*tary-Treasurer,* Dr. Herbert G. Johnstone, department of bacteriology, University of California Medical School; *Councillors,* Dr. Ethel McNeil, department of zoology, University of California, and Dr. Harry E. Foster, medical director of the Cutter Laboratories, Berkeley. The membership of the society at the close of this year is 320.

THE second annual meeting of the Oregon Psychological Association was held at Reed College on May 1. A symposium was held on "The Measurement and Evaluation of Personality," and individual research reports were presented. Professor William Griffith, of Reed College, was chairman and delivered an evening address entitled, "The House of Magic." Dr. L. F. Beck, of the University of Oregon, was elected secretary. The Oregon Normal School was selected as the place of meeting for next year.

THE Botanical Society of America and the American Society of Plant Taxonomists will hold two joint summer field meetings in August. The first of these meetings will be held at Acadia University, Wolfville, N. S., from August 18 to 21; the program for this meeting is being arranged by the officers of the Botanical Society of America. The second meeting will be held at the Biological Station of the University of Michigan at Douglas Lake, from August 24 to 27. Officers of the American Society of Plant Taxonomists are arranging the program for the Douglas Lake meeting.

DURING the summer session of the College of Arts and Science of the University of Rochester, two summer courses in photography will be given under the joint auspices of the Institute of Applied Optics of the university and the Eastman Kodak Research Laboratory. They will be under the immediate supervision of Dr. T. R. Wilkins and Dr. Walter Clark, and will be similar in nature to those given in the regular curriculum of the Institute of Optics. The elementary course will run from June 22 to July 13 and the advanced course from July 5 to July 23. The lectures in the latter course will be given by Dr. C. E. Kenneth Mees, Dr. L. A. Jones and Dr. W. Clark, of the Kodak Research Laboratories. In addition, from July 5 to July 9, there will be a course on "Photographic Photometry and Spectrophotometry," conducted by Dr. Brian O'Brien; and from July 12 to July 16 Dr. T. R. Wilkins will lecture on "The Photographic Emulsion as a Tool in Atomic Nuclear Research." During the courses trips of inspection have been planned to the Kodak Park Laboratories and the Kodak Camera Works.

THE John and Mary R. Markle Foundation of New York City has recently appropriated to the National Research Council the sum of $100,000 to be available over a three-year period for the support of research in endocrinology. This fund will be administered by a committee of the Division of Medical Sciences of the council to be appointed later this spring and will be allotted in grants for the support of approved programs of research in this field to be conducted in institutions which may wish to collaborate in these investigations.

# DISCUSSION

## THE FLORA OF CALIFORNIA

WITHOUT attempting an adequate review, I venture to call attention to some of the features of W. L. Jepson's "Flora of California," Vol. 2, Capparidaceae to Cornaceae, a work of 684 pages published at the University of California last year. It is one of the most interesting and stimulating floras I have seen, and is especially to be valued for its full discussions of debatable points and the historical data often given with the more important species. We may envy the Californian students of flowering plants, who are now so well provided with information concerning the very unique flora of the Pacific Coast region. It must not be thought, however, that discoveries are no longer possible. There is very much to be found out, and such works as Jepson's should stimulate zeal for investigation, by providing a basis for the judgment of such observations as may be made.

One feature in Jepson's work which I greatly regret is his custom (following the old "Kew rule") of citing as the authority for a species or variety the writer who proposed the combination used. Thus the common water-cress, named *Sisymbrium nasturtium-aquaticum* by Linnaeus in 1753, appears as *Radicula nasturtium-aquaticum* Britten and Rendle, 1907. Such usage hides the true history of the plant, and prevents the recognition of the original describer. The usual custom of botanists to-day is to cite the original author and also the author of the combination, thus: (Linnaeus) Britten and Rendle. In zoology, however, we use the double citation only in formal monographs, if at all, and I have never been able to see that we lost anything of value by the omission of the author of the binomial or trinomial accepted, when that is based on an earlier name. It is perhaps ungracious to say it, but one can not avoid a suspicion that sometimes the double citation or the single citation, as given by Jepson, acts as a stimulus to the formation of new combinations.

