STATE OF CORRELATION IN BELGIUM AND ADJACENT AREAS WHICH RESULTS FROM THE DECISIONS OF THE COMMISSION ON STRATIGRAPHY AND DEPENDS ON PALYNOLOGY — M. STREEL

Base of the Gedinnian

The base of the Ardennan Gedinnian Stage in the type region has been demonstrated by Steemans (1987, 1989 & in Streel et al., 1987) to be diachronous, ranging from the miospore Interval Zone N (*S. newportensis*) (locality Willerzie) to the Interval Zone R (*C. retorrida*) (locality Lahonry) (Fig. 1) and transgressing on Cambro-Ordovician rocks from SE to NW. He has also demonstrated that, in Brittany where miospores and Chitinozoa coexist in the same section, the base of the miospore Interval Zone R is higher than the base of the Chitinozoa Zone 27 (Paris 1981). As the Chitinozoa Zone 27 is within the Lochkovian Stage in Bohemia, it happens that the basal layers of the Gedinnian at Lahonry (30 km W of Gedinne) do not reach the base of the Lockkovian. Because the miospores demonstrate the diachronism of the Gedinnian base (the Fepin Conglomerate), it is not possible to tell whether it reaches the base of the Devonian in the most southern part of the Ardenne in France.

Top of the Gedinnian

The top of the Gedinnian in the type region occurs in the miospore Interval Zone E (*D. emsiensis*) which can be correlated through Brittany (Western France) (Fig. 1) with the Chitinozoa Zones 31 to 34. The base of the newly defined Pragian (the *Eognathodus*

