# THE PYCNIDIUM OF CICINNOBOLUS.

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The occurrence of Cicinnobolus as a parasite, for the most part on the powdery mildews, has been well known since the genus was established in 1853; however, there seems to have been more interest in forming new species rather than noting the various forms, many of which are doubtless caused by the specific parts of the host attacked, their shape determining the shape of the pycnidium of the parasite. For example, when a conidiophore of a host is converted into a pycnidium it is entirely different in shape and size from one formed from a perithecium of a host.

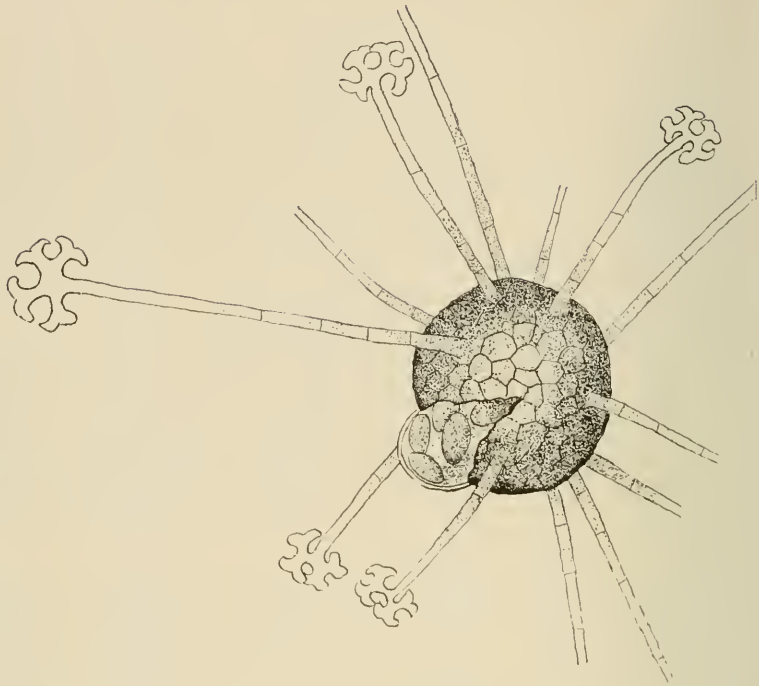
Many species of this genus are now described, most of these being named from the host of the powdery mildew rather than from the host of the Cicinnobolus. From what is already known of the wide variation of the fruiting forms of these parasites, together with the similarity of description of many of their essential parts, much confusion of species has doubtless been made. It is hoped that critical study of seasonal variation of the parasite upon a single powdery mildew host will be made in the future along the lines of Griffiths (The Common Parasite of the Powdery Mildews. Bull. Torr. Bot. Club. 26, 1899.).

Most species have been described as parasitizing the mycelium or conidiophores of their hosts; however, in at least three cases they are reported on perithecia. These are by Griffiths on Erysiphe cichoracearum DC., by Saccardo and Sydow on Uncinula salicis (DC.) Winter and by Cocconi on Phyllactinia corylea (Pers.) Karst. It is not strange that the last two should have been originally called respectively a Phoma and a Phyllosticta. So far as the writer can learn, the Cicinnobolus herein mentioned has not previously been reported on the mycelium, conidiophore or perithecium of Podosphaera oxycanthe (DC.) de Bary.

The present brief paper is to show a form exceedingly common on the powdery mildew of cherry, here in Monroe County, Indiana. This seems to form fruit only in the perithecia of the host and usually at about the same stage of its maturity. In figures 1 and 2 of the accompanying plate, the comparative forms of the attacked and unattacked perithecia are shown. These figures represent a fair average of a large number examined and measured. It will be observed that parasitized fruit bodies are slightly smaller and have only slightly less developed appendages. Attention is always attracted by the presence of conidia instead of asci when the perithecia are crushed, though a more critical examination of the exterior will enable one to judge when pycnidia are present.

These parasites are an extremely interesting and attractive group from an economic view as well as from a morphological one. There has always appeared to be a possibility of their employment to hold certain of the most dangerous powdery mildews in check.

It would also be an interesting problem to determine the exact relation of the pycnidium of the Cicinnobolus to the perithecium of the host by means of a critical study of stained sections made from material such as was used in making the accompanying figures.



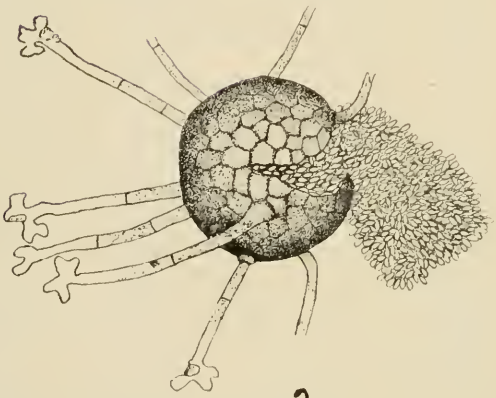


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Fig. 1.—Normal perithecium. Fig. 2.—Parasitized perithecium highly magnified. Fig. 3.—Conidia

(The writer wishes here to thank Professor Weatherwax for making the three camera lucida drawings which accompany this paper.)

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