

# Proceedings of the Iowa Academy of Science

---

Volume 17 | Annual Issue

Article 12

---

1910

## Spore Formation in *Lycogala exiguum* Morg.

Henry S. Conard

Copyright ©1910 Iowa Academy of Science, Inc.

Follow this and additional works at: <https://scholarworks.uni.edu/pias>

---

### Recommended Citation

Conard, Henry S. (1910) "Spore Formation in *Lycogala exiguum* Morg.," *Proceedings of the Iowa Academy of Science*, 17(1), 83-84.

Available at: <https://scholarworks.uni.edu/pias/vol17/iss1/12>

This Research is brought to you for free and open access by the Iowa Academy of Science at UNI ScholarWorks. It has been accepted for inclusion in Proceedings of the Iowa Academy of Science by an authorized editor of UNI ScholarWorks. For more information, please contact [scholarworks@uni.edu](mailto:scholarworks@uni.edu).

## SPORE FORMATION IN *LYCOGALA EXIGUUM* MORG.

BY HENRY S. CONARD.

On the 5th of October, 1907, young aethalia of a *Lycogala* were collected in a grove four miles southwest of Grinnell, Iowa, killed in chromo-acetic acid and carried through into paraffin. Sections have shown some interesting stages in the development of spores. Since this process has hitherto been described in only two species of saprophytic myxomycetes, it seemed desirable to record the observation. Whether the organism in question is *Lycogala exiguum* or *L. epidendrum* cannot be certainly determined. Its small size and the fact that only four or five aethalia were found indicate the former species.

The specimens have already formed a peridium, in which are embedded the familiar masses of protoplasm with nuclei. The protoplasm of the main body of the aethalium is already divided into typical uni-nucleate spores. Tubular capillitial threads are frequent throughout the spore mass, but only rarely have they shown any connection with the peridium. In the outer portions of the aethalia, that is, adjacent to the peridium and on the free side of the body, there are in two cases many spherical and irregular masses of protoplasm containing from two to several nuclei. In one case these are apparently "pseudo-spores," or masses of substance whose development into spores was cut short—probably by desiccation. In the other, the process of spore formation was evidently arrested by the killing fluid. A third has an area of similar material through the middle of the fruit.

It is clear that the protoplasm is divided by irregular cleavages first into large, multinucleate blocks, and then into smaller and smaller portions, until finally but one nucleus remains to each piece. These pieces then round up and form spores. Meanwhile, nuclear division goes on, quite regardless of the lines of cleavage, until the final separation into spores.

The whole process, including the formation of pseudo-spores, is so precisely like that described by Harper in 1900 (*Bot. Gazette*) for *Fuligo*,

that it seemed not worth while to make figures. Harper's figures for *Fuligo* would exactly represent *Lycogala*. One difference exists. Whereas Harper found the spores perfected first at the periphery of the aethalium of *Fuligo*, the last cleavages of *Lycogala* may occur, either at the center or at the periphery.