Journal of Parasitology for June, 1925. This protozoon has been found in tadpoles of *Rana catesbiana* and *R. clamata* in New Jersey and in those of *R. pipiens* in Iowa.

Endolimax ranarum is a smaller amoeba than *Endamoeba ranarum*, and is much less frequently encountered. Its nucleus is more or less typical of that of other members of the genus and careful staining is required to bring it out.

On the basis of the combined experiences of Dr. Hegner and those of the writer, we may confidently expect to find in our American tadpoles most of the following species of intestinal protozoa: (1) *Opalina ranarum*, (2) *Nyctotherus cordiformis*, (3) *Balantidium entozoon* (not observed by either Hegner or the writer), (4) *Giardi agilis*, (5) *Trichomonas augusta*, (6) *Chilomastix caulleryi*, (7) *Hexamitus intestinalis*, (8) *Euglenamorpha hegneri*, (9) *Mastigina hylae*, (10) *Endamoeba ranarum*, and (11) *Endolimax ranarum*. *Trichomonas batrachorum* and *Polymastix bufonis* are two other species which have been found in frogs and should be searched for in tadpoles. This formidable list of intestinal protozoa makes tadpoles invaluable for teachers in protozoology and invertebrate zoology.

The writer wishes also to call the attention of bacteriologists and microbiologists to a rather unusual bacterial flora which is sometimes encountered in the rectum of the tadpole. Large spirilla with a prominent spore at each end, bacilli of a crescentic shape with a prominent spore at each end, and other equally remarkable forms have been seen by the writer while making examinations of the contents of the rectum of tadpoles.

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THE EFFECT OF ULTRAVIOLET RADIATIONS UPON SOY BEANS

A SERIES of experiments was performed to study the effect of ultraviolet radiations upon the subsequent development of the soy bean. The full spectrum of an air-cooled quartz mercury lamp was used in every case. The plants were kept under rigidly controlled conditions.

The first outstanding result noted was that the longer the exposure the shorter the plant, that is, in successive experiments as the length of exposure was increased the internodes of the plant became shorter. The stems were very brittle and the leaf tissue very stiff and rigid.

The internal changes were equally interesting. The stems of irradiated plants were approximately one and one half times as large in diameter as the control plants. There was also a reduction of the number of medullary rays in irradiated plants, so that these plants tend to show that the meristematic tissues remain active for a very much longer period of time than in the control plants. The cells of the medullary rays under ordinary conditions remain parenchymatous but in irradiated plants have gone further and developed into xylem and phloem. Furthermore, because of differential growth the stems became hollow.

A detailed report of the work will be prepared later. The author wishes to express her appreciation to Dr. W. J. G. Land and Dr. C. A. Shull for their kind help and inspiration.

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FLORA OF BARRO COLORADO ISLAND, CANAL ZONE

RECENTLY there appeared in SCIENCE an account of Barro Colorado Island.[1] Visiting scientists working upon plants are concerned with the names of the species to be found on the island. All such workers will be interested in a list of plants of Barro Colorado Island that has just been issued by the Smithsonian Institution. The author, Mr. Paul C. Standley,[2] who spent a week on the island, has traveled extensively in Central America and has published several articles on the flora of these regions. The flora is an annotated list without keys or complete descriptions, but the accompanying notes on common names, uses and prominent characters will be a great aid to those taking advantage of the facilities of the laboratory on the island.

Mr. Standley has also published a paper on the ferns of the island.[3] A flora of the Canal Zone by the same author is now in press.

The bibliography of papers relating to Barro Colorado Island now includes over 50 titles.

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A DAYLIGHT METEOR

AT a golf course on Warwick Neck, near Providence, Rhode Island, I was on a fairway overlooking Narragansett Bay about one o'clock in the afternoon of June 1, in brilliant sunlight when my companion and I distinctly saw what seemed to be a small meteorite dropping over the bay. It was fol-

[1] Kellogg, Vernon, "Barro Colorado Island Biological Station," SCIENCE 65: 535, 1927.

[2] Standley, Paul C., "The Flora of Barro Colorado Island, Panama," Smithsonian Miscellaneous Collections 78: No. 8, 1–32, 1927.

[3] Standley, Paul C., "The Ferns of Barro Colorado Island," *American Fern Journal* 16: 112–120, 1926; 17: 1–8, 1927.