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ILLUSTRATIONS OF POLYMEROID TRILOBITES FROM THE HUAQIAO FORMATION (MIDDLE-UPPER CAMBRIAN), PAIBI AND WANGCUN SECTIONS, NORTHWESTERN HUNAN, CHINA

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INTRODUCTION

The Huaqiao Formation, as exposed in northwestern Hunan Province, China, yields one of the most diverse trilobite assemblages known from the Cambrian. Well-preserved agnostoid trilobites from the Huaqiao Formation in two important sections, the Wangcun section, Yongshun County, and the Paibi section, Huayuan County, were recently detailed in a monograph by Peng and Robison (2000). Polymeroid trilobites are also well-preserved in the Wangcun and Paibi sections. Some of the polymeroids have been described in previous papers (e.g., Peng et al., 1995), and an exhaustive monographic compilation is underway. That work is expected to appear in the near future. For the benefit of participants in the Seventh Field Conference of the Cambrian Stage Subdivision Working Group of the International Subcommission on the Cambrian System (ISCS), a sampling of the polymeroid trilobites from the Huaqiao Formation in Wangcun and Paibi sections is illustrated here. The polymeroids illustrated here have been selected from the plates of the forthcoming monograph, and from an earlier paper (Peng et al., 1995). They serve to represent the remarkable diversity and excellent preservation of the Huaqiao fauna. Many of the taxa illustrated here will be encountered during the ISCS field excursion to northwestern Hunan.

The polymeroid trilobites from the Huaqiao Formation of northwestern Hunan include forms having aspects of both the North China and Southeast China faunal provinces (Lu et al., 1974). This assures that these assemblages will play an important role in constraining Middle and Upper Cambrian correlations within China and elsewhere in eastern Gondwana. The significance of the Huaqiao Formation polymeroids for correlation purposes is enhanced because of their co-occurrence with the well-described Huaqiao Formation agnostoids (Peng and Robison, 2000). Whereas most of the polymeroids are restricted to shelf and slope areas of Gondwana and neighboring terranes, many of the co-occurring agnostoids have distributions around
Gondwana and intercontinentally.

The polymeroids illustrated here are from key sections in the Middle and Upper Cambrian. The Wangcun section has been proposed as the stratotype for two Cambrian stages as used in China: the Wangcunian and Youshuiuan stages (Peng et al., 2001a). The Paibi section is a candidate global stratotype for the base of an Upper Cambrian series coinciding with the base of the Waergangian Stage (Peng and Robison, 2000; Peng et al., 2001b).

The plates are arranged in successive stratigraphical order to show the faunal changes among polymeroids in chronostratigraphic fashion. Specimens are labeled with a letter prefix and a number. Specimens with the prefix P are from the section near Paibi, and specimens with the prefix W are from the section near Wangcun (see Peng and Robison, 2000; also see figures in Peng et al., 2001a, 2001b). The numbers associated with these prefixes identify levels in meters above the base of the Huaqiao Formation in the respective sections. The specimens will be assigned numbers in the collection of the Museum of the Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, Nanjing (NIGP) upon publication of the monograph.

TAXONOMIC NOTE

A new generic name, Luyanhaoaspis, is erected here as a replacement name for Luaspis Peng, Lin, et Chen, 1995, which is preoccupied by another trilobite. The type species of Luyanhaoaspis gen. nov. is Luaspis decorosa Peng, Lin, et Chen, 1995.

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REFERENCES


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Fig. 9. Wanshania wanshanensis Rong et Yang in Zhou et al. Cranium, P240.5, x12.

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Fig. 11. Schmalenseea amphionura Moberg. Exoskeleton, P240.5, x7.

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* Luyanhaaspis gen. nov. is a replacement name for Luaspis Peng, Lin, et Chen, 1995 (preoccupied).
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