

Smart Stuff

with Twig Walkingstick



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OHIO AGRICULTURAL RESEARCH
AND DEVELOPMENT CENTER

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Notes: "To the fisheries biologist, the otolith is one of the most important tools for understanding the life of fish and fish populations. Growth rings not unlike those of a tree record the age and growth of a fish from the date of hatch to the time of death. ... Virtually the entire lifetime of the fish is recorded in the otolith." So writes Steven E. Campara, Otolith Research Laboratory, Bedford Institute of Oceanography, Nova Scotia, Canada, at <http://www.marinebiodiversity.ca/otolith/english/home.htm>. Twig hitched a ride on a passing common loon and is currently vacationing at an undisclosed location in the UNESCO Niagara Escarpment World Biosphere Reserve. This column first ran on Feb. 25, 2007.

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Q. Dear Twig: My sister and my friend and I found "lucky stones" on a beach at Lake Erie. My aunt said they came from the ears of a fish. True?

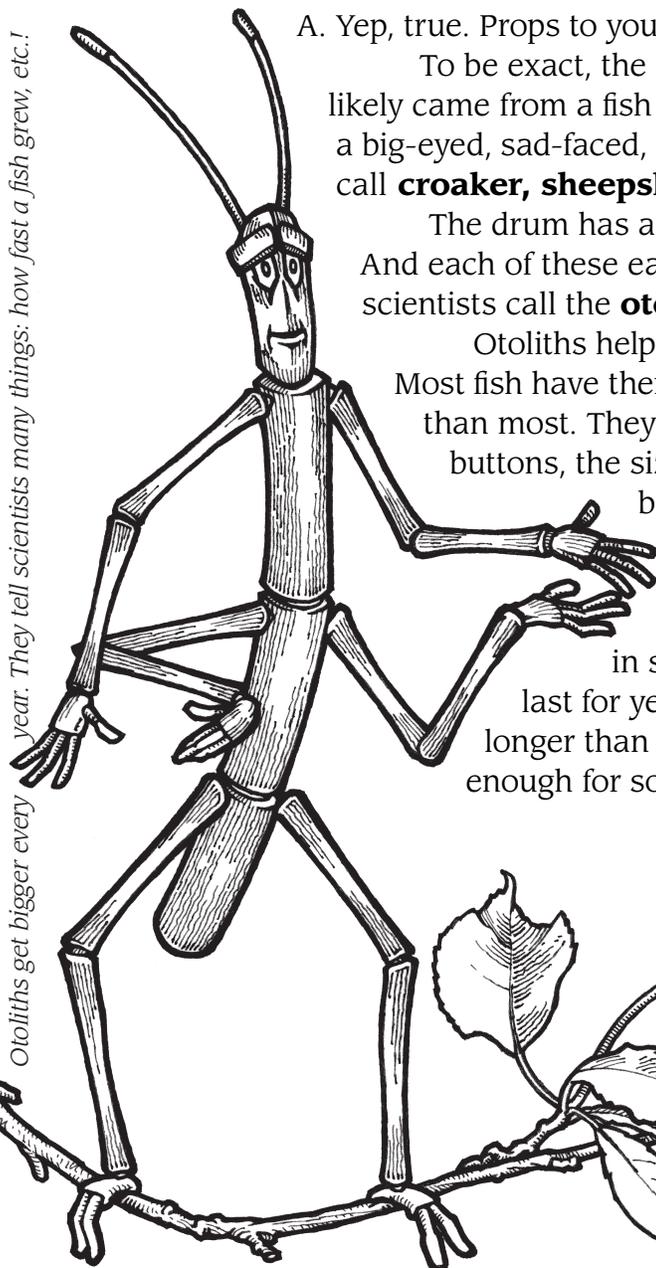
A. Yep, true. Props to your aunt!

To be exact, the "lucky stones" that you found likely came from a fish called the **freshwater drum**, a big-eyed, sad-faced, round-tailed fish that people call **croaker**, **sheepshead** and **silver bass**, too.

The drum has an ear on each side of its head. And each of these ears has a part way inside it that scientists call the **otolith** ("OH-toe-lith").

Otoliths help with balance and hearing. Most fish have them. But the drum's are bigger than most. They look like big, fat, white, shiny buttons, the size of a penny or a nickel or bigger, with the shape of an "L" on one side.

Made out of **calcium carbonate**, the same stuff in seashells and eggshells, otoliths last for years and years. They last a lot longer than the fish itself. They last long enough for somebody to find them!



Otoliths get bigger every year. They tell scientists many things: how fast a fish grew, etc.!

Twig

From your scientific friends at The Ohio State University — specifically, the Ohio Agricultural Research and Development Center (www.oardc.ohio-state.edu) and OSU Extension (extension.osu.edu).