

associations are organized under three kinds of cycles: the lower ones are basically coarsening upwards, with (c) - (b) in the lower cycle and (c) - (b) - (a) in the intermediate; the upper cycle is fining upwards, with (a) - (b) - (c). The mapping of these cycles, however, can't be confidently extended to the entire area.

## SEQUENCE STRATIGRAPHY OF THE ITARARÉ SUBGROUP (LATE PALEOZOIC), PARANÁ BASIN, IN SOUTHERN PARANÁ AND NORTHERN SANTA CATARINA, BRAZIL

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Stratigraphic analysis of the Itararé Subgroup (Middle/Late Carboniferous-Early Permian) cropping out between Mafra (SC) and Palmeira (PR) led to its subdivision into seven sedimentary "cycles", with a mean thickness of 100 m, deposited during glacially controlled regressive-transgressive-regressive episodes.

"Cycles" constitute fining-coarsening upward successions of: a) massive diamictite; b) stratified diamictite intercalated with shale and deformed sandstone masses; c) massive or cross-bedded sandstone intercalated with shale and massive or stratified diamictite; d) shale/mudstone, and/or regular or irregular rhythmites with dispersed clasts; and e) massive or cross-bedded sandstone (Canuto et al., 1997). Base of each cycle corresponds to an unconformity on top of striated Precambrian to Middle Paleozoic basement, striated and/or glaciotectionized Itararé Subgroup sediments or their correlative surfaces. Top of uppermost "cycle" unconformably recovered by fluvio-deltaic sandstones of the Rio Bonito Formation (Early Permian). The lower erosional surface is assigned to the advance of the grounded Paraná glacial lobe into the Paraná Basin during a lowstand sea-level phase. It is usually covered by thin subglacial tillite. Subglacial erosion by meltwater probably associated with glacial abrasion carved a wide and long tunnel-valley under the Paraná lobe.

Filling of the valley upon retreat of the glacier resulted in a long linear predominantly sandy body, known as the Lapa Sandstone (Canuto, 1985; Canuto et al., 1996 e 1997). Retreat of the glacial lobe was followed by sea-level rise and a transgressive phase with extensive marine reworking and ressedimentation of the glaciogenic sediments mostly by mass-gravity flow processes. Highstand phase is marked by deposition of shale/mudstone some of them bearing marine fossils (e.g. Ortigueira, Guaraúna, and Passinho). Shallow marine sandstones on top of the shale/mudstone suggest glacio-isostatic uplift in response to desintegration of the glacial lobe. The "cycles", some incomplete due to erosion, are recognized in more proximal deposits in relation to basin margin. Their delimitation is more complex in more distal settings, due to facies change.

Simpósio sobre Cronoestratigrafia da  
Bacia do Paraná, Barra do Garça  
Abstracts (1997)