

**Two Archipelagos, one Story:
Influence of Plate Tectonics and Sea Level Fluctuations
on Southeast Asian Water Monitors
(Squamata: Varanidae)**

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The vast chain of islands between the continental margins of Eurasia and Australia is characterised by a complex geological history and a stunning biodiversity. Sulawesi lies in the centre of the Indo-Australian Archipelago bridging the Oriental and Australian faunal regions. Together with the Lesser Sunda Islands and the Moluccas, Sulawesi represents a zoogeographic transitional region called Wallacea. The Philippine Archipelago represents another separate biogeographic subregion of Southeast Asian biotas. Long periods of isolation in the geological past crucially enhanced the biodiversity and the degree of endemism on Sulawesi and the Philippines.

Sulawesi, due to its highly structured shape and its composite nature consisting of three fused microcontinental plates, forms an “archipelago” within one island which, at present, is connected by land bridges. Several areas of endemism reflecting the geological history of Sulawesi have been identified. Within the Philippines several faunal sub-provinces representing five to seven distinct Pleistocene aggregate island complexes are recognized as unique centres of endemism. Both oceanic island groups are internationally appreciated as biodiversity hotspots with very high conservation priority.

In addition to plate tectonics, past sea level changes have greatly shaped the present-day distribution patterns and systematics of many Southeast Asian vertebrates by either separating land or uniting formerly disconnected island regions. Today, the archipelagos of the Philippines and the Sulawesi region harbour the highest diversity of Southeast Asian water monitors (*Varanus salvator* complex) including many locally restricted taxa. Using the example of water monitors, the influence of geological setting and fluctuating sea levels for the genesis and maintenance of biodiversity will be demonstrated.