A Miscellany of Spores*. Book reviews frequently end with an assessment of the typography, standard of illustrations and production, after dealing with the main facts and theses developed in the text. The reverse seems appropriate here. Miss Hires has produced a beautiful book with exceptional photographs and photo-micrographs of spores, sporangia and sporophylls of the Pteridophyta in the wide sense. The choice of taxa illustrated seems to be a random one, some tropical, some temperate North American; a later volume is promised to deal with the true ferns in more detail. As it stands the illustrations lead one on a pleasant diversion into the fine structure of fronds and spores. But there it ends. If I understand the author aright—and therein lies one of the major difficulties, that of understanding what indeed she does think—botanists have failed to understand clearly the three dimensional structure of spores and their relation in the tetrad, and have been incapable of resolving their structure under the microscope. She sets out to educate us. She gives us accounts of how to understand tetrads by modelling them in plasticine and cutting them to gain understanding of optical sections. But surely this is high school stuff and does not need a few score pages on it? The impression grows that difficulty in interpreting three dimensional structure is the author's weakness not ours. If she were lucid it might help us but sentences such as "Gradually we discovered that each spore has two definite 3-dimensional areas" (sic! p. 61) leave much to be desired.

Certainly it is an individualistic approach but it hardly furthers the serious study of spores and certainly would merely confuse a student. One can only regret that twenty odd years of work and the abounding enthusiasm of the author has produced so misguided a volume.

D. M. HENDERSON

*Spores: Ferns. Microscopic illusions analyzed. Clara S. Hires. Volume I. 548 pp. xxiv, 350 photomicrographs, 14 col. 1965. Mistaire Laboratories. $22.50.