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THE EARLY CAMBRIAN CHENGJIANG BIOTA: NEW QUARRY AND DISCOVERIES NEAR ERCAICUN, HAIKOU TOWN, KUNMING COUNTY, YUNNAN PROVINCE, CHINA

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INTRODUCTION

In recent years nonmineralized fossils characteristic of the Chengjiang Biota have been discovered at various localities along the western side of Dianchi Lake, particularly in the area between Haikou and Xianjie (see Fig.1 of the Yunnan Route 2). Among these localities, the quarry near Ercaicun Village is most important because primitive vertebrate fossils, *Haikouella* (Chen *et al.*, 1999), *Haikouichthys*, and *Myllokunmingia* (Shu *et al.*, 1999), have been discovered from this quarry. The new localities and quarries along the western side of Dianchi Lake were first investigated by Luo Huilin and colleagues in the early 1990s, and first reported by Luo *et al.* (1997). Up to now, more than 100 genera and species have been described from this area (Luo *et al.*, 1999), and the fossil composition here exhibits significant differences from that of the Chengjiang area. In general, arthropods are the dominant fossils in both areas, but *Naraoia, Isoxys*, and *Kunmingella* which are common in the Chengjiang area, are uncommon in the western Dianchi Lake area. Another obvious difference between the two areas is in the relative abundance of worms: the most common worm in the Chengjiang area is *Maotianshania*, but *Cricocosmia*, which is rare in the Chengjiang area, is the most abundant worm in the western Dianchi Lake area.

Ercaicun Village is about 4.5 km west of Haikou, 47 km from Kunming, and 13 km from Meishucun. On a southwest slope 0.5 km from Ercaicun Village, the Yu'anshan Formation is well exposed and deeply weathered. The section (Fig. 1) begins in a 40-cm-thick layer of the Yu'anshan Formation that is rich in Fe, Mn, and P. Nonmineralized fossils occur in the middle part of the section. The Cambrian Yu'anshan Formation is disconformably overlain by the Devonian Haikou Formation.

Stop 5

Yu'anshan Formation: *Haikouella*–bearing quarry

The quarry is located near an electric wire pole. This quarry has yielded more then 500 specimens of *Haikouella*, all of which were excavated from a single layer about 24.5 m above the Fe-, Mn-, P-rich layer marking the base of the Yu'anshan Formation. In total, some 50 spe-

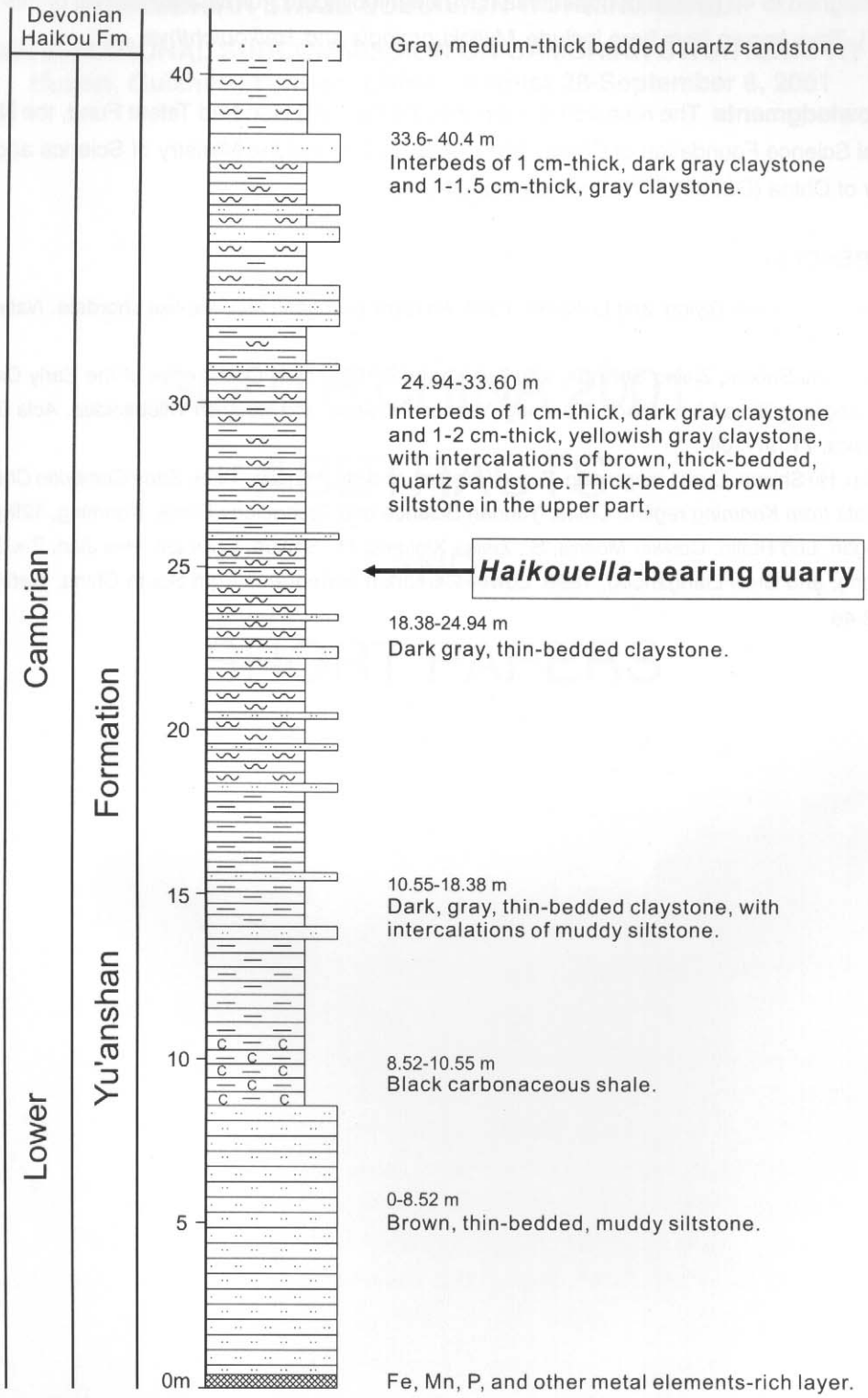

Fig. 1. Lithologic log of the Yu'anshan Formation near Ercaicun Village, Haikou, Kunming.

cies assigned to 40 genera of organisms have been collected from a 3-m-interval of this quarry (Fig. 1). Taxa known from here include *Myllokunmingia* and *Haikouichthys*.

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