 2.11 b.3 Bologna 1998 N°15

dle Devonian rocks in the SE Maider have been measured and sampled during recent field work.

New cooperations started with the stable isotope group from Erlangen University (Buggisch, Joachimski, van Geldern) in order to get a very detailed record of stable isotopes in well preserved brachiopod shells from biostratigraphically well-dated strata.

A new project between the FIS and the Academic Institute at Ekaterinburg (Russia), granted by the 'Deutsche Forschungsgemeinschaft', started with a joint field campaign to Western Uralian areas. Own investigations in this project will focus on homoctenids and facial/sedimentological phenomena from two Upper Devonian sections in close cooperation with the other participants of the project (i.e. TM Willi Ziegler, TM Karsten Weddige, Peter Königshof, Gunnar Schraut, Gerhard Becker, Gerhard Plodowski, Ulrich Jansen from FIS; Alexander Bikbaev, Maria Snigireva, Kirill Ivanov, Larissa Mizens from Ekaterinburg).

Finally, there shall be mentioned the participation at the joint ECOS VII/IGCP 421/SDS meeting in Bologna and Modena (Italy) as well as the contribution to both working groups (Emsian and Late Devonian subdivisions) of the German SDS.

Short note:

At the Forschungsinstitut Senckenberg (Frankfurt, Germany) palynological investigations have started recently on sections in the Moroccan Anti-Atlas and in the Rheinisches Schiefergebirge (Germany). The aim of the studies is to compare both regions and to contribute to refinement of their biostratigraphy. The material will be dealt with by Rainer Brocke (address: Dr. Rainer Brocke, Paläobotanik, Forschungsinstitut Senckenberg, Senckenberganlage 25, D-60325 Frankfurt/M. - phone ++49-69-97075189, fax ++49-69-97075137, e-mail rbrocke@sngkw.uni-frankfurt.de). There will be a close cooperation with the newly elected CM Christoph Hartkopf-Fröder (Krefeld, Germany)

CM Streel, M. (Liège)

IGCP 421 round table, June 25, 1998, Bologna

Quantitative palynology of latest Famennian events in the Sauerland

During the late and latest Famennian, quantitative palynology allows to recognize four continental ecological niches, three marine megaenvironments and two contrasting palynofacies (oxic / anoxic). Miospore analysis recognises a recurrence of high sea levels developing downstream "coal" swamps and a recurrence of wet climates developing upstream swamp margin plant communities.

Applied to a sequence around the Hangenberg Event in Sauerland, Germany, where the changes in sea level are known to have been severe, miospore analysis suggests a high rate of sedimentation and short cycles involving climatic changes and sea-level changes probably of the 6th order i.e. of less than 100 ka by comparison with other, but similar, researches conducted in the late Famennian in N-E Belgium.

Continental vegetation has not been affected by the Hangenberg Event sensu stricto (the base of the Hangenberg Black Shale). On the contrary, younger "continental Hangenberg Events", corresponding to the peak of the regression, probably associated with a much wetter climate, have strongly modified the contemporaneous "upland" and "coastal"plant communities. The "coastal" one has not recovered after that peak, probably as a consequence of a colder climate (Brand 1993).

The duration of the Hangenberg Events (corresponding to the miospore LN Zone) was probably less than 100 ka as also suggested by Sandberg & Ziegler (1996). The consequence is that the glacial episode known in Brazil, which is characterized by the same miospore Zone, had also a very short duration. Latest Famennian climate was probably unstable with quick oscillating glacial and interglacial phases in the high latitudes.

Brand, U. - 1993: Global perspective of Famennian-Tournaisian oceanography: geochemical analysis of brachiopods. Ann. Soc. Géol. Belg., 115 (2): 491 - 496.

