

內蒙古东烏珠穆沁旗志留紀一个四射珊瑚的新属——孔壁柱珊瑚(*Araiostroton*)*

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本文描述的珊瑚化石系 1963 年內蒙古地质局某队采自內蒙古自治区锡林郭勒盟东烏珠穆沁旗。共有四个复体珊瑚,一般保存良好。经研究系一新属,新种,茲命名为:乐氏孔壁柱珊瑚(*Araiostroton yohi* Guo)。

据区测队同志的研究,上述珊瑚化石是产于灰黑色泥板岩內,共生化石有:

四射珊瑚: *Syringaxon* sp.

腕足类: *Coelospira hemisphaerica* (Sowerby); *Uncinulus* sp.; *Meristella* sp.; *Merista* sp. 等(苏养正鉴定)。

三叶虫: *Cyphaspides* sp. (南润善鉴定)。

证明含化石群地层的时代属晚志留世。

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属 种 描 述

四射珊瑚分类位置未定 (TETRACORALLA INCERTAE SEDIS)

孔壁珊瑚科 (CALOSTYLIDAE C. F. Roemer, 1883)

孔壁柱珊瑚属 *Araiostroton* Guo (新属)

特征: 多角柱状复体,由少量个体组成。全壁完整,壁表仅有生长皱。个体的外壁穿孔。一级隔壁两侧对称排列,高度穿孔,长达轴心相交形成窄小的海绵状轴部构造。次级隔壁未发育。鳞板无,横板未见。边缘厚结带窄。壁间出芽繁殖。

属型: 乐氏孔壁柱珊瑚 *Araiostroton yohi* Guo (新属,新种)(图版 I, 图 1—3)。

比较及讨论: 本新属与 *Calostylis* Lindström 的不同之处在于后者是单体珊瑚,两级隔壁多而密集,轴部构造宽阔,具有横板。本新属不同于 *Palaeareaea* Lindström 是后者为星射状复体,个体间外壁消失。按其外壁及隔壁穿孔的特征,新属 *Araiostroton* Guo 应归入孔壁珊瑚科。早在志留纪初期这种稀见而奇特的隔壁穿孔型珊瑚即已出现,至泥盆纪已告绝迹。

四射珊瑚的演化规律,表现在外形的变化上,一般是由单体—丛状复体—多角柱状复

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体一星射状、互嵌状或互通状复体。本新属为多角柱状复体,代表了孔壁珊瑚科的演化中间阶段,它较 *Calostylis* 高级,较 *Palaeareaea* 低级。

乐氏孔壁柱珊瑚 (*Araiostroton yohi* Guo) 新属,新种

(图版 I, 图 1a—c, 2—3)

特征: 复体小荷叶状, 由 4—5 个个体组成。萼呈碟状。个体直径 7—9 毫米。个体间外壁高度穿孔。一级隔壁 27—28 个, 长达轴心, 穿孔剧烈, 横切面多呈串珠状。海绵状轴部构造极窄。齿状的隔壁基部与外壁融联形成一个明显的厚结带。

描述: 小型多角柱状复体珊瑚, 外形小荷叶状, 直径 18—22 毫米, 高 8—9 毫米; 由 4—5 个个体组成, 全壁层完整, 壁表仅有明显的生长皱。个体横切面 5—6 边形, 直径 7—9 毫米。萼呈碟状。外壁厚 0.4 毫米, 中央有断续的中线; 高度穿孔, 孔径 0.2 毫米左右, 孔间距 0.7—1.2 毫米; 两侧有刺状隔壁基。隔壁侧对称排列, 位于复体外围的隔壁一般甚长, 位于中央部位的则甚短。一级隔壁按隔壁基的数目约 27—28 个, 厚达 0.2—0.3 毫米; 多数达轴心, 少数仅达个体半径之半; 均穿孔剧烈, 一般呈串珠状, 仅在近轴心部分较为连续。在隔壁内的孔径约 0.2—0.5 毫米, 孔间距 0.5—1 毫米。次级隔壁未发育。一级隔壁在轴心围成一仅 2 毫米宽的海绵状轴部构造。边缘厚结带宽 0.8—1 毫米, 由层状组织及加厚的隔壁基部组成。纵切面上仅见穿孔的外壁及隔壁。

登记号: 全型 Ru 64001, 副型 Ru 64002, Ru 64003; 野外编号: 4H1174a-8。

参 考 文 献

- 乐森璿、吴望始, 1964: 珊瑚化石(四射珊瑚)。第 197—221 页。
 俞昌民、吴望始、赵嘉明、张肇诚, 1963: 中国的珊瑚化石。中国各门类化石。
 穆恩之, 1962: 中国的志留系。全国地层会议学术报告汇编, 第 6 页。
 Hill, D., 1956: In Moore's Treatise on Invertebrate Paleontology, pt. F, Coelenterata, Rugosa, p. 295—296.
 Pošta, P., 1902: Anthozoaies et Alcyonaires, in Barrande, Système Silurien du centre de la Bohême, Vol. 8.
 Smith, S., 1945: Upper Devonian corals of the Mackenzie River Region Canada, Geol. Soc. America, Spec. Paper, No. 59, p. 17.
 Сошкина, Е. Д., Добролюбова, Т. А. И Кабакович, Н. В., 1962: Подкласс Tetracoralla, Четырёхлучевые кораллы, Основы Палеонтологии, стр. 320—321.

