

**THE
MYXOMYCETES
OF WISCONSIN**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649654451

The Myxomycetes of Wisconsin by Aletta Friscone Dean

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

ALETTA FRISCONE DEAN

**THE
MYXOMYCETES
OF WISCONSIN**

Library
of the
University of Wisconsin

University of Wisconsin Library

Manuscript Theses

Unpublished theses submitted for the Master's and Doctor's degrees and deposited in the University of Wisconsin Library are open for inspection, but are to be used only with due regard to the rights of the authors. Bibliographical references may be noted, but passages may be copied only with the permission of the authors, and proper credit must be given in subsequent written or published work. Extensive copying or publication of the thesis in whole or in part requires also the consent of the Dean of the Graduate School of the University of Wisconsin.

This thesis by.....
has been used by the following persons, whose signatures
attest their acceptance of the above restrictions.

A Library which borrows this thesis for use by its
patrons is expected to secure the signature of each user.

NAME AND ADDRESS

DATE

THE MYXOMYCETES
of
WISCONSIN

By
ALLETTA FRISCONI DEAN

A Thesis Presented for the Degree of
MASTER OF PHILOSOPHY

UNIVERSITY OF WISCONSIN
1904

398740

OCT -6 1933

~~AWM~~
D3435

AWM

D345

A225

-2-

I N T R O D U C T O R Y

The Mycetozoa number at present about four hundred species, the greater part of which are contained in the group of the Myxomycetes or Slime-Fungi (the Myxogasteres of Fries) and the smaller part in the group distinguished by Van Tieghem under the name of Acrasieae.

The Mycetozoa, according to Strasburger, are an independent phylum. The Acrasieae are supposed to be connecting links between the Myxomycetes and Rhizopods, but no line of development has yet been found between these and any higher plant forms.

Their mode of life is similar to that of the fungi. They have no chlorophyll. A few, like Plasmodiophera brassica, are parasites, but the greater number are saprophytes. The Myxomycetes, however, show no hyphal structure and can not be called fungi.

The vegetative stage of the slime moulds consists of the plasmodium, which is a naked mass of protoplasm, amoeboid in movement, found most frequently in forests upon decaying moss, leaves, wood, etc. The general character of the plasmodium has caused to be given to this organism the common name Slime-mould.

The fruit consists of simple or compound sporangia. The spores may be borne outside or inside the spore-bearing body. Besides the spores, the sporangia of the most of

the species contain filaments of various forms, called the capillitium.

Nearly 400 species, distributed among 50 genera, have been described. In the United States 200 or more species have been recognized. Macbride, up to the year 1894, had reported 75 species from eastern Iowa.

The classification is as follows:

Mycetozoa

1. Acrasieae
2. Myxomycetes
 - (1) Exosporae
 - (2) Endosporae
 - a. Simple
 - b. Compound

For my list of synonyms I have drawn largely from Macbride's North American Slime-Moulds.

For my determination of specimens I have consulted Saccardo's Sylloge Fungorum, Lister's A Monograph of the Mycetozoa, Masee's A Monograph of the Myxogasteres, and Macbride's North American Slime-Moulds.

Where I have used their authors' names in my descriptions with no further designation, the data have been taken from the above named books.

Alletta F. Dean.

University of Wisconsin
June 1, 1904.

CERATIOMYXA FRUTICULOSA (MUELL.) MACBR.

1729. *Puccinia ramosa bifurcata*, etc., Micheli, p. 213,
Tab. 92, Fig. 2.
1775. *Byssus fruticulosa* Mueller in Fl. Dan., t. 718, Fig. 2.
1778. *Tremella hydnoidea* Jacquin, Misc., Vol. I., t. 16.
1783. *Clavaria puccinia* Batsch, Eleüch. Fung., p. 139, Fig. 19.
1791. *Puccinia byssoides* Gmelin, Syst. Nat., p. 1462.
1791. *Clavaria byssoides* Bulliard, Champ. de la France,
t. 415, Fig. 2.
1794. *Isaria mucida* Pers., Rom. N. Mag. Bot., I., p. 121.
1801. *Isaria mucida* Pers., Syn. Meth., p. 688.
1805. *Ceratium hydnoides* Alb. and Schw., Consp. Fung., p. 358.
1829. *Ceratium hydnoides* Fries, Syst. Myc., p. 294.
1872. *Ceratium hydnoides* Woronin and Fsmintzin, Mem. Acad.
Imp., St. Petersburg.
1887. *Ceratium hydnoides* De Bary, Comp. Morph. Fun., p. 432.
1889. *Ceratiomyxa mucida* Schroeter, Eng. u. Prautl Nat.
Pflanz., I. i., p. 16.
1893. *Ceratiomyxa mucida* Macbride, Bull. Nat. Hist. Ia., II.,
p. 114.
1894. *Ceratiomyxa mucida* Lister, The Mycetozoa, p. 25.

Macbride: Plasmodium in rotten wood, white or nearly transparent; when fruiting, forming on the substratum mould-like patches composed of the minute sporiferous pillars, generally in clusters of three or more together; spores white, ovoid or ellipsoidal, smooth, 10-12x6 μ .

Saccardo adopts the name *Ceratium hydroides* (Jacq.) Alb. and Schw. He gives the color as white or yellow, and the spores as ovoid 10-12 by 8μ , or globose 10μ in diameter. He finds the spores to be minutely guttulate and hyaline.

Lister adopts the name *Ceratiomyxa mucida* Schroet. "Sporophores white or pinkish-yellow, membranous, either rising from a common hypothallus in a tuft of simple or forked, fasciculate obtuse branches, 1 mm. or more high, .07 mm. thick, or more or less interwoven in broad perforated bands, from which arise irregular and anastomosing lobes; the membranous wall is divided, chiefly on the upper part of the sporophore, into somewhat hexagonal areolae about 10μ broad; a membranous stalk bearing the spore arises from the center of each areola. Spores 10×6 to $13 \times 7\mu$."

The above descriptions are excellent for this species. I find spores that are ovoid or ellipsoid, 8-11 by $6-8\mu$, and globose ones $10-11\mu$ in diameter.

I found a small specimen of this species in Cemetery woods October 14, 1903. In February, 1904, some chips under a bell-jar in our Herbarium Room produced some of this species, giving me good material for microscope slides. April 25, 1904, in our greenhouse, a piece of decayed poplar 3 ft. by 6 in. suddenly became nearly covered with the fruiting-bodies. It looked like a small snow-drift and