Another quite different matter has to do with the

recognition of genera. It is very inconvenient to students to find marked differences in the standard works of Jepson, Munz and Abrams, all dealing with the west coast flora. It should be possible to form a committee to reach a common agreement on these matters. There is no fixed rule for the recognition of a genus, and in many cases possible alternatives seem about equally permissible. Take, for instance, the genera of Cruciferae, and examine Jepson's key for their recognition. We find, for example:

Flowers yellow, or often white in Nos. 4 and 5 (four genera)
Flowers white or whitish (rarely yellowish) to purple or purplish (four genera)

or again:

Seeds in 1 row in each cell (except 2 species in No. 5 and several in No. 16 (nine genera)
Seeds 2 rows in each cell (2 genera)

These definitions well illustrate the difficulty of sharply limiting the genera, yet nearly all the genera cited are readily recognizable in the field by their "facies." Munz recognizes *Descurainia* (often called *Sophia*), which differs from *Sisymbrium* by the forked hairs, and by its characteristic appearance. Jepson merges it in *Sisymbrium,* which then becomes an assemblage of very different looking plants. I think it is a good genus, but that is more or less a matter of opinion.

Another obvious criticism has to do with the numerous "varieties" proposed or cited. Apparently the intention usually is to recognize such units as we term subspecies in zoology, but there is no doubt a mixture of forms due to the direct influence of the environment. The intergradation which leads botanists to reduce plants to varietal rank may be due to crossing. Botanists must not be blamed for this inexact treatment, since they usually lack the necessary information for more correct judgments. But each "variety" may be taken as a sort of challenge to the coming generation of workers to determine its real biological significance.

We miss, in all these botanical works, any reference to the animal life associated with the plants. It is singular that botanists rarely take the least interest in the insects which bring about the fertilization of the flowers, those which devour the various parts of the plant, or form galls. Every species of plant is a stage on which a drama of animal life is enacted, and some day, we may hope, this will be recognized and the facts properly described and illustrated. Here is a vast field for study, rich in opportunities for discovery.

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## SPARGANA IN NATRIX

IN SCIENCE for January 29, Dr. L. J. Thomas reports the finding of spargana (larvae of the cestode genus Diphyllobothrium) in a Natrix taken near Ithaca, N. Y. These spargana had been collected by Mr. Elmer Brown, of Cornell University. The first instance of spargana in water snakes in this country to come to my attention was a case related to me verbally in December, 1936, by Dr. George R. La Rue, of the University of Michigan. In this instance the spargana were found in a water snake taken in the Okefinokee Swamp, Georgia. In neither of the above cases were the spargana fed to suitable definitive hosts to determine what species was represented.

I wish to report here the finding of spargana in Natrix from Florida. In February, 1937, two lots of Natrix, one from Sarasota, the other from Silver Springs, Florida, were examined for spargana, and found to be about 90 per cent. infected. The number per snake varied from one to seven. These spargana were in all respects similar to the larvae of *Diphyllobothrium mansonoides* Mueller, the only *Diphyllobothrium* known from this country which might be presumed to infect Natrix in the larval stage. The larvae in this case have been fed to numerous suitable definitive hosts, and it should therefore be possible shortly to determine the exact identity of this parasite.

I have previously reported, in a preliminary note on the life history of *D. mansonoides,* the failure to infect snakes with the sparganum of this parasite. However, in these experiments garter snakes were used instead of Natrix, it being supposed that the genus of snakes would make little difference in the outcome of experiments on a larva which has such a wide diversity of hosts as the sparganum of *D. mansonoides.* Probably this supposition was in error.

A very limited number of Natrix from the vicinity of Syracuse were examined for spargana during the summer of 1936, but were reported negative. In this connection it is of interest to note that Mr. Elmer Brown, finder of the spargana reported by Thomas, states in a personal letter: "Frankly, I am not optimistic over the prospect of the forms being found again very readily. I have dissected a good many snakes from this region, but I am reasonably certain that the specimen of last spring was the first I have opened which carried this genus." This is in conflict with the idea that this sparganum is the larva of *D. mansonoides,* since this parasite, in the adult stage, occurs very commonly in cats in this region, and therefore its larva should occur commonly in all potential hosts.

With experiments and further work now under way, it should be possible very shortly to clear up this puzzling and very interesting question.