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A Preliminary Study of the Liverworts of Henry County, Iowa

S. S. STATLER AND JEAN MORROW

Very few people seem to be familiar with liverworts, or even aware that they exist. It seems in this age of erosion and soil conservation that we should be more conscious of nature's safeguards against the former. In addition, liverworts make fine material for study, and are usually available within a short distance of any college or high school.

The Iowa Wesleyan College Herbarium lacked liverworts. This preliminary study was started to add liverworts to the herbarium. Dr. Conard of Grinnell College, in his report on "Bryophyta of Iowa" (The Bryologist, Vol. 48, page 70), has record of only two Hepaticae, *Frullania eboracensis* and *Porella platyphylloidea*, being reported from Henry County.

In the last few months, five liverworts have been found in abundance here in Henry County. None of the five has been reported before.

Reboulia hemisphaerica seems to be very common in widely separated parts of the county. It has been found on moist rocks, bridge abutments, and moist soil. That which has been found so far seems to be in rather small, scattered patches. The thalli are generally 1-3 cm. long and 6-7 mm. wide; pale green in the center with brownish purple along the edges, and beneath.

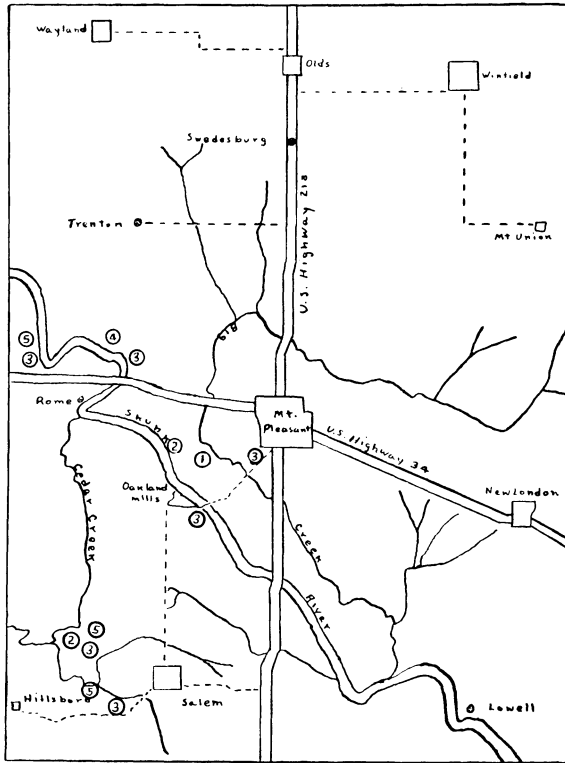
Conocephalum conicum was discovered in immense quantities covering many square feet in two widely separated places. It seems to prefer a moist, shady bank of rock or earth. The thalli are large, mostly 10-20 cm. long, 1-2 cm. wide, and a brighter green color than the *Reboulia*. The main characteristics are the large size of the thalli, and the polygonal areas with one protruding pore in each cell on the upper surface of the thalli. These pores are visible without a lens.

Lophocolea heterophylla is also common in this vicinity. It was found growing on shaded banks, and on rotten wood in damp areas. The leaves are pale green in color and appear transparent. Considerable difficulty was experienced in trying to distinguish this species from *Lophocolea minor*, but the size of the leaf, and the presence of gemmae on the leaf margins of the latter seem to be sufficient differentiation. At this point it might be well to mention the difficulty in distinguishing leafy liverworts from the mosses. Several mosses were carried into the lab, but the midrib, which is not present in liverworts, is very obvious when seen through the microscope.

We are indebted to Joseph Schaffner for the other two species being reported. *Marchantia polymorpha* was found along a creek bank in rich silty soil. The thalli are about 4-6 cm. long, 1 cm wide, and are pale green to dark green in color. The prevalence of gem-

mae cups, and thin marginal scales underneath seem to be the most important taxonomic characteristics of this species. Further survey should uncover this species in more numerous locations in Henry County.

The land form of *Ricciocarpus natans* was found growing along the mud flats of Skunk River. The thalli are 4-10 mm. long, 4-9 mm. wide, and a dark green color. The land form grows in neat rosettes. This species should be found more often in Henry County.



Map of Henry County, Iowa, Showing Distribution of Liverworts.

We are greatly indebted to Dr. Henry S. Conard, Professor of Botany, Grinnell College, for his verification of correct classification, for his gift of several species for our reference collection, and for the cordial welcome when we visited with him at Grinnell. Thanks also, to Joseph Schaffner, Iowa Wesleyan student, for the two specimens received from him, and for his assistance in locating the others.

A map of Henry County showing where the liverworts were found

is included, and should be helpful in further study and collecting in this area.

Henry S. Conard's Key "How to Know the Mosses", was used to classify the liverworts.

Symbols used to show where liverworts were found in Henry County.

1. *Marchantia polymorpha* L.
2. *Conocephalum conicum* (L.) Dum.
3. *Reboulia hemisphaerica* (L.) G. L. and N.
4. *Ricciocarpus natans* (L.) Corda.
5. *Lophocolea heterophylla* (Schrad.) Dum.

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