日本古生物學會報告

(Transactions of the Palaeontological Society of Japan)

43. On Some Neogene Shells From Japan* (Part I.)

By

Kinji KANEHARA

(The Imperial Geological Survey of Japan. Received

May 13th; read June 19th, 1937)

In this paper, the writer describes some interesting fossil shells found in the Neogene beds of several localities, now preserved in the Imperial Geological Survey of Japan.

Genus *Melongena* SCHUMACHER 1817.⁽¹⁾

Melongena sazanami nov. spec.

Pl. 23 (11), figs. 10, 11, 12, 13.

Holotype:—An example from the Uyetsuki Series; preserved in the Imp. Geol. Surv. Japan.

Description:—Shell of medium size, biconical in outline, somewhat elongated, spired with apical angle of about 70 degrees and more. Spire conic, four preserved, strongly shouldered and flat-sided, separated by undulated and feebly depressed suture. Judging from the body whorl, periphery may be ovate and not so large. Outer lip not thickened. Inner lip covered with thin and narrow callus. Anterior canal partly broken, but seems narrow, elongated, and slightly geniculated. Sculpture entirely spiral. Two rows of tuberculum, anterior and posterior, developed, of which the upper forms a keel-like shoulder. Tuberculum, nine on ultimate whorl, eight on penultimate. Numerous rather uniform threads of regular magnitude developed on entire surface.

Dimensions:—72mm. in height, 52mm. in maximum diameter.

Comparison and remarks:—*Melongena brevispira* K. MAR-

* By the permission of Dr. S. YAMANE, Director of the Imp. Geol. Surv. Japan.

(1) Subgenus *Galeodes* s. s. and *Melongena* SCHUMACHER are synonymous, according to J. THIELE.

TIN⁽¹⁾, an Upper Eocene fossil of Java, seems closely allied to the present new species, although the former is provided with more rounded and elongated bodywhorl. *Melongena bucephala* LAM.⁽²⁾ and *M. ickei* K. MARTIN⁽³⁾ are provided with far lower spires.

Locality:—Yoshikawa-mura, Maniwa-gun, Okayama-Pref.

Geological horizon:—Uyetsuki Series.

Collector:—M. SATO, Geologist of our Survey.

Occurrence:—rare.

Genus *Turritella* LAMARCK 1799.

Subgenus *Hauastator* MONTFORT 1810.

Turritella sakakurai nov. spec.

Pl. 23 (11); figs. 1, 2.

Holotype:—An example from the Hacchorei Hard Shale; preserved in the Imp. Geol. Surv. Japan.

Description:—Shell high, turreted with apical angle of 10 degrees seventeen whorls preserved, all flat and spirally sculptured. Suture distinct but not deep. Wide spiral ribbon, situated close to upper suture, with faint spiral cord superposed on it, and seven cords developed, the lowest of which is subsutural. Of these seven cords, fifth from top rather stronger than others. Oblique ribbon developed on basal disk near its margin. Aperture angulate and continuous. Lines of growth, very fine and close, *Hauastator*-like.

Dimensions:—84 mm. in height, 13 mm. in diameter of the last whorl.

Comparison and remarks:—The present new species is characterized by its small apical angle and high turreted form. No species either allied to it or resembling it has so far been described or reported from Japan. These species, such as *Turritella andenensis* OTUKA⁽⁴⁾, *T. kiiensis* YOKOYAMA⁽⁵⁾ and *T. perterebra*

(1) K. MARTIN: Dienst. Mijnb. Nederl., Wetens. Meded., No. 18, s. 22, Taf. 3, fig. 12.

(2) K. MARTIN: Samm. Geol. Reichs. Mus. Leiden, Neue Folge, Bd. 1, p. 207, Taf. XIV, figs. 206, 207.

(3) K. MARTIN: Samm. Geol. Reichs. Mus. Leiden, Neue Folge, Bd. 1, p. 309, Taf. XLV, fig. 73.

(4) Y. OTUKA: Bull. Earthq. Res. Inst., XII, pt. 3, p. 623, Pl. LI, Figs. 100, 113.

(5) M. YOKOYAMA: Jap. Jour. Geol. Geogr., Vol. II, No. 3.

YOKOYAMA⁽¹⁾, are all sculptured in the similar way, but have larger apical angle and no sutural ribbon. The last mentioned difference is observed between *Turritella scripsensis* HANNA⁽²⁾ and the present species. *Turritella infralirata* NAGAO⁽³⁾ has more regular and numerous spiral cords than the present new species.

