

## **A MEGAFOSSIL ASSEMBLAGE FROM THE NEOPROTEROZOIC SHIJIA FORMATION IN NORTHERN JIANGSU PROVINCE, CHINA**

Qian Maiping\*, YuanXunlai\*\*, Yan Yongkui\* \*Nanjing Institute of Geology and Mineral Resources, 534 East Zhongshan Road, Nanjing, P.R.China, Email:nigmr@public1.ptt.js.cn \* \*Nanjing Institute of Geology and paleontology, Academia Sinica, Nanjing 210008, China

A fossil assemblage of megascopic organic remains (0.1-20mm in leugth and 0.1-5mm in width) is well preserved in shales of the Neoproterozoic Shijia Formation at the White Hill near Xuzhou, northern Jiangsu Province, China. Most specimens show both a planktonic and cystiform organisms. Based on morphological difference, four forms are recognized. Each form presents a certain morphological appearance, e.g., spheroidal or elliposoidal – *Chuar*ia, suasage- or gourd-shaped – *Tawuia*, and elliposoidal or elongate elliposoidal remains with annulations and a round hole at an end – *Huaiyuanella* on bedding planes. In addition, tubular *Anhuiella* wriggled in layers. These confirm that limited morphological evolutionary radiation of marine organisms took place not later than the Shijia epoch, with an absolute age around 681Ma.

Of this fossil assemblage, *Huaiyuanella* and *Anhuiella* previously were interpreted as worm-like candidates of Annelida, but lack of internal structures makes this interpretation speculative. In contract to the conclusive worm fossils, with distinct internal organs including an alimentary canal, from Lower Cambrian Chengjiang Biota, Yunnan Province, China. *Huaiyuanella* possibly merely is a multicellular alga, and *Anhuiella*, three-dimensionally preserved

tubular remain, is probably a burrow with harden wall secreted by an unknown metazoan.