

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.

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

### **(Abstract)**

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.

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## Austria's contribution to Micropaleontology

As "Nautilids" FICHEL & MOLL described fossil and modern foraminifera in "Testacea microscopica". This paper, published 1803 at Vienna, was one of the first on this group of animals. The types of FICHEL & MOLL could be traced again some years ago at the Wiener Naturhistorisches Museum; first examination showed, that the effect of these old types on foraminiferal nomenclature, strictly using the old names, would certainly involve difficulties.

Nevertheless the great french paleontologist A. D'ORBIGNY thought FICHEL & MOLL's paper to be the first scientific treatise on foraminifera. 1846 D'ORBIGNY who first recognized the independence of forams from "Nautilus", described 228 species from the Vienna Basin. This Material was sent to him by FR. V. HAUER who very early recognized the importance of foraminifera.

After D'ORBIGNY many papers on Foraminifera were published. Outstanding is the work of A. E. REUSS, who was originally medical doctor in the Bohemian Bilin and 1849 came to Vienna. Besides his work on mollusca, bryozoa and corals he published a large number of papers on foraminifera and ostracodes; his material still exists, but would need a revision.

Besides the work of REUSS a great number of special papers on foraminifera was published at Vienna in the second half of 19th century. One of the outstanding scientific events was the Novaraexpedition (1857 to 1859). STACHE (1864) and KARRER (1864) worked also on foraminifera.

A new epoch of problem-oriented micropaleontological investigation began after World War II. Stratigraphic and phylogenetic work has been done in all fields of micropaleontology.

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Zeitschrift/Journal: [Jahrbuch der Geologischen Bundesanstalt  
Sonderbände](#)

Jahr/Year: 1971

Band/Volume: [19](#)

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Artikel/Article: [New Information on the Microstructure of Ostracods as  
obtained by means of the Scanning Electron Microscope 16-17](#)