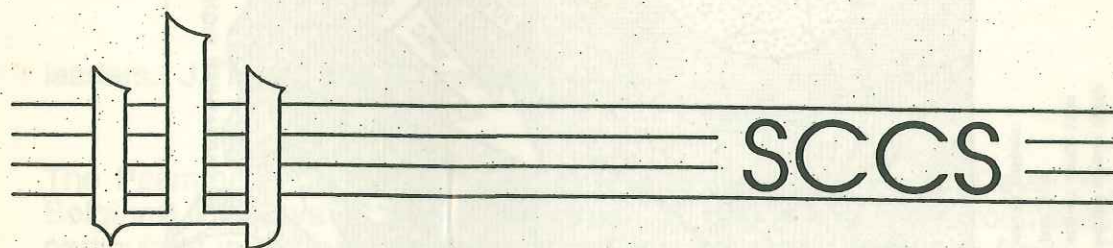


**International Union of Geological Sciences  
Commission on Stratigraphy**

**Subcommission on Carboniferous Stratigraphy (SCCS)**



**LATE FAMENNIAN TO NAMURIAN  
IN THE EASTERN ARDENNE, BELGIUM**

**GUIDEBOOK**

by

**R. DREESEN, E. POTY, M. STREEL & J. THOREZ**

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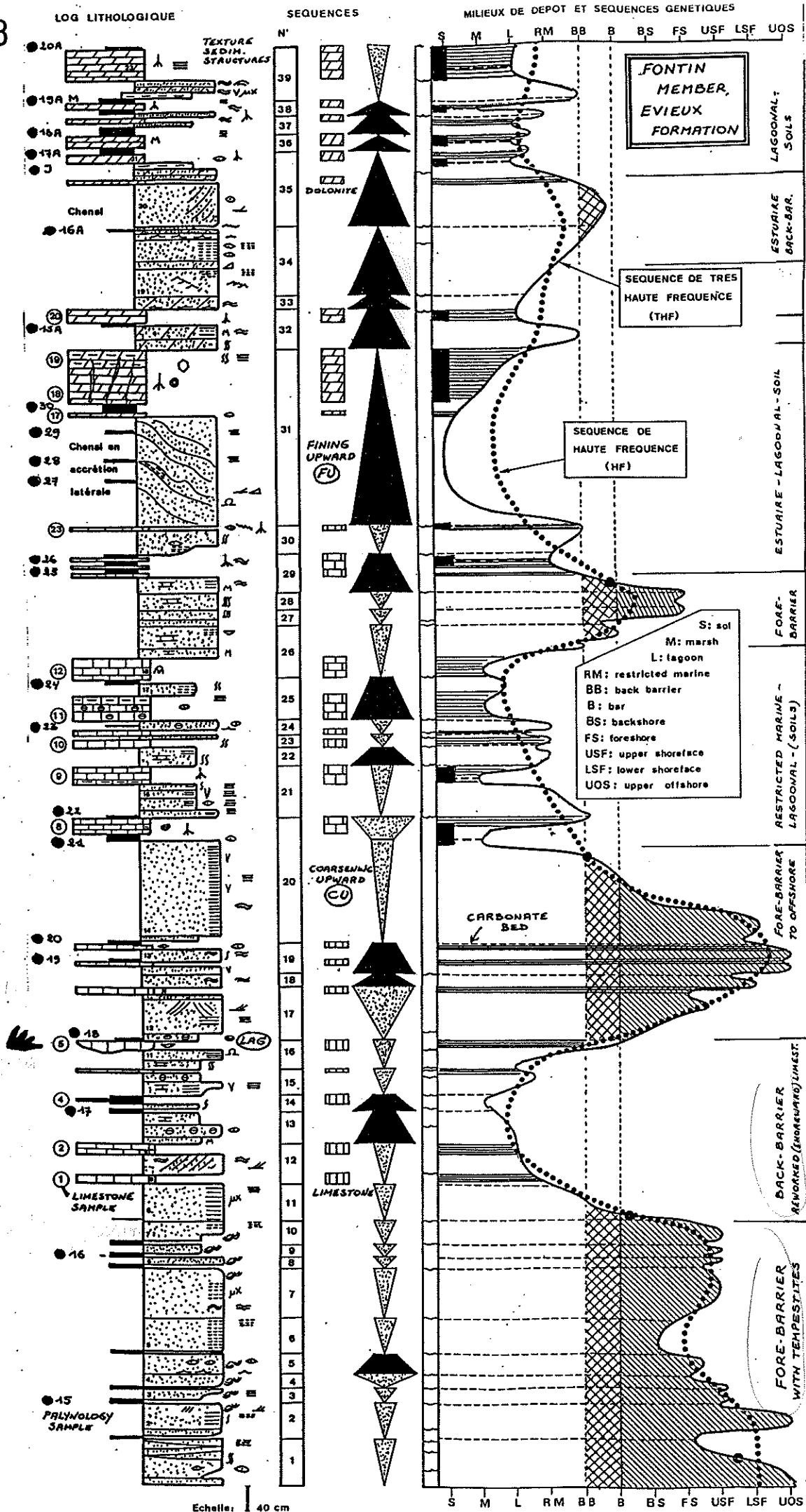


