

# On Some Noteworthy Marine Gastropoda from Southwestern Japan

By

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During his course of researching marine biocoenosis of Japan, the writer could gain some interesting gastropod species from Amami-Oshima Island, off the coasts of Kagoshima-, Wakayama- and of Aichi Prefectures. The specimens of these shells of warm Kuroshio type, now treated in this paper, are collected by him and Mrs. S. HAYASHI, A. SUZUMA and stored in the writer's collection in the Geological Institute, Yokohama National University. He could gain valuable suggestions and help from Mr. A. D'ATTILIO of New York, Mrs. P. BAUTISTA of Quezon, the Philippines, Mr. P. CLOVER of Yokohama, Dr. T. HABE of National Science Museum of Tokyo and Dr. K. HIRATA of Kagoshima University. He wishes to express his cordial thanks to them all.

*Columbarium pagoda costata* subsp. nov. (カセンイトグルマ)

(Pl. I, figs. 1, 2)

Holotype: An adult specimen from Hirado, Nagasaki Pref.

Referred specimens: A specimen from Hirado and four from off the coast of Kuriya, Fukui Pref.

Distribution: Japan Sea to off the coast of Nagasaki.

Description:

Shell not thin, elongate and spinose; creamy yellow to greyish white in colour; five whorls turreted, becoming gradually larger basally; nuclear whorls bulbous; smooth and light brown in colour. Whorl angulated, carrying sharp edge which has many leafy triangular spines, projected upward. Surface of whorl smooth with minute growthlines. Aperture subquadrate and basal area near axis extends forming a lengthened and narrow canal. Columella straight and very long; inner lip thin and extends over whorl base. Basal part of body whorl and columella carry many costae of tubercles, upper two of which eminent. Operculum large, linguiform, and projects basally. Tubercled costae more distinct in the specimens from Nagasaki than in those from Kuriya.

	Height	Width (excluded spines)	Aperture
Holotype.....	57.8	19.0	11.0×9.0 mm
Nagasaki .....	48.0	22.0	12.0×8.5
Kuriya .....	71.0	22.0	12.0×10.0
" .....	68.0	20.0	12.5×10.0
" .....	70.5	19.5	11.0×9.3
" .....	60.0	19.5	12.0×9.0

## Remarks:

This species is clearly distinct from *pagoda* LESSON by many tubercled costae of whorl base: in the latter there is a strong costae tuberculated at a middle length of body whorl base, but there is no other eminent costae as seen in this subspecies. *C. spinicincta* MARTENS from Western Australia is also distinguished by obsolete costae of whorl base.

*Coralliobia densicostata* sp. nov. (コウモリサンゴヤドリ)

(Text fig.)

1953. *Coralliobia fimbriata* (A. ADAMS), KURODA. Venus, vol. 17, no. 3, pp. 128-129, figs. 5, 6.

## Compared with

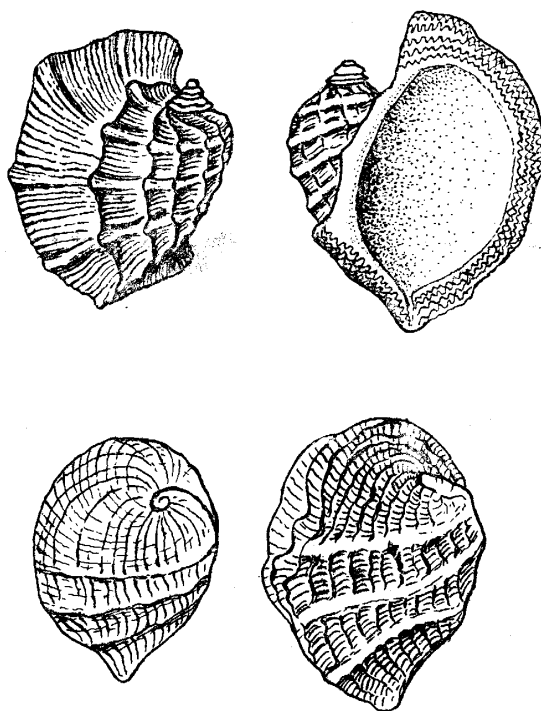
*Coralliobia fimbriata* A. ADAMS (ヒメコウモリサンゴヤドリ)

1852. *Concholepas (Coralliobia) fimbriata* A. ADAMS. Proc. Zool. Soc., vol. 20, no. 93.  
1880. *Magilus fimbriatus* (A. ADAMS), TRYON. Man. Conch., vol. 2, p. 217, pl. 69, figs. 419, 420, 422, 423.

Type specimens: Three specimens from Nase, Amami-Oshima Is., collected by TAKANASHI and the writer.

