A Preliminary Study of Aquatic Hyphomycetes in Iowa

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Investigations were initiated in the fall of 1971 to ascertain the presence and diversity of this group of aquatic organisms in Iowa waterways. This paper reports the occurrence of aquatic hyphomycete flora from six sites in central Iowa.

MATERIALS AND METHODS

The collecting sites included three rocky-bottomed areas on the Skunk River in Story County, Iowa, near Ames (water cascaded over rocks and small dams at two sites; the river was wide and calm at the other). Another site on the Skunk River was located in the Ames city limits; the bottom here was wide and sandy. Lake Laverna on the Iowa State University campus and Squaw Creek, in the Ames city limits, in a sandy area with a rapids formed by large pieces of concrete. All collecting areas are bordered with trees. At the first three Skunk River sites, samples were taken at approximately two-week intervals from October 2, 1971 through April 13, 1972. At the other sites, samples were taken from January 18, 1972 through April 13, 1972.

Submerged leaves of Quercus, Acer, Populus, Ulmus, Salix, Prunus, Parthenocissus and Smilax were collected individually. The leaves were rinsed in the stream, placed with stream water from the sites in a polyethylene bag, labeled and taken to the laboratory.

In the laboratory the leaves were rinsed in sterile, deionized, distilled water, sterile stream water, sterile tap water or non-sterile tap water, placed in sterile petri plates and covered with fresh water of the same type as the rinse water. The leaves were checked immediately and at varying intervals for fungi and the fungi producing spores were identified.

RESULTS

Ten species of aquatic hyphomycetes were found fruiting on submerged leaves collected in the period between October 2, 1971 and April 13, 1972. The species are: Alatospora acuminata Ing., Anguillospora longissima (Sacc. and Syd.) Ing., A. pseudolongissima Ran., Flagellospora curvula Ing., Lemmoniera aquatica DeWild., L. brachycladia Ing., Tricladium marchalianum DeWild., Tricladium angulatum Ing., T. gracile Ing. and Triscelophorus monosporus Ing.

DISCUSSION

The type of water covering the leaves in the laboratory did not affect the number of species detected. Untreated water worked well; therefore, it is being used for further studies.

The extent of degradation of the leaf tissue appeared to have little influence upon the number of species found; an observation which may support Crane (1968) who records leaves well colonized after two weeks in the water.

At this time, collection data do not indicate any marked difference in the number of species at the different sites. Sampling at these sites continues.
All species found have been reported from various sections of the United States and from other countries.

Literature Cited


