

MYXOMYCETES OF CLARK COUNTY, INDIANA

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The Myxomycetes, a group of plants of approximately four hundred species of world-wide distribution, and commonly known as slime-moulds, include many species which exhibit characters that are of considerable scientific and popular interest. On the one hand, at certain periods of their life cycle they show features allying them with certain lower forms of animal life, while at other periods they have definite plant-like characters. To the layman, the bright color of some species and the delicate make-up of the fruiting structures often prove of great interest. Too often, however, because of their commonly small size and the inconspicuous coloration of many species, they escape the notice of many professional botanists as well as others.

Different species show a considerable range in habitat preference, although a favorable habitat for many species appears to be very rotten logs in cool, damp woods. Some species may be found on grass, rotten leaves, soil, or cinders, and in one instance fruiting specimens of *Stemonitis fusca* were collected on the painted ceiling of a dairy. Certain species, e. g., *Physarum cinereum* and *Lycogala epidendrum*, appear to prefer one type of habitat, while others such as *Fuligo septica* grow equally well in a variety of habitats.

The first reference to myxomycetes in Indiana which I have been able to find was made by Underwood (1), who, in 1893, listed twenty-one species from Putnam, Vigo, and Vermillion counties, those from Vermillion County having been collected by Arthur; he followed this with a report (2) of three additional species in 1894. In 1897, Olive (3) reported forty-three species from the region about Crawfordsville; this list included thirty species which had not been formerly recorded by Underwood. Thomas (4), in 1900, recorded thirty species from the same region, twenty of these being reported for Indiana for the first time. In 1901, Whetzel (5) described in considerable detail seven species of *Stemonitis* occurring in Indiana and accompanied the descriptions with a key to the species and some notes on plasmodial behavior; among the seven species were *S. pallida* and *S. axifera*, which had not been hitherto reported for the state. In the same year Mutchler (6) listed thirty-eight species which he had collected in the vicinity of Bloomington, adding nine to the state list; later, in 1902, he presented a second report (7) on an extensive collection which was, in the main, obtained near Winona Lake. By this second list Mutchler added twenty-nine to the known species of Indiana myxomycetes. In 1909, Barbazette (8) listed fifty-three species based on collections of J. A. Niewland in 1905; of these, thirty-four were collected in Indiana, and five species were new ones for the state. During the years 1911 to 1934, the late Professor J. M. VanHook (9, 10, 11, 12, 13, 14, 15, 16) reported various species to this academy at irregular intervals in conjunction with his reports on Indiana fungi. He included forty-one species of myxomycetes in these various papers, adding five to the state list, which raised the total number of species reported for Indiana to one hundred and twenty-four.

None of these reports contained records of any species of myxomy-

cetes collected in Clark County; in fact, Monroe was the southernmost county in the state from which species had been reported. Clark County, particularly that region along the Ohio River, presents many favorable habitats for myxomycetes. In addition to woods along the Ohio, favorable localities are also to be found along Silver Creek, Fern Creek (Fourteen Mile Creek), and Lacasagne Creek. So far, the most fruitful locality has been in the Arctic Springs region (two miles east of Jeffersonville).

This work, which was started at DePauw University in 1933, represents collections made during the past three summers. Undoubtedly more extensive search will reveal many species not included in this report. Specimens herein referred to are deposited (with the same numbers under which they are listed here) at the Herbarium of DePauw University, Greencastle, Indiana. Doubtful specimens were referred to Dr. G. W. Martin, State University of Iowa. Species marked with an asterisk are those being reported for Indiana for the first time.

Subclass EXOSPOREAE

Ceratiomyxa fruticulosa (Muell.) Macbr.

On rotten locust tree in conjunction with sporangia of *Hemitrichia stipitata*; woods near C. C. C. & St. L. yards (Jeffersonville), June 15, 1933 (No. 69). On rotten log, Arctic Springs, June 19, 1935 (No. 103).

**Ceratiomyxa fruticulosa* (Muell.) Macbr. var. *arbuscula*.

(Berk. & Br.) Macbr. & Martin.

On rotten log in woods near C. C. C. & St. L. yards (Jeffersonville), June 20, 1935 (No. 105).

Subclass MYXOGASTRES

Arcyria cinerea (Bull.) Pers.

On rotten log, Arctic Springs, June 5, 1933 (No. 35); June 16, 1933 (No. 28); June 16, 1934 (No. 106); June 5, 1935 (No. 42). On rotten log, Armstrong Bend, June 19, 1933 (No. 57); in conjunction with *Hemitrichia stipitata*, June 19, 1934 (No. 109). Common in early summer.

Arcyria denudata (L.) Wettstein.

On rotten logs, Arctic Springs, June 16, 1934 (No. 50); July 19, 1934 (Nos. 95 and 96); July 23, 1934 (Nos. 3 and 4); June 19, 1935 (No. 29). On rotten stump, Jeffersonville, June 18, 1935 (No. 45).

Arcyria digitata (Schw.) Rost.

On rotten log, Arctic Springs, June 19, 1933 (No. 38). On rotten locust log in woods near C. C. C. & St. L. yards (Jeffersonville), June 20, 1935 (No. 2).

Arcyria insignis Kalch. & Cooke.

On rotten log near main spring, Arctic Springs, June 30, 1933 (No. 6); on cinders, June 30, 1933 (No. 58).

