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STUDIES ON CONIDAE (MOLLUSCA, GASTROPODA)

1. *CONUS PAPUENSIS* AND *C. KINTOKI*, TWO NEW SPECIES FROM DEEPER WATER IN THE WESTERN PACIFIC

H.E. COOMANS & R.G. MOOLENBEEK

ABSTRACT

Conus papuensis nov. spec. was dredged in Hansa Bay, New Guinea, between 60 and 90 m. The shell has a superficial likeness to *C. filicinotus* Schepman, 1913, from Indonesia. *Conus kintoki* nov. spec. was a nomen nudum since 1970 and is validated here. This species is living around the Philippines between 100 and 200 m. It was incorrectly united with *C. berdulinus* Veillard, 1972 from the Indian Ocean.

INTRODUCTION

Since 1979 an alphabetical revision of the recent (sub)species in the Conidae is being published by Coomans, Moolenbeek & Wils in "Basteria" (vol. 43, onwards). For that series the types and original descriptions are studied, after which for every *Conus* name an opinion about its taxonomic validity and systematical status of the taxon is given. Photographs of type specimens and other shells are supplied, next to distribution maps of valid species.

In these "Studies on Conidae" the authors will discuss special topics about the family. This first article contains the description of two new *Conus* species.

Conus papuensis nov. spec.
(figs. 1-2)

In 1980 the Zoological Museum Amsterdam (ZMA) received some specimens of *Conus* from New Guinea, provisionally identified as *C. cf. fili-*

