
Tectonism in Borneo: subduction-collision or diapiric vertical?

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Tectonic evolution of Borneo is as yet poorly understood. Over the last two decades it was mainly discussed in terms of convergent plate margin settings including arc-continent collision. Various lines of geologic evidence, however, cannot readily be reconciled with such tectonic interpretations. Magmatism in time and space, in particular, does not conform to the postulated subduction zones (e.g. North Borneo Trough, Lupar Line).

Evolution of Borneo as an integral part of a larger Sundaland, can alternatively be interpreted within the framework of vertical tectonics and diapirism coupled with strike-slip movements. Based on observed geologic features including subsidence patterns (basin development), magmatic events, melanges and chaotic complexes, it is suggested that episodic diapirism of different orders took place in this region.

Northeastern Borneo probably represents a diapirically uplifted marginal(?) basin with highly attenuated crust formed by an earlier stretching. North Borneo Trough is not a subduction trench. It is interpreted as a submerged extensional basin overridden by materials derived by gravity spreading of the uprising Northeastern Borneo.

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