

Structural geology of the Macincang Formation,
Langkawi Islands

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A recent field study determined that in general, beds of the Macincang Formation have not been overturned despite the fact that at least two phases of deformation affected the rocks. This is interpreted as indicating that the Langkawi islands represent a transitional boundary between the mobile region in the east (including a narrow belt along the east side of the island group) and the, since Early Palaeozoic stable area in the west. The Macincang beds were compressed to form listric faults and large open folds striking north and northeast. Indicators of palaeocurrents and palaeoslope suggest that the original western and eastern edges of the Macincang sedimentary basin are located close to Tanjung Cincin and Kuala Kubang Badak, respectively. A group of rocks with different lithologic and structural character compared to the ordinary Macincang clastics is interpreted to represent pre-Macincang rocks. At Teluk Datai and near Tanjung Buta, these rocks are separated from overlying Macincang beds by a low-angle lag fault and a paraconformity. The reverse motion on the lag fault indicates tectonic transport towards southwest.