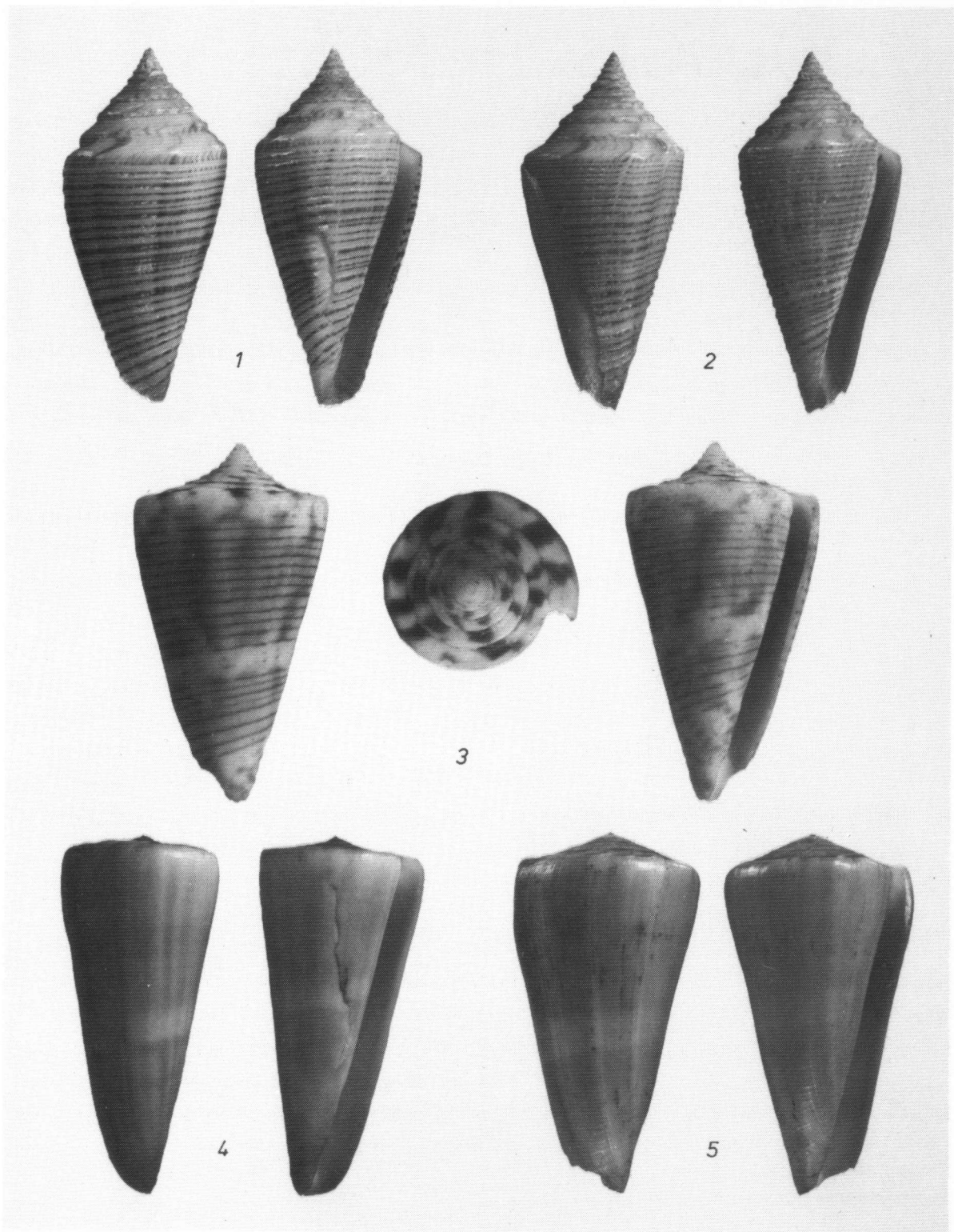


Fig. 1. *Conus papuensis*, holotype, Hansa Bay, New Guinea, length 26.3 mm (ZMA). Fig. 2. *Conus papuensis*, paratype, length 29.1 mm (ZMA). Fig. 3. *Conus filicinctus*, holotype, Madura Bay, length 27.4 mm (ZMA). Fig. 4. *Conus kintoki*, holotype, Cebu, Philippines, length 93.3 mm (ZMA). Fig. 5. *Conus berdulinus*, holotype, Réunion, length 68.4 mm (MNHN, Paris).

cinctus Schepman, 1913. The animals were live collected by Dr. and Mrs. B.M. Tursch during August 1973. After comparing the shells with the holotype of *C. filicinctus*, present in ZMA, the conspecificity could not be established. Further research convinced us that they represent a new species, not mentioned or figured from New Guinea by Hinton (1977).

Material studied.-

Holotype: length 26.3 mm, width 12.4 mm (ZMA, dept. Malacology). Three paratypes: 29.1 x 13.3 mm, 25.2 x 12.2 mm (both in ZMA), 29.0 x 13.7 mm (Inst. Roy. Sci. Nat. Belg. at Brussels). Other material: 21 specimens, measurements between 34.2 x 16.0 and 19.3 x 9.1 mm (coll. B.M. Tursch, Brussels); one specimen, 26.5 x 12.8 mm (coll. H. Saesen, Antwerp).

Type locality.-

Northwest of Laing Island in Hansa Bay (4°10'S, 144°50'W), New Guinea, dredged between 60-90 m (fig. 6).

Synonymy.-

Conus filicinctus Schepman; Kaicher, 1977: no. 1186 (Indonesia - New Guinea). The same specimen was figured as

Conus polygrammus Tomlin; Walls, 1979: 548 above left (off Samarai, Papua New Guinea).

Description of holotype.-

Shell small, rather slender, glossy. Outlines of body whorl almost straight, slightly convex near the shoulder, somewhat concave towards the base; surface covered from shoulder to base with about 23 weakly pustulated, fine spiral cords, those at the base are more prominent. Aperture straight and narrow, length 20 mm, width 1.7 mm. Spire high and slightly concave; nucleus somewhat eroded, with about 1½ whorls; 9 postnuclear whorls are stepped and have 3 fine spiral striae, which are better visible on the earlier whorls; the first four postnuclear whorls have very small coronations. Colour: the ground colour is creamy white, last whorl covered with 26-28 yellowish brown spiral lines of uneven thickness, most lines are running on the cords; just below the shoulder a series of transverse brown lines are marking

the growthlines, some of these brown lines cross the shoulder rim unto the spire, this pattern is also present on earlier whorls; inside of aperture white, except for the inner margin of the outer lip on which the brown spiral lines are visible.

Variability.-

Paratypes and other shells in general like the holotype, spire sometimes more concave, with 1½ nuclear and 8 to 10 postnuclear whorls. The last whorl with 25-40 yellowish brown uneven lines, about 20-30 pustulated spiral cords, but sometimes the upper part almost smooth. In one specimen (28.4 x 13.7 mm) the pustules gave the shell a granulated appearance. There is a thin periostracum with spiral rows of raised hairs.

Animal.-

The foot is light beige with brown to blackish brown marmoration, at the anterior end an orange transversal band. Siphon whitish to beige brown, speckled with light brown. Proboscis beige with red dots, eye tentacles light beige.

Ecology.-

The animal lives on sandy mud, in association with purplish coloured algae. In the same habitat, together with *Conus papuensis* live *C. proximus* Sowerby, 1859, *C. floridulus* A. Adams & Reeve, 1848, and *Oliva ceramensis* Schepman, 1911.

C. papuensis is vermivorous, the prey consists of Polychaeta.

Discussion.-

The new species is distinct from congeners in the following characters.

