era adopted in the index, with synonyms and sectional divisions. This follows in the main the treatment in *Die natürlichen Pflanzenfamilien,* departing from it where recent monographic work seems to render it necessary, and changing generic names where priority requires. In this connection, it will be a rude shock to some of our conservative fern students to see the names *Dryopteris, Dennstædtia, Phanerophlebia, Phyllitis, Pteridium, Matteuccia, Cyclophorus* and *Ceropteris* accepted in place of names long cherished, but progress is inevitable and these names will stand because they are *right.*

To those people who still name ferns as new which are 'not described in *Synopsis Filicum,*' to whom it makes no difference whether the type locality of the name given to a West Indian fern is New Zealand, Mauritius or Jamaica, or to whom the mere priority of publication is of no concern, Mr. Christensen's book will be only a thorn in the flesh. To those whose ambition is to place fern delimitation and our knowledge of fern distribution on a stable and scientific foundation for accurate study, his work will be worth its weight in gold as a time saver, and a datum line for departure into new fields. Conceived in the same spirit as *Index Kewensis* for flowering plants, Mr. Christensen's work will far outrank it in accuracy, completeness and rational point of view.

The novice might well ask: Are the ferns all described in these 5,940 accepted species? Unhesitatingly we would say, No! Not all these names will stand, for there has been much avoidable and some unavoidable redescription in the absence of such an index as we now have before us. On the other hand, countries supposed to have been exhaustively studied are yielding frequent novelties. A single capital illustration is fresh from the antipodes. The island of Java has been classic ground for fern study since the time of Blume (1828). Raciborski has recently (1898) given us a fresh manual of the ferns of the vicinity of Buitenzorg. This last work includes only a single terrestrial *Ophioglossum.* An American morphologist visits Buitenzorg specially in quest of material bearing on this primitive type and what does he find? No less than four well-marked terrestrial species of *Ophioglossum* snatched from under the eyes of the slower European botanists who have exploited rather than exhausted the fern flora of the old world.

LUCIEN M. UNDERWOOD.
COLUMBIA UNIVERSITY,
November 10, 1906.

SCIENTIFIC JOURNALS AND ARTICLES.

The Botanical Gazette for November contains the following papers: 'The Ovule and Female Gametophyte of Dioon,' by C. J. Chamberlain. This genus is endemic in Mexico and it is probable that plants often reach the age of more than 1,000 years. The structures studied were the ovulate strobilus, the megasporophyll, the integument, the vascular system of the ovule, the megaspore membrane, the archegonium and the egg, the general conclusions being reached that Dioon resembles Cycas more than does any other living genus. 'Temperature and Toxic Action,' by Charles Brooks, the purpose of the experiments recorded being to determine what might be the modifying effect of temperature on the toxic properties of certain chemicals as shown by the effect of these substances on germination and growth in certain fungi. 'The Embryogeny of some Cuban Nymphæaceæ,' by Mel. T. Cook, giving an account of the development of the embryo sac, the endosperm and the embryo.

SOCIETIES AND ACADEMIES.

THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE.

THE eighteenth meeting of the Society for Experimental Biology and Medicine was held at the Cornell Medical School, in New York City, on Wednesday evening, October 17. The president, Simon Flexner, was in the chair.

Members present.—Atkinson, Auer, Beebe, Buxton, Crile,[1] Dunham, Elser, Emerson, Ewing, Field, Flexner, Flournoy, Foster, Gibson, Gies, Hatcher, Lee, Levene, Levin, Loeb (L.),[1] Lusk, Mandel (A. R.), Meltzer, Meyer,

[1] Non-resident.