Late Mesozoic clam shrimp palaeobiogeography of China

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Clam shrimps are freshwater bivalved crustaceans with a chitinous carapace and have a long geological history extending back to the Devonian. Their individuals are generally between a few millimeters to two centimeters, and the largest fossil record is up to 42 mm shell length. Although there are only 17 extant genera in four families, they were much more prosperous during Late Mesozoic. They are commonly abundant and widely distributed in freshwater lacustrine deposits in China and the neighbor areas in eastern Asia of that age (Li et al., 2014). Consequently, they are useful for biostratigraphic correlation of non-marine Mesozoic deposits and palaeobiogeographic subdivision. Here the author would like to introduce the palaeobiogeography of Chinese clam shrimps during the Jurassic and Cretaceous time.

During the Early Jurassic and early Middle Jurassic, the consistent and unified clam shrimp palaeobiographic provinces have developed in northern and southern China, such as the Early Jurassic *Palaeolimnadia baitianbaensis* Province, and the Middle Jurassic *Euestheria ziliujingensis* Province. Since late Middle Jurassic, clam shrimps differentiated into a *Palaeoleptestheria* Province in the palaeo-lake system of southwestern China, and a *Sinokontikia* Province in northern China. During Late Jurassic, a *Pseudograpta* Province developed in northern China, while an *Eosestheriopsis dianzhongensis* Province occurred in the palaeo-lake system of southwestern China and a *Qinghaiestheria-Mangyalimnadia* Province occupied the Qaidam Basin (Li and Matsuoka, 2012).

Since Early Cretaceous an *Orthestheria* Province developed in the palaeo-lake system of southwestern China, an *Eosestheria-Yanjiestheria* Province occupied southeastern and northern China. During the Cenomanian a homogeneous *Nemestheria* Province was widely distributed in China. Soon after, the clam shrimps differentiated into three palaeogeographic provinces: a *Euestherites* Province in the ancient Heilongjiang River-Songhua Lake drainage system in northeastern China; two successive clam shrimp provinces (i.e. the earlier *Linhaiella* Province and the later *Tenuestheria* Province) in the Yunmeng Lake system in southeastern China; and an *Aglestheria* Province in the palaeo-lakes of southwestern China (Chen et al., 2007).

References

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