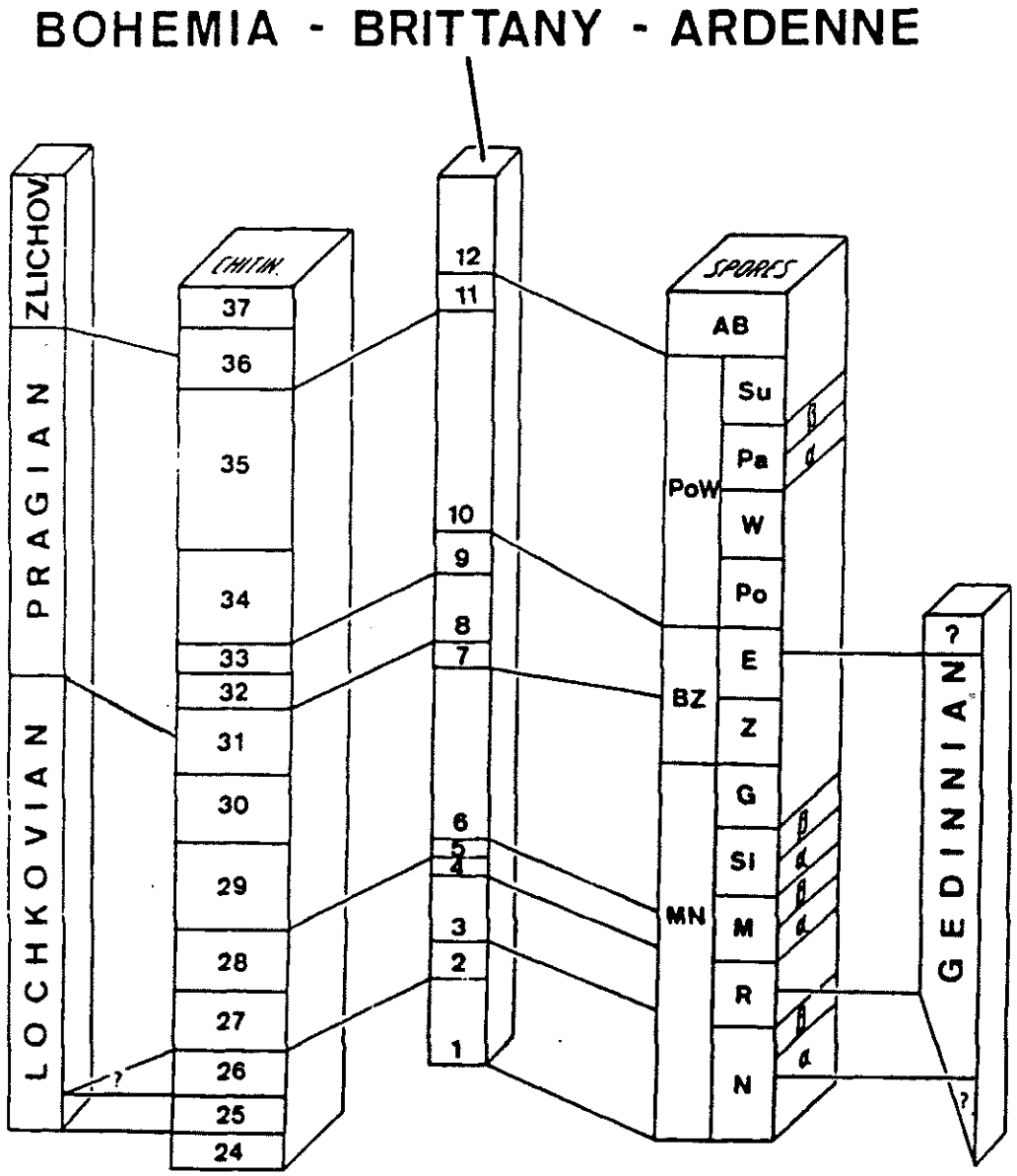

Fig. 1 - Intercalibration in Brittany of spore zones (Steemans, 1987) and chitinozoa zones (Paris, 1981) of the Lochkovian-early Emsian and correlations between the type Gedinnian Stage in the Ardenne and the type Lochkovian/Pragian/Zlichovian Stages in Bohemia.

