

贵州长顺代化组的可疑化石

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本文描述的化石采自贵州长顺睦化晚泥盆世晚期代化组的灰色緻密灰岩中,经化学处理后获得。与此化石共生的牙形刺有 *Palmarolepis gracilis sigmoidalis* Ziegler, *Palmarolepis gracilis gracilis* Branson et Mehl, *Palmarolepis gracilis expansa* Sandberg et Ziegler, *Pseudopolygnathus trignicus* Ziegler。

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化石描述

腔肠动物门? Phylum Coelentera?

纲、目、科未定 Class, Order and Family uncertain

辐双壳(新属) *Radibicupellus* gen. nov.

模式种 *Radibicupellus cupulatus* gen. et sp. nov.

属征 个体小。草帽形,一面凸,一面稍凹;凸的一面饰以片状饰纹,似同心圆的相嵌式出现。凹的一面无特殊构造。

讨论 新属目前仅有3个标本,从外形来看,有背(凸的一面)、腹(凹的一面)之分。腹面无特殊的构造,背面饰纹两侧对称不显,从这一点来看,不像植物化石而可能属于动物化石,并可能是动物的外骨骼。

这3个标本均具相嵌式的似同心圆的片状饰纹,有趋向两侧对称之势,与某些软体动物的口盖雷同。但是,腹足类口盖至今尚未见这种类型,因足腺不可能形成有趋向两侧对称之势的饰纹,而是分泌成一个方向的饰纹——旋绕、同心圆或近平行的单向饰纹,因此属于腹足类口盖的可能性不大。头足类的口盖虽有两侧对称,并且是很明显的两侧对称,但未见类似当前标本这样的两侧对称,且中间有相嵌之处的类型。因此也可排除是头足类口盖的可能性。虫管(龙介虫)的口盖有一延长的把。它与软舌螺的口盖在外形上也不同。当前标本有趋向两侧对称之势,但外形上没有很好的两侧对称,故也不可能是单板类及腕足类。与锥石也有明显的区别。

从目前的3个标本来看,它们有相似的壳饰,片状饰纹的排列次序和相嵌的特征是一致的,但片状饰纹的粗细及相间间距稍有变化,可以看作是种内差异。3个标本被认为是3个个体,属同一物种。这一动物的软体部分在此标本的背面,背面的外缘有片状饰纹为界,说明此动物能分泌钙质形成外骨骼,而且也能溶解这外骨骼,具软体动物外套膜的功能。似同心圆的相嵌式的片状构造,说明此动物的生长过程是身体的一半增长后,相对的另一半再增长,这样交替增长就形成相嵌式的饰纹,这可能是从辐射对称向两侧对称演化的一个过渡类型,因此推测是腔肠动物向两侧对称体形过渡的一种中间类型。此动物的适应性较差,没有进一步演化。

当前标本个体小,这也是适应性差的一种反映。因此,这一动物可能是腔肠动物类向两侧对称演化的一个特化分支。

时代分布 晚泥盆世;中国贵州。

帽双辐壳(新属、新种) *Radibicupellus cupulatus* gen. et sp. nov.

(图版 1, 图 5—7;插图 1)

个体小,草帽形,一面凸,一面稍凹;凸的一面饰以低的片状饰纹。最早的两条片状纹饰呈半圆形,同一方向,近乎平行,与第三条方向相反的片状饰纹组成不封闭的圆,每一片状饰纹约为 180° 圆弧形,第三条片状饰纹嵌在第二、第四条之间,其后的片状饰纹一般也是相嵌式的排列(插图 1)(图版 1, 图 6a, 7a),形成相嵌式的似同心圆,但这两个方向的半圆不完全对称,一边短,另一边长。中心即最高处光滑而凸,稍偏于一边,外缘圆,周缘以片状饰纹为限。凹的一面有宽的边,无特殊构造,外缘很清晰,周缘无片状饰纹。

