

THE MOSSES OF MONROE COUNTY, INDIANA, II.

MILDRED NOTHNAGEL AND F. L. PICKETT.

At the winter meeting of the Indiana Academy of Science in 1912 the authors presented a list of the mosses of Monroe County, made up principally of fall-fruited forms. That list appears in the Proceedings for 1912, pp. 69-75. In the spring of 1913 the collection and identification of the mosses in the neighborhood of Bloomington was resumed. The following list is the result of that work and includes fourteen new species, among which are representatives of one family and three genera not represented in the previous list.

Material has been prepared, as described in the former paper, and left in the herbarium of the Botanical Department of Indiana University. Full notes of habitat, time and locality of collection, as well as of condition of the specimens, are on file to make the material of value for comparison. In this, as in the previous list, the numbers in parenthesis after each species indicate the accession numbers in the herbarium.

In this list some species are included which were in the former list. This has been done to indicate noteworthy differences in time of fruiting, or of habitat, and to show the herbarium numbers of such species as were not given numbers in the first list.

To those interested in making permanent collections, the following plan for preparing microscopic slides of species for convenient reference and examination may be of use. The dissections of leaves from different parts of a plant as well as peristome, operculum and calyptra, are mounted in a 10 per cent. glycerin solution in water for examination. If satisfactory, the slide, with the specimens well covered with the dilute glycerin, is carefully protected from the dust until the glycerin is concentrated. Then a cover glass on which a small piece of glycerin-jelly has been melted is carefully placed on the previously warmed slide. Such mounts are very convenient for quick reference, and are quite firm if covers at least 22 mm. by 32 mm. are used. In the writers' collections the quick reference to such prepara-

tions is further facilitated by giving the slides the same accession numbers as the regular herbarium specimens.

Doubtful specimens have been sent to Dr. A. J. Grout of Brooklyn for identification, and due notice given in the list.

Order. BRYALES.

Suborder NEMATODONTEÆ.

Family *Polytrichaceæ*.

Polytrichum commune L. (105).

P. ohioense R. & C. (106).

Suborder ARTURODONTEÆ.

Family *Fissidentaceæ*.

Fissidens taxifolius (L.) Hedw. (77). Determined by Dr. Grout.

Mature spores in late fall and winter. Dark green mats on clay, Huckleberry ravine. Common.

Family *Dicranaceæ*.

Ditrichum pallidum (Schreb.) Hampe. (111). Mature spores in May. Dense yellow-green tufts on clay, dry wooded hillsides, common.

Family *Grimmiaceæ*.

Grimmia apocarpa (L.) Hedw. (70). Mature spores in March and April. On limestone slabs and cliffs forming almost black cushions, abundant.

Family *Tortulaceæ*.

Weisia viridula (L.) Hedw. (72). Mature spores in April, abundant.

Barbula unguiculata (Huds.) Hedw. (103). Spores mature from late fall to early spring.

Family *Funariaceæ*.

Funaria flavicans Mx. (79). Mature spores in April. Rare.

F. hygrometrica (L.) Sibth. (101). Mature spores in May. Common.

Physcomitrium immersum Sulliv. (122).

Family *Bryaceæ*.

Bryum capillare L. (112). Mature spores in July. Occasional on wooded hillsides.

B. intermedium Brid. (108). Mature spores in May. On limestone wall of Oolitic Stone Mills Company's reservoir.

Mnium affine Rand. (83). Determined by Dr. Grout. Mature spores in April. On damp soil in Huckleberry Ravine. Not common.

M. rostratum Schrad. (92). Sterile. Rare, on very damp rocks or in running water.

Family *Hypnaceæ*.

Amblystegium fluviatile (Sw.) B. & S. (98). Mature spores in May. Light green tufts in running water; common, but rarely found fruiting.

A. kochii B. & S. (80). Mature spores in April. Common. Indiana University campus.

A. orthocladon (P. B.) Kindb. (107). Mature spores in May. On stones in running water, common.

A. varium (Hedw.) Lindb. (81, 99). Thin, loose mats with light green branches; on soil; common. Mature spores in April.

Family *Leucodontaceæ*.

Forsstroemia trichomitria (Hedw.) Lindb. (119). High on living *Juglans cinerea* near I. U. water-works reservoir. Mature spores from late summer to midwinter.

Indiana University Botanical Laboratory.

