

Fossil Prokaryotes and Protists

Edited by Jere H. Lipps
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Almost 15 years ago, Helen Tappan's *The Paleobiology of Plant Protists* provided the first detailed overview of that group of microscopic organisms, in a substantial hard-backed volume. The work was too costly to be recommended for purchase to students and was, in any case, too detailed to make an ideal student text, even for advanced classes in palynology. Martin Brasier's *Microfossils*, published in the same year, furnished, in contrast, an admirable text for undergraduate classes and stayed in print much too briefly, while subsequent texts — *Erdtman's Handbook of Palynology*, recently republished in second edition, and Alfred Traverse's *Paleopalynology* — have not dealt with prokaryotes or with protists having mineralized walls. This new work thus fills a gap in paleontological literature. If its price be again undesirably high, the purchaser can at least take comfort in the fact that the royalties are to be shared by the Paleontological Society and Cushman Foundation!

It is a particular pleasure that the various groups of organisms are treated in a reasonably balanced fashion; thus the foraminifera, so long the darlings of micropaleontologists, occupy only as many pages as the radiolarians and calcareous nannoplankton. Dinoflagellates and diatoms are arguably somewhat shortweighted, but the page allocation to acritarchs and prasino-phytes is properly substantial, and the briefer treatments of other groups are proportionate to our present knowledge of them.

Yet, I do have a few quarrels with the contents of this work. Archeomonads gain only the briefest of mentions (p. 141), their morphology not being discussed or illustrated. The phosphatic-walled, acritarch-like muellerispherids and the intriguing ophiobolids gain no mention at all. The exclusion of the

chitinozoans, although regrettable, is understandable, since Patrick Cashman's demonstration of their protist character (1990) probably came too late for them to be taken into account: up to that time, chitinozoans had been treated conventionally as cysts or egg-cases of higher animals.

The diagrams are clear and the photographs — mostly scanning-electron micrographs — very well reproduced. The page size is somewhat too large for convenience in handling and shelving. A second edition of more modest size, at a lower cost, would serve excellently as a class text: the pages are spacious enough to lose little in reduction. At the present price, though, I suspect that few instructors will be happy about listing this as a class text, and I am quite sure that, if they do, students will be reluctant to buy it. That is a pity, for it is certainly the best book on this theme yet to be made available.

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