# PALYNOSTRATIGRAPHY IN OFFSHORE SARAWAK CLIMATIC AND EUSTATIC APPLICATIONS

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The classical qualitative palynostratigraphy of Neogene ages in tropical areas is of limited accuracy owing to the broad age ranges of most vegetals for most pollen taxa and often owing to high sedimentation rates which dilute the fossil pollen record.

In order to fit in with corresponding geological problems, a new palynological zonation was established based on quantitative variations of pollen assemblages. These assemblages are not artificial but correspond to living vegetal ecological assemblages. Neogene pollen grains are so morphologically close to present pollen grains that they are directly identified under plant taxonomy.

Twelve quantitative palynozones occur in the Malaysian offshore from Oligocene to early Pliocene. The study on seven wells shows that the sedimentary significance of quantitative palynozone allows us to assimilate their limits with sequence boundaries defined by seismic stratigraphy.

The pollen assemblages of montaine and inland vegetation evolve in close response with regional climatic changes. The variations in frequencies of littoral flora groups compared with those of spores are correlated with stillstands and changes of sea levels.

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