

Brachiopods, fusulines and palynomorphs from the Lower Permian Mengkarang Formation (Sumatra, Indonesia) have been studied in order to establish the palaeogeographical position and the palaeolatitude of the West Sumatra Block. The position of the West Sumatra Block within the Palaeo-Tethys and Panthalassa oceans and its relationships to their marginal landmasses, in particular the Gondwana supercontinent and the Cathaysian palaeogeographical area, currently is uncertain. Brachiopods, fusulines and palynomorphs of the Lower Permian Mengkarang Formation were analysed to test the Gondwanan versus Cathaysian affinity of the West Sumatra Block. Six genera and two species of fossil brachiopods were identified: *Neochonetes* (*Neochonetes*) *carboniferus* (Keyserling, 1846), *Marginifera* (*Arenaria*) sp. ind., *Reticulatia* sp. ind., *Stereochia* aff. *S. irianensis* Archbold, 1981a, ?*Protoanidanthus* sp. ind., *Cancrinella* sp. ind., and an undetermined genus and species of the subfamily *Toryniferinae*. Multivariate analysis of the available brachiopod data including those from the Mengkarang Formation identified two groups, the first comprising Iran, Yukon, the Urals and West Sumatra, the second comprising South Thailand, Baoshan, central Afghanistan, Karakoram, India, West and East Australia, indicating that Lower Permian brachiopods from West Sumatra are best grouped with warm water taxa rather than with cold water taxa from the Gondwanan-Perigondwanan region. Six fusuline species belonging to five genera were identified from six limestone samples: *Eostaffella* sp., *Schubertella* sp., *Pseudoschwagerina* cf. *afghanensis* Leven, 1971, *Pseudoschwagerina meranginensis* Thompson, 1936, *Eoparafusulina* ?*haydeni* Leven, 1971, *Pseudofusulina rutschi* Thompson, 1936. The fusuline fauna is rather poor in terms of generic composition as it is composed mainly by widespread genera but, in a broad sense, the Lower Permian West Sumatra fauna is typical of palaeo-tropical Tethyan regions because of the common occurrence of large schwagerinids. Only one sample level in the Mengkarang Formation yielded abundant palynomorphs, dominated by *Laevigatosporites* spp. indeterminate bisaccate pollen, *Florinites florini* Imgrund, 1960 and *Convolutispora* sp. This assemblage is very different from coeval assemblages of the Gondwanan region, northern Palaeotethyan regions of Kazakhstan, and parts of western Europe and the Intrasudetic Basin, but has more affinity with the Cathaysian phytogeographic province as represented in northern China, Turkey and northern Iraq.