

A New Cone from the Bay of Bengal,
Darioconus bengalensis, n. sp.

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ベンガル湾産イモガイの1新種

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(図版 Plate VII)

A unique specimen of a cone was brought home by the R/V *Shoyo-Maru* of the Fisheries Agency of Japan in 1958. It was in the biological samples trawled by that vessel in the Bay of Bengal for the purpose of an exploratory fishing. The specimen had been preserved by freezing, but animal and operculum were not examined as they had been contractile into the spire.

Prof. Tokio SHIKAMA, the Yokohama National University, have shown the present specimen on the color frontispiece of his beautiful book, "Selected Shells of the World Illustrated in Color (II)", under the name of *Conus (Leptoconus)* sp. aff. *gloriamaris* HWASS. Dr. R. Tucker ABBOTT (1967)* criticized that it may be a close kin of *Darioconus aureus* (BRUGUIÈRE).

After a long search for literatures on an identity of the specimen, it was concluded that this cone may reasonably be treated as the new to science.

I wish to express my sincere gratitude to Mr. Shojiro SHIMURA, who was in charge of the Japanese Fisheries Agency research vessel *Shoyo-Maru* in 1958, for the opportunity of examining the present specimen. I am also indebted to Drs. Tadashige HABA and Masuoki HORIKOSHI for their kind advice. As color printing is generally expensive for the scientific journal, Prof. SHIKAMA's colored illustration may well relieve the description of the present report.

Darioconus bengalensis, n. sp.

Conus (Leptoconus) sp. aff. *gloriamaris*, SHIKAMA 1964, Selected Shells of the World III. Col. (II), frontispiece (col. illus. and note).

Shell medium in size, elongate, conico-cylindrical, thick and stout. Protoconch pinkish, mamillate, smooth, about $2\frac{1}{2}$ in number of turns. Teleoconch biconical, about 12 whorls. Early whorls ornamented with fine granules on the shoulder and opisthocyrst rugae on the sutural ramp. The spire high, regularly conical, cytoconoidal, ornamented with opisthocyrst growth lines; suture flush; sutural ramp weakly concave and periphery

* Notulae Nature, No. 400.

weakly angulated. The maximum diameter of the shell at the shoulder about thrice the diameter of the base at the abapical end of the canal, and the distance from the shoulder to the base about two and a half times the maximum diameter.

Body whorl transversely striated; striae impressed, fine, closely spaced, most distinct around the outer-lip at about three quarters from the shoulder to the base and almost indistinct on the other area of the body whorl. Aperture moderately broad, siphonostomous, flaring basally. Outer lip thin, edged, weakly concave at about halfway from the shoulder to the base. Adapical corner of the aperture deeply notched, forming an anal fasciole.

Ground color white with wavy longitudinal brownish lines, interrupted by white triangles arranged as scales, and broad brownish maculations disposed to form two interrupted transverse bands on the body whorl. The maculation streaked longitudinally with irregular darker brown lines. Spires similarly marked, but maculation and white ground color alternate to show a chequer pattern.

Interior of aperture white. Periostracum thin, yellowish, translucent.

Locality: The Bay of Bengal, about 50 m in depth.

Measurement: Height 96.7 mm, height of the spire 23.4 mm, maximum diameter 31.1 mm.

Type: Holotype only, tentatively preserved in Tokai Regional Fisheries Research Laboratory, Tokyo, Japan.

Comparison to Darioconus gloriamaris (CHEMNITZ)* and *D. aureus* (BRUGUIÈRE):

The important difference of the present new species from *gloriamaris* and *aureus* may be summarized as follows:

- (1) *Proportion*: The new species is longer (diameter about 31% of the height) than both *gloriamaris* (38% based on measurement of the (photograph of the holotype) and *aureus* (35% on a specimen from Amami-Ōshima Isl.). The spire is much higher in the new form (23.2% of the shell height) than in *gloriamaris* (21.4%) and *aureus* (20%).
- (2) *Outline*: The outline of the spire in the new species gives an impression of being "coeloconoid" (side concave), while that of other two species, "cytoconoidal" (side convex). The body whorl of the new species looks slightly concave or weakly narrowed near the middle, while those of the others, linear or weakly convex.
- (3) *Color pattern*: The principle of triangular scaly pattern is quite the same in all three species. The number of triangle on a single collabral line (imaginarily drawn at random) on the body whorl is more than 100 on *gloriamaris* but it is quite less than that in the new species. The spire of *gloriamaris* retains triangle patterns, but that of the new species is ornamented with brownish maculations that alternate with interrupted

* Descriptions and illustrations used for comparison are as follows:

REEVE (1843 *Conch. Icon. Conus*), SOWERBY (1857, *Thes. Conch.*, pl. 24, fig. 526), WEINKAUFF (1875, *Syst. Conch. Cabinet*, MARTINI u. CHEMNITZ, p. 150, pl. 7, fig. 1, 2), TRYON (1884, *Man. Conch.* vi, p. 89, pl. 29, fig. 90), BRUUN (1945, *Vidensk. Medd. fra Dansk. naturh. Foren* 18, p. 95-101, pl. 1) and KOHN (1963, *J. Linn. Soc. (Zool.)*, 45, p. 152, pl. 1, figs. 1-2).

white ground color showing a chequer pattern.

