Report on Research at Ives Lake, August 24-September 10, 1971 by Dr. R.H. Petersen, Department of Botany, University of Tennessee, Knoxville

1. Weather conditions are extremely important to the collection of fleshy fungi. Although the party arrived in the rain, and although this culminated several days of wet weather in the area, it was the last rain to fall during the research period. Within a week considerable drying had occurred, greatly speeded by hot, dry winds, and the fleshy fungi became progressively sparser over that time. Nevertheless, about 250 collections of fleshy fungi were made, and are now deposited in the herbarium of the University of Tennessee. Most were accompanied by complete notes, and many by color transparencies. This forms an addition to the record of the fleshy fungi of the area, and a reservoir of specimens for subsequent study of the taxonomy of the clavarioid and cantharelloid fungi of North America.

The objectives of the research were limited. Clavarioid and cantharelloid fungi were collected preferentially, often at the complete expense of other fleshy fungi so that complete notes, photographs and cultures could be obtained. Even within this limited group, however, collections of significant importance were obtained.

Several records were particularly interesting. A few of these include collections of <u>Clavariadelphus sachalinensis</u>, furnishing a new geographical location for the species which completes a distributional pattern from the Sachalin Islands of the North Pacific to Sweden. <u>Ramaria "striatospora</u>," as yet unpublished and known only from the Pacific northwest was found, as was <u>R. brunnea</u>. The latter has been collected in the Pacific northwest and Sweden but not between. Several members of the <u>Ramaria stricta</u> strips were found, including the Pacific northwestern <u>R</u>. "<u>brunneostricta</u>," not yet published, <u>R</u>. apiculata, hitherto known in this continent only from the far west, and <u>R</u>. condensata, perhaps establishing a new North American record. An apparently new species of echinulate-spored <u>Ramaria</u> was also discovered.

Among the cantharelloid fungi, <u>Cantharellus</u> <u>cibarius</u> was collected in quantity, not surprising on the face of it, but noteworthy in the study of the complex in North America, for there are several forms of the species, and collections from various geographical locations are advantageous. Once their Sphagnum-swampy habitat was discovered, members of the subgenus <u>Leptocantharellus</u> were found in quantity. Most significant of this group were <u>Cantharellus</u> infundibuliformis, occuring in several forms, and <u>C. lutescens</u>. Collections of the latter constituted my first encounter with the species outside Europe, and confirmed that the species under that name in the southeastern states is a separate taxon.

- 2. In addition to collections of fleshy fungi preserved by drying, isolations of about 25 species were successfully placed in pure culture, providing material for additional taxonomic characters as well as for studies of sexuality, physiology, etc. Among the unusual cultures obtained were those of <u>Creolophus septentrionalis</u>, a rare hydnoid fungus, several species of the <u>Ramaria stricta</u> group, constituting the first isolations ever made from these fungi, two species of <u>Hericium</u>, and several species of <u>Pleurotus</u>. These last will be sent to Dr. Orson Miller who specializes in these fungi, and thus will add to the research program of another investigator who has not collected in the Ives Lake area (I might add that this secondary effect ought to be almost as important as the primary research done on the spot).
- 3. Perhaps not as well understood as the above direct research, interaction between people is an important factor in all research. During residence at Ives Lake, I was able to furnish much more intimate contact with my own graduate student,

Mr. David Jenkins, thus aiding his research program. A week spent with Dr. Paul Olexia was particularly stimulating and renewed our spirit of cooperation. Contact with Mrs. Ingrid Bartelli of Marquette not only formed a friendship, but also furnished a contact-person for future work, specimens and advise concerning species distribution.

4. Finally, a word of appreciation for the members and officers of the Huron Mountain Club and the Wildlife Foundation. Obviously, without their concern the Ives Lake facility would not be possible. The presence of the facility provides field-oriented researchers with a headquarters in a geographical and ecological area otherwise difficult to investigate, as well as comfortable living conditions under which to work. The people involved in this effort should be congratulated, and every effort to continue this service to the scientific community should be made. I extend my personal thanks, and that of my family, for the courtesies shown us by the members during our stay.