PERTEMUAN PERSATUAN (MEETINGS OF THE SOCIETY)

CERAMAH TEKNIK (TECHNICAL TALKS)

M.G. Audley-Charles: Did the flowering plants (angiosperms) first evolve in Malaya? A geological look at the problem.

Abstract

Based on what have been argued are similarities of fossil faunas and floras and distinctive lithofacies and igneous rocks it has been suggested that Burma, Thailand, Malaya and Sumatra comprise continental fragments rifted from northern Australia-New Guinea. An outstanding problem concerns the precise date of separation of these Asian continental fragments from the Australia-New Guinea part of Gondwanaland. There is some geological evidence for the separation being as late as late Jurassic Oxfordian stage (160 Ma), but some indications have been taken to mean that the rifting occurred as early as Permian. Palaeomagnetic measurements that could provide such an important guide through the apparently conflicting geological evidence are too few at present and it is hoped that this work will be undertaken soon.

The conclusion put forward on the basis of the available evidence appears to me to be strongly in favour of Burma, western Thailand, Malaya and Sumatra having been rifted from the north Australia-New Guinea continental margin during the Jurassic. These southeast Asian blocks became relatively isolated within the Tethys ocean between Gondwanaland and the Asian mainland for possibly as long as 60 Ma or even possibly 100 Ma. Equally important there are indications that from the late Cretaceous (100 Ma) onwards they provided an archipelago of islands between the Asian mainland and Australia-New Guinea. By being above sea-level from the late Jurassic and into the Cretaceous these regions may have acted as Noah's arks for the land plants of that time.

It may be significant for the history of land plant development as well as for geotectonics that large parts of northern Australia, Burma, western Thailand, Malaya and Sumatra escaped the flooding of the world-wide marine transgression of late Cretaceous time. This may have permitted land plants related to those which had evolved in the late Jurassic to have survived in these parts of southeast Asia. This suggests that the fossil land plants of Jurassic and Cretaceous age in these parts of southeast Asia may be found to contain the most primitive forms of the great flowering land flora that dominates the forests of this part of the world at the present day.

Laporan (Report)

Pada 27hb November, 1985 lalu, bertempat di Bangunan Jabatan Geologi, Universiti Kebangsaan Malaysia, Bangi, Prof. M.G. Audley Charles daripada University College, London, telah menyampaikan sebuah ceramah teknik bertajuk, "Did the flowering plants (angiosperms) first evolve in Malaya? - A geological look at the problem". Ceramah ini telah dihadiri oleh kira-kira 40 ahli persatuan, dan diakhiri dengan jamuan 'Satay Kajang'! Prof. Audley Charles



M.G. AUDLEY-CHARLES

B.W. SELLWOOD

berada di U.K.M. sebagai ahli dalam projek penyelidikan bersama UKM-UCL "Stratigraphical-Structural Evolution of Malay Peninsula", tajaan Sarawak Shell Berhad, yang baru bermula.

Hamzah Mohamad