Field investigation and laboratory analysis (observation under a microscope and geochemical analysis) on the Cambrian and Ordovician flysh in the south of Jiangxi and Hunan Provinces indicate the following: (1) the flysh is a set of hemipelagic sandy and muddy submarine fan. Its greywacke has low compositional and textural maturity, increasing upward with the strata. Horizontal bedding and parallel bedding developed. Graded bedding and low angle-inclined bedding are observed. Flute cast has been occasionally detected. Seven types of lithofacies are indentified. The sea water got deeper gradually from SE to NW in Cambrian. The material source of the fan was from Cathaysia Block. After weathering, the terrigenous clast moved a short distance across narrow shelf and then poured from the continental steep slope. Finally they accumulated on the continental rise. (2) Radiolaria fossils were discovered for the first time in the lower Cambrian and middle Ordovician strata of the South China orogenic belt. Cambrian Radiolaria fossils of China have never been reported as yet. They occur in argillaceous slate of the lower Cambrian Niujiaohe Formation in Pingxiang of Jiangxi Province and silicalite of the middle Ordovician Yanxi Formation in Yongzhou of Hunan Province. The discovery of Radiolaria shows that there might have existed a low-latitude sea basin of considerable scale in Pingxiang-Yongzhou area in Cambrian-Ordovician period.

Key words: sedimentary environment, Cambrian, Ordovician, Jiangxi, Hunan, Radiolaria

Reference
Mclaren D. J. Rare events in geology. EOS[J]. Transaction, American Geophysical Union, 1988, 69(2):24-25.
Read J. F. Carbonate ramp-to-basin transitions and foreland basin evolution, Middle Ordovician, Virginia Appalachians,

Lithofacies Characteristics of Cambrian and Ordovician Greywacke And Sedimentary Evironment in The South Of Jiangxi And Hunan

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June 2013