从腹面无特殊结构,只有宽的边,无固着生活的痕迹,这似乎说明此动物是自由游泳或临时附着在其它动物体或其它物体上生活。

度量(mm)

登 记 号	直 径
87017(Holotype)	1.087×1.053
87019(Paratype)	0.813×0.880
87018(Paratype)	0.813×0.813

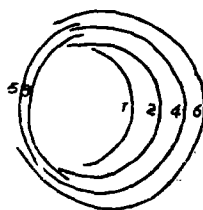


插图 1 *Radibicupellus cupulatus* gen. et sp. nov.

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DISCOVERY OF PROBLEMATICA FROM DAIHUA FORMATION OF CHANGSHUN, GUIZHOU

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Summary

The problematica described and figured here were collected by Dr. Wang Cheng-yuan from the Daihua Formation in the Changshun county, Guizhou, in association with the conodonts *Palmatolepis gracilis sigmoidalis* Ziegler, *Palmatolepis gracilis gracilis* Branson et Mehl, *Palmatolepis gracilis expansa* Sandberg et Ziegler and *Pseudopolygnathus trigonicus* Ziegler, which were referred to the Late Devonian by Wang Cheng-yuan. This indicates that the problematica-bearing deposits belong to Late Devonian.

Description of species

Radibicupellus gen. nov.

Type species *Radibicupellus cupulatus* gen. et sp. nov.

Diagnosis Individual cuppy in shape; convex surface with lamellar ornamentations, which are inlaid with lamellae in opposite direction and ranged in similar concentricity.

Range Late Devonian, China.

Radibicupellus cupulatus gen. et sp. nov.

(Pl. I, figs. 5—7; Text-fig. 1)

Individual small, cuppy in shape. Convex surface with lamellar ornamentation. Primary two lamellae in the same direction, and the third one in opposite direction, which are inlaid with the second and fourth ones in opposite direction (Text-fig. 1; Pl. I, figs. 6a, 7a); each lamella arched at about 180°. Specimen strongly symmetric bilaterally, with center at the highest point, smooth and inclined towards one side, circular in outline, with lamellar edge; other (concave) surface without special structure.

The organism seems to be an according to these characters, such as the convex surface strongly symmetric bilaterally, and the lamellae inlaid with those in opposite direction, which neither appeared in opercula of gastropods, cephalopods, serpulids, monoplacophorans nor in shell of brachio-

Pods and conulariids, indicating that *Radibicupellus* differs from those animals. As to the race of the *Radibicupella*, the strongly bilaterally symmetrical ornaments appearing on the specimen's convex surface can be interpreted as belonging to an intermediate type between radiate symmetry and bilateral symmetry. So the writer presumes that this is an intermediate race between the coelenterate and a bilaterally symmetrical animal and may be a specific race of coelenterata, which was so small that they probably didn't adapt themselves to circumstances, and that is why the animal could neither advance in evolution nor persist to the recent time.

图 版 说 明

本文描述的标本均采自贵州常顺睦化晚泥盆世代化组,保存在中国科学院南京地质古生物研究所。

图 版 I

1. *Palmatolepis gracilis sigmoidalis* Ziegler

×26。采集号: Mh11; 登记号: 87013。

2. *Palmatolepis gracilis gracilis* Branson et Mehl.

×26。采集号: Mh11; 登记号: 87014。

3. *Palmatolepis gracilis expansa* Sandberg et Ziegler

×26。采集号: Mh19; 登记号: 87015。

4. *Pseudopolygnathus trigonicus* Ziegler

×26。采集号: Mh19; 登记号: 87016。

5—7. *Radibicupellus cupulatus* gen. et sp. nov.

×42。5. Paratype, 采集号: Mh11; 登记号: 87019。6. Paratype, 采集号: Mh19; 登记号: 87018。

7. Holotype, 采集号: Mh19; 登记号: 87017。

