422

PALEOBIOGEOGRAPHICAL SIGNIFICANCE OF THE MESOZOIC PLANT FOSSILS OF LIVINGSTON ISLAND, SOUTH SHETLANDS, ANTARCTICA.

M Leppe

Instituto Antártico Chileno, Punta Arenas, Chile

Livingston Island has been traditionally one of the best paleontological places in western Antarctica. But, only a few coastal points are seasonally uncovered by ice and snow. Between January of 2001 and the summer of 2006, plant mega and microfossils was collected from Shirreff Cape (NW), Byers Peninsula (SW), Williams Point (NE) and Hurd Peninsula (SE). The floristic paleoassemblages, belonging to Lower Jurassic to Upper Cretaceous lapse, reflects the dramatic events generated by the Gondwana breakup over the high latitude plants. Vicariant events can be distinguished from cladograms generated by PAE (Parsimony Analysis of Endemicity), comparing with 12 other plant bearing Mesozoic localities from South America and Antarctica. The new paleoflora A of Shirreff Cape have great affinities in their composition with the Albian of Alexander Island. But the paleoflora B differs substantially than A, and is more related with Hope Bay, but specially with the Jurassic flora from South Orkney beds. A radiometric age of Williams Point fossiliferous rocks put they into the Campanian, age confirmated by the biocron of Cycadeoidales, present in the beds with the genera *Pterophyllum*. The stratigraphy of the Williams Point beds, recently reviewed, shows that the supposed Upper Triassic rocks are allochthonous, transported big blocks by glaciers. The dichotomized frond type is not exclusive to the Corystosperms, indicator of Triassic age. The flora of Byers Peninsula is the best known, and has been situated between the Upper Jurassic and Lower Cretaceous. Recent investigations demonstrated that the main fossiliferous locality, near Cerro Negro, is clearly Early Cretaceous, but other plant bearing beds located at the centre part of the peninsula are associated with Upper Jurassic ammonites, belemnites, innoceramids and fishes. This biogeographical approach to the understanding of the evolutionary processes affecting the abundance and richness of the Mesozoic flora, will be soon under examination in accord to the modern paleogeographical reconstructions.