

**FIVE NEW TAXA FOR THE GENUS *CONUS*
(GASTROPODA: CONIDAE)**

by
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INTRODUCTION

Several samples from populations belonging to the genus *Conus*, which have been under study and observation for a certain time, often extending to several years, presently justify their publication as new taxa: the present paper proposes four new species and one new subspecies for the genus.

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Conus turritinus sp. n. da Motta

(PL. 1 — fig. 1a, 1b)

Description: Shell subcylindrical and turreted, with ten spiral whorls topped by a globose apex, surface of whorls being slightly concave and round-edged, with straight sides at its fold towards slightly channeled sutures. The shoulder is angulate, but not acutely keeled and having flat tapering sides. The spire shows no pronounced striation but arcuate lirae can be detected on its later whorls. The body whorl is smooth except at its anterior end, which is sculptured with about fifteen raised sulci. The shell is light yellow throughout and completely devoid of any ornamentation, except for a faint white band barely visible at its mid-section. Aperture is dull white, widening very slightly at its columellar fold.

Type locality: Trawled off the eastern coast of the Malayan Peninsula in South China Sea, full range unknown.

Holotype: 57 mm × 24 mm deposited in the Museum d'Histoire Naturelle, Geneva No. MHNG. 984.597.

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Paratypes: No. 1 44 mm × 20 mm deposited in Museum d'Histoire Naturelle, Geneva No. MHNG. 984.598.

No. 2 58 mm × 26 mm

3 50 mm × 21 mm

4 46,5 mm × 19.5 mm

for distribution to other museums.

Discussion: The new species compares closest in shape to a high-spired form of *Conus regularis* Sowerby, 1833 found in Costa Rica, whose spire has a similar form of turrification, but the whorl edges are more rounded. Its shoulder and sides of the body whorl are also alike but the pattern consists of rows of fine brown transverse thread-like lines which are continuously disrupted by blank areas of longitudinal colorless streaks. No other species possessing a scalariform spire bears even some slight resemblance. *Conus compressus* Sowerby, 1866 having eleven spiral whorls, has the first eight with tuberculate edges projecting above the suture, but the penultimate whorl is steeply sloping onto a carinate shoulder. It also varies in having a pattern of cloudy maculations of pink to dark brown. It is endemic to S. W. Australia.

The somewhat biconic *Conus segravei* Gatliff, 1891 again has a spire of a different type of turrification. It consists of ten whorls with flat surface, heavily striated, and projecting sharply at its edge. It has a pattern of two broad bands of light grayish-brown cloudy ornamentation and is another endemic species to South Australia.

Conus scalaris Valenciennes, 1832 has a steeply acuminate and pointed spire of fourteen stepped whorls, with a slightly concave surface and carinate edge projecting over its channeled suture, which, added to the variegated ornamentation seen in the species, suggests no particular basis for any useful comparison to be made. These remarks also apply to the turritiform type of spire of *Conus milneedwardsi* Jousseaume, 1894 and *Conus arbornatalis* da Motta, 1978, both being also extremely different in structure.

Conus nipponicus sp. nov. da Motta

(PL. 1 — fig. 2a, 2b)

Description: Shell turbinata, consisting of 10 whorls, first 2 or 3 obsolete beaded, and a pointed apex; top of whorls nearly flat with a carinate edge on the fold over closely-coiled suture, the penultimate whorl sloping to form an acutely keeled shoulder, which is wide with flat sides and constricted at its basal extremity. Spiral whorls have prominent arcuate lirae and the body whorl is

sculptured with rows of transverse ridges throughout its length, although some specimens occur with the upper part quite smooth, but having the same striation below its mid-section. Ground color is a light orange-brown with darker brown maculations on the spire in a radial pattern. A necklace of small brown dots decorates the shoulder and rows of spiral lines encircle the body whorl, superimposed with several rows of brown blotches axially aligned, simultaneously forming 3 interrupted circular bands. Aperture is laterally narrow and stained a light purple within.

Type locality: Trawled in deep sea off Kii-suido, east of Shikoku, Japan.

Distribution: Single specimens have also been found in the Strait of Taiwan and Cebu, Philippines of this exceedingly rare species.

Holotype: 24.9 mm × 13.5 mm deposited with the Museum d'Histoire Naturelle, Geneva, MHNG No. 984.637.

