

広島大学学術情報リポジトリ
Hiroshima University Institutional Repository

Title	On the Occurrence of Psilotrignia in the Cretaceous of the Kwanto Mountainous Land, Japan
Author(s)	NAKANO, Mitsuo
Citation	Journal of science of the Hiroshima University. Ser. C, Geology , 2 (1) : 69 - 71
Issue Date	1957
DOI	
Self DOI	10.15027/52970
URL	https://ir.lib.hiroshima-u.ac.jp/00052970
Right	
Relation	



**On the Occurrence of *Psilotrignia* in the Cretaceous
of the Kwantu Mountainous Land, Japan**

By

Mitsuo NAKANO

with 3 Text-figures

Trignia beesleyana LYCETT from British Oolite has hitherto been monotypic of COX's *Psilotrignia* (1952). A new species of the genus was lately collected from the lower Kawarazawa group (Aptian) of the Sanchu graben at Ohihata, Saku-machi, Minami-saku-gun, Nagano Prefecture.

Before its description I wish to thank to Mr. HIDEHIRA, the collector. The specimens belong to the Geological Institute of the Yokohama National University.

Genus *Psilotrignia* COX, 1952, em.

1952. *Psilotrignia* COX, *Proc. Mal. Soc. London*, Vol. 29, Pts. 2-3, p.53.

Type species:— *Trignia beesleyana* LYCETT, 1874. Inferior Oolite, England.

Diagnosis:— Shell medium in size, ovate to ovately oblong, moderately convex and inequilateral; umbo low, rather broad, slightly opisthogyrous; marginal carina obtuse and well defined, but sometimes rounded off later; median and escutcheon carinae evanescent; area wide, a little concave, provided with plain costellae which are first concentric, gradually become oblique, and often effaced later; escutcheon ill-defined, and if present, narrow, sculptured with plain transverse costellae; flank with slightly oblique and flexiately or subconcentric plain costae which sometimes die out in posterior; ante-carinal depression absent.

Remarks:— *Trignia beesleyana* LYCETT is a member of the *excentrica* group of the *Glabrae* section. The others of the section are referred by Cox to *Rutitrignia* van HOEPEN.

KOBAYASHI (1957) pointed that *T. excentrica* passes the *Psilotrignia* stage in its younger stage and the *excentrica* group should be separated from *Rutitrignia*.

Psilotrignia differs from *Rutitrignia* in its more oblong outline, fairly distinct marginal carina, its ornamented broader area and more compressed shell. In this genus, surface sculptures vary to large extent. The type species has slightly oblique and flexiately costae on the anterior half of the flank, but they die out on the posterior. On the other hand, *Psilotrignia sanchuensis*, n. sp. has concentric or subconcentric costae on the whole flank. The area in mature stages is obliquely costellate in the former, but smooth

in the latter.

Because *P. sanchuensis* n. sp. is ornamented with plain concentric costae in the early stage, this genus may be a derivative from *Frenguelliella* by the obsolescence of the carinae, development of the oblique costation on the area and Q trend of evolution (KOBAYASHI, 1954).

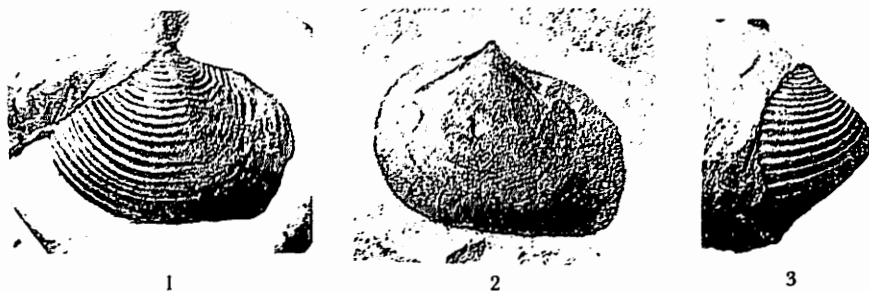
Judging from the surface ornamentation, *Trigonia excentrica* PARKINSON in LYCETT (Pl. 20, fig. 6 only) may be an immature form of this genus. *Trigonia semiculta* FORBES in STOLICZKA (1871, pl. 15, figs. 19, 22, 23 and 27) belongs probably to this genus, because it has an oblong shell and oblique costae on the slightly concave area in the early stage. *Trigonia beyrichi* KRUMBECK (1906, pl. 7, figs. 5a-b) from the lower Turonian at Tripolis in North Africa has the oblique costae on its area, probably belongs to this.

