Ediacara biotas from the Doushantuo Formation(635–555Ma) on the Yangtze platform, South China

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After the Snowball Earth, the climate became warmer, the oxgen in the environment became richer and the warm ocean currents brought richer phosphorus and other nutritions. These provided a good chance for multicellular organisms to evolution.

The Doushantuo Formation was just deposited after the Nantuo glaciation and before the evolution of Ediacaran metazoans. The most important Edicaran fossil sites in China are the Yangtze Gorge area, Liantian in Anhui province, and Wangan in Guizhou province. The Gorge stratigraphic section is standard for Chinese stratigraphers(Mikhail A et al., 2007).

There are available data which indicate that the Doushantuo Formation is older than the diverse Ediacaran assemblages of South Australia and northern Russia, and may be older than all known Ediacaran-type assemblages (Hofmann et al., 1990).

Condon has suggested that the cap carbonate of the basal Doushantuo was deposited around 635 million years ago, similar age to some of glacial deposits in Namibia. They also dated a volcanic ash bed a few meters above the cap carbonate is at around 632 million years and another ash bed near the Doushantuo-Dengying boundary at about 551 Ma(Condon et al., 2005).

The quality of preservation and evolutionary importance of these fossils rival those of the younger Lagerstatten such as the Burgess Shale or the Rhynie Chert, and shed unprecedented palaeontological light on the early evolution of multicellular organisms (Xiao et al., 1998).

I have already collected samples in the Doushantuo Formation in the Yangtze Gorge section. I am planing to investigate the phosphorites and chert nodules by making thin sections and by SEM(Scanning Electron Microscope) to find some microfossils.

I also plan to study biomarkers in such old rocks. I hope that we can get more information concerning these biomarkers in order to compare with other multicellular fossils.

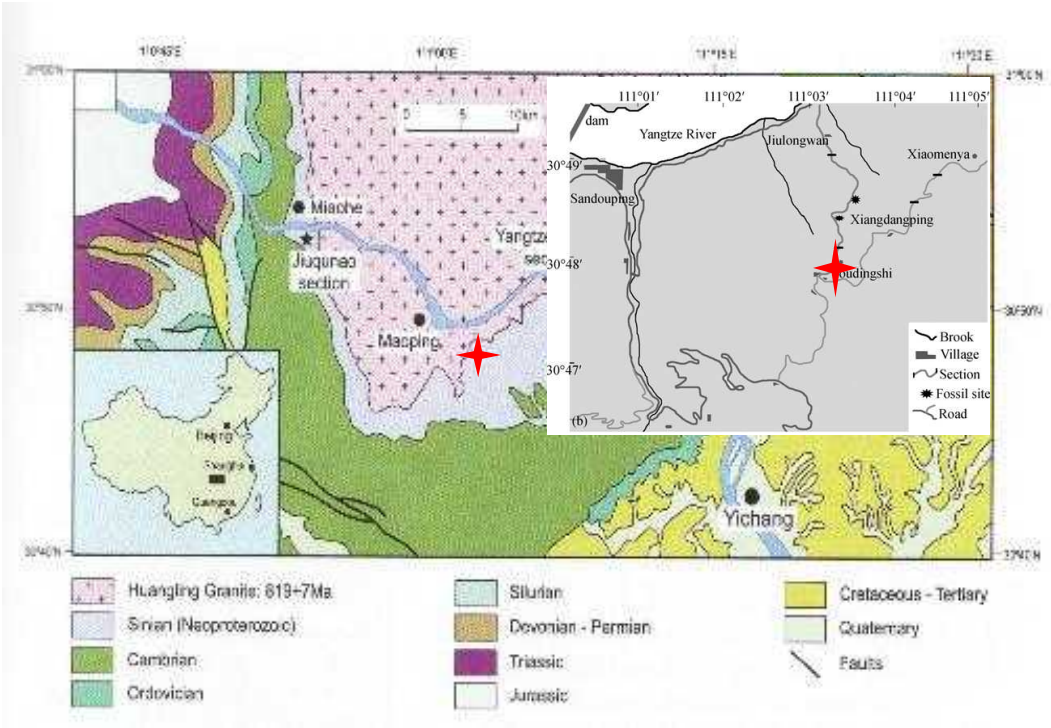

Fig1. Locality map of the Yangtze Gorge Section

次回のお知らせ

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＊10月15日 (水) は月曜授業のため休講です。