Prof. E. Nagy Dr. PH., Dr. Sc.

Aspects of Nomenclature, Taxonomy, Ecology, Cenology, Climatology and Faciology in Paleopalynological Research

(Abstract)

Some methodological aspects of palynological work are discussed, amongst others clean sampling and maceration techniques. The most important part of the palynological work is the identification of forms. Beside morphological identification, biological identification is needed, if possible. This is the basis of any further scientific and practical conclusion. In Hungary, paleoclimatological zones could be distinguished by means of palynological studies.

These and some faciological conclusions including redeposition have proved to be important for industrial exploration work too.

Biostratigraphical information obtained is a serious help for geological mapping done by the Hungarian Geological Institute. Of course, palynological results are evaluated together with those of other micro- and megapaleontological, sedimentological, investigations. Three palynological diagrams display the different possibilities of evaluation.

Dr. J. Bóna, National Prospecting and Drilling Co., Komló

Palynological Practice in the Investigation of Liassic Coal Measures in the Mecsek Mountains (South Hungary)

(Abstract)

Continuous Upper Permian to Upper Cretaceous sedimentation in the Mecsek Mountains comprises two cycles. The second one started with the deposition of a 200 to 1200 m. thick black coal bearing formation of Lower Liassic age.

Pollen studies have contributed essentially to settle the following major problems:

1. Approximate determination of carbonization grade (depending mainly on tectonic stresses).

2. Tracing the Triassic/Liassic boundary. Of 128 forms found in the examined sequence, 38 are indicative of the Upper Triassic only, while 38 — of the Lower Liassic. They never occur together.

3. Distinction of swamp zones: deep swamp, shallow swamp and swamp forest, with direct possibilities of coal measures correlation. This is a very important aid in this area, which is very intensely folded.

4. Establishing an adequate picture of Lower Liassic paleogeography. Some continental floral exchanges have been pointed out with the Rhodopean Continent, while marked differences support the existence of a marine area betwen the area of study and the Bohemian Massif.

Dr. E. DUDICH Jr.

Paradoxes and Use of Bryozoa

(Abstract)

A synthetic review of some crucial problems of paleobryozoology is given. Such are: the contradiction between systematics based mainly on features of the soft body and paleosystematics necessarily based on skeletal morphology; a possible interpretation of paradoxical bryozoan anatomy by means of mosaic evolution; the rule of astogeny, reflecting phylogeny in zoarium development; the two-phase phylogeny through the Earth's past, with virence periods displaying strange reiterations and competition phenomena; non-corallian ecology and possibilities of paleocommunity reconstruction based on the principle of actualism. As for the methodological aspect, traditional and up-to-date techniques are enumerated and commented. Finally, references are cited, with particular regard to practical applications in faciology and stratigraphy. As an example, some conclusions drawn from Upper Eocene bryozoan faunulas in Hungary are presented, concerning age, environment and conditions of sedimentation.

Dr. F. GÓCZÁN

Comparative Palynology and the Paleoclimate of Bauxite Formation

(Abstract)

The author adopted the concept of E. VADÁSZ (1951, 1956): "bauxite is a particular type of continental sediment which is — independently of its laterite or terra rossa origin — produced by analogous processes from siallitic substances derived from various bedrocks."

A comparative palynological approach is forwarded. As a first step, several maps of recent aluminium enrichment areas are compiled, showing January and July medium temperature, rainfall distribution and sea water temperature data as well as the distribution of climate indicating plants, the ancient equivalents of which can be traced, by means of pollen studies, from Jurassic to Oligocene.