NOTE ON A NEW GENUS OF RUGOSE CORAL—*ARAIOSTROTION* FROM THE SILURIAN OF DONGWU-QI REGION, INNER MONGOLIA

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(Summary)

The specimens referred to *Araiostroton*, a new genus of Calostylidae, were found

图 版 说 明

本文描述的标本均采自内蒙古自治区锡林郭勒盟东乌珠穆沁旗上志留统。保存于地质部东北地质科学研究所。

图 版 I

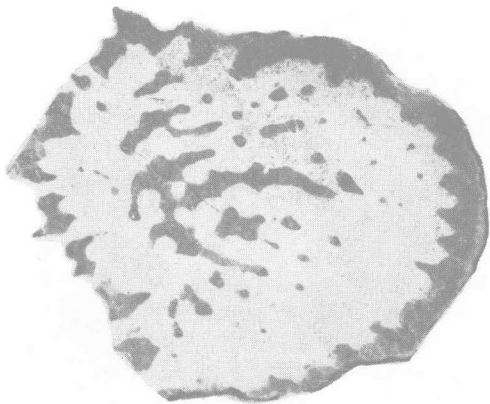
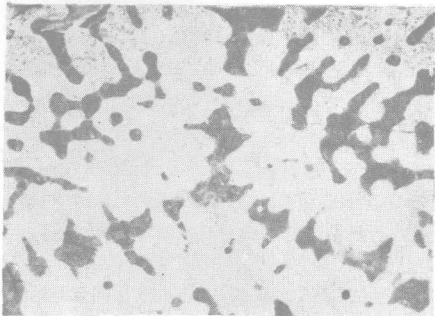
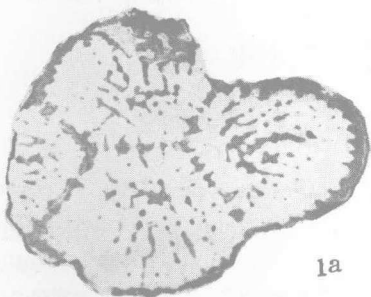
图 1—3. 乐氏孔壁柱珊瑚 *Araiostroton yohi* Guo (新属、新种)

- 1a. 横切面, $\times 2$; 1b. 横切面, 见外壁的穿孔及中线 $\times 6$;
- 1c. 横切面, 见全壁构造, $\times 6$, (全型), 登记号: Ru 64001。(反影)
2. 纵切面, $\times 2$, (副型), 登记号: Ru 64002。(反影)
3. 始部视外形, $\times 2$, (副型), 登记号: Ru 64003。(正影)

Plate I

Figs. 1—3. *Araiostroton yohi* Guo (gen. et sp. nov.)

- 1a. transverse section, $\times 2$; 1b. transverse section, see the pores and the median lamella of epitheca, $\times 6$; 1c. Transverse section, see the structure of holotheca, $\times 6$, Holotype: Ru 64001.
2. longitudinal section, $\times 2$, Paratype: Ru 64002.
3. proximal view, $\times 2$, Paratype: Ru 64003.



in 1963 from a greyish black clayey slate in Dongwu-Qi region, Inner Mongolia. They are in the state of well preservation, associated with *Syringaxon* sp., *Coelospira hemisphaerica* (Sowerby), *Uncinulus* sp., *Meristella* sp., *Merista* sp., *Cyphaspides* sp. etc., which are obviously of late Silurian age. Here a brief description is given as follows:

TETRACORALLA INCERATAE SEDIS

Family CALOSTYLIDAE C. F. Roemer, 1883

Genus *Araiostroton* Guo (gen. nov.)

Diagnosis: Corallum cerioid with few corallites. Holotheca complete, decorated externally with growth wrinkles. Epithecata of each corallite remarkably perforated. Major septa long, bilaterally and strongly perforated, arranged symmetrically and usually connecting with their inner ends to form a small spongy axial structure. Minor septa not developed. Dissepiments absent. Tabulae unseen. Marginal stereozone narrow. Colonial reproducing intermurally.

Genotype: *Araiostroton yohi* Guo (Gen. et sp. nov.) (Pl. I, figs. 1—3).

Comparison and Discussion: The present genus resembles *Calostylis* in the inner structure, but the latter is a ceratoid simple coral with septa of two orders, wide spongy axial structure and domed tabulae. With regard to the massive compound form, our genus is also similar to *Palaearea*, but differs therefrom in the cerioid form of corallum and the strongly perforated septa.

As the evolutionary trend of the shape of the corallum of *Tetracoralla* is generally from solitary to compound, and from phacelloid to cerioid and from cerioid again to thamnasterioid or Aphraid, the taxonomic position of this new genus may probably be placed between *Calostylis* and *Palaeorea* in the family of Calostylidae.

***Araiostroton yohi* Guo (gen. et sp. nov.)**

(Pl. I, figs. 1a—c, 2—3)

Corallum small, patellate, containing 4—5 cerioid corallites with disc-like calyx. Corallites 7—9 mm in diameter. Epithecata strongly perforated. Major septa 27—28 in number, mostly reaching the axis, being strongly perforated, resembling a string of beads in the transverse section. Axial part of each corallite represented by a rather narrow spongy structure. Marginal stereozone composed of the lamellar tissue and the septal bases.

Dimensions (in mm):

Diameter of the corallum	18—22
Height of the corallum	8—9
Diameter of the corallite	7—9
Thickness of the epithecata	0.4
Diameter of pores on the epithecata	ca. 0.2
Distance of pores on the epithecata	0.7—1.2
Number of major septa	27—28
Thickness of major septa	0.2—0.5
Diameter of pores on the major septa	0.2—0.3
Distance of pores on the major septa	0.5—1
Width of the axial structure	2
Width of the marginal stereozone	0.8—1