Paratypes: No. 1 30 mm × 17 mm
2 25 mm × 14 mm
3 28 mm × 16 mm

Discussion: The new species compares closest to *C. japonicus* Hwass in Bruguière, 1792 which has, up to now, never been unequivocally identified. However, it can be said that the description of *Conus japonicus* would fit that of *Conus nipponicus* in most respects, but in the absence of a type for verification, it would be best to use *nipponicus* as an hypothetical substitute name and regard it as a new species instead. *Conus memiae* Habe & Kosuge, 1970 has some resemblance in its shape, but is a pale pink shell with an elevated spire and a body whorl with grooves impressed and set regularly apart. It can also be recognized by its characteristic 1, sometimes 2, narrow white band standing out conspicuously amidst its other ornamentation of pink and brown. *Conus wakayamaensis* Kuroda, 1956, often mistaken for *japonicus*, is a somewhat more elongated brown shell with 2 or 3 solid brown spiral bands on a body whorl symmetrically grooved throughout its length. Other species, which are congeneric but different, are: *Conus eugrammatus* Bartsch & Rehder, 1943, *Conus baileyi* Rockel & da Motta, 1979, and *Conus tuberculosus* Tomlin, 1937.

Photographs courtesy of Carla-Ramos Cabrera.

Conus ciderryi sp. nov. da Motta

(PL. 1 — 3a, 3b)

Description: Shell subcylindrically obconic, consisting of 10 whorls with an exerted and pointed apex; top of spiral whorls flat with sutures very slightly undulate and sculptured with deep spiral grooves. Shoulder is nodularly coronate with flat sides tapering down its attenuated length, engraved with rows of evenly spaced grooves with narrow, minutely punctured interstice. Base color is creamy-white, decorated with brown horizontal bars of reddish-brown transversely encircling the body; here and there, stained with a few smudges of brown.

Aperture is narrow, uniform in width, and white within, with patches of brown visible at its labrum margin.

Type locality: Trawled in the Strait of Taiwan and not seen elsewhere to date.

Holotype: 31 mm × 14.4 mm deposited with Museum d'Histoire Naturelle, Geneva, MHNG. No. 984.636.

Paratypes: No. 1 39 mm × 18 mm
2 30 mm × 13.3 mm
3 32 mm × 16 mm

Discussion: Not many specimens have been found, but the few examined were trawled one at a time over a period of several years. Its structural morphology however is consistently the same. The new species compares closest to *Conus sibogae* Schepman, 1913, another obconical species almost identical in shape except for the shoulder being broader and acutely carinate, and the rows of body grooves more numerous and tightly engraved. *Conus caillaudii* Kiener, 1845 also has a depressed, conic spire with obtusely coronated apex, sharply protruding and tinged with pink. Its ground color is fulvus-yellow encircled throughout with fine thread-like lines of a darker color. *Conus hirasei*, a larger shell, exists sympatrically with the new species, but has a smooth body whorl, covered with rows of transverse lines of reddish-brown. Aperture is pale violet within.

Etymology: Named for Cid Derry, who has always shown more than a dealer's interest in helping research work. Tribute, long overdue, should be paid to conscientious persons like him, among others, who would go to great lengths to gather accurate data and without whose intervention, we would

not have available much of the study material to up-date existing museum records.

Photographs courtesy of Carla-Ramos Cabrera.

Conus nivalis sp. n. da Motta

(PL. 1 – 4a, 4b)

Description: Shell subcylindrical, smooth, with a pointed, turbinate spire, consisting of 11 whorls, 3 to 4 post-embryonic ones being obsoletely beaded. Surfaces of whorls are moderately convex with a very slight fold above the canalliculated suture. Shoulder is subangulate and moderately keeled, very slightly convex where the sides begin to taper down its attenuated length. Striation at the spiral whorls is not readily noticeable to the eye, but about ten rows of raised sulci are visible at the anterior end. Shell is immaculately chalk-white, without any ornamentation. Aperture is equilateral and porcelainous-white within its interior.

Type locality: Found in shallow water in Ragay Gulf, Southern Luzon, Philippines.

Distribution: Specimens have been collected by native divers in waters ranging from Bantangas, Quezon to Sorsogon and Samar del Norte. The species appears to be endemic to the northern shores of inland Sibuyan Sea.

Holotype: 46.7 mm × 20.4 mm deposited with the Museum d'Histoire Naturelle, Geneva, MHNG. No. 984.633.

