

## MYXOMYCETES NEW TO ILLINOIS

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ABSTRACT.—A survey of the Myxomycete flora of Montgomery Arboretum (Northern Illinois University) and collecting sites in Cook and Kane Counties, Illinois yielded eleven species and two genera not previously reported from Illinois.

The myxomycetes of Illinois have been the subject of only two previous papers. Stover (1941) reported the occurrence of thirty-six species in the area immediately surrounding Charleston. After an extensive survey of the slime molds of Champaign County (Benjamin, 1949) and some spot collecting in other sites in the State, Benjamin (1956) reported the occurrence of 133 species in 35 genera.

During the period between the summer of 1962 and the fall of 1964, the junior author conducted a survey of the Myxomycete flora (McCleary, 1965) of a six acre plot of woods known as the Montgomery Arboretum located on the campus of Northern Illinois University, DeKalb. In addition to field collections extensive use was made of the moist chamber culture technique first used by Gilbert and Martin (1933). Pieces of bark from living trees were placed on filter paper in petri dishes and soaked with distilled water. After 24 hours the water was removed and the cultures were allowed to stand for about two weeks. At the end of this time, the covers were removed and the bark examined for the presence of Myxomycete fruiting bodies and plasmodia. If the examination revealed no fruiting bodies or plasmodia the culture was remoistened and examined after another two weeks. Bark examined was obtained from trees in the Montgomery Arboretum and trees on the west side of the 2100 block of 21st Avenue, Broadview, Illinois.

Sixty eight species were found. The identifications were based on Martin's (1949) monograph in *North American Flora*. Verifications were made by Dr. G. W. Martin, University of Iowa and Dr. C. J. Alexopoulos, University of Texas. All species have been deposited

in the Myxomycete collection at the University of Iowa, Iowa City. When available, duplicates were deposited in the herbaria of the University of Illinois, Urbana; Northern Illinois University, DeKalb; University of Texas, Austin; and the Chicago Natural History Museum, Chicago.

The collection sites and substrate of the species new to Illinois are as follows:

*Arcyria magna* Rex. Montgomery Arboretum, DeKalb Co. Dead wood and bark of *Ulmus* sp. Benjamin (1949) mentions two Illinois collections of this species in the herbarium at the University of Iowa, but does not include the species in his check-list (Benjamin, 1956). Dr. Martin placed our specimen as being between *A. magna* and *A. oerstedtii* Rost. The translucent and iridescent cups and the long expanded capillitium fit the description for *A. magna* (Martin, 1949).

*Badhamia panicea* (Fries) Rostafinski. Cook County Forest Preserve, Maywood (behind Proviso East High School), Cook Co. Dead wood and bark.

*Calomyxa metallica* (Berk.) Nieuwl. = *Margarita metallica* (Berk.) A. Lister (Martin, 1961). Montgomery Arboretum, DeKalb Co. Dead wood. Dr. Martin noted that the single specimen collected was the first stalked form of this species that he had seen. This is the first report for the Family Dianemaceae and the genus *Calomyxa* in Illinois.

*Comatricha lurida* A. Lister. Montgomery Arboretum, DeKalb Co. Rotting wood. Dr. Martin indicated that the slight variations found in the specimen were well within the range of variation seen in the species.

*Cribraria aurantiaca* Schrad. Montgomery Arboretum, DeKalb Co. Rotting wood.

*Cribraria languescens* Rex. Montgomery Arboretum, DeKalb Co. Rotting wood.

*Licea operculata* (Wingate) G. W. Martin. Montgomery Arboretum, DeKalb

Co. Moist chamber culture on bark of *Ulmus* sp. Single typical collection of 10 fruiting bodies.

*Liccia pedicellata* (H. C. Gilbert) H. C. Gilbert. Montgomery Arboretum, De Kalb Co. and Broadview, Cook Co. Moist chamber culture on bark of *Juglans nigra* and *Ulmus americana*. Spores tended to be larger than described and more uniform in color.

*Lindbladia effusa* (Ehremb.) Rostafinski. Johnson Mound Forest Preserve, Kane Co. and Montgomery Arboretum, DeKalb Co. Rotting wood. This is the first report for this genus in Illinois.

*Stemonitis nigrescens* Rex. Montgomery Arboretum, DeKalb Co. Rotting wood.

*Stemonitis smithii* Macbr. Montgomery Arboretum, DeKalb Co. Rotting wood.

This paper brings the number of species of Myxomycetes reported from Illinois to 144. Two previously unreported genera, *Lindbladia* and *Calomyxa* (*Margarita*), are reported bringing the number of genera found in Illinois to 37. Almost all of the reported species have been collected in the central and northern parts of the State.

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