Three dark brownish color bands are distinct on the body whorl of *gloriamaris*, but only two bands are visible on the new species. In *aureus*, color bands are two in number, but they occupy the major portion of the body whorl and darker longitudinal streaks are far distinct than in the new species.

Comparison to other Indo-Pacific cones:

There are some known cones that have similar color patterns. They are such as, *Darioconus textile* (L.), *D. pennaceus* BORN, *D. abbas* BRUGUIÈRE, *D. victoriae* SOWERBY and some others, but all of the above-mentioned species are distinguished from the present species in short and squat shell. By the elongated outline, *Hermes auriconus* (BRUGUIÈRE) is somewhat alike to the present new species, but it is easily distinguished from the new one by its cytoconoidal whorl. *Leptoconus milneedwardi* (JOUSSEAUME) is strikingly similar to the present one not only in color pattern but also in a high-spined elongated shell. But, *L. milneedwardi* differs from the present new species in having smaller size, much coarser triangle scaly pattern, and much higher spire.

Concurrent molluscan assemblage:

Together with the present new species, some interesting molluscs were also found in trawl catch of the R/V *Shoyo-Maru* from the Bay of Bengal. As not much information on molluscan assemblage in the sublittoral zones in the Bay of Bengal is available, it may be noteworthy to add the list of molluscs concurrently taken with the new cone:

Stellaria solaris (LINNAEUS) var., *Strombus (Euprotomus) listeri* GRAY, *Gyrineum echinatum* LINK, *Gyrineum elegans* (SOWERBY), *Ficus gracilis* (SOWERBY), *Tonna fasciatam* (BRUGUIÈRE), *Murex trapa* (RÖDING), *Murex tenuispina* (LAMARCK), *Murex tribulus* (LINNAEUS).

要 約

鹿間時夫博士著“原色図鑑続世界の貝”(1964年北隆館)の巻頭にウミノサカエと新称されたイモガイの種につき記載する。殻の色彩文様および概観はウミノサカエ *Darioconus gloriamaris* あるいは ABBOTT の指摘するように、コガネイモ *Darioconus aureus* に似るが、次の諸点で区別される。(1) 比率: 新種はきわめて細長く最大径は殻高の 31% (ウミノサカエ 38%, コガネイモ 35%)。螺塔は殻高の 23.2% (ウミノサカエ 21.4%, コガネイモ 20%) 程度。(2) 外形: 新種の螺塔および体層側面むしろ凹, ウミノサカエコガネイモ共やや凸状。体層やや膨れた感じがある。(3) 色彩: ウミノサカエの鱗状紋は極めてこまかく、且つ螺塔部にも鱗状文様がみえるが、新種では鱗状文様粗で、螺塔は市松文様となっている。又体層の色帯が 2 本である点、3本のウミノサカエより、コガネイモに似るが、コガネイモのそれほど巾広くなく又暗色線も濃くない。

この鱗状文様はタガヤサンミナン、ヒメタガヤサン、ハナイモガイ等と共通であるが、それらは何れも太短い殻で新種とは異なる。又、殻の細長い点ではホンタガヤサンミナンに似る点もあるが、体層が狭小になっている点等で区別できる。又ハデミナンも似た点があるが、ハデミナンは小型の貝であるばかりでなく、鱗状紋も粗で又螺塔が著るしく高い点、新種とは異なる。

Explanations of Plate 7.

1. *Darioconus gloriamaris* HWASS. Type specimen in the Zoologisk Museum, University of Copenhagen. (Height 91.2 mm) After a souvenir picture card of the Zoologisk Museum presented to the present author by Dr. Z. NAKAI.
2. *Darioconus bengalensis* OKUTANI, n. sp. Type specimen. (Height 96.7 mm)

