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FRESHWATER SPONGES IN ARKANSAS

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That *some* sponges occur in freshwater seems not generally known, and probably only those zoologists definitely interested in freshwater biology have a clear idea of their appearance. Freshwater sponges occur in the clear, glacial lakes of the upper Mississippi Valley, growing in masses several inches in diameter on the stones of the bottom or on the aquatic vegetation. Those I have obtained from Louisiana seem always to be on the submerged roots of trees, where they form a noticeable encrustation. The Arkansas species here reported seem to be either on the under side of submerged logs or on the top surface of rocks in the beds of mountain streams. Silt will choke their canals, so they occur generally in clear waters. Since the skeleton is silicious, they do not do well in "hard" waters, but are occasionally found in such.

The only mention of Arkansas sponges in the literature seems to be that of *T. horrida* (Causey and Eidson). The present note adds one genus and two additional species. They do not appear to be common in the areas from which they are reported and I have not noticed them in other parts of the state. No large mass has been found, the specimens thus far being more or less circular incrustations of approximately an inch in diameter. When alive they show some shade of green due to the contained algae, unless greatly shaded, and resemble green algae. A sensitive finger tip will distinguish the rough surface of the sponge colony from the slippery smooth algal surface. A good hand lens will show the ends of the protruding spicules and an occasional osculum. In some of the mountain streams they may be found in the dry part of the summer as patches on the bare rocks. At such times they tend to be white, dirty or resembling a splash of whitewash. The presence of the roundish gemmules, approximately a sixteenth of an inch in diameter, and often occurring in clusters, is good confirmatory evidence. Microscopic examination will show the silicious spicules. Permanent preparations are readily made by boiling bits of the colony, with gemmules if identification is intended, in nitric acid, washing, and spreading on slides to dry. By making the final suspension in alcohol, and igniting as soon as spread on the slide, dry preparations are obtained which can be mounted in balsam in a few seconds. The gemmule spicules are necessary for identification. Useful references are those of Potts (1887), Smith (1921), Ward and Whipple (1918), and Old (1932).

Arkansas records are as follows:

Ephydatia mülleri (Lieberkühn) 1856. Savoy, Washington County, on floating log.

Trochospongilla leidyi (Bowerbank) 1863. Eden's Bluff, Washington County, on rocks; Petit Jean River, Scott County, on rocks.

Trochospongilla horrida (Weltner) 1893. White River, Elkins, Washington County, on rocks.

LITERATURE CITED

- Causey, D. and H. Eidson, 1936, *Trochospongilla horrida* in Arkansas. Science, 84: 2178: 291.
- Old, M. C., 1932, Taxonomy and Distribution of the Fresh Water Sponges of Michigan. Papers Mich. Acad. Sci., Arts and Letters, 15: 439-477.
- Potts, E., 1887, Fresh Water Sponges; a monograph. Proc. Acad. Nat. Sci. Phila., 39: 158-279.
- Smith, F., 1921, Distribution of Fresh Water Sponges in North America, Bull. Ill. St. Nat. Hist. Sur., 14: 2: 9-22.
- Ward, H. B. and G. C. Whipple, 1918, Freshwater Biology, chapter X, The Sponges, by E. Potts.