

Shock structures in Peninsular Malaysia: evidence from Kedah and Pahang

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Evidence of geology, morphology and gravity anomalies demonstrate that the double Mahsuri Rings in Langkawi are impact structures. Each of the partially superimposed rings is 2.4 km across, with centres at 0.6 km distance apart and depths of 107 m (eastern ring) and 45 m. From these rings in the southwest direction are two more circular structures of progressively smaller size: Temoyong and Tepor structures. Together the four structures probably represent the product of serial impacts of extraterrestrial projectiles arriving from the southwest. The impact event was post-granite of Gunung Raya (whose age is Triassic-Jurassic) if the topography was exhumed, but could be of Neogene age if the present landscape was never buried. The Paloh craters at the Pahang-Terengganu

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border are associated with vein quartz containing planar deformation features and display mosaicism. At Beserah near Kuantan, 35 km southeast from Bukit Paloh, quartz megacrysts of partially weathered granite show naturally etched cleavage. It is not yet clear if the Paloh impact craters are in any way related to the shocked-metamorphose granitoids in the Kuantan area.