Distribution:- Middle Jurassic to Upper Cretaceous; England, Italy, North Africa, India and Japan.

Psilotrigonia sanchuensis NAKANO, new species.

Text-figures 1-3.

Description:- Shell medium in size, ovately oblong, fairly compressed, inequilateral broader than high; antero-dorsal margin short and nearly straight or slightly concave; antero-ventral rounded and transmitting gradually into broadly arched ventral; siphonal margin broad, gently arcuate and somewhat angulated at junction with dorsal or ventral margin; dorsal margin slightly concave, about a third as long as shell. Umbo fairly broad, nearly orthogyrous, located at about a third from front. Marginal carina obtuse and well marked, but rounded off in later stages. Area broad, a little concave, ornamented with about 12 plain concentric to transverse costae which gradually become oblique and effaced later; median carina absent. Escutcheon narrow, sculptured with some 12 transverse costellae; escutcheon carina absent. Flank with



Text-fig. 1. Lateral view of a clay cast of the holotype. ($\times 1$.)

Text-fig. 2. Lateral view of an internal mould of the paratype. ($\times 1$.)

Text-fig. 3. Lateral view of a clay cast of the paratype showing antero-ventral part. ($\times 2$.)

On the Occurrence of Psilotrignia in the Cretaceous

about 25 plain concentric to subconcentric costae fairly distinct and regularly arranged.

Comparison:- This is closely allied to *Trigonia semiculta* FORBES in STOLICZKA, but distinguished by its smaller shell, more oblong outline and numerous costae on the flank. From *Psilotrignia beesleyana* this differs in the presence of subconcentric costae on the flank. *Trigonia beyrichi* KRUMBECK can be distinguished from this species by the oblique costation on the flank in the later stage. *Rutitrignia yeharai* KOBAYASHI, 1954 (= *Trigonia neumayri* YEHARA, 1923) is easily distinguishable from this by its smaller shell and rostrate outline.

Measurement: Holotype specimen (Text-fig. 1) is, if complete, 33 mm. long and 25 mm. high.

REFERENCES

- CON, L. R. (1952), Notes on the Trigoniidae with Outlines of a Classification of the Family. *Proc. Mal. Soc. London*, Vol. 29, Pts. 2-3.
- DEECKE, W. (1925), Trigoniidae Mesozoicae. *Fossilium Catalogues, Animalia*. Pars 30.
- van HOEPEN, E. C. N. (1929), Die Krytfauna van Soeloeland. 1, Trigoniidae. *Pal. Navorsing Mus. Bloemfontein*. Vol. 1, Pt. 1.
- KOBAYASHI, T. (1954), Studies on the Jurassic Trigonians in Japan, Pt. 1, Preliminary Notes. *Japan. Jour. Geol. Geogr.*, Vol. 25, Nos. 1-2.
- (1957), *Rutitrignia* and *Nipponitrignia*. *Trans. Proc. Palaeont. Soc. Japan*, N. S., No. 26.
- KRUMBECK, L. (1906), Beiträge zur Geologie und Palaeontologie von Tripolis. *Palaeontogr.* Vol. 53.
- LYCETT, J. (1872-79), A Monograph of British Fossil Trigoniae. *Pal. Soc.*
- STOLICZKA, F. (1871), Cretaceous Fauna of Southern India. *Pal. Indica*, Ser. 6, Vol. 9.
- YEHARA, S. (1923), Cretaceous *Trigoniae* from South-western Japan. *Japan. Jour. Geol. Geogr.*, Vol. 2, No. 3.