Paratypes: No. 1 37 mm × 13.5 mm
2 58 mm × 25 mm
3 47 mm × 22 mm
4 53 mm × 24.5 mm
5 36 mm × 16.5 mm
6 42 mm × 18 mm

Discussion: This shell has been variously called: «*poehlianus*», «*submarginatus*» and «*furvus albino*» but, clearly, is none of these. *Conus poehlianus* Sowerby, 1887, although a predominantly white shell, is also found with two transverse bands of tan, and has a conic to convex spire. It attains lengths of over 90 mm, not seen in the new species. *Conus submarginatus* Sowerby, 1870 which is a small white shell and, to judge from its holotype in

the National Museum of Wales in Cardiff, appears to be a juvenile specimen, with a raised conic spire, of a still unidentifiable species. Certainly, the new species is unlikely to be *Conus furvus* Reeve, 1843 which could be recognized by its characteristic purple stain at its basal extremity, even in the case of albinistic specimens.

The new species is almost identical in shape to *Conus aegrotus* Kiener, 1845 but can again be distinguished by the purple stains at both its apex and basal end, even when the rows of minute dotted lines are often effaced. *Conus albus* Sowerby, 1887 is a natural white shell with a low conic spire, carinate shoulder, and having flat sides with a strongly plicated and contorted columella, features not seen in the new species. Coomans, Moolenbeek & Wils consider it an albinistic *Conus magus*. *Conus lacteus* Lamarck, 1810 non-Roding, 1798 comes closest because the shell is ovately subangulate and entirely chalk-white in color. However, its spire has a conic profile, and body whorl is somewhat more inflated from the shoulder down its convex sides. Also, the body whorl is completely incised with spiral grooves having an arched columellar wall, and the aperture widening somewhat towards its basal end.

Photographs courtesy of Museum d'Histoire Naturelle, Geneva.

Conus maculospira bangladeshianus sub sp. nov. da Motta

(PL. 1 — 5a, 5b, 6a, 6b)

Description: Shell turbinated, medium-sized with a low spire consisting of 11 whorls and an exerted apex; surface of whorls sloping and flat on top with a very slight fold over channeled suture, the last being convex as it forms a subangulate shoulder sloping roundly to sides which are flat. The spiral whorls are sculptured with continuous thread-like striae; body whorl is smooth but becomes strongly grooved below its mid-section down to its anterior end. The ground color is orange-brown with transverse lines of darker brown horizontal dashes, these coalescing just above the center of the body whorl and another below it to form 2 spiral bands. Aperture is equilateral and has a nacreous orange-colored interior.

Type locality: Trawled off the coast of Bangladesh in the Bay of Bengal, Indian Ocean.

Habitat: Specimens usually are found covered with a slushy black mud difficult to remove unless chemically treated.

Holotype: 43 mm × 23 mm deposited with the Museum d'Histoire Naturelle, Geneva No. MHNG. 984.595.

Paratypes: No. 1 45 mm × 22.5 mm deposited with the Museum d'Histoire Naturelle, Geneva No. MHNG. 984.596.

- No. 2 47 mm × 24 mm
- 3 38 mm × 18.5 mm
- 4 45 mm × 22 mm
- 5 41 mm × 18.5 mm
- 6 40 mm × 20 mm
- 7 36 mm × 17 mm

to be subsequently deposited with other museums.

Discussion: With the occurrence of *Conus maculospira* Pilsbry & Johnson, 1921 along most of the coast of Thailand, Burma and the opposite Indian shores, it would appear that a somewhat different habitat exists off the coast of Bangladesh from which a new subspecies has evolved. The type of *C. maculospira* found elsewhere is usually more heavily grooved and has a more angulate than rounded shoulder and whose aperture is porcelaneous-white. *Conus inscriptus* Reeve, 1843 is usually inscribed with 2 or 3 bands of large brown spots very like Chinese characters, encircled with single rows of smaller spots; its ground color being white, but the aperture violet flush in its interior. This species occurs mainly in the Red Sea and Arabian Gulf area. Its body whorl, compared with *C. maculospira*, is somewhat wider at the shoulder and less attenuated in body length. A tendency of the new subspecies is characterized by its ornamentations being less clearly defined and also irregularly marked.

Photographs courtesy of Chavana Chamorman.

RESUMO

O autor descreve quatro novas espécies e uma nova subespécie para o género *Conus*, algumas das quais se encontravam em estudo já desde há alguns anos.

As novas espécies são provenientes da Malásia, Japão, Formosa e Filipinas, respectivamente; a subespécie proposta vem da Baía de Bengala.

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- 1 a, b — *C. turritinus* sp. nov. (holotype)
2 a, b — *C. nipponicus* sp. nov. (holotype)
3 a, b — *C. ciderryi* sp. nov. (holotype)
4 a, b — *C. nivalis* sp. nov. (holotype)
5 a, b — *C. maculospira bangladeshianus* ssp. nov. (holotype)
6 a, b — *C. maculospira bangladeshianus* ssp. nov. (paratype 1)