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Late Pleistocene to Holocene environmental and vegetation changes in Thailand indicated by palynofloras

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Information on vegetation change during the Pleistocene–Holocene of Thailand is important for paleoenvironment and climate change studies, but it is quite limited. This study provides a record of spore and pollen data from a 40 m long sediment core obtained from the east coast of southern Thailand, ranging in age from 33,000+ to 6,000 BP. Prior to 33,000 BP, pollen assemblages with abundant mangrove pollen indicate that mangrove was the dominant vegetation type along with near shore communities during a period of high sea levels. Sediments from 33,000 to 8,000 BP were barren of pollen, suggesting exposure to the atmosphere related to a period of lower sea level. After 8,000 BP, mangrove became re-established in the area as sea levels rose. Subsequently, mangrove pollen started to decline, and pollen of inland vegetation, such as back mangrove, grasses, ferns, and lowland plants, increased. A decrease of mangrove pollen in sediments can be an indicator of a prograding shoreline. At present, the area is a sand beach environment 2 km from the shoreline. The fluctuation of mangrove pollen percentages indicates marine regression and transgression over time.