

Khoo Teng Tiong: Contact Metamorphism and Matrix Recrystallization of the Setul Limestone, Langkawi.

Abstract

The northeastern part of the Langkawi area is underlain by the Setul Limestone outside the tremolite-phlogopite boundary of the Raya and Tuba aureoles. Specimens of the limestone from Teluk Belangkas to Tanjung Rhu including the islets of Pulau Gasing and Pulau Pasir show occurrence of pellets of micrite set in a more crystalline groundmass. Petrographic evidence show that these pellets are not organically extruded bodies but result from contact metamorphism ($< 400^{\circ}\text{C}$) by the adjacent granite bodies. The pellets are the non-recrystallized parts of the original micritic carbonaceous limestone. There is also evidence that tectonic deformation due to an earlier phase of regional metamorphism (Patani Metamorphics) could have aided the recrystallization.

At higher grades of contact metamorphism the pellets become scarce but they do persist up to grades where forsterite and wollastonite developed. However, schistose fabric in the limestone developed during the earlier regional metamorphism generally survive to high grades of contact metamorphism. The only change is just coarsening of the schistose fabric.

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