Locality:—Minami-Nayoshi-gawa, Nayoshi-gun, South Karafto (Sachalin).

Geological horizon:—Hacchôrei Hard Shale.

Collector:—K. SAKAKURA, Geologist of the Mitsubishi Mining Co.

Occurrence:—rare. Only one fairly well-preserved specimen was obtained.

Genus *Cuspidaria* NARDO 1840.

Subgenus *Cardiomya* A. ADAMS 1864.

Cuspidaria makiyamai nov. spec.

Pl. 23 (11), figs. 3, 4, 5, 6, 7, 8, 9.

Holotype (Fig. 8):—An example from the Asagai Sandstone; preserved in the Geological Institute, Faculty of Science, Imperial University of Tokyo.

Description:—Shell large for the genus, moderately inflated, rostrate. Beak prominent, central, strongly incurved and turned backwards. Posterior end rapidly narrowing, forming rostrum which tapers backward at angle of about 40 degrees. Rostrum not so long, subtruncated terminally. Ventral margin broadly rounded; anterior also rounded broadly and in-rolled, joining the ventral by a smaller arc. Disk sculptured with twelve to fifteen elevated, simple, radial threads, the whole crossed by fine, concentric lines of growth. The radials increase in prominence near posterior end, each of them accentuated toward ventral side. We find only close-set lines of growth on rostrum. Resilium under beak faintly observed in present specimens.

Dimensions:—

	Length	Height	Thickness
Holotype (Fig. 8)	21.5 mm.	17.0 mm.	10.3 mm.

(1) M. YOKOYAMA: Jour. Coll. Sci., Imp. Univ. Tokyo, Vol. XLV, Art. 2, p. 11, Pl. II, figs. 2-5.

(2) HANNA: Univ. Calif. Publ., Bull. Dept. Geol. Sci., Vol. 16, No. 8, p. 308, Pl. 49, fig. 10.

(3) T. NAGAO; Sci. Rep. Tôhoku Imp. Univ., (Geol.), Vol. XII, No. 1, p. 102 (92), Pl. XV, figs. 27-33.

Paratype (Fig. 3)	24.0	13.0	11.0
(Fig. 4)	15.0	12.0	7.0
(Fig. 5)	20.1	16.0	11.0
(Fig. 6)	18.0	13.0	9.2
(Fig. 7)	19.7	15.5	11.0
(Fig. 9)	16.2	13.5	10.0
	15.0	11.5	8.0

Comparison and remarks.—The recent form from the Japanese seas, *Cuspidaria* (*Cardiomya*) *gouldiana* HINDS⁽¹⁾, is quite small in size, provided with ten to twelve radial threads, its rostrum being much longer than in the present species.

C. (C.) costellata DESHAYES var. *corpulenta* DALL⁽²⁾ differs from *C. (C.) makiyamai* by its numerous and less prominent radials. In *C. (C.) planetica* DALL⁽³⁾, it is difficult to distinguish the disk from the rostrum. *C. (C.) californica* DALL⁽⁴⁾ and *C. (C.) isralskyi* HANNA⁽⁵⁾ have radial sculptures on their rostrum.

Cuspidaria (*Cardiomya*) is a rare fossil in Japan. The present material, which was obtained by Dr. J. MAKIYAMA⁽⁶⁾ from the Asagai Sandstone of Yotsukura, Iwaki, are now preserved in the Geological Institute of the Tokyo Imperial University and some in the Imperial Geological Survey of Japan. It is very interesting to know that this genus is frequently found in the Eocene Beds of California⁽⁷⁾⁽⁸⁾, suggesting a faunal connection between Japan and California.

Strangely enough, a closely resembling species, *Cuspidaria*

(1) A. ADAMS: Annals. Mag. Nat. Hist. London, 1868, p. 367.

PILSBRY: Catal. Marine Moll. Jap., p. 136.

(2) W. H. DALL: Bull. Mus. Comp. Zool., XXIX, (Blake Moll.), p. 298, Pl. III, fig. 9.

(3) I. S. OLDROYD: Stanf. Univ. Publ., Geol. Sci., Vol. I, p. 99.

(4) I. S. OLDROYD: Idem., p. 101, Pl. 5, fig. 13.

(5) HANNA: Univ. Calif. Publ., Bull. Dept. Geol. Sci., Vol. 16, No. 8, p. 280, Pl. 34, figs. 5, 8.

(6) J. MAKIYAMA: Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, Vol. X, No. 2, Art. 6.

