

Basin sedimentation was roughly continuous from possibly early Lochkovian to the late Frasnian. Early Lochkovian chitinozoans occur mainly in the Amazonas Basin where *Eisenackitina bohemica*, *Margachitina catenaria* and *Pterochitina megavelata* are the index species. Emsian chitinozoans are common in the Paraná Basin, where they are represented by such species as *Ancyrochitina? varispinosa* and *Ramochitina magnifica*. The Eifelian to early Givetian index species *Alpenachitina eisenacki* is the commonest in the Middle Devonian, but other species are also present like *Ancyrochitina frankeli*, *Ramochitina ramosi* and *Ramochitina milanensis* (this latter seemingly restricted to the early Givetian). Late Givetian to early Frasnian strata are poorly characterized in the Paraná Basin, but *Angochitina pilosa* is locally abundant. Late Frasnian to early Famennian chitinozoan faunas in all studied basins generally contain *Angochitina mourai* and *Urochitina bastosi*. In coeval Late Devonian sections of the Parnaíba Basin occurs the distinctive genus *Sommerochitina*. The diversity of the Famennian chitinozoan fauna of the Parnaíba Basin is unique, with about 30 recorded species (most of which yet undescribed), so in stark contrast to the 2-3 species known elsewhere from the Famennian on a world-wide basins. Gondwanan glaciations extensively reworked the microfossil assemblages from older Devonian beds during the late Famennian, so that no diagnostic chitinozoan faunas are discernible for this time interval. — (13 de dezembro de 1994).

**MIOSPORE EVIDENCE FOR PRE-EMSIAN AND LATEST FAMENNIAN SEDIMENTATION IN THE DEVONIAN OF THE PARANÁ BASIN, SOUTH BRAZIL**

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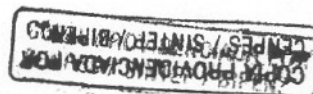
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According to most biozonal schemes proposed for the Paraná Basin Devonian, no strata older than early Emsian or younger than Frasnian had been so far recognized in that region on a paleontological basis. This situation is now challenged by new miospore evidence from the subsurface of the basin.

In well 2-CN-1-SC (core 23 between 1455-1457 m), the uppermost Furnas Formation has yielded an abundant, low-diversity miospore assemblage. This is entirely constituted by small-sized forms such as *Dictyotriletes emsiensis*, *D. cf. granulatus*, *Dibolisporites cf. eifeliensis*, *Tholisporites chulus*, *Synorisporites cf. verrucatus*, *Amicosporites sp.*, *Chelinospora cf. cassicula* and *C. cf. retorrída*. Of all recorded species, *D. emsiensis* has the most recent appearance in terms of the Western European miospore zonation, where in the upper Lochkovian of the Ardenne-Rhenish regions it defines the base of Interval Zone E within the upper *breconensis-zavallatus* (BZ) Oppel Zone. Besides, the appearance of miospores with bifiform sculpture like *Dibolisporites* is first recorded about the Lochkovian/Pragian boundary. Also of biostratigraphic significance are the small size of specimens and the absence of *Emphanisporites annulatus* and *Brochotriletes bellatulus* (whose joint appearance defines the base of the *annulatus-bellatulus* (AB) Oppel Zone near the Emsian/Pragian boundary). All these facts combined tend to restrict the age of the studied interval to the early Pragian, so in agreement with previous age determinations by R. Dino and M. A. C. Rodrigues for the uppermost Furnas in the Jaguariáva outcrop area.

Other Early Devonian miospore assemblages from the basal Ponta Grossa Formation in well 2-CN-1-SC (cores 21-22, between 1419.9-1457.0 m), 1-PH-1-PR (core 7, between 3032.9-3034.6 m) and 2-AG-1-MT (core 18, between 1400-1403 m) are less diverse and age-diagnostic, containing only some of the forementioned species, plus *Emphanisporites rotatus*, *Synorisporites tripapillatus*, *Dibolisporites sp.*, *Cymbosporites sp.*, *Dictyotriletes sp. cf. D. richardsonii* and *Cirratriradites sp. cf. C. diaphanus*. With the doubtful exception of the latter two taxons, all others are known to range into the Emsian. However, as in the preceding case, a pre-Emsian age is favored by the



absence of Emsian index species (such as *E. annulatus*), of large-sized spiny zonates/pseudosaccates and of other more evolved miospores, all recorded in the Emsian part of the lower Ponta Grossa Formation.

