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STRATIGRAPHICAL DISTRIBUTION OF *TAENIATE* POLLEN GRAINS IN THE UPPER PALAEOZOIC BASINS OF SOUTH AMERICA: AN UPDATE

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This contribution aims to update the stratigraphical distribution of taeniate pollen grains (TE) along the Late Carboniferous (LC) and Early Permian (EP) of South America (SA) and recognize key species with stratigraphic value. Knowledge of LC and EP SA microfloras has expanded significantly during the past five years, specially as a result of detailed investigations in Argentina [Tarija (T), Paganzo (P), Uspallata-Iglesia (UI), San Rafael (SR), Chacoparaná (CH), Colorado (CO) and Tepuel-Genoa (TG) Basins], Brazil [Paraná (PA), Amazon (A) and Parnaíba (PR) Basins], Uruguay (Paraná/Chacoparaná Basin), Bolivia [Tarija and Madre de Dios (MD) Basins] and Peru (Madre de Dios Basin). Several biostratigraphic units and correlations have been proposed covering almost all these basins where the assemblages typically contain variable frequencies of spores and pollen grains (monosaccate, bisaccate and taeniate) spanning this interval. These palynomorphs represent a predominantly gymnospermous (cordaitalean and coniferalean) vegetation but with significant contributions from lower vascular plants, notably pteridophytes, sphenophylls and lycopods. TE pollen grains, which become increasingly prominent in the EP are derived mainly from a glossopterid source. LC microfloras have yielded generally scarce specimens of several bisaccate taeniate pollen grains mainly of *Protohaploxypinus-Striatoabieites-Striatopodocarpidites* genera, while the EP sequences are presently composed of small to high amounts of diverse bisaccate and non-saccate TE taxa such as the above cited and *Vittatina, Lueckisporites, Hamiapollenites, Lunatisporites, Pakhapites, Illinites*, among others. In this context, there is any TE species recognized exclusively from the LC, while many others have their appearance, even slightly diachronic, in the EP strata where they are widely distributed in all the South American basins as in the rest of the world, used to define the LC-EP boundary. So, LC assemblages that have scarce TE forms would imply seasonal climates with drier conditions respect to other assemblages TE-barren (e.g., Tarija Basin). In the EP, the ever-present TE taxa would attest general warmer climates proved by the Gondwana movement to lower paleolatitudes.

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