Fig. 14 : Columnar section, major sedimentary structures, carbonate types, grain-size trends (fining-upward, FU, and coarsening upward, CU) in the sequences, depositional environments as well as high and very high frequency sequences in the Fontin Member (uppermost part of the Evieux Formation), railway section South of Esneux (modified after Lafleur, 1991)

## Miospores and palynofacies: M. STREEL & N. MEZIANE

Miospores are very abundant in the Fontin Member of the Evieux Fm. Normally, a few tenths thousands, up to 250,000 miospores / 1 gr. sediment (see fig. 16).

They belong to the VCo (*versabilis - cornuta*) Zone (see fig. 10). Compared to the conodont stratigraphy, the base of the zone is not well known, somewhere within the *trachytera* and *postera* Zones. Miospore assemblages found with the famous Evieux megaflora (*Archaeopteris*, *Rhacophyton*, ...) (see fig. 13) are poorly preserved. The section along the railway (see fig. 14 and 16) has better preserved assemblages. Samples 17 and 19 to 21, in the lower part of the section, contain 50% or more of acritarchs (Sphaeromorphs only in the back barrier, spiny acritarchs in the fore-barrier to off-shore). Acritarchs are rare higher in the section. The uppermost part of the section (samples J and M) contains *Retispora macroreticulata*.

The most abundant miospores are shown on fig. 15. They originated from four distinct continental environments (see reconstruction, fig. 17, based on joint megaflora-miospores studies made in Virginia, USA, by Streel & Scheckler, 1990). A quantitative analysis<sup>1</sup> groups the samples carrying miospores from the same environment. Assemblages taken near the Evieux megaflora (fig. 13) and from samples 15, 26 and 30 originated mainly from upstream swamp margin. Those taken from samples 19, 22, 25 and 27 originated mainly from the coal swamps. The palynofacies (amount of heterogeneous particles) indicate reductive depositional conditions in samples 17 to 22 and also in sample 15A.

<sup>1</sup> A correlation value was computed between each pair of assemblages: each sequence of  $x$  species presenting the same decreasing order of abundance was given a value calculated with the formula  $2^{x-1}$ .

