1.4. Scientific Presentations

These are subdivided into three groups; the first covers those, held in Austria, the second, those held in Hungary and the last one those, given in Czechoslovakia, Prague and Bratislava. The presentations given by the participants of the colloquium are added to the first group; the arrangement in the groups is alphabetical; see also index.

1.4.a. Presentations given in Austria*)

Prof. Dr. H. HOINKES, University Innsbruck

Modern glaciology and world water reserves

(theme of lecture and excursion)

Prof. Dr. W. KLAUS, University Vienna

Review of Palynology

(Abstract)

Earth Science and Biology received a considerable amount of contributions by palynologists within the last few years. A number of modern developments should be mentioned, with emphasis to those subjects, which may be of interest and possibly also of practical value to geologists of various specializations. These include pollen preservation, the use of accumulation — rate diagrams as opposed to the classical pollen-percentage diagrams, the application of fluorescence-, cathodoluminescence-, interference-phasecontrast and stereoscan-electronic microscopy. Marine palynology and its various prospects for stratigraphy, sedimentology and environmental geology received close attention. Some trends in prequaternary palynology include new attempts at a palyno-stratigraphy of Triassic, Cretaceous and Neogene, the many applications of palynological studies of saltdeposits, the growing importance to oil geology with basic contributions to palaeogeography, palaeoclimatology and palaeoecology and a computerbased numerical coding system for the description of pollengrains and spores. Palynological data about the origin of the gymnosperms, chlamydosperms and angiosperms are considerable increasing. The annual output of scientific publications on palynological subjects reached 1400 in 1965 and reaches about 2000 in 1970.

Numerous important events, which incorporated palynological subjects or were especially devoted to palynology, occured during the last few years: the Gondwana Symposium in Argentina and South Africa, 3rd Int. Salt Symposium in Ohio (USA), First Int. Symposium on Sporopollen in

*) Geologische Bundesanstalt, A-1031 Wien, Rasumofskygasse 23.

London 1970 and the 3rd Int. Palynological Conference in Novosibirsk 1971; special attention will be given to the Silver Jubilee Paleobotanical Conference Dec. 1971 at the Birbal Sahni Institute of Paleobotany in Lucknow (India). A number of important books and periodicals have been issued during the last few years; e. g.

ERDTMAN, G. (1969): Handbook of Palynology. Munksgaard, Kopenhagen.
KEDVES, M. (1969): Palynological studies on Hungarian Early Tertiary Deposit. Budapest 1969. Akad. Kaido.
KRUTZSCH, W. (1970): Atlas der mittel- und jungtertiären dispersen Sporen und Pollen sowie der Mikroplanktonformen des nördlichen Mitteleuropas. 7 Lieferungen. VEB Gustav Fischer Verlag, Jena, DDR.
MANTEN, A. A (1966): Marine Palynology. Special Issue of Marine Geology, Vol. 4, N. 6. Elsevier Publishing Co. Amsterdam.
NAIR, P. K. K. (1966): Essentials of Palynology. Asia Publishing House, Lucknow.
POKROVSKOYA, I. M. (1966): Palaeopalynologia. 3 Volumes. Leningrad (Russian).
TSCHUDY, R. H., & SCOTT, R. A. (1969): Aspects of Palynology. Wiley-Interscience, New York-London-Sydney.

Dr. K. KOLLMANN, Direktor, RAG, Vienna

New Information on the Microstructure of Ostracods as obtained by means of the Scanning Electron Microscope

(A b s t r a c t)

The study of bodily preserved microorganisms or their skeletal elements in the reflected light has its limits, where a simple light microscope is used, in that the depth of field as required for a three-dimensional view can be achieved only through reduction of the lens aperture at the expense of resolution. The many times greater resolution of the scanning electron microscope permits of reaching into optical ranges, which are beyond the capacity of even the best light microscopes.

The scanning electron microscope lately brought about remarkable successes in the study of recent and fossil ostracods. It turned out i. a., that the features of the pore canal openings show much more variety than had been assumed only a few years ago. Moreover, there was deepened and supplemented also our so far but sketchy information on the surface ornamentation of the shells, of the hingement, and of the central muscle scar pattern on the interior of the shells.

As most of these features are also of special systematic significance, more and more information on the microstructure will furnish also many new vistas as regards phylogenetic relations, above all between those ostracod groups, whose direct relationship with recent representatives has not yet been clarified. In spite of the numerous advantages of the scanning electron microscope, however, both the binocular and the monocular light microscope will keep their place in research work and, chiefly, in routine analyses.