

关于 *Cameroceras triformatum* 外殼的發現*

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(附 1 圖版)

本文所介紹的一種內殼與外殼同時保存的壁角石 *Cameroceras triformatum* Yü, 系筆者 1955 年夏采自南京湯山西南部侖山石灰岩上部, 其層位相當於穆恩之、潘江和俞昌民所測剖面^[5]的第 6 層。

壁角石系我國奧陶紀, 尤其是下奧陶紀后期 (Arenigian) 地層——揚子江下游之侖山石灰岩^[1,4,5,6], 揚子峽區的紅花園石灰岩^[2,7]以及華北和東北之亮甲山石灰岩中最常見的化石之一。很多只見內殼而不見外殼, 因此 *Cameroceras triformatum* 外殼的發現是頗饒興趣的。

種 的 描 述

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壁角石屬 *Cameroceras* Conrad (emend. Hyatt)種 *Cameroceras triformatum* Yü

1933 *Cameroceras triformatum*, 俞建章, 前中央研究院地質研究所叢刊, 第三號, 1—13 頁, 圖版 1, 圖 9 a-b。

外殼直, 體壁薄, 橫切面為圓形。中部之尖化率為 1:12。其內充有較薄的梯板, 下斜與外殼成 40° 交角, 并稍下凹, 其凹度約為氣室深度的 $\frac{1}{3}$ 。梯板間的距离甚密, 隨個體直徑的加寬而增大, 上部平均為 4.5 毫米, 中部為 4.0 毫米, 始部不清楚。但壁襟較長, 達一氣房, 即前一梯板頸與後一梯板頸相連, 故內殼為完整者。

內殼亦直, 中等大小, 位於外殼的邊緣, 橫切面為卵形, 但腹邊緣較平, 其上部直徑約為外殼直徑的 $\frac{3}{7}$, 但向下約 24 毫米, 即為 $\frac{7}{11}$ (圖版 I, 圖 4)。其尖化率甚速, 約為 1:9, 尤以始部向上 15—20 毫米內最大。俞建章教授所描述的標本 (見俞建章, 1933, 圖版 I,

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圖9b)在橫過內殼的橫切面周圍的邊緣有6个或6个以上的內体管瓣(endosiphoblade),但我們的标本上部已破,未能見到此种構造。內殼下部的內体管(endosiphotube)部分,可以明顯的觀察到有三个內体管瓣(endosiphoblade)(圖版 I, 圖 4),可与俞建章教授所描述的标本相比較。

本文所描述的标本其梯板頸較長,達一氣室、長 4.0—4.5 毫米。而俞建章教授所描述的标本僅見內殼,其側边具斜的脊狀隆起,其上部之相互距离为 2 毫米,下部为 1.5 毫米。这虽与俞建章教授所描述的标本稍有区别,但依据其它特性,仍应屬同种。

地点和層位:南京湯山下奥陶紀侖山石灰岩上部,野外采集編號 P4,登記号 I1 a-g。

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ON THE ECTOCONCH OF *CAMEROCERAS TRIFORMATUM* YÜ

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(Summary)

The present paper deals with a nearly complete specimen of *Cameroceas triformatum* with ectoconch and endoconch well preserved, which was recently found by the writer from the upper part of the Lunshan limestone at Tangshan near Nanking in 1955.

The genus *Cameroceas* is one of the wide spread index fossils of late Lower Ordovician rocks in China. It has been reported from the Lunshan limestone of the lower Yangtze valley^[1,3,4,5,6,], the Hunghuayuan limestone of the Yangtze Gorge^[2,7,] and the Liangchiashan limestone of North China. The present discovery of the ectoconch will throw some light on the structure of the shell wall of the species *Cameroceas triformatum* Yü.

Description of species

Nautiloidea

Genus *Cameroceas* Conrad (emend. Hyatt)

Cameroceas triformatum Yü

1933. *Cameroceas triformatum*, Yü, Cont. Rese. Inst. Geol.

Academia Sinica, No. 3, p. 9. Figs. 9a-c.

Ectoconch straight, thin, circular in cross section. The preserved specimen tapers at a ratio of 1:12 in median part. Septa thin, having a concavity of $\frac{1}{3}$ the depth of chamera or more. The septal necks are rather long, extending apically for a distance equal to the interspace between the septa, which are about 4.5 mm apart at the upper end and about 4.0 mm at the median, but the lower end is obscure.

Endoconch straight, moderately large, situated on the margin of the ectoconch, oval in transverse section with ventral side more or less flattened, measured about $\frac{3}{7}$ the diameter of the shell in the upper end (figs. 1, 2), while 24 mm below, showing about $\frac{7}{11}$ the diameter of the shell (fig. 4). It tapers rather rapidly, at a ratio of 1:9, but below a point of 15—20 mm from the apical extremity, the rate

of tapering becomes much greater. On the transverse section of the specimen described by Prof. C. C. Yü (1933, pl. 1, fig. 9b) there are six or more endosiphoblades extending out from the periphery of the endocone to the margin of the endoconch, but they are unknown in the present specimen. In the lower part of the endoconch however, the endosiphotube is usually accompanied by three endosiphoblades in transverse section, a feature which is the same as that in *Cameroceeras triformatum* Yü.

The septal necks, which in this specimen are longer, extend apically for a distance equal to the interspace between the septa (4.0–4.5 mm). In *C. triformatum* Yü it is marked on the lateral side of endoconch by the oblique annular ridges, which are 1.5 mm apart at the lower end and about 2 mm at the upper. Though the specimen described differs slightly from Yü's type it evidently belongs to the same species.

The specimen (P4, Cat. No. I 1a-d; plisiotype) is now deposited in the Museum of the Ministry of Geology in Peking.