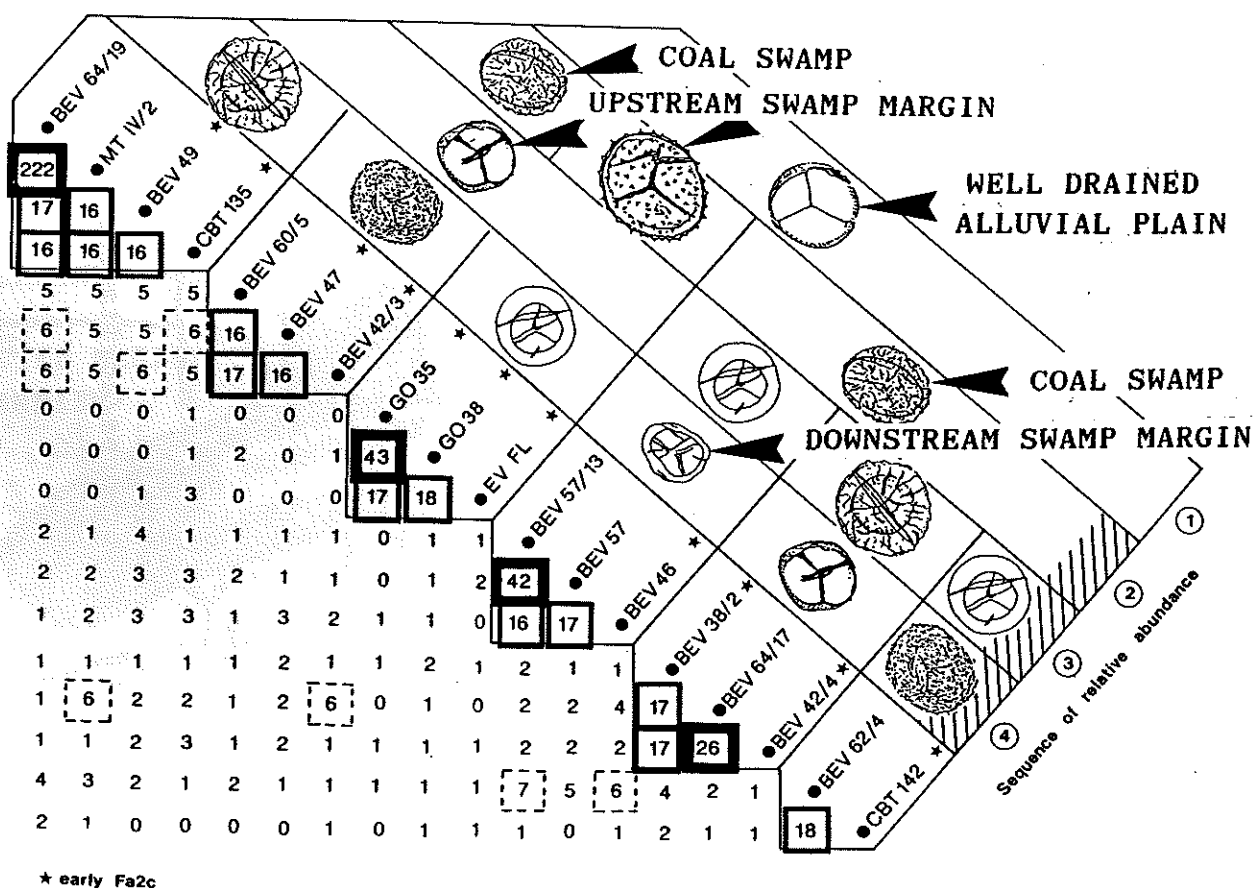


Fig. 15 Quantitative analysis of the most abundant miospores in 18 samples collected in the Ourthe valley, south of Liège, Belgium.



