

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 between 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 faunas 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.

As a second step, these climatic features are compared with maxima of paleoclimatological curves. These have been plotted on one hand from paleotemperature measurements on *Belemnites* and *Nummulites* specimens (oxygen isotope method), and from palynological data, reflecting relative climatic values obtained by the study of continental paleovegetation.

This comparison points out markedly the time intervals of optimum conditions of bauxitization. Accordingly, the majority of bauxite deposits in Hungary seems to have been formed during the Albian.

Dr. M. HAJÓS C. Sc.

## Siliceous Unicellulars. Their Use for Faciology and Biostratigraphy

(A b s t r a c t)

The study of siliceous unicellulars is of increasing importance. Particularly so in the case of sediments containing no other kind of microfossils.

In Hungarian Geological Institute siliceous unicellulars are evaluated also from the point of view of applied geology.

Siliceous unicellulars are to be found most likely in acidic tuffs and tuffites, or in diatomites accompanying these.

The composition of these assemblages is controlled by the chemical and physical characteristics of the given water medium. Light, temperature, agitation, chemism of the water are decisive for the propagation of these microorganisms. Changes in these involve changes in both the sediments and the assemblages enclosed.

The most sensitive indicators of such alterations are the diatoms.

Consequently paleobotanical conclusions are based first of all on diatoms. However, for faciological and microbiostratigraphic evaluations the whole assemblage should be taken into account: *Archaeomonas*, *Silicoflagellata*, *Ebriida*, *Diatomea*, *Phytolitharia*, *Radiolaria*, accompanied by fragments of siliceous sponges. Chitinous tests of planktonic forms "incertae sedis" of characteristic morphological features, also occur; these may be of considerable stratigraphic value.

In Hungary, important diatomites are known to occur in the foreland and in some marginal basins of the Mecsek and Bakony mountains. Their age varies from Liassic through Oligocene, Miocene and Pliocene to Holocene. "Marker species", of short haemeras, may be used for stratigraphic dating the age. In the Tertiary, assemblages can be used even for detailed geochronological zonation and even for longdistance correlation with the neighbouring countries.