Within the Bocaina dolomites discontinuous stromatolitic bodies associated with intraformational breccias are observed in a band stretching 200 km NNW from Bonito to Corumbá (MS) that marks the limit of the craton on the west with the Paraguai fold belt to the east.

These stromatolites are best exposed in a deposit at least 300 m long and 6 m high, on the right bank of the Rio Paraguai at Porto Morrinhos, near Corumbá. Bulbous stromatolites 3 m across and 1 m high are capped by 1 m of pelitic sediments and these, in turn, by unbranched, straight stromatolites 3-10 cm wide and 2 m high exhibiting convex to planar laminae.

The associated intraformational breccias include granules to blocks of carbonates, chert, and phosphorite dispersed within a carbonate matrix.

The close association of the stromatolites with the intraformational breccias is interpreted as related to sedimentation at the edge of the platform. In this palaeogeographic context, the breccias would have been deposited at the break in slope to the east and the bulk of the carbonates on the platform to the west under more restricted and locally mildly evaporitic conditions. — (*30 de novembro de 1995*).

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ICHNOFOSSILS AND POSSIBLE IMPRESSIONS OF SOFT-BODIED ANIMALS IN THE RAIZAMA FORMATION (ALTO PARAGUAI GROUP, VENDIAN-CAMBRIAN), MATO GROSSO, BRAZIL*

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Ichnofossils are an important tool for identifying the Proterozoic/Phanerozoic limit. We report here the discovery of seven forms of ichnofossils and possible soft-bodied animal impressions in sandstones of the Raizama Formation, basal unit of the Vendian-Cambrian Alto Paraguay Group near Cáceres, Mato Grosso, Brazil.

The specimens of ichnofossils are morphologically simple and few in number but resemble the horizontal locomotion or feeding trails of the ichnogenera *Planolites* (two forms), *Palaeophycus*, and *Cochlichnus*, all beginning in the Vendian; a fourth ichnomorph may represent a resting mark while a fifth, similar to *Lockeia*, known from Ordovician and younger rocks, appears to be the habitation mark of a sessile fusiform animal.

Two dubiofossils, each known from unique specimens, possibly represent molds or impressions of soft-bodied animals. One consists of an oval impression about 2 × 1.5 cm with a minute central depression and four radially arranged tear-shaped depressions; this possibly is the sub-umbellar impression of a medusoid scyphozoan with four gonads. The other specimen is a slightly curved (incomplete) cylinder, about 6 cm long, tapering slightly at the extremities and marked by regular lateral corrugations, possibly representing the mold of an annelid.

The small number of known specimens and the occurrence of several of them within mud-cracked sediments demand that caution be exercised in their analysis. Confirmation of their biological origin would support tentative correlation of at least part of the Alto Paraguai Group with the upper part of the Tucavaca Group (E. Bolivia) which bears Early Cambrian ichnofossils. — (*30 de novembro de 1995*).

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AGES AND TYPOLOGY OF THE BRASILIANO GRANITIC MAGMATISM CLOSE TO THE PROTEROZOIC-PHANEROZOIC BOUNDARY, STATES OF SÃO PAULO AND PARANÁ, SE BRAZIL

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A variety of granitic, dioritic and syenitic rocks were formed during the late- to post-orogenic Brasiliano period in the States of São Paulo, Paraná and vicinities. They belong to the Itu and Serra do Mar provinces, which were generated within a narrow time span [600-580 (± 20) Ma], close to the Neoproterozoic-

Phanerozoic limit, as indicated by well constrained Rb-Sr and U-Pb ages.

Two main granitic associations, intruded mainly Proterozoic meta-supracrustal rocks, are found within the Itu province. One is a high-K calc-alkaline association with biotite granites usually associated with K-diorite small bodies with an important mantle component. The second are subalkaline granites with some rapakivi affinities, showing also some W/Sn-mineralized granites, and was produced by high temperature lower-crustal melting. Minor K-rich diorite and syenite bodies have geochemical signatures that point to a contribution from enriched lithospheric mantle.

The Serra do Mar province also shows two main granitic associations, but they intruded older high-grade rocks. Peralkaline granites and sodic syenites may represent fractionates from asthenospheric alkali-basaltic magmas variably contamined with crustal materials. Subalkaline biotite granites are similar to those of the Itu province, but are commonly hypersolvus, as a reflection of the drier nature of their parent magmas.

The contrasts between the two granitic provinces are due to differences in the degree of distension (greater in the Serra do Mar region, with asthenospheric magmas penetrating the crust) and in the mechanical behavior of the crust (older and drier in the Serra do Mar province). — (*30 de novembro de 1995*).

MAGMATISMO GRANÍTICO E BACIAS VULCANO-SEDIMENTARES DO PERÍODO DE TRANSIÇÃO PROTEROZÓICO-FANEROZÓICO (600-500 Ma), NOS ESTADOS DO PARANÁ E SANTA CATARINA: IDADE E SIGNIFICADO TECTÔNICO

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Ao final do Proterozóico, os terrenos localizados entre os Cinturões Ribeira e Dom Feliciano (PR-SC) foram afetados por importante atividade magmática, representada por inúmeros maciços graníticos (Serra da Graciosa, Anhangava, Marumbi, Serra da Igreja, Agudos do Sul, Corupá, Morro Redondo, Dona Francisca, Piraí do Sul e Serra Alta), bem como, por expressivo vulcanismo associado a instalação das bacias de Campo Alegre, Guaratubinha e Corupá.

Predominam, nesses terrenos, granitos alcalinos-peralcalinos, contendo, anfibólios e clinopiroxênios (Na-Ca) e fayalita, que mostram tendências evolutivas desde metaluminosos, até francamente peralcalinos. Nas bacias de Campo Alegre, Guaratubinha e Corupá, predominam rochas vulcânicas (lavas ácidas a intermediárias e depósitos piroclásticos), sobre as seqüências sedimentares.

As idades U-Pb, em zircões, indicam que a colocação das rochas graníticas e vulcânicas situa-se no intervalo 610 ± 10 Ma. Esse fato demonstra uma contemporaneidade entre esses dois eventos, caracterizando, para essa região um regime distencional, ao final do Proterozóico.

O início do Fanerozóico marca uma modificação importante nas características tectônicas. No intervalo de 550 ± 50 Ma, compreendendo a maior parte do Cambriano, a região sul-oriental brasileira sofreu os efeitos compressivos das colisões relacionadas a orogênese Rio Doce.

Em conclusão, é enfatizada a proximidade temporal entre os corpos graníticos e o magmatismo das bacias vulcano-sedimentares (610 ± 10 Ma) dentro de um quadro distensivo fini-brasiliano. No Cambriano, não são conhecidos registros de sedimentação ou magmatismo, predominando condições compressivas. — (*30 de novembro de 1995*).

QUANTIFICAÇÃO DE ENCLAVES MAGMÁTICOS MÁFICOS DO GRANITO ITAQUI, SP E IMPLICAÇÕES PETROLÓGICAS E ESTRUTURAIS

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A análise da deformação em corpos granitóides fornece informações sobre o fluxo magmático, durante a ascenção, a ocorrência de expansão (*balooning*) e a influência da deformação regional, durante e após o alojamento (*emplacement*). O Granito Itaqui é um