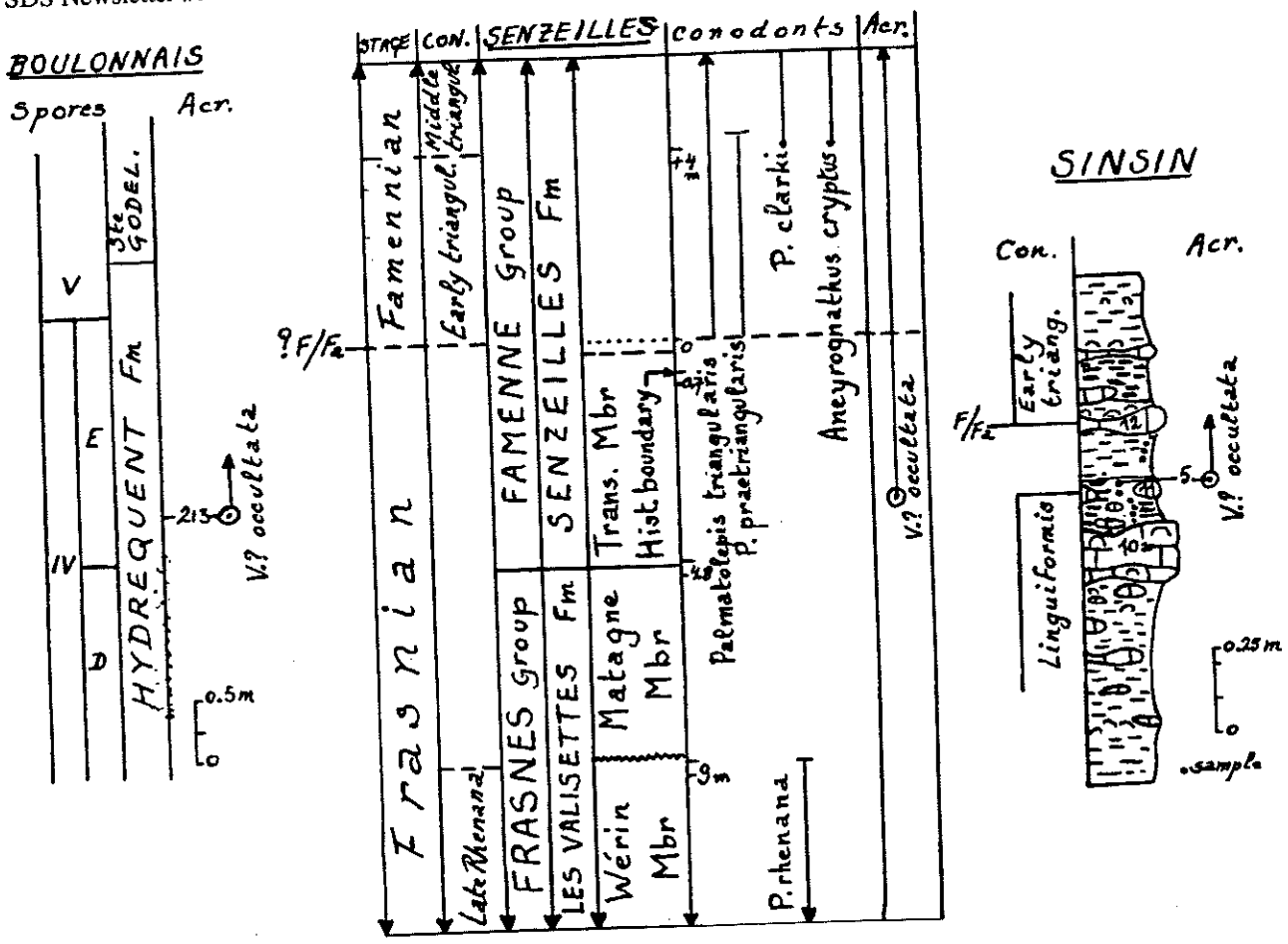

Fig. 2

sulcatus sulcatus first occurrence) in Bohemia occuring in the uppermost part of the Chitinozoa Zone 31 it happens that the base of the miospore Interval Zone E is very near the base of the Pragian Stage.

Base of the Famennian

In the type area of Senzeilles, the historical base of the Famennian lays in the uppermost part of a nearly 9 meters thick shaly interval devoid of Conodonts (Fig. 2). Acritarchs are abundant and one species (*Visbysphaera? occultata*) which first occurs within this shaly interval (Martin, in press), seems to have some significance for correlation. This species allows an accurate correlation (Fig. 2) with the section of Sinsin where a very detailed analysis of acritarchs have been made by Vanguestaine (Streel & Vanguestaine, 1989, 1993). It first occurs immediately on top of the last limestone with *Palmatolepis linguiformis* (The extinction level of Sandberg *et al.*, 1988). Consequently, if the first limestones containing the first occurrence of *Palmatolepis triangularis* in Senzeilles and in Sinsin represent the base of the Famennian Stage, then the 20 cm thick shaly layer without conodont at Sinsin is a lateral equivalent of the nearly 4 meters of shales occurring below the first limestone at Senzeilles. The same acritarch species (*V.? occultata*) allows a correlation (Fig. 2) with the uppermost part of the Hydrequent Fm in the Boulonnais area (Northern France) where a detailed zonation based on miospores have been described (Loboziak *et al.*, 1983) (Fig. 3). They demonstrate that there is no sharp change of flora at the F/Fa boundary in contradiction with the erroneous statement made recently in the SDS Newsletter n° 9 p. 5 (Proposal for the global stratotype section and point - GSSP - for the Frasnian-Famennian Boundary).

Top of the Famennian

The top of the Famennian in the type region of the Ourthe valley has recently been characterized by the occurrence of the miospore Interval Zone LE (*lepidophyta-explanatus*) in the uppermost shales of the Comblain-au-Pont Fm, 6.5 meters below the Hastière Fm (Dreesen *et al.*, 1993). The LE Zone is known in Sauerland (Germany) to occur in the uppermost part of the conodont early *praesulcata* Zone.