抄 録

アボット (1967) ウミノサカエの毒腺と地理的分布

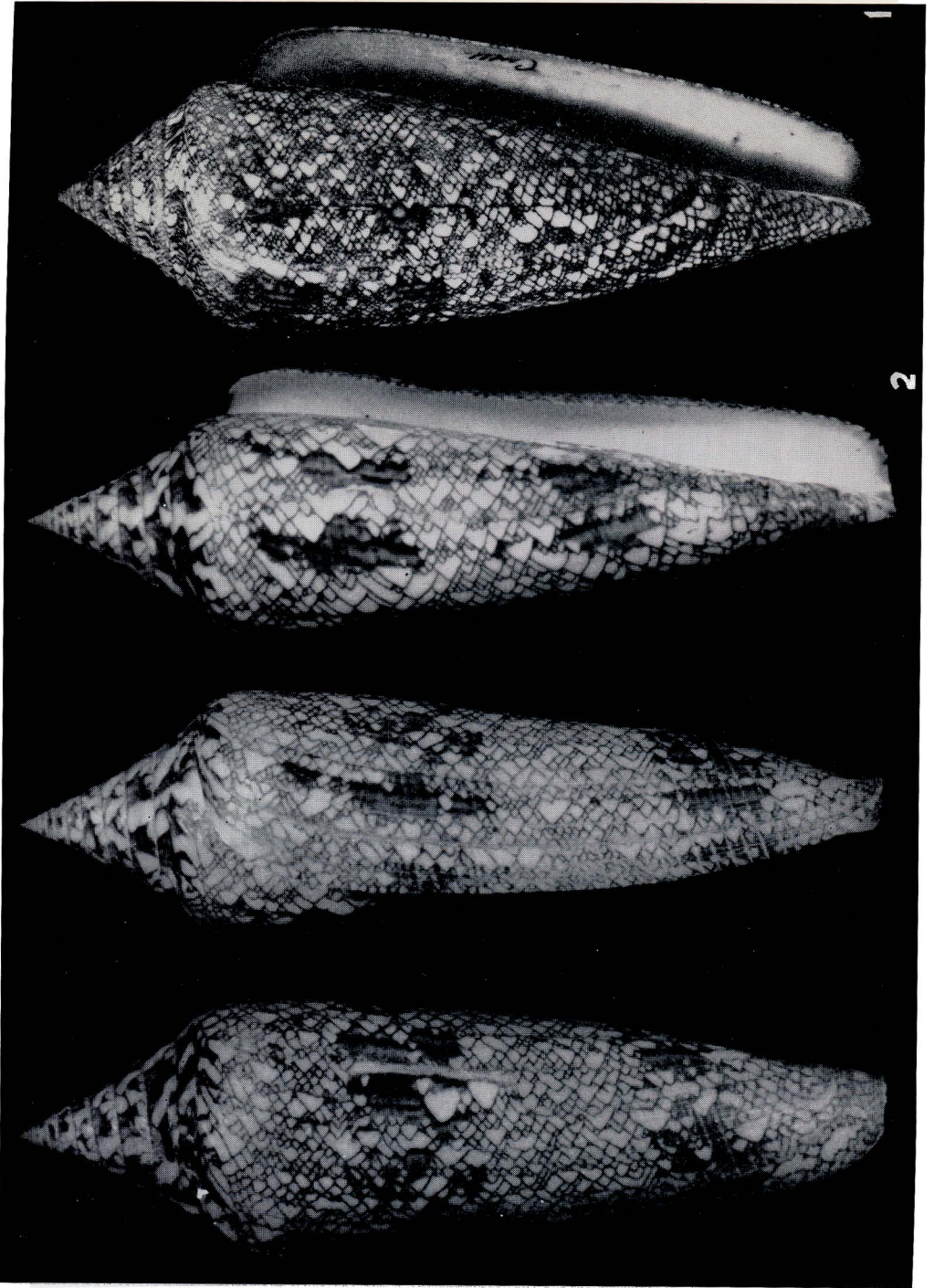
ABBOTT, R.T. (1967) Venom Apparatus and Geographical Distribution of *Conus gloriamaris*. *Notulae Naturae, Acad. Nat. Sci. Phila.*, no. 400, p. 1—8.

かつては珍稀なイモガイとして知られていたウミノサカエについて、S.P. DANCE (1966 貝の収集 *Shell Collecting* 第8章ウミノサカエ 'The 'Glory of the Sea,' pp. 238-258) はそれまで、44個標本があることについて述べた。所が著者はさらに19個の標本の記録をここに加え、総計63個あることとなった。

著者が調べた標本のうちヒリッピン群島からの1♂標本(殻高121.0 mm)の軟体部を剖見することが出来た。その結果、一般的特徴はタガヤサンミナン群と非常に似かよっていた。陰茎は斧型で、水管は生時恐らく赤、白、青黒の色帯があったものと思われる。吻はらっぱのように開いていて肉質の突起で縁取られている。毒腺は30 cm 余もあって殻高の3倍もあり、歯舌嚢には2列に並んだ14の歯舌があり、吻端にはすぐ発射できる22の歯舌があった。歯舌の型と比率の特徴は *C. canonicus* やタガヤサンミナンと全く同じで、他の猛毒性のあるイモガイから類推して本種も人命にかかわる毒性をもつものと思われる。

DANCE の報告した記録および新たに追加された19の標本(主としてヒリッピン群島、ビスマルク諸島、ソロモン群島、ニューギニアなど)の記録および更に補足的なデータに基づいてみるとウミノサカエの大体の分布範囲がルソン島—フローレス島—ニューギニア—ソロモン群島—カロリン群島(ヤップ)を結ぶ圏内にあることが判る。(奥谷喬司)

Plate 7



OKUTANI: A New Cone from the Bay of Bengal