

The Other Side of the Rock at Crow Creek

In January 2024, as an assigned laboratory project by Dr. C. Olson in her limnology course at Rogers State University in Claremore, Oklahoma, students were organized into lab groups and assigned Blue Thumb data packets of different stream sites in Oklahoma to interpret. After understanding Blue Thumb's data collections, the groups were expected to familiarize themselves with their assigned stream's region and conduct varying tests and analyses.

The group assigned to Crow Creek in Tulsa, Oklahoma conducted several analyses of the creek site and water quality. Group members spent hours examining Crow Creek's parameters and water. The lab mates were successful in interpreting the data, their findings, and quality tests.

While completing their reports, lab members made a final site visit and found a surprising phenomenon occurring in the creek water. Not far from the group's observation deck, members found a shocking sight they had yet to observe despite the numerous site visits. Freshwater sponges were found on the underside of rocks in the creek's water (Figure 2 and 3.) Baffled by the discovery, students quickly collected and preserved samples and rushed them to the RSU lab for closer examination with Dr. Olson. Under the microscope, and with a second opinion from Professor Witt of Redlands Community College and Dr. C. Olson of RSU, the specimens proudly displayed their spicules, and confirmed their identity: freshwater sponges (Figure 1 and 2.)

While uncommon, freshwater sponges do exist, and new species are being discovered. Although marine ecosystems are what sponges are most often found in, freshwater sponges occur. What was once thought to be extinct in Oklahoma, after nearly 75 years, freshwater sponges were rediscovered in Crow Creek of Tulsa, Oklahoma. The species of sponge found by

the student group at Crow Creek is still undetermined and is waiting to be properly identified by a professional.

Sponges are ancient single celled organisms in the phylum *Porifera*. Often mistaken for plants, sponges are sessile aquatic invertebrates. Although most sponge species are found in the ocean or other marine ecosystems, freshwater sponges can also be found in aquatic systems around the world. Sponges are essential to supporting water quality. Sponges are busy organisms, acting as filter feeders, soaking up bacteria and heavy metals, providing food to other organisms, while also processing carbon, phosphorus, and nitrogen. While it's thought that most sponges inhabit marine ecosystems, more and more aquatic species are being discovered.

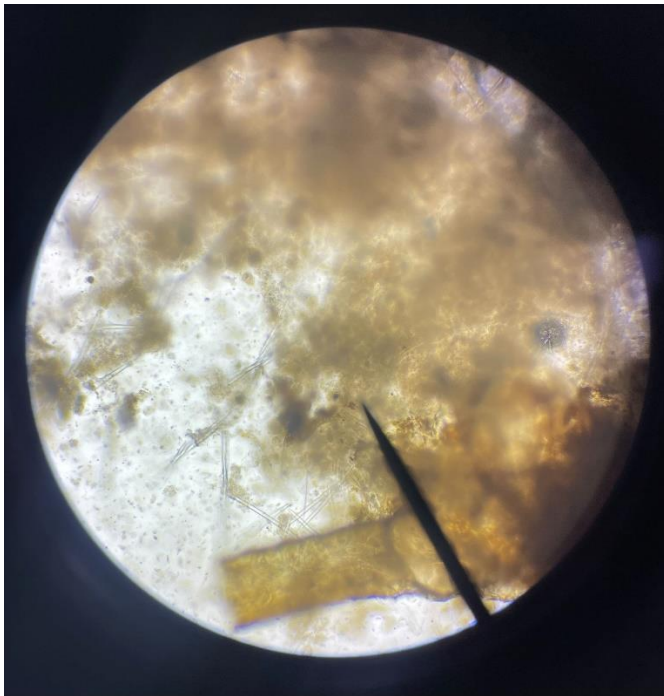


Figure 1: Sponge sample mixed with algae under microscope showing off its spicules and porocytes.



Figure 2: Sponge sample under microscope showing its spicule.



Figure 3: Sponge found living on underside of rock in Crow Creek, Tulsa, Oklahoma.



Figure 4: Close up of sponge found living on underside of rock in Crow Creek, Tulsa, Oklahoma.