Miospores of post-Frasnian (latest Devonian) age are herein recorded in a diamictite section of well 2-O-1-PR (core 14, between 953-954.5 m) which is currently considered as part of the Itararé Group, of Late Carboniferous age. Strikingly, however, there are no post-Devonian miospores in that interval which could lend support to such a stratigraphic inference. Instead, analyzed samples have yielded a typical latest Famennian miospore assemblage containing *Retispora lepidophyta*, *Vallatisporites hystricosus*, *V. cf. vallatus*, *Knoxisporites hederatus* and *Radiizonates* sp. These miospores are associated to well preserved specimens reworked from Givetian and Frasnian strata (e.g., *Acinosporites lindlarensis*, *Geminospore lemurata*, *G. piliformis*, *G. punctata*, *Chelinospore timanica*, *Cymbosporites catillus* and *C. cyathus*).

The joint occurrence of *V. cf. vallatus* with *R. lepidophyta* and *V. hystricosus* characterizes the *lepidophyta-nitidus* (LN) Interval Zone within the upper part of the *R. lepidophyta* total range. That biozone corresponds to the middle to upper *praesulcata* conodont zones of latest Famennian age.

Provisionally, until more complete studies are carried out, at least two possible interpretations can be proposed for the age of this interval: (a) the latest Famennian miospores are *in situ*, so allowing correlation with other diamictite sections of identical age in northern Brazil (Parnaíba, Amazon and Solimões basins) where identical miospore assemblages are recorded; (b) all miospores in core 14 have been reworked from Devonian strata ranging in age from Givetian to latest Famennian during the Late Carboniferous. In the latter case, the absence of *in situ* miospores would be possibly ascribed to ecological or climatic constraints. — (13 de dezembro de 1994).

**CARACTERÍSTICAS MORFOLÓGICAS DE GLOBOCONUSA DAUBJERGENSIS NA ZONA HOMÔNIMA DO DANIANO DA BACIA DE SERGIPE/ALAGOAS\***

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A Zona de Intervalo Superior *Globoconusa daubjergensis* (Noguti & Santos, 1972) é definida em seu topo pelo nível de extinção da espécie *Globoconusa daubjergensis* (Brönnimann, 1953), e constitui-se um importante indicador da parte basal do Paleoceno em praticamente todas as bacias da costa brasileira (Beurlen *et al.*, 1992). Por este motivo, a definição da variabilidade intra-específica desta espécie, principalmente próximo ao seu nível de extinção, deve ser perfeitamente compreendida. O principal objetivo deste trabalho é o de discutir e registrar esta variabilidade, e em consequência melhor estabelecer o limite superior da zona homônima.

Originalmente atribuída ao gênero *Globigerina* por Brönnimann (1953), esta espécie foi posteriormente considerada como pertencente ao gênero *Globoconusa* por Khalilov (1956), com o objetivo de diferenciar do grupo das globigerinas as formas com a superfície pustulosa, lado espiral fortemente convexo, e com aberturas secundárias no lado espiral.

O conjunto de espécimens estudado provém de cinco poços da bacia de Sergipe/Alagoas, onde foi possível encontrar material paleontológico com excelente preservação. Caracterizam-se por possuir tamanho pequeno, quatro câmaras na última volta e tracoestira variando de baixa à alta. Abertura umbilical-extraumbilical, e aberturas suturais secundárias no lado espiral. Ocorre rara presença de *bullae*. Umbílico pequeno; suturas deprimidas e radiais nos lados umbilical e espiral. Superfície coberta por pústulas. — (13 de dezembro de 1994).

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**OSTRACODES MARINHOS NA BACIA POTIGUAR: APLICAÇÃO NOS ESTUDOS BIOESTRATIGRÁFICOS DO CRETÁCEO**

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Intervalos cretáceos (Albiano-Campaniano) de poços da parte emersa, e de um amplo setor da parte submersa da bacia Potiguar, forneceram associações ou ostracodes marinhos ricas e diversificadas, que