appear that forking fronds had grown on the same plant two years in succession. Of course, such may have been collected the previous season, but it seemed strange that not one specimen should have been found to have forked in 1916 as well as in 1917.

It is more common to find a number of fronds having abnormal lobes at the base on a single plant, than to find several with abnormal tips on one specimen. No record has been kept of the place and date of collection of any of those used in illustrating this article, but it is safe to say that all were collected within six miles of Manlius and most of them within 3 miles. A great many better ones have been distributed to members than some used for the cuts. By oversight the plate showing tips does not include a normal one for comparison with the others, but the other plate happens to show several of the normal tips among the abnormal bases. It is well to notice that Figures 1 and 2 on plate 6 are of normal base lobes. Also that this plate happens to show fronds in various stages of spore development.

MANLIUS, N. Y.

Notes on American Ferns—XI[1]

WILLIAM R. MAXON

CAMPTOSORUS FROM OKLAHOMA.—The walking fern, *Camptosorus rhizophyllus*, is known from Kansas, but seems not to have been recorded from the territory immediately southward. Excellent Oklahoma specimens have recently been distributed, however, by Prof. G. W. Stevens, being his Nos. 2003 and 2005, collected near Pawhuska, Osage County, in August, 1913.

THE ALTITUDINAL RANGE OF ASPLENIUM MONTANUM.—In his paper of nearly twenty-five years ago[2] recording

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[1] Published by permission of the Secretary of the Smithsonian Institution.

[2] Bull. Torrey Club **20**: 455–467. 1893.

the extremes of altitude observed for the ferns of the Appalachian Mountain system, Dr. John K. Small gives the maximum elevation for *Asplenium montanum* as 4500 feet, on Grandfather Mountain, North Carolina (*Small & Heller*). This is considerably exceeded by specimens collected in May, 1917, at the very summit of Mount Pisgah, North Carolina, altitude 5749 feet, by Mr. Frank Crayton and the writer. The species has been collected also at about 5000 feet in the vicinity of Eagle's Nest, near Waynesville, North Carolina (*Standley* 5398) and at about 4500 feet on the upper slopes of Rabun Bald, Rabun County, Georgia (*House* 2257), and there are several other records of above 4000 feet. It descends to about 100 feet altitude at the Great Falls of the Potomac River, just above Washington, D. C.

NOTHOLAENA CRETACEA AN AGGREGATE.—In some recent notes on *Notholaena*[3] the writer has undertaken to show that the Mexican and United States specimens passing commonly as *N. cretacea* Liebm. actually represent three species. As this publication is not generally available to Fern Society members it seems desirable to indicate briefly the conclusions reached. The three species recognized are: *N. cretacea* Liebm., known only from a few localities in the southerly state of Puebla; *N. neglecta* Maxon, a new species known from the states of Coahuila and Chihuahua, and from two collections in the Huachuca and Mule Mountains of extreme southeastern Arizona; *N. californica* D. C. Eaton, abundant in southern California and known also from a single locality in adjacent western Arizona and from several stations in Lower California. The distinguishing characters of the three species are mentioned in some detail.

DICRANOPTERIS FLEXUOSA AGAIN COLLECTED IN ALABAMA.—In the course of zoological collecting in Alabama

[3] Contr. U. S. Nat. Herb. **17**: 601–604. 1916.

late in 1916 Mr. Arthur H. Howell, of the Bureau of Biological Survey, Department of Agriculture, had an opportunity to visit the locality for *Dicranopteris flexuosa* near Delchamps Station, a few miles from Mobile, recorded by the writer several years ago.[4] That the fern is actually well established at this place is clear from Mr. Howell's observations. He writes that it was found "in exactly the situation described, in a round hole in the side of a shallow railroad cut," and adds, "The big flood of last July may have enlarged the original fissure, but apparently it did not injure the plants. I found only a single clump, comprising perhaps 40 or 50 stalks, closely bunched, in which were mixed a number of dead fronds." Mr. Howell collected several specimens, of which a part have been added to the National Herbarium.

EQUISETUM PALUSTRE IN OREGON.—This species seems to be well known as occurring in the State of Washington, but not to have been reported from the region southward. A specimen received at the National Herbarium for identification recently bears the following data: Jarboe Creek bottom, Wenaha National Forest, Oregon, altitude 4000 ft., July 30, 1916, *William E. Lawrence* 95.

WASHINGTON, D. C.

A new Notholaena from the Southwest[1]

WILLIAM R. MAXON

In the second of a series of five articles published in the American Naturalist for 1875, giving an account of his botanical investigations in southern Utah during the preceding year, Dr. C. C. Parry records, in the follow-

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[4] Amer. Fern Journ. 4: 15. 1914.

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