

Palynological Event Stratigraphy in the Palaeozoic of Saudi Arabia

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The joint investigation undertaken by palynologists from both Saudi Aramco and the Commission Internationale de Microflore du Paleozoique has established important zonation patterns throughout the Palaeozoic deposits of Saudi Arabia. This zonation replaces previously published regional databases with their heavy reliance on long range comparisons to effect correlation

Detailed taxonomic studies have now demonstrated the unique phytogeographical character of these assemblages and established the possibility of closer correlations with other locations on the northern margin of Gondwana. Previously ill-defined formations are now more precisely dated and more importantly, the magnitude of several specific hiatus may be shorter than anticipated. New stratigraphic intervals have been recognised for the first time and evidence recovered from the study of reworked palynomorphs may suggest the existence of other intervals still awaiting discovery in the subsurface.

This project has expanded the biostratigraphical database for the Arabian Peninsula not only in terms of the total amounts of section investigated but also by the detailed study of palynomorph groups which were previously poorly exploited (e.g. cryptospores). It has additionally exploited that data to develop a number of well-defined palynological events which appear to have widespread distribution and therefore allow reliable palaeogeographical reconstructions to be attempted.