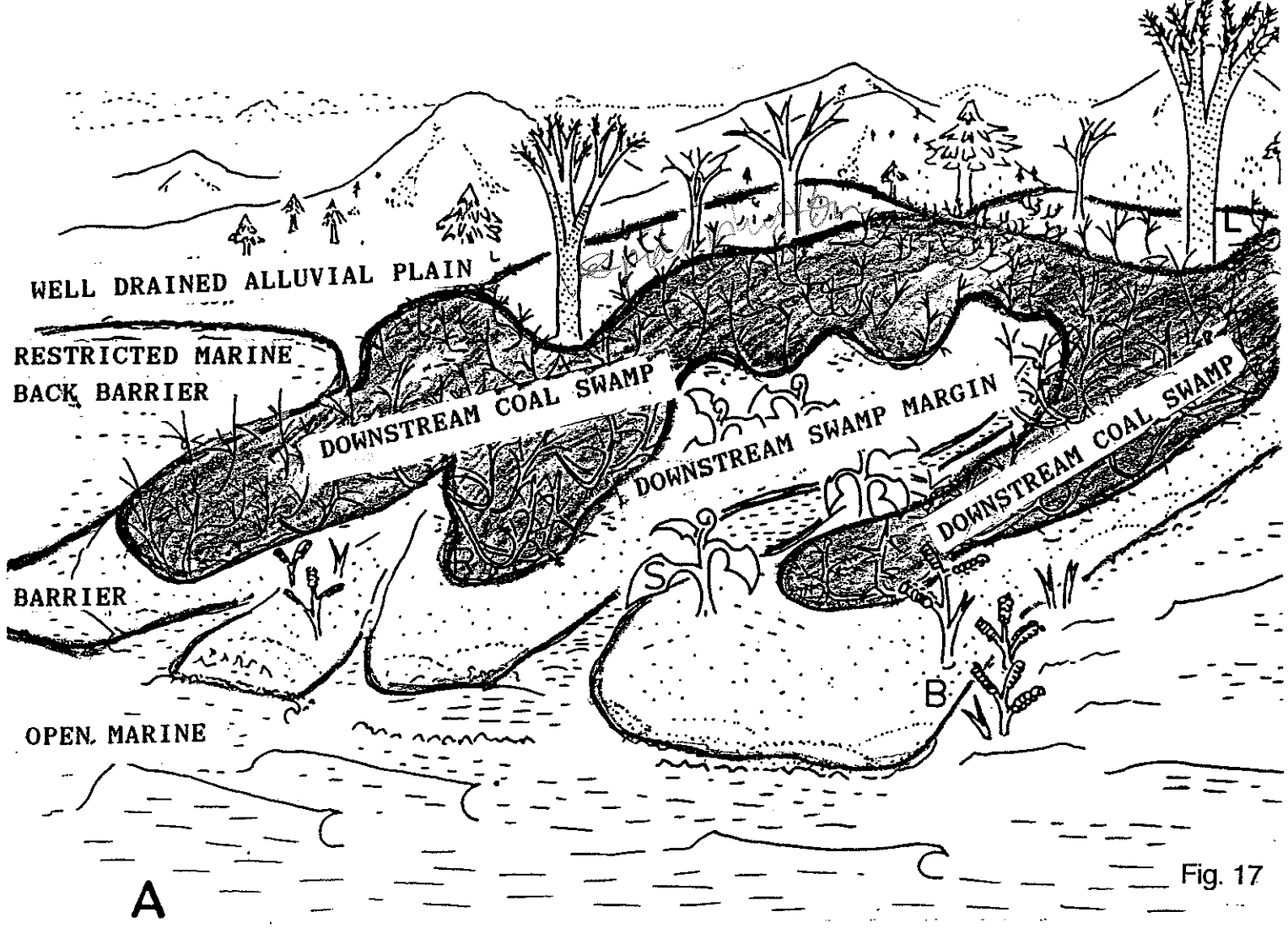
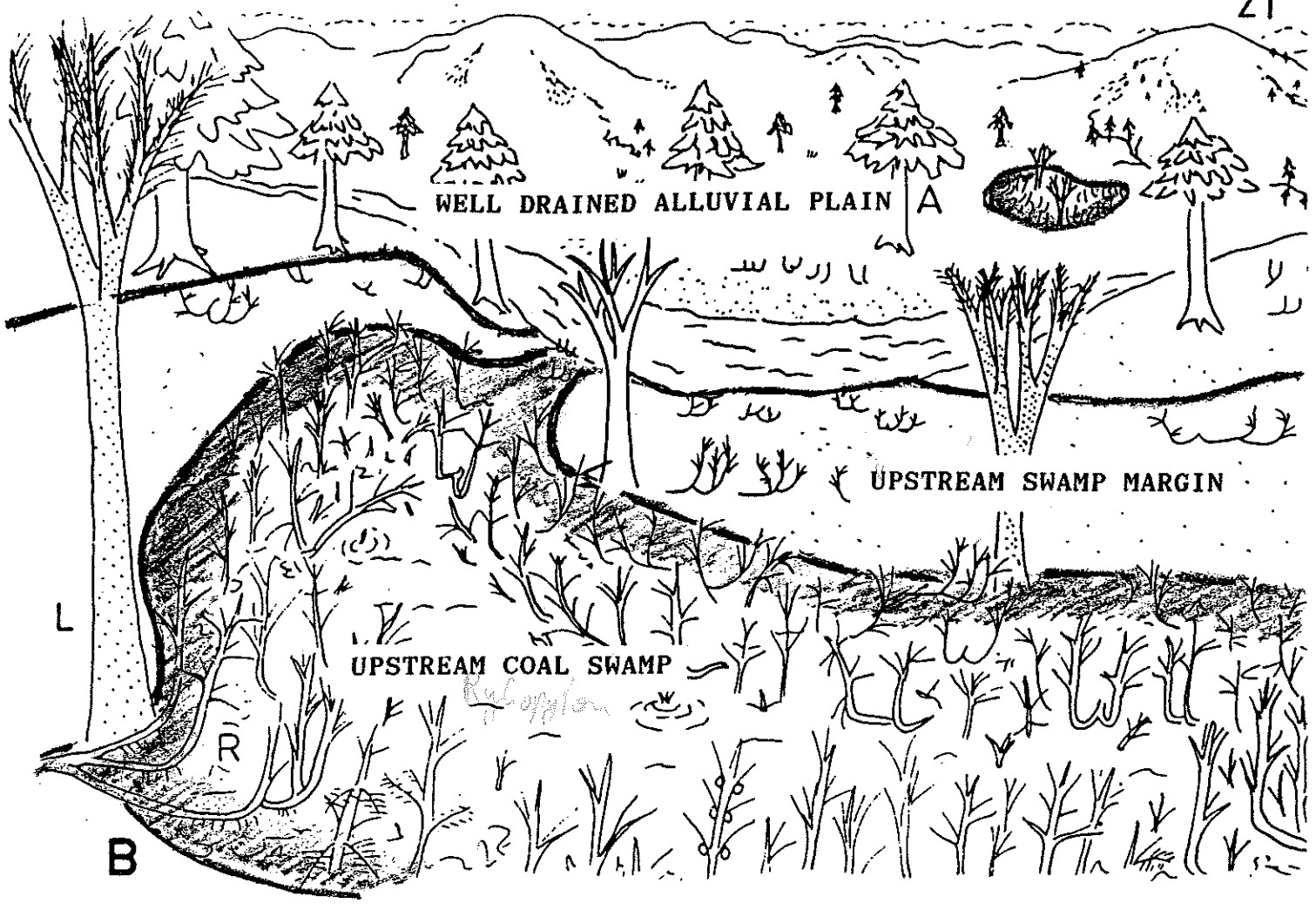


Fig. 17