

龚一鸣, 徐冉, 李保华. 分叉波痕在广西上泥盆统钙质浊积岩中的发现及意义[J]. 地质论评, 2003, 49(4): 379-382

分叉波痕在广西上泥盆统钙质浊积岩中的发现及意义 [点此下载全文](#)

[龚一鸣](#) [徐冉](#) [李保华](#)

[1]中国地质大学地球科学学院, 武汉430074 [2]同济大学海洋地质教育部重点实验室, 上海200092

基金项目: 国家自然科学基金(编号40072041), 中国主要断代地层建阶研究项目, 国家“九五”攀登计划专项“SSR”项目

DOI:

摘要:

小型不对称分叉波痕(简称分叉波痕)发现于桂林杨堤剖面上泥盆统弗拉斯阶linguliformis牙形石带, 桂林碳酸盐台地东南缘斜坡相钙质浊积岩鲍马序列C段。波长7.5~8.0cm, 波高0.5~0.8cm, 波痕指数15~10; 向流面长5.0~7.0cm, 背流面长2.5~4.0cm, 波痕对称指数2.0~1.8; 背流面向东倾; 波脊较圆滑、缓曲, 且具明显的分叉现象。是浊流流速减缓, 密度流转化为牵引流后在低流态条件下, 并叠加有推进型风暴浪作用形成的复合成因波痕。根据该波痕和寄主地层特征, 推断含分叉波痕的阳朔碳酸盐盆地的最大水深约100m, 极限水深小于200m。这一估计值应能代表广西乃至华南板块泥盆纪广泛发育的含牙形石动物群和钙质浊积岩碳酸盐沉积盆地的定量水深, 可能也代表了弗拉斯阶—法门阶之交受集群绝灭事件重创的浅水海相生物与基本未受影响的深水海相生物的水深分界线。

关键词: [小型不对称分叉波痕](#) [广西](#) [泥盆系](#) [钙质浊积岩](#) [碳酸盐](#) [定量水深](#) [集群绝灭](#) [沉积岩](#) [牙形石动物群](#)

Ripple Marks with Bifurcation from the Calcareous Turbidite Sequence of the Upper Devonian in Guangxi, South China [Download Fulltext](#)

GONG Yiming, XU Ran, LI Baohua(1) China University of Geosciences, Wuhan, Hubei, 430074(2) Laboratory of Marine Geology, Tongji University, Shanghai, 200092

Fund Project:

Abstract:

small asymmetric ripple marks with bifurcation (BRM) were found from the C-section of turbidite with the Bouma sequence in the eastern slope of the Guilin carbonate platform. The BRM are 7.5-8.0 cm in wavelength, 0.5-0.8 cm in wave-height, 5.0-7.0 cm in the length of stoss side and 2.5-4.0 cm in the length of lee side. The ripple indices are 15-10 and the ripple symmetry indices are 2.0-1.8. The lee sides slope eastwards. The crests of the BRM are rounded and slightly sinuous and are apparently of bifurcation. The BRM were suggested to be formed under the circumstances of the lower regime with following the lowering of the turbidity-current velocity, the transformation density currents into tractive currents and the superimposition of progradational storm-wave. Based on the characteristics of the BRM and host strata, the maximum or limit water-depth of the Yangsuo carbonate basin containing BRM were estimated to be about 100 m or less than 200 m. The estimations may represent the quantitative water-depth of the Devonian carbonate basin containing the calcareous turbidite and conodont fauna, and may be the water depth boundary between the marine deep fauna almost not influenced and the marine shallow water fauna significantly influenced during the Devonian Frasnian - Famennian transitional events.

Keywords: [ripple mark](#) [turbidite](#) [carbonate](#) [quantitative water-depth](#) [mass extinction](#) [Devonian](#) [Guangxi](#)

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

您是第693041位访问者 版权所有《地质论评》

地址: 北京阜成门外百万庄路26号 邮编: 100037 电话: 010-68999804 传真: 010-68995305

本系统由北京勤云科技发展有限公司设计