

This value is compatible with those observed during the Vendian (ca. 600 Ma) and during parts of the Upper Riphean (ca. 800 and 950 Ma). Based on several Pb/Pb and Rb/Sr isochronic age determinations, which are in the range of 686-520 Ma, an age of ca. 595 Ma can be inferred from the secular variation curve proposed by Kaufman *et al.* (1993). In both groups, the $\delta^{13}\text{C}$ values increase from ca. -4‰ (PDB) to >6‰ toward the top of the formations similar to post-Varanger episode carbonates of Svalbard, East Greenland, Namibia, etc. The above $^{87}\text{Sr}/^{86}\text{Sr}$ ratio is very similar to that found for Araras Formation limestones (ca. .70746), taken up to now as coeval with the Corumbá Group (MT). However, the ratio for this last Group together with its equivalent Camba Jhopo Formation in Paraguai, is very different, around .7085. This indicates that both units can be younger than the already mentioned Bambuí Group and their ages can be estimated as 560 ± 10 Ma, a fact which is supported by the presence of an Ediacaran-grade fauna (590-550 Ma). In contrast, the Loma Negra Formation of La Tinta Group in Argentina seems to be appreciably older than the Bambuí Group. An age between 900-780 Ma can be estimated from the $^{87}\text{Sr}/^{86}\text{Sr}$ ratio of around .7060, in accordance with Rb/Sr isochronic ages obtained in adjacent formations. This low ratio is close to that found in level I6 of Adrar limestones of Mauritania (890-874 Ma) deposited during the "mantle" event defined by Veizer *et al.* (1983).

— (30 de novembro de 1995).

ANÁLISE FACIOLÓGICA, MODELOS DEPOSICIONAIS, E EVOLUÇÃO PALEOGEOGRÁFICA DO GRUPO BAMBUÍ, NA REGIÃO DE ARCOS, MG

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Os carbonatos do Grupo Bambuí que afloram na região de Arcos (MG) pertencem à sequência inferior, pelítico-carbonática. São de idade neoproterozóica, e compõem um megaciclo regressivo, constituído por quatro intervalos principais de sedimentação. A sequência superior é de natureza terrígena, continental.

As litologias que compõem Intervalo 1, basal, depositaram-se em uma plataforma carbonática do tipo rampa, talvez com quebra de relevo na sua porção distal. Em condições de rampa externa ocorrem: biostroma de calcário microbiano críptico, calcissiltitos com laminações cruzadas e plano-paralelas, considerados tempestitos distais; apresentam intercalações de calcirruditos maciços, talvez gerados por processos de fluxos de detritos; calcirruditos/calcarenitos em pequenas sucessões, com gradação normal, estratificação cruzada, marcas onduladas e laminação plano-paralela, foram considerados tempestitos proximais. Os depósitos de rampa interna incluem calcarenitos dolomíticos com estratificação cruzada, representando baixios. No ambiente perilitorâneo, predominam estromatólitos dômicos e colunares.

Processos de dissolução, com abertura de cavidades e formação de brechas de colapso, afetaram as fácies de topo do Intervalo 1 e registram um evento de exposição subaérea.

O Intervalo 2, é estromatolítico, apresenta intercalações de dolarenitos com microfítólitos, e compõe sucessões métricas; representa a progradação de uma planície de maré.

Os sedimentos dos intervalos 3 e 4 foram depositados em plataformas do tipo *rimmed shelf* e têm características de ciclos *Oolite-Grainstone*, com corpos de calcarenitos oolíticos. No Intervalo 3, ocorrem calcilutitos laminados com cristais de evaporitos, que exibem semelhanças com ciclos do tipo *Lime mud-Sabkha*. — (30 de novembro de 1995).

THE CORUMBÁ GROUP (CENTRAL SOUTH AMERICA) IN THE CONTEXT OF LATE NEOPROTEROZOIC GLOBAL CHANGES

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The palaeoceanographic and palaeoclimatic changes that occurred in the Neoproterozoic-Cambrian transition have been interpreted as the cause of the

expansion and decline of the Ediacaran fauna and the later explosion of life in the Cambrian. This situation has been linked to changes in the composition of seawater and the installation of extensive carbonate platforms around the planet.

The Corumbá Group (Neoproterozoic-Cambrian) exhibits many of the same stratigraphic relationships as do other Neoproterozoic sequences of this age such as those in Namibia and South Africa (Damara Group), East Greenland and Svalbard (Polarisbreen Group), central Europe (Domo Extremeño Group), western Canada (Windermere Supergroup) and northern Siberia.

In Brazil, the Varangian glaciation was responsible for the Puga Formation and the iron-formation of the Jacadigo Group in the Urucum Massif. Resting on these glacial sediments, there are pink dolomites with tepee structures that mark the beginning of a significant transgression (Bocaina Formation) with more vigorous oceanic circulation and upwelling responsible for phosphogenetic processes.

A regressive event eroded the Bocaina platform and formed a slope breccia which contains clasts of limestone, chert and phosphorite. The subsequent transgression resulted in deposition of the Tamengo Formation (limestones and limestone-black shale rhythmites) with *Cloudina lucianoi* and *Corumbella weneri*. Increasing delta ^{13}C values, from negative to positive, are observed upwards in this unit, which may correlate with the Positive Ediacaran Excursion. — (30 de novembro de 1995).

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POSSIBLE ICHNOFOSSILS IN THE TERMINAL PROTEROZOIC CORUMBÁ GROUP, SERRA DA BODOQUENA, MATO GROSSO DO SUL, BRAZIL*

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Metazoan fossils suggestive of a latest Proterozoic age very close to the Cambrian limit are known from the

Corumbá Group near Corumbá, extreme western Mato Grosso do Sul, (MS) Brazil. Till now, no fossils attributable to invertebrates had ever been reported from this group in the Serra da Bodoquena, some 200 km SSE of Corumbá. We recently discovered possible ichnofossils associated with stromatolites, oncoids, and phosphatized microfossils from the Bocaina Formation, basal unit of the Corumbá Group, north of Bonito, MS.

The traces occur evenly distributed over both top and bottom halves of a single bedding plane exposure in a hand sample of dololite. They consist of short, straight to rarely curved traces, 1-6 mm long and 0.4-0.9 mm across, parallel to lamination. The curvature of several traces and the intersection of others are suggestive of trails made by tiny worm-like animals. If this interpretation is correct, then those objects represent the oldest evidence of animal life in the Corumbá Group and in Brazil as well. However, until this hypothesis can be confirmed, it must be invoked cautiously in view of the small amount of material available for study. — (30 de novembro de 1995).

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STROMATOLITIC REEFS OF THE BOCAINA FORMATION (CORUMBÁ GROUP – NEOPROTEROZOIC – CAMBRIAN) MATO GROSSO DO SUL, BRAZIL

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The Bocaina Formation, the essentially dolomitic basal unit of the Corumbá Group (Neoproterozoic-Cambrian), rests conformably upon glaciogenic sediments (e.g. Puga Formation) attributed to the Varanger glaciation. Pink dolomites with tepee structures locally mark this contact.