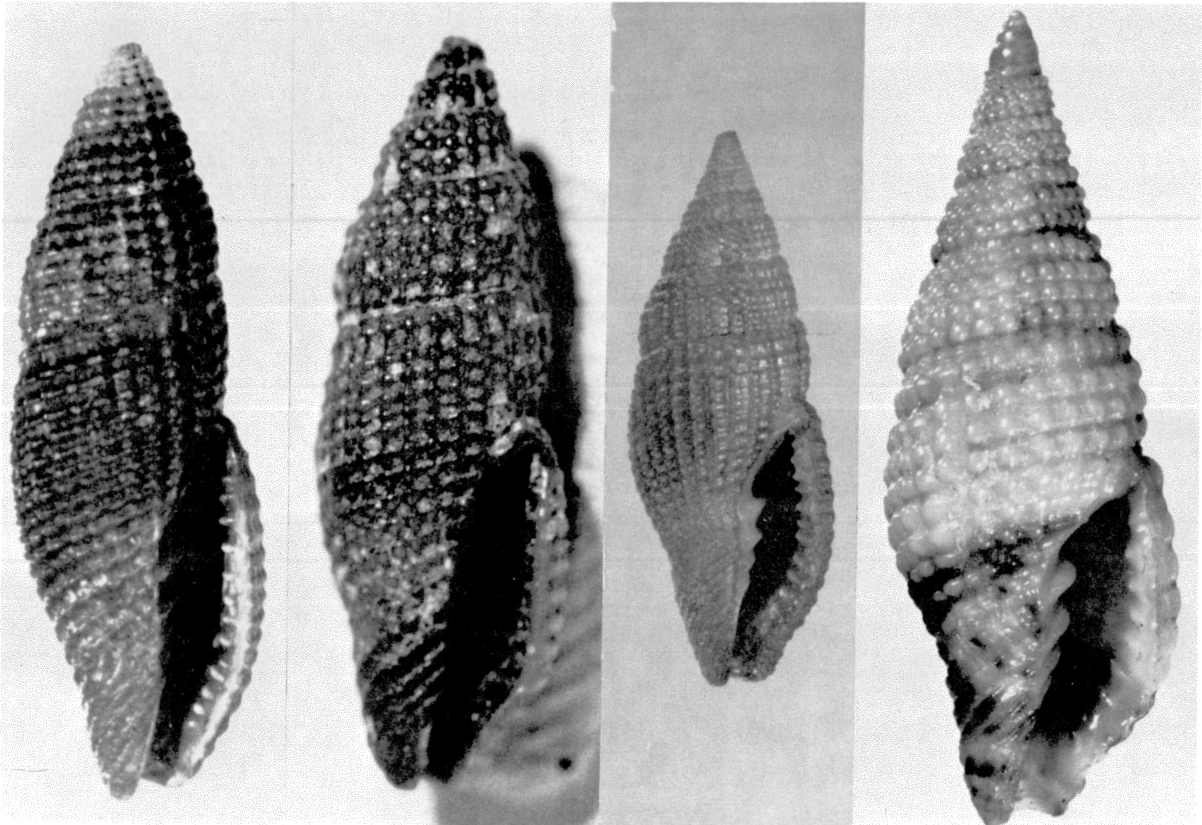


Figure 1

Figure 2

Figure 3

Figure 4



Localities: *Thala gratiosa* (REEVE, 1845), stations 1 to 19
Thala jeancateae SPHON, spec. nov., station 19
Thala solitaria (C. B. ADAMS, 1852), stations 11, 12, 16-19

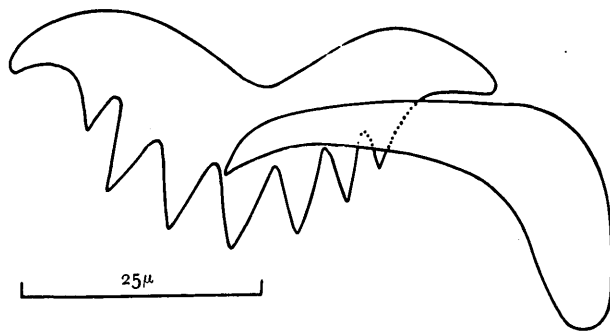


Figure 2

Thala gratiosa (REEVE, 1845) (after McLEAN, 1967)
The rachidian plate and one lateral plate

TENS). *Thala gratiosa* (figured by McLEAN, 1967, as *Mitromica solitaria*) is more aberrant (see Text figure 2) with 7 cusps on the rachidian plate.

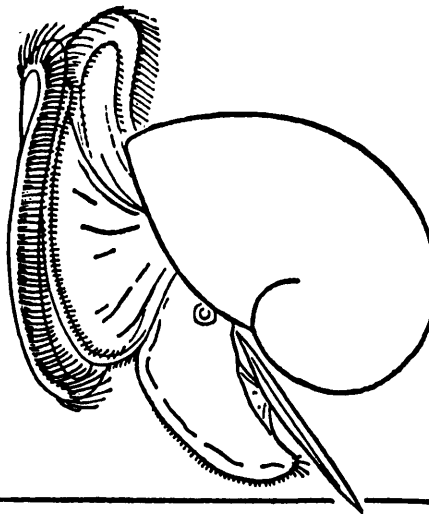
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Note: The various taxa above species are indicated by the use of different type styles as shown by the following examples, and by increasing indentation.

ORDER, Suborder, DIVISION, Subdivision, SECTION,
SUPERFAMILY, FAMILY, Subfamily, *Genus*, (*Subgenus*)
New Taxa

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