

THE OHIO CAVE SURVEY

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A perusal of the literature on the limestone caves of Ohio indicates a decided absence of information in this area. White (1926) in his study of Ohio caves provided a sketchy knowledge of some twenty caves. Shetrone (1928) has treated briefly the archaeological importance of some of these caves, and Cottingham (1919) discussed the formation of the South Bass Island caves. Hills (1916) described Reames Cave (Ohio Caverns). Smith (1953) recently discussed Ohio caves in their relationship to cave conservation. Little else of a serious nature has been reported.

In 1952, the Central Ohio Grotto of the National Speleological Society in cooperation with the Ohio Geological Survey established a comprehensive survey of the Ohio caves and caverns. The work of this study includes a general description of the caves, their locations, and a discussion of the geological features of the caves. Maps after the standards adopted by Davies (1947, 1949, 1950) are being made. Further, a photographic study of each cave is made. This includes not only black and white pictures, but also kodachrome transparencies. Historical anecdotes related to the caves are noted. Also a study of cave fauna is being carried out in cooperation with the natural history section of the Ohio Archaeological and Historical Society. Relationships have also been established with the Cleveland Grotto of the National Speleological Society and the Ohio Division of Wildlife. It is hoped that the end result of this survey will be the publication of a definitive volume on Ohio caves.

To implement the survey program, the Geological Survey addressed letters describing the project and the need for cave locations to county engineers, county agricultural agents, and historical societies throughout the state. From the reply to this letter and from the work of the survey investigators, a preliminary list of more than one hundred caves has been compiled. Most of these listings are in limestone areas and will receive the major attention of the report. A few sandstone overhangs and rock shelters such as those in the Hocking area may be included because of their widespread fame.

Intensive study has been carried out in more than twenty caves. Preliminary maps and geological notes have been completed in fourteen cases.

From the fieldwork done in the first year of the survey several problems have arisen, all of which bear further study. These include:

- 1) The general theory of formation of Ohio caves. Some of the caves, at least, are formed in a manner quite different from the usual solution processes. Cottingham (1919) and White (1926) have pointed out the singular features of the South Bass Island caves, Verber and Stansbery (1953) have attacked this problem. More study is needed in other areas.

- 2) The relationship between cave formation and the glacial boundary, and the relationship between cave fauna and the boundary. Exploration has provided an interesting pattern of caves close to the glacial boundary in at least one southern Ohio county. The cricket (*Ceuthophilus gracilipes*) normally found in non-glaciated areas has been collected north of the Illinoian boundary.

- 3) The migration of salamanders into and out of certain caves. The ecological aspects of a cave environment are known to have marked effects on animal movements. Work in this area could contribute to our concepts here.

- 4) The possibilities of both paleontological and archaeological remains in some caves. Careful study could yield much informative material in these areas. Work in some caves will begin soon.

5) The occurrence of the Eastern Big-eared Bat (*Corynorhinus macrotis macrotis*) in Ohio. The first report of this bat has raised speculation as to the range of the Eastern Big-eared Bat. This problem is under study at the Ohio State Museum and at the National Museum.

It is hoped that others will be able to contribute to the study of Ohio caves. Information on cave locations is always welcome. Cooperative studies in some phase of the project could speed the completion of the work. All communications regarding the cave survey should be addressed to the Ohio Geological Survey office, Orton Hall, the Ohio State University, Columbus 10, Ohio.

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