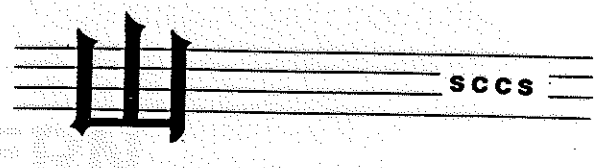
International Union of Geological Sciences
Commission on Stratigraphy

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)

MIOSPORES FROM THE RIESCHEID SECTION

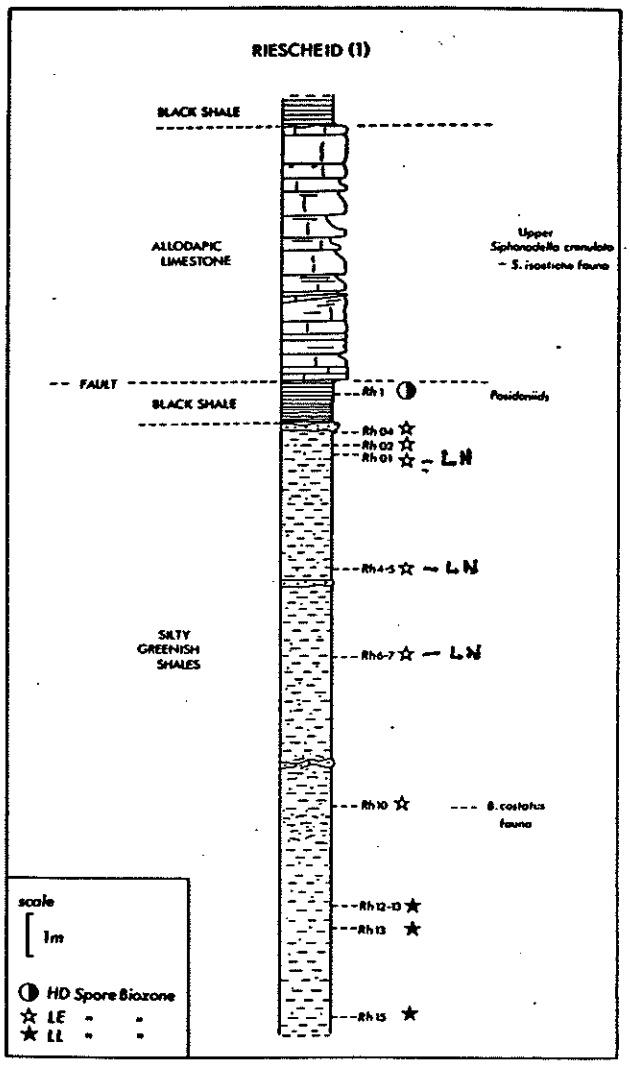


Fig. 51.- Stratigraphic position of spore assemblages in the section of Riescheid
(after Higgs & Streel, 1984, modified)

The upper 15 metres of shales below the allodapic limestone have yielded well preserved spore assemblages. Their stratigraphic positions and composition are shown on figure 51.

LL Biozone

Between levels 12.5 m and 15 m three LL Biozonal assemblages were recorded.

These assemblages are rich and diverse in composition with *Retispora lepidophyta* and species of the *Diducites* complex being particularly abundant. The assemblages also contain several large sized taxa such as *Auroraspora torquata, Retispora cassicula, Hystricosporites multifurcatus,* together with numerous small acritarchs.

LE Biozone

Between levels 1 m and 10 m six LE Biozone assemblages were recorded. These assemblages differ in composition from the LL Biozone assemblages in the absence of the large-sized taxa mentioned above and the presence of the zonal species *Hymenozonotriletes explanatus.* A notable feature of these assemblage is the presence of a large and diverse population of *Vallatisporites* specimens. The majority of these falling into the *Vallatisporites* in the section of *pusillites* concept of Dolby & Neves (1970). Most of the specimens possess rather bulbous based spines, 2-10μ in lenght (sometimes fused). Occasional verrucate forms belonging to *Vallatisporites verrucosus* are also present.

The lower LE assemblage (Rh 10) occurs at a level more or less equivalent with the *costatus* conodont fauna.

Recent reexamination of the miospore assemblages by K. Higgs suggest that some samples of the so-called LE Zone contain *V. nitidus* and should therefore be assigned to the LN Zone.

HD Biozone

The uppermost metre of the shale succession is composed of black shale. Approximately 25 cms below the top of the black shale a HD Biozone assemblage was recorded. The assemblage is rather poor in composition with species such as *Retusotriletes incohatus* and *Verrucosisporites nitidus* being the most commonly occurring elements. A single occurrence of *Kraeuselisporites hibernicus* allows an assignment to the HD Biozone.

In conclusion the palynological and faunal evidence indicate that the critical levels at the Devonian-Carboniferous boundary ie. the upper part of the Hangenberg Schiefer and the Hangenberg Kalk are missing at Riescheid.