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Palynological Assemblage Age and Palaeoenvironment of the Cretaceous Salt-bearing Strata in Laos and Yunnan, China

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The study of Cretaceous-Palaeogene salt-bearing strata of the Khorat Basin Laos and the Lanping-Simao Basin in Yunnan, China has an great significance not only in explaining the basin evolution and the genesis of potash deposits there, but also for the potassium exploration in Yunnan Province, China as these basins formed in the same tectonic realm. Yet there is a distinct controversy about the ages of these salt-bearing strata and the correlation of the salt-bearing sequences between the two basins is of argument, too.

In this study palynological analysis was carried out on the Nongbo Formation of the Khorat Basin at Wentai and Longhu mining area in Khammouane Province of Laos and clastic interbeds of the Mengyejing Formation of the Lanping-Simao Basin at the Taiyu Mine, Baozang District, Jiangcheng City, Yunnan. The results show that the assemblage from the Nongbo Formation consists of rich *Classopollis*, *Ephedripites* and *Exesipollenites*,

together with low abundances of *Callistopollenites*, *Normapolles*, *Cicatricosisporites*, *Clavatipollenites* and *Asteropollis* and indicates a Turonian–Santonian age of Late Cretaceous.

By contrast, palynological assemblages from the Jiangcheng mining area are mainly composed of *Psophophaera*, *Exesipollenites* and *Classopollis* and only a few number of angiospermous pollen are found. These include *Monocolpopollenites* and *Tricopites*. An age of no older than Aptian/Albian is considered for the assemblage and the Mengyejing Formation. As a result, it can be concluded that the Mengyejing Formation might be older than the Nongbo Formation in age. It can also be inferred from the palynological assemblages that both basins were occupied by a hot and arid climate in southern subtropical environment which is good for the salt formation and deposition.

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