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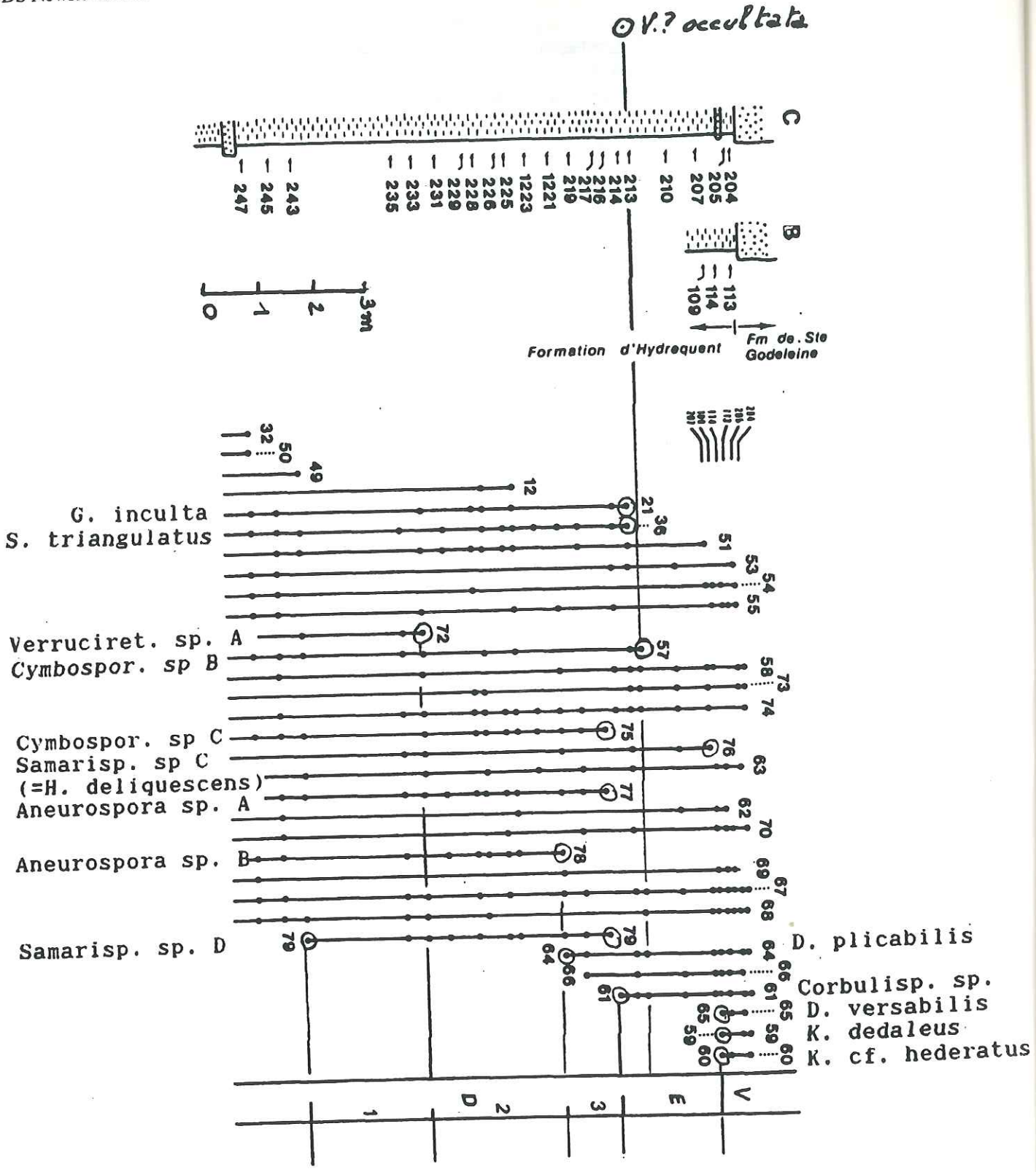

Fig. 3 7/6

Fig. 3 Stratigraphic distribution of miospores in the upper part of the "Formation d'Hydrequent" compared to the first occurrence of the acritarch *V.? occultata*.