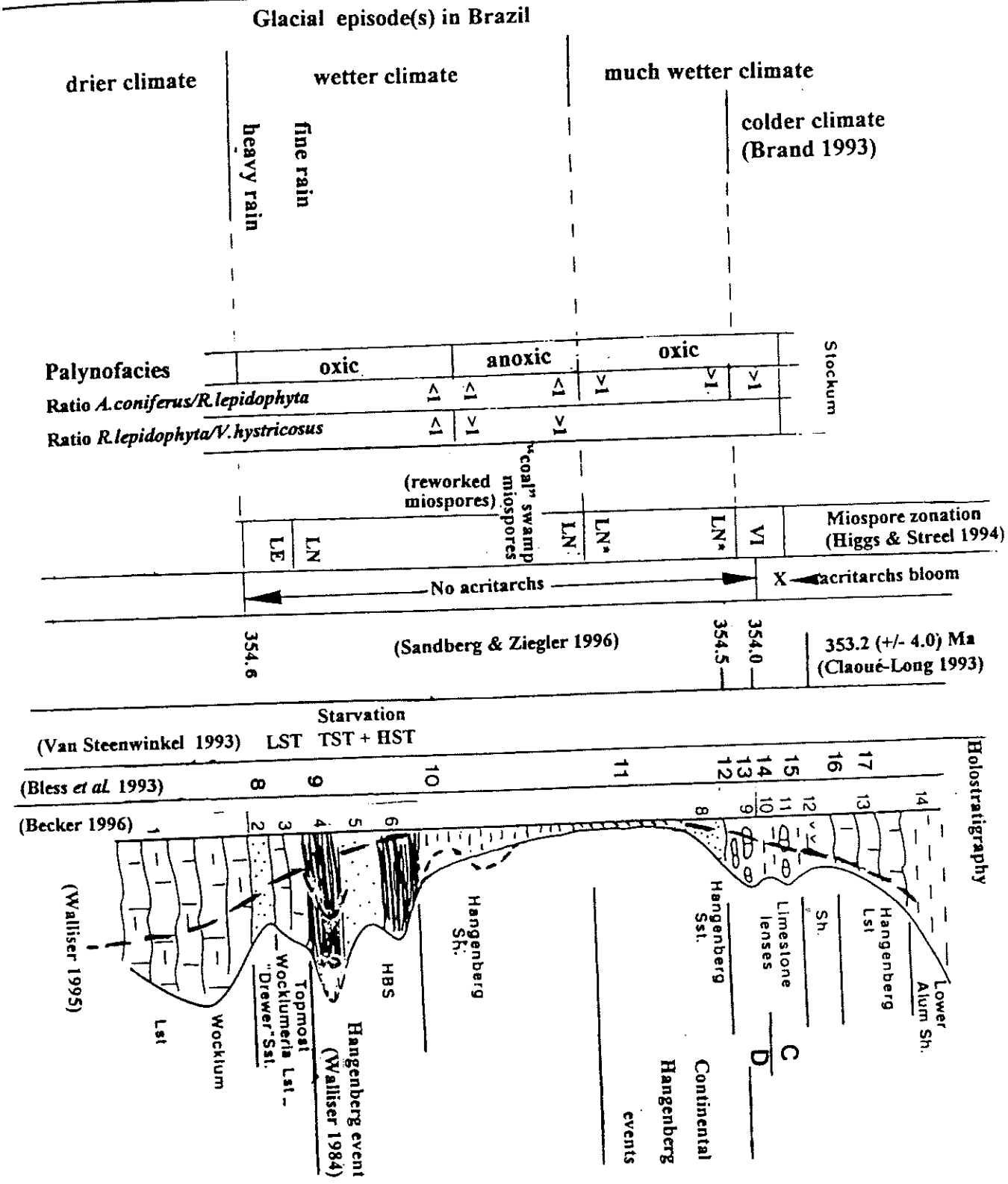
Dreesen, R., Poty, E., Streel, M. & Thorez, J. - 1993: Late Famennian to Namurian in the eastern Ardenne, Belgium. I.U.G.S. Subcom. on Carb. Strat., guidebook : 60 p. Liège University.

Jarvis, D.E. - 1992: The stratigraphic palynology, palynofacies and sedimentology of the Devonian-Carboniferous Kiltorcan Formation of Southern Ireland. Ph. D. Thesis, Cork (Unpublished).

Sandberg, C.A. & Ziegler, W. - 1996: Devonian conodont biochronology in geologic time calibration. Senckenbergiana lethaea, 76 (1/2): 259 - 265.

Streel, M. & Scheckler, S.E. - 1990 : Miospore lateral distribution in upper Famennian alluvial, lagoonal to tidal facies from eastern United States and Belgium. Rev. Palaeobot. Palynol., 64: 315 - 324.

Fig - page 77


Glacial episode(s) in Brazil
drier climate
wetter climate
much wetter climate
heavy rain
fine rain
colder climate
(Brand 1993)
Palynofacies
oxic
anoxic
oxic
Stockum
Ratio A.coniferus/R.lepidophyta
Ratio R.lepidophyta/V.hystricosus
(reworked miospores)
"coal" swamp miospores
Miospore zonation
(Higgs & Streel 1994)
LE
LN
VI
No acritarchs
X acritarchs bloom
354.6
(Sandberg & Ziegler 1996)
354.5
354.0
353.2 (+/- 4.0) Ma
(Claoué-Long 1993)
Starvation
(Van Steenwinkel 1993) LST TST + HST
(Bless et al. 1993)
(Becker 1996)
Holostratigraphy
(Walliser 1995)
Lst
Wocklum
Topmost Wocklumeria Lst.
"Drewer" Sst.
HBS
Hangenberg Sh.
Hangenberg event
(Walliser 1984)
Hangenberg Sst.
Limestone lenses
Sh.
Hangenberg Lst
Lower Alum Sh.
Continental Hangenberg events
C
D