Conus filicinctus Schepman, 1913 (fig. 3) has a smooth body whorl, more angulated shoulder, no spiral striae on the spire; the last whorl is designed with 21 uneven brown lines; white areas with brown spots are present under the shoulder, at midbody and at the base; spire with brown dots. Holotype length 27.4 mm, width 15.0 mm. Type locality Madura Bay, Indonesia.

Conus polygrammus Tomlin, 1937 (new name for *C. multilineatus* Sowerby, III, 1875, non Pecchioli, 1864) has a smooth body whorl, turbi-

nated shape with a coronated shoulder. Colour yellowish with light subcentral belt and numerous dotted lines. Holotype length 40 mm, width 20 mm. Type locality unknown.

Conus aureolus Sowerby II, 1858, has a smooth last whorl, a low spire and angulated shoulder. Colour golden yellow with a light band at midbody, and 16 rows of lightbrown spots. Holotype length 19.1 mm, width 10.7 mm (Coomans c.s., 1981: 33, fig. 161). Type locality unknown.

Conus furvus forma *aegrotus* Reeve, 1849, is generally larger (to 60 mm) with a lower spire. Body whorl convex, smooth or very fine pustulated. Colour white with rows of minute pale brown dots, base brown. Distribution Philippines (Coomans c.s., 1979: 84, fig. 36).

Conus kintoki nov. spec.
(fig. 4)

Habe & Kosuge (1970:9) named and figured a shell as *Conus kintoki* from the South China Sea at about 200 m depth, measurements 102.0 x 49.5 mm. The description should appear in the Japanese Journal of Malacology "Venus", however, it was never published. Therefore *Conus kintoki* was a nomen nudum. However, the name *C. kintoki* has been used since by shell collectors.

Recently one of the original authors (Kosuge, 1979: 21-22, pl. 4, figs. 8-9) stated that his *C. kintoki* is conspecific with *C. berdulinus* Veillard, 1972.

We have studied the holotype of *C. berdulinus* (fig. 5) from Réunion and compared it with specimens of *C. kintoki* from the South China Sea and around the Philippines. Our conclusion is that they represent two distinct species. This conclusion was also expressed to us (in litt.) by Dr. D. Röckel. We herewith validate *Conus kintoki*.

Material studied.-

Holotype: length 93.3 mm, width 43.0 mm (ZMA, dept. Malacology). Two paratypes: 93.4 x 45.2 and 71.0 x 30.6 mm (coll. E. Wils, Antwerp). Other material: five specimens from Bohol, Philippines, measurements 91.5 x 41.6, 87.7 x 40.7, 84.3 x 38.7, 82.7 x 39.7, and

65.0 x 30.0 mm (coll. H. Saesen).

Type locality.-

Bogo, Cebu, Philippines (fig. 6), collected January 1979.

Synonymy.-

Conus kintoki Habe & Kosuge, 1970 (nomen nudum), Pac. Shell News 2: 9, textfig. (South China Sea, about 200 m).

Conus berdulinus "Veillard" in Kosuge, 1979 (non Veillard, 1972), Bull. Inst. Malac. Tokyo 1 (2): 21-22, pl. 4, figs. 8-9 (South China Sea, Philippines).

Conus coelinae berdulinus, in Walls, 1979: 232 below (fig.), 350 (Cebu, Philippines).

Conus kintoki Habe, in Kaicher, 1977: no. 1303 (Philippines).

Conus kintokii Habe & Kosuge, in Kohn & Riggs, 1979: 139 (name only).

Conus berdulinus (in part), in Röckel, 1980: Nr. 68, 2 figs. (Philippines).

Conus kintoki Auctorum, in Tucker, 1980: 9, no. 26 (valid species?).

Conus kintoki Azumai & Toki, 1974, in Prigent, 1981: 18. This reference of Prigent is incorrect. According to Mr. Toki (in litt.) he and Azuma did not use this binomen in 1974 or later.

Description of holotype.-

Shell elongate conical, thick and stout, with straight sides; body whorl with a low gloss and covered with numerous spiral threads and axial growthlines; shoulder sharply angulate; spire nearly flat, with a cord on the shoulder edge, suture distinct, whorls of the spire nearly flat, with very fine spiral striae. Colour light purple with yellow streaks, over the midbody a narrow whitish band; suture yellow. Aperture straight and white inside. The periostracum is not present in the holotype.