(7) R. E. DICKERSON: Univ. Calif. Publ., Bull. Dept. Geol. Sci., Vol. 8, No. 6, pp. 61-180.

(8) F. B. MEEK and W. M. GABB: U. S. Geol. Surv., Palaeontology Vol. 1, (1864).

(*Cardiomya*) *craspedonica* DALL¹⁾, has been described from the Oligocene Beds of Jamaica. Upon comparing with the illustration given by DALL, it is difficult to find any difference between *C. (C.) makiyamai* and *C. (C.) craspedonica* DALL. As to whether these two species are really genetically and specifically related to each other or whether the resemblance in the morphological characters is only apparent and fortuitous, the writer has no definite opinion at present.

Locality:—Yotsukura, Yotsukura-machi, Iwaki-gun, Iwaki (Fukushimaken).

Geological horizon:—Asagai Sandstone of Shiramizu Series²⁾. (Lowest Miocene or Upper Oligocene.)

Collector:—Prof. Dr. J. MAKIYAMA of the Kyôto Imperial University.

Occurrence:—not so rare.

Explanation of Plate 23 (11)

(All figures are in natural size)

- Figs. 1, 2. *Turritella (Haustator) sakakurai* nov. spec. (Holotype) from the Lower Miocene Beds (Hacchorei Hard Shale) of South Karafto (Sachalin).
- Figs. 3-9. *Cuspidaria (Cardiomya) makiyamai* nov. spec. from the Lower Miocene or Upper Oligocene Beds (Asagai Sandstone of Shiramizu Series) of the Joban Coal Field.
- Fig. 7. Holotype.
- Figs. 3-6, 8, 9. Paratypes.
- Figs. 10-13. *Melongena sazanami* nov. spec. from the Lower Miocene Beds (Uyetsuki Series) of Chûgoku.
- Figs. 10, 13. Side view.
- Fig. 11. Apical view.
- Fig. 12. Basal view.

1) W. H. DALL: Trans. Wagn. Free Inst. Sci., Vol. III, Pt. VI, p. 1506, Pl. LVII, fig. 17.

2) K. WATANABE: Expl. Detailed Geol. Map. Jôban Coal Field, Sec. II, (Imp. Geol. Surv. Japan).

本邦新第三紀貝化石 (第1報) (摘要)

金原均二

地質調査所の所蔵する標本の中の數種を選んで記載を試みた。

1) *Melongena sazanami* (新種)

技師佐藤源郎學士は「高粱」圖幅地質調査に際し多くの新第三紀貝化石を採集せられた。蒐むる所悉く植月津山兩統に屬する地層からである。中國地方新第三紀層の一般たる周知の如く *Vicarya callosa* JENKINS を伴へる暖海性動物群を含める事であるが、茲に記載するメロンゲナも亦その分布は「印度——太平洋區域」に限つて産する暖海屬である。佐藤學士によつて獲られた此新種は特徴ある漣狀の縞狀彫刻を具へ、ジャバの始新統より産する1種に近似する。

2) *Turritella (Haustator) sakakurai* (新種)

眞岡統の長島貝殻層及び布禮頁岩層は北海道の幌内統及び常磐の淺貝砂岩に對比され得る動物群を含むが、荒貝噴出岩層をへだてて上位にある本斗統の最下部たる八咫嶺硬質頁岩層は一般に化石に乏しい。三菱鑛業の坂倉勝彦學士は南樺太南名好川上流から *Turritella* の1種を本硬質頁岩層から採集せられて筆者に贈られた。之を検するに縞塔極めて秀でた特異な1種である。類似した種若しくは近縁の種は我國からは未だその産出を聞かない。

3) *Cuspidaria (Cardiomya) makiyamai* (新種)

東大地質教室に槇山教授採集による *Cuspidaria* が保存せられてある。常磐地方によく發達する淺貝砂岩層より産した化石で、亞屬 *Cardiomya* に屬する。*Cardiomya* は米國加州の始新統に甚だ多く發見されるのは注意を惹くが、更に注意すべきはジャマイカ (Jamaica) の漸新統より産する *Cuspidaria craspedonica* DALL に酷似する事である。

終りにのぞみ、發表を許可せられたる山根所長、種々御教示をいただいた渡邊技師、槇山教授、黒田、大塚、大炊御門、池邊、鈴木諸氏に厚く御禮を申し上げる。尙御多忙中にも拘らず検閲の勞をとられた渡邊技師、標本を提供せられた槇山教授、佐藤技師及坂倉學士に深く感謝の意を表する。