Abstract: Apart from the early Cambrian strata which have experienced much strong regional metamorphism and deformation, the identification of tectonic generation in the area around Beijing is uncertain. Caprock structures are mainly faults and folds in NE and EW directions, which constitute the basic structural framework of this area and control the spatial distribution of sedimentation, pyrogenesis and mineralization.

Based on the field survey, sampling and analysis (Fig.1) of Weidian section, Qingbaikou section and Zhoukoudian Dongshanhilang section in Xishan of Beijing, the characteristics of each Cambrian Group are summarized (Fig.2).

Lower Cambrian
The lithology of Changping Formation is mainly leopard-porphry limestone and dolomite, and the bottom is mainly dark gray berry-bearing micritic limestone. It turns into leopard-porphry limestone and bioclastic-bearing micritic limestone in the upward direction. Thick light gray fine-crystal dolomite can be seen at the top of Changping Formation in Weidian section below. The lithology of Mantou Formation is dominated by purple-red mudstone, with limestone, micritic dolomite and oolitic limestone, and horizontal striation, belonging to tidal flat facies deposition. It is in parallel unconformable contact with the lower Changping Formation, and ancient weathering crust and breccia can be seen at the bottom. Maozhuang Formation mainly exposed in many areas. The thickness is about 60m, with dark brown mudstone, cloudy limestone and micritic dolomite.

Middle Cambrian
Xuzhuang Formation can be seen in Beishan and Xishan of Beijing. The section of the lower Weidian is about 57m thick, and the cycle of the interbedding of lime-green sandstone and oolitic limestone is developed at the bottom, and the cycle of the interbedding of oolitic limestone and cloudy belt limestone is developed upward. Zhangxia Formation is widely distributed in Mentougoudistrict of Xiashan, Beijing. It is characterized by the development of thick layer oolitic limestone, the thickness of oolitic limestone is 0.4m~1m, the bottom is the interbed of grayish-green thin layer sandstone and oolitic limestone, the middle part is sparry oolitic limestone, and the top part is thick layer sparry oolitic limestone, with the development of ripple marks.

Upper Cambrian
The Gushan Formation is mainly oolitic limestone, a small amount of bamboo-like limestone can be seen. The oolitic limestone is interbedded with the thin layer edgewise limestone at the top. The lithology of the Changshan Formation is mainly dominated by micrite edgewise limestone and yunnite strip-zone limestone. Most of the bamboo leaves are long and have oxidation rings. The sedimentary environment is mostly intertidal zone environment with medium and low intermittent energy. A small amount of micrite dolomite can be seen on the upper part. The lithology of the Fengshan Formation is dominated by the limestone in the Yunnizao belt, the cycle of interbedding between the Yunnizao limestone and the limestone is developed at the bottom, the middle part is the limestone in the Yunnizao belt sandwiched with oolitic limestone, and the top is the thick layer edgewise limestone.

Fig.1. Beijing Xishan sectional reconnaissance outcrop at Austin Reed.

* Corresponding author. E-mail: 332786329@qq.com

© 2019 Geological Society of China
Key words: stratigraphic division, Cambrian, Beijing area

References


About the first author
Li Shuo, female, born in 1996 in Qinghai Province; master; graduated from China University of Petroleum, Beijing; postgraduate. She is now interested in the study on Sedimentology and paleogeography. Email: 332786329@qq.com; phone: 17610731121.