Badhamia utricularis (Bull.) Berk.

On rotten tree along Fourteen Mile Creek, about 3 miles below Beaver Hole, June 23, 1935 (No. 54).

Comatricha aequalis Peck.

On rotten log in damp ravine, Arctic Springs, July 18, 1935 (No. 91).

Comatricha irregularis Rex.

On rotten elm stump in woods near Lacasagne Creek (3 miles N. E. of Jeffersonville), June 20, 1933 (No. 65).

Comatricha laxa Rost.

On rotten log in damp ravine, Arctic Springs, July 19, 1934 (No. 98).

Comatricha longa Peck.

On rotten sycamore log about one mile below Beaver Hole (Fern Creek), June 23, 1935 (No. 55).

Comatricha typhoides (Bull.) Rost.

On rotten log, Arctic Springs, June 19, 1935 (No. 33); July 18, 1935 (No. 92).

Cribraria microcarpa (Schrad.) Pers.

On rotten log in woods near Arctic Springs, June 26, 1935 (No. 82).

Dictydium cancellatum (Batsch) Macbr.

On rotten log, Arctic Springs, June 19, 1933 (No. 40); July 23, 1934 (No. 62). On rotten log in woods about one mile n. of Memphis, June 8, 1935 (No. 107).

**Dictydium cancellatum* var. *purpureum* Macbr.

On rotten log, Arctic Springs, June 16, 1933 (No. 67); June 16, 1934 (No. 13).

Diderma hemisphaericum (Bull.) Rost.

On rotten oak leaf, Arctic Springs, June 19, 1933 (No. 41).

Fuligo septica (L.) Weber.

On rotten tree stump, Jeffersonville, June 18, 1935 (No. 44).

Hemitrichia stipitata (Masse) Macbr.

On rotten log in woods near C. C. C. & St. L. yards (Jeffersonville), June 15, 1933 (No. 47); in conjunction with *Ceratiomyxa fruticulosa*, June 15, 1933 (No. 69); June 15, 1934 (Nos. 32 and 66). On rotten log in damp ravine, Armstrong Bend, June 19, 1933 (No. 60). On rotten log in drift pile, Fern Creek (3 miles below State Road 62), June 23, 1935 (No. 53). On rotten log, Arctic Springs, Sept. 9, 1934 (No. 110); in conjunction with *Comatricha typhoides*, July 28, 1935 (No. 92).

Hemitrichia vesparium (Batsch) Macbr.

On bark of fallen tree, Tunnel Mill Reservation, April 14, 1933 (No. 56).

Lamproderma arcyronema Rost.

On rotten log in damp ravine, Arctic Springs, July 18, 1935 (No. 102).

Lycogala epidendrum (L.) Fr.

On rotten ash tree, Arctic Springs, June 23, 1933 (No. 87).

Lycogala exiguum Morgan.

On rotten ash tree in woods near C. C. C. & St. L. yards, June 15, 1934 (No. 31). On rotten log, Arctic Springs, June 26, 1935 (No. 80).

Physarum cinereum (Batsch) Pers.

On living grass in City Hall lawn, Jeffersonville, August 25, 1933 (No. 5). The entire fructification covered a circular area approximately one foot in diameter.

Physarum globuliferum (Bull.) Pers.

On rotten log, Arctic Springs, Sept. 19, 1933 (No. 83); Sept. 19, 1934 (No. 85).

Physarum nucleatum Rex.

On rotten log in woods near C. C. C. & St. L. yards (Jeffersonville), June 20, 1935 (No. 1).

Physarum nutans Pers.

On rotten log, Arctic Springs, June 19, 1935 (No. 43); July 18, 1935 (No. 90).

**Physarum pulcherrimum* Berk. and Rav.

On rotten log in woods about 1 mile n. of Memphis, June 18, 1935 (No. 108). On rotten log, Arctic Springs, July 18, 1935 (No. 101).

Physarum viride (Bull.) Pers.

On rotten log, Arctic Springs, June 19, 1933 (No. 39); June 19, 1934 (No. 97); June 19, 1935 (No. 84); July 18, 1935 (No. 94). On rotten elm stump in damp woods near Lacasagne Creek, June 20, 1933 (No. 59). Common.

Stemonitis axifera (Bull.) Macbr.

On rotten ash tree, Tunnel Mill Reservation, June 14, 1933 (No. 14). On rotten log, Arctic Springs, June 16, 1934 (No. 12).

Stemonitis fusca Roth.

On fallen oak leaves in woods about 1 mile N. of Memphis, June 18, 1935 (No. 104).

Stemonitis pallida Wingate.

On rotten limb in Junior High School yard, July 14, 1934 (No. 26). On rotten log, Arctic Springs, July 18, 1933 (No. 61); July 18, 1935 (Nos. 88 and 100).

Stemonitis smithii Macbr.

On rotten log, Arctic Springs, June 19, 1933 (No. 36); June 20, 1933 (No. 7); July 18, 1935 (No. 89). On rotten elm stump in woods near Lacasagne Creek, June 20, 1933 (No. 30).

Stemonitis splendens Rost.

On rotten log in damp ravine, Arctic Springs, July 18, 1935 (No. 99).

Trichia favoginea (Batsch) Pers.

On rotten elm stump in woods near Lacasagne Creek (three miles n. e. of Jeffersonville), June 20, 1933 (No. 16).

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