

Help Us Find Wisconsin's FRESHWATER SPONGES

Acknowledgments

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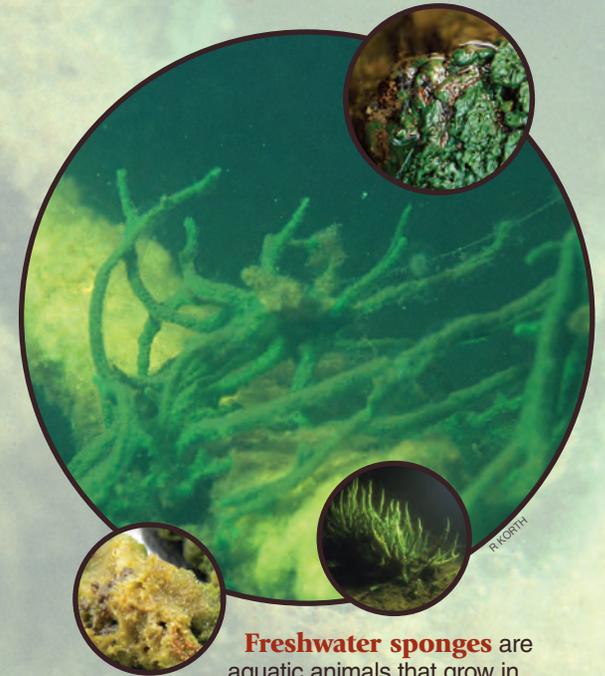
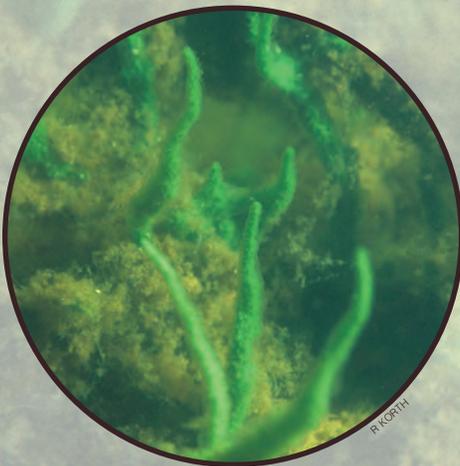
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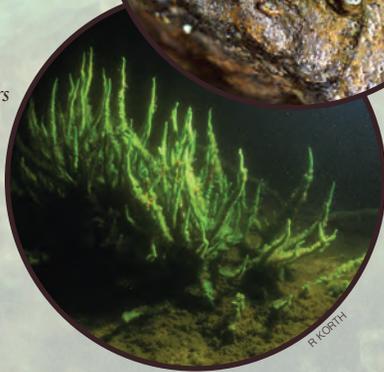
Freshwater sponges are aquatic animals that grow in lakes, rivers, bogs, and streams attached to submerged rocks, sticks, logs, or aquatic vegetation. They feed by filtering small particles from the water, and so are thought to be sensitive indicators of pollution. Wisconsin's freshwater sponges were studied extensively in the 1930s and found to be growing in many lakes and major river systems. Since then, extensive studies have not been done, though some limited research seems to indicate that the range of some species is more restricted than in the 1930s. This Citizen-based Monitoring study will try to shed more light on how abundant and widely distributed Wisconsin's sponges are today.



What do FRESHWATER SPONGES look like?

Freshwater sponges vary from marble-sized to elongated masses and can grow to be thin or thick encrusting layers. Their surfaces may be smooth, textured or wavy, or have finger-like projections. Their structure is supported by spicules, tiny needle-like structures made of silicon that are distributed throughout the sponge body. You can use a magnifying glass to see at least a hint of the needle-like spicules.

Sponges can grow as encrusting layers with smooth, textured, or wavy surfaces or they can grow with finger-like projections.

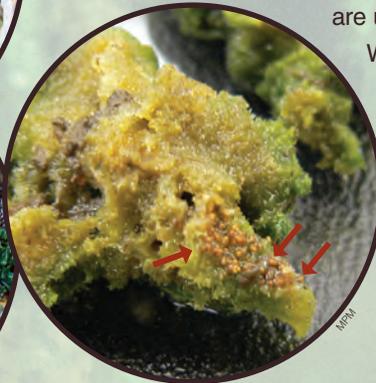


Unfortunately, color and shape are not particularly helpful in identifying sponges to the species level. Instead, biologists rely on the spicules, which are quite diverse in their size, shape, and number of prongs. Some have hooks or are dumb-bell-shaped. They can be smooth or spined. Much of this variability is species-specific (i.e. each species has its own sizes and shapes).



Can we find them in our lake or nearby river?

Sponges grow in relatively shallow water and so can be found by wading and observing the surfaces where they might grow. You might find a rake useful for turning over debris. The sponges may be colored green by algae that live inside their cells or they may be beige to brown or pinkish in color. Sponges can be delicate to very firm feeling but are not slimy or filmy. Some sponges prefer the underside of logs and sticks; these are usually not green in color.



Gemmules (indicated with arrows above) contain cells from which new sponges grow. About the size of poppy seeds and tan in color, they can be clustered or scattered in the sponge.

Wisconsin's sponges exhibit an annual life history in which they grow through the summer, die back in the winter, and begin a new growth cycle in spring. So, it's best to look for them in late summer and early fall. In late summer, sponges form gemmules, small spherical protective structures that contain cells from which new sponges will grow in spring. The gemmules will appear about the size of poppy seeds, but are tan in color. They can be clustered or scattered in the sponge.

How common are FRESHWATER SPONGES?

We don't know. Since little modern survey research has been conducted, their conservation status remains unknown. Biologists have found sponges in fewer than half of Wisconsin's counties. So there are many gaps in our knowledge.

Biologists rely on the varying sizes and shapes of microscopic mineral structures called spicules to identify each species.

Help us learn more about WISCONSIN SPONGES.

Have you seen sponges in your area? Use this questionnaire to submit observations of sponges in your local waterways to help biologists prioritize future survey efforts.

Where did you observe sponges?

County: _____

Waterbody: _____

Substrate where you observed sponges:

- Sand
 Gravel
 Logs
 Other: _____

When did you observe sponges?

Date: _____

How many kinds of sponges did you observe?

- All sponges appeared to be the same kind.
 Sponges appeared to be more than one kind.

How can we contact you?

Name: _____

Address: _____

Telephone: _____

E-mail: _____

Mail this completed questionnaire to:

Dreux Watermolen, SS/7
 Wisconsin Department of Natural Resources
 P.O. Box 7921
 Madison, WI 53707-7921

Or send all of the requested information by e-mail to: dreux.watermolen@wisconsin.gov.