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Autor: Oberling, J.J.
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of California at Berkeley for the present study. Dr. ARNOLD is responsible for many of the photographs. Miss J. SISCHO drafted the drawings.

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Technique

Three types of sections were used:

1. Rough sections produced by breaking shells for examination by reflected light.
2. Polished sections obtained by cutting shells with a diamond wheel and polishing the cut surfaces with fine carborundum abrasive. These were also examined by reflected light.
3. Thin sections were made by cutting and then grinding parts of shells until they transmitted light¹.

Rough and polished sections were examined with a binocular microscope under 12, 36 and 96 powers by reflected light. Thin sections were examined with a biological microscope under 120 and sometimes 480 powers with transmitted light.

As the present work deals with gross morphological features, with the arrangement and distribution of the microstructures rather than with a close examination of these microstructures themselves, a petrographic microscope was not used, and, in general, low powers of magnification were found to be adequate for these studies.

¹ An attempt was also made to use a plastic (parlodion) peel method for getting better photographs of some sections. The results however have not been generally too satisfactory.