## Description:

Shell small sized, white, not high, flat, and carries five whorls. Spire relatively small, low and angulated, while body whorl large and expanded; aperture large, suboval, almost as long as shell and carries a dense lip which is platy, composing a subcircular ring. Inner portion of the ring broken; outer portion varixlike and finely corrugated; upper margin higher than apex; when inner margin of the ring fully composed, whorls invisible from apertural side. In upper view, shell rather flat and upper margin of aperture straight and longer than apex. Body whorl latticed, with five eminent spiral keels crossed by about nine distinct radiating costae; the former are thick, while the latter lamellated; interspace between costae becomes gradually wider distally, and the ultimate interspace is winglike, much larger than the penultimate one. Many fine striations run between spiral keels and intercross fine growth lines. Sculptures in general are like those of *Coralliobia lamellata* (HABE) or *C. sugimotonis* (KURODA). Height 11.5 mm, width



Text fig. Upper, *Coralliobia densicostata* sp. nov.  
Lower, *C. fimbriata* A. ADAMS.

9.5 mm, height of wing 12.5 mm.

Remarks:

This species is distinguished from *fimbriata* illustrated by REEVE and TRYON by the following characteristics: it has five spiral keels while *fimbriata* has three to four; has not so many radiating costae as *fimbriata*. The specimen described and illustrated by KURODA under the name of *fimbriata* from Ryukyu seems to be near this species. *Coralliobia fimbriata* is known from Indo-Pacific waters of the Philippines to Mauritius. *Coralliobia smithi* YENG from S. China Sea is another species which has obsolete spiral keels and undistinct radial costae.

*Leptoconchus exopolitus* sp. nov. (ツヤムロガイ)

(Pl. I, figs. 3-5)

Type specimens: Five specimens gained west of Shionomisaki, Wakayama Pref.

Distribution: Off the coast of Shionomisaki and its neighbourhood, southern end of Wakayama Pref.

Description:

Shell medium sized, flat, naticiform, thin, white, strongly lusted and has four whorls. Spire relatively small and low, while body whorl much expanded and large. Aperture large, irregularly oval, outer lip thin. Columella

short and callus thick. Surface of shell with many fine radial striations which are covered by smooth lustrous layer. Suture of whorl rather obsolete in adult shells.

Height.....	17.4	18.3	12.4 mm
Width.....	18.6	18.9	15.7
Aperture.....	10.1×13.3	9.7×14.4	8.9×9.8

Remarks:

This species is found in boring coral stocks of *Hydnophora exesa* (PALLAS) and *Physophyllia ayleni* (WELLS). In general, *Leptoconchus striatus* RÜPPEL is distinct from this species by higher shell, relatively larger body whorl, surface of shell with wavy, netlike striations etc. Spire of *Leptoconchus lamarckii* (DESHAYES) is covered partly by lustrous coating but its body whorls are not covered, nonlustrous, having numerous wavy striations; by these features this species is safely distinguished from *lamarckii*.

*Buccinum mysticum* sp. nov. (エンシユウバイ)

(Pl. I, fig. 6)

Holotype: An adult specimen gained at Miya, Aichi Pref.

Distribution: Ensyu-nada, off the coast of Shizuoka Pref.

Description:

Shell moderate-sized, thick, yellowish gray, seven-whorled, carrying a very thin, light brown epidermis. Whorls high, turrated and gradually increasing in size; shoulder inflated but not acute; suture distinct but not channeled. Aperture relatively large, suboval and outer lip thick; canal very short and wide; columella thick, short and straight; callus lustrous, white and thick. Whorl surface has numerous spiral striations, crossed by radial growth lines which become distinct near suture. Height 65 mm, width 30 mm and aperture 27×17 mm.

Remarks:

This is a deep sea *Buccinum* of Kuroshio type like *B. leucostoma* (LISCHKE) though much rarer. In general outline and shell construction this is rather like *B. striatissimum* SOWERBY or *B. bayani* (JOUSSEAUME), but shoulder is not so much inflated and surface sculpture are not so much crenulated as in the latter two. Also distribution area is very different. In *B. aniwanum* DALL whorl is more inflated, suture is shallower and columella is relatively longer.

*Mitra (Cancilla) melaniana* LAMARCK, 1835 (クロチユウカフデ)

(Pl. I, figs. 7, 8)

1835. *Mitra melaniana* LAM. Anim. sans vert., vol. 10.

1844. *Mitra nigra* CHEM., REEVE Conch. Icon. Mitra, pl. 5, fig. 35.

1847. *Mitra nigra* CHEM., SOWERBY Thes. Conch., fig. 4.

1882. *Mitra melanaica* LAM., TRYON. Man. Conch., vol. 4, p. 127.

Specimen described: An adult specimen gained at Tatsugahama, Wakayama Pref.

Distribution: Southwestern Sea of Japan along Pacific. TRYON described this species from Port Jackson, Australia and REEVE from Annaa Island, Pacific Ocean. Rare.

