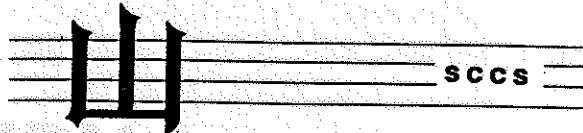


**International Union of Geological Sciences
Commission on Stratigraphy**

Subcommission on Carboniferous Stratigraphy (SCCS)



**BEDS NEAR THE DEVONIAN-CARBONIFEROUS BOUNDARY
IN THE RHENISH MASSIF, GERMANY**

GUIDEBOOK

by

**R. Thomas BECKER (Berlin), Dieter KORN (Tübingen), Eva PAPROTH (Krefeld),
& Maurice STREEL (Liège)**

10 to 12 June, 1993

**Published in Liège, Belgium
(Services associés de paléontologie de l'ULg)**

REWORKED MIOSPORES IN THE OESE (STOP 2) AND OBERRÖDINGHAUSEN (STOP 3) AREA

(after BLESS *et al.*, 1993)

The presence of reworked miospores derived from the "PLm-i zone" (= "middle" LV zone according to Streeel, 1986 fig. 3) was already noticed by Paproth & Streeel (1970). Higgs & Streeel (1984) assigned these assemblages to the LL zone, but mentioned the anomalous presence of *Lophozonotriletes triangulatus* and *Vallatisporites verrucosus*, two taxa which normally appear in the younger LE zone in Ireland (Higgs & Streeel, 1984). The same is true at Riescheid, where these taxa are absent in the samples attributed to the LL zone and appear slightly above the base of the LE zone (Higgs & Streeel, 1984). A further difference between the samples from Oese, Apricke and Oberrödinghausen and those from the LL zone at Riescheid consists in the almost absence of miospores of the *Diducites* complex, which are "particularly abundant" in the LL biozonal assemblages of the Riescheid section (Higgs & Streeel, 1984).

One might question why these assemblage had not been assigned to a higher zone. The discovery of *Hymenozonotriletes explanatus* or perhaps even *Verrucosisporites nitidus* would have solved the problem, because the base of these miospore zones is defined by the first appearance of its zonal index taxon. The presence of *H. explanatus* would have allowed an assignment to the LE zone, and the presence of *V. nitidus* to the LN zone. Otherwise, the assemblages of the LL, LE and LN zones are rather similar. The (incomplete) ammonoid evidence from the Hangenberg Shale at Oberrödinghausen indicates that the miospores assemblages from the Hangenberg Shale at Oese, Apricke and Oberrödinghausen should not be older than the LN zone.

Hangenberg Shale sequences in the Oese, Apricke and Oberrödinghausen sections were deposited during the maximum of the regression, in a somewhat isolated small basin in the immediate eastern area near the Seiler deltaic deposits (see fig. 8). The small basin was enclosed by the emergence of some shoals (like in Müszenberg) and therefore might have been separated from the longshore currents. In front of this small basin, onshore erosional processes might have reworked exceptionally abundant LL- aged sediments seawards with reworked miospores largely outnumbering those produced by the contemporaneous flora. In light of these questions, several of these sections are being once more reinvestigated.

SYNTHESIS OF THE MIOSPORE ZONATION AND CORRELATION OF CONODONT, CEPHALOPOD AND MIOSPORE ZONATIONS

(after BLESS *et al.*, 1993)

The following synthesis of the miospore zonation is based on papers by Higgs & Streeel (1984) and Higgs *et al.* (1993).

- Miospore assemblages typical of the LL zone have only been recognized at Riescheid, where they occur between 12,5 and 15 m below the top of a succession of greenish silty shales. The lower boundary of this zone has not been established in Sauerland. The presence of a limestone nodule with conodonts of the "costatus zone" above the highest