Variability.-

Paratypes and other material in general like the holotype. The spire is nearly flat to low, whorls of the spire almost smooth or with very fine striae. Colour lavender, light violet to purplish, with yellowish to orange. Periostra-

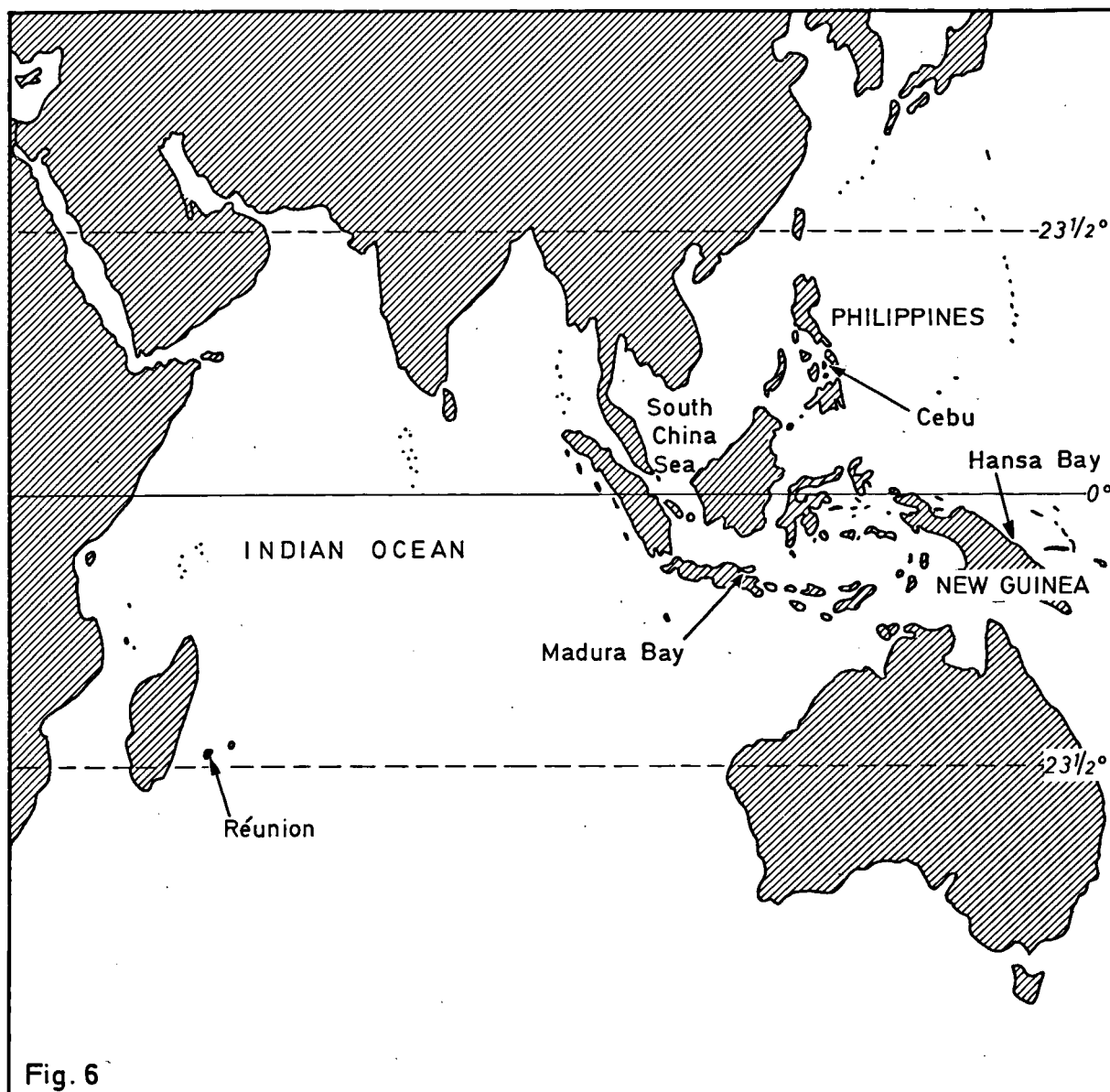


Fig. 6

Fig. 6. Localities mentioned in this paper.

cum thick, velvety and dark brown.

Distribution.-

Presently known from the Philippines and the South China Sea, in deeper water (about 100-200 m).

Discussion.-

Conus berdulinus Veillard, 1972 (fig. 5) is distinct from *C. kintoki* in the following characters: the last whorl is less elongate, smooth and shiny, without raised spiral threads; shoulder less angulate because the spire is somewhat elevated. Colour of the last

whorl pinkish, below the shoulder and at mid-body two vague bands are visible of a somewhat lighter pink shade, inside of aperture light mauve. Periostracum thin and lightbrown. Known from deeper water in the Indian Ocean, the type locality is off Réunion.

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Dr. H.E. Coomans,
R.G. Moolenbeek,
Instituut voor Taxonomische Zoölogie,
(Zoölogisch Museum),
Plantage Middenlaan 53,
1018 DH Amsterdam,
The Netherlands.

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