Description:

Shell large, solid, fusiform and high. Whorls nine, turrated, flatly convex and becoming gradually larger basally; in lateral view spire margin almost straight. Suture distinct and weakly stepped. Body whorl five-eighths of total height and inflated at middle. Aperture white, long, narrow, sublunar and extends lower to an open short canal; outer lip thin. Columella thick, straight, short and five plaited; callus weak. Surface very smooth and olive brown to dark chestnut brown with white streaks running longitudinally; many weak striations becoming distinct at base. Apex almost white to olive. Height 83 mm, width 22 mm and aperture 42×9 mm.

Remarks:

TRYON says *M. nigra* CHEM., *digna* A. ADAMS and *carbonaria* CUMMINGS are all synonymy. *M. chinensis* GRAY may be near this species but is distinguished by more inflated whorls, relatively shorter spire, unstreaked or unspotted colouration and by fewer columella plaits etc. REEVE regarded this and *M. chinensis* as fluviatile in habit, but this specimen is trawled from the waters of Kii Channel above 20 f. deep. The writer was donated by Prof. K. HIRATA a fossil specimen of this species from Moeshima Isle in Kagoshima Bay. It is greyish white with longitudinal streaks of light brown, 91 mm high, five plaited at columella, eroded at apex, having thick outer lip. HIRATA says that this fossil *Mitra* is also very rare.

*Asprella alabasteroides* sp. nov. (サナダイモ)

(Pl. I, fig. 9)

Type specimens: Two large and small specimens gained at Tatsugahama, Wakayama Pref.

Distribution: Kii Channel, rare.

Description:

Shell medium in size, rather solid, white, subrhomboidal in lateral outline with high spire and strong sculpture. It has ten whorls, with straight or slightly concave lateral borders; body whorl a little convex above; spire extended, slightly concave and acute; shoulder of whorl carinated and suture relatively deep. Epidermis thin and yellowish brown. Aperture long, narrow, becoming a little wider basally; outer lip thin and crenulated. Below shoulder

of body whorl are seen about thirty to thirty seven spiral cords, and above it four; three to four cords just below shoulder and five to ten of them at base are undivided, but the others paired; interspaces between cords of middle height are broader than cords and carry many strong radial lines which do not cross over cords. Brown coloured irregular patches arranged longitudinally as in *A. australis* (HOLTEN).

Remarks:

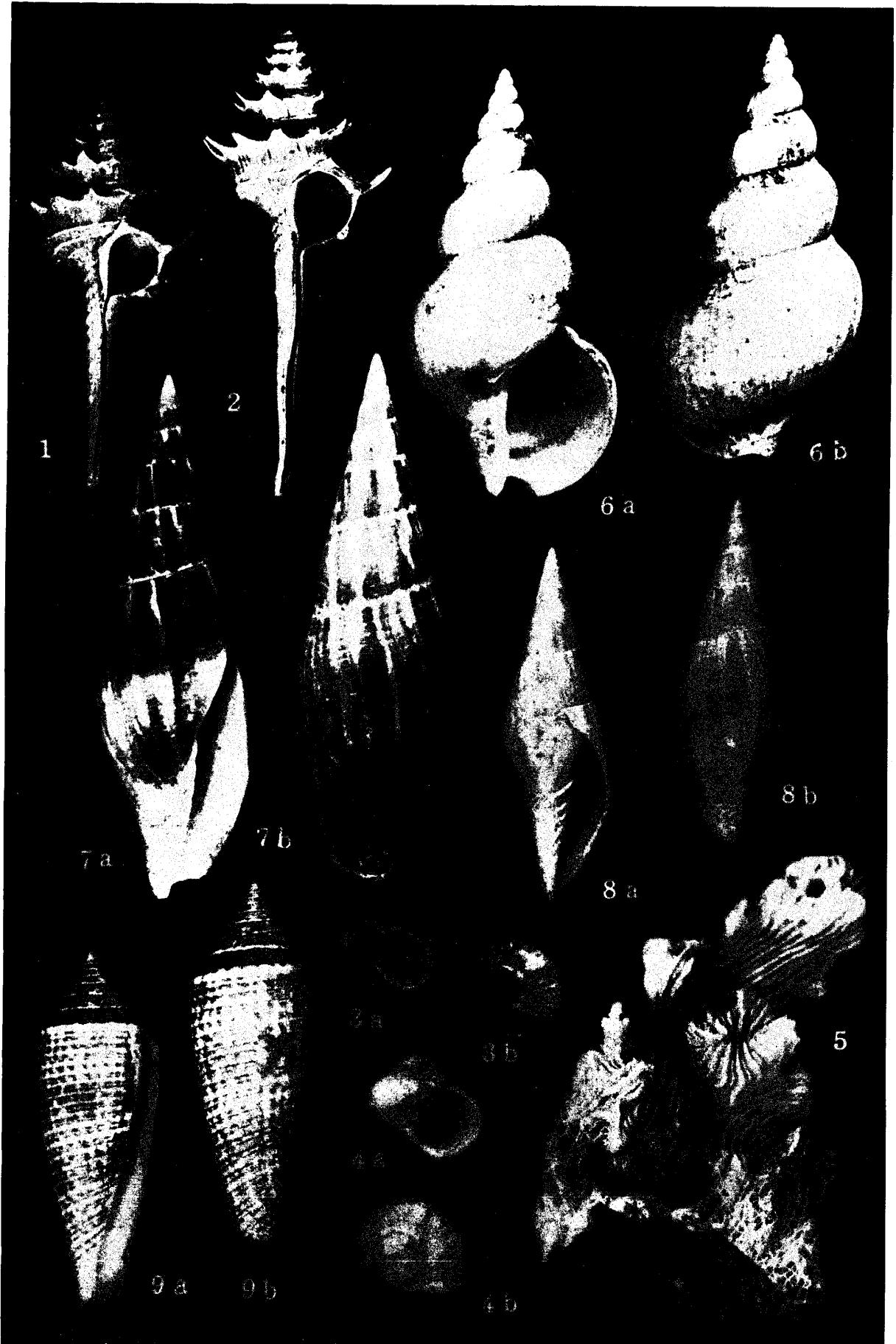
This species is very much like *A. australis* (HOLTEN) but is distinguished from it by relatively broader and straight interspace between spiral cords. In this respect *A. sulcata* may be near, but is distinct by shorter and more inflated body whorl and by many accessory radial cords between main radial cords. *C. alabaster* ADAMS & REEVE from Davao, the Philippines is nearest to this species; some authors regard this as *australis* synonymous with *C. mucronatus* REEVE or *C. orbitatus* REEVE, but *alabaster* is distinguished from this species by smaller size, lower whorls, light violetish-grey coloured shell, violet coloured aperture and by narrower interspace between spiral cords on upper part of body whorl.

### References

- AZUMA, M. 1960. Catalogue of the Shell-bearing Mollusca of Okinoshima, Kashiwajima and the adjacent Area, Shikoku, Japan.
- DALL, W. H. 1908. Descriptions of new species of shells, chiefly Buccinidae, from the dredging of the U. S. S. "Albertross" during 1906, in the Northwestern Pacific, Bering, Okhotsk, and Japanese Seas. *Smith Miss. Coll.*, vol. 50.
- , 1921. Summary of the marine shell bearing mollusks of the northwest coast of America, from San Diego, California, to the Polar Sea, mostly contained in the collection of the United States National Museum, with illustrations of hitherto unfigured species. *Inst. Unit. Stat. Nat. Mus.*, bull. 112.
- HABE, T. 1953. *Illustrated Catalogue of Japanese Shells*, no. 23. Xenophoridae, Columbariidae, Caecidae.
- , 1958. The Fauna of Akkeshi Bay, 25. Gastropoda. *Pub. Akkeshi Mar. Biol. St.*, no. 8.
- , 1961. Fauna of Shell-bearing Mollusks of the Sea around Shirikishinai, Hokkaido, 2. Gastropoda. *Faun. Flor. Sea Shirikishinai Mar. St.*, no. 3.
- KAWAMOTO, T. 1960. *Catalogue of Molluscan Shells of Yamaguchi Prefecture*.
- KURODA, T. 1953. New Genera and Species of Japanese Rapidae. *Venus*, vol. 17, no. 3.
- , 1960. A Catalogue of Molluscan Fauna of the Okinawa Islands.
- SHIKAMA, T. 1962. On Some Noteworthy Shells from Off Choshi, Chiba Prefecture. *Sci. Rep. Yok. Nat. Univ.*, sec. 2, no. 8.
- TERAMACHI, A. 1933. The Whelk Fishing in Toyama Bay. *Venus*, vol. 3, no. 6.

### Explanation of Plate I

- Figs. 1, 2. *Columbarium pagoda costata* subsp. nov.  $\times 1$ . 1, holotype from Hirado. 2, referred specimen from Kuriya.
- Figs. 3-5. *Leptoconchus exopolitus* sp. nov.  $\times 1$ . 3 and 4, type specimens from Shionomisaki. 5, specimen boring coral stock of *Physophyllia ayleni*.
- Fig. 6. *Buccinum mysticum* sp. nov.  $\times 1$ . Holotype from Ensyu-nada.
- Figs. 7, 8. *Mitra (Cancilla) melaniana* LAMARCK.  $\times 1$ . 7, specimen from Kii Channel. 8, fossil specimen from Moeshima Isle.
- Fig. 9. *Asprella alabasteroides* sp. nov.  $\times 1$ . Type specimen from Kii Channel.



Hasegawa photo.