

## HOW OLD IS THAT FISH?

Horses two years old are sufficiently mature to race in the Kentucky Derby. A hog can be brought to market in six months. In contrast, a 26-pound black drum is 28 years old. How do I know? I took its otoliths, and sent them to the Florida Marine Research Institute (FMRI) in St. Petersburg for analysis.

All bony fishes except billfish have otoliths (*otos* ear, *lithos* stone), in their brain cages, beautiful pieces of calcium carbonate that have annular rings, somewhat like trees. The otoliths not only give the age of a fish, but they are as distinctive as the fish itself. That is, if you catch a strange fish (not sharks nor rays) and take its otoliths, an ichthyologist can identify the fish.

All animals need a balance mechanism to stay upright. We humans have otoconia (ear-sand), in our ears. No one knows why fishes have such large otoliths, but we can speculate that whereas we live in a two-sided world: left-right and forward-backward; a fish's world is three-sided: left-right, forward-backward, and up-down.

Although there are several different types of otoliths, the *sagittae* are the only ones large enough to interest most anglers. They rest in the brain cage.

Spotted seatrout are relatively easy from which to take otoliths. Lay the trout on its stomach, and with a sharp knife slice just forward of the eyes; that exposes the brain cage. With tweezers, probe around in there until you feel something rock-like. There should be two of those rock-like prizes, mirror images of each other. Take them out and wash them thoroughly.

Even with the naked eye, you can get a good idea of the number of rings there are; if you're not in a hurry, package the otoliths carefully and send them to the FMRI, 100 Eighth Ave., SE, St. Petersburg, FL, 33701-5095. They will select one of the two and cut it in half with a high-speed saw, which under magnification makes the rings stand out like the steps on the courthouse.

It is curious that the sizes of otoliths vary widely, for no reason I can think of. Those of a 2-pound white grunt are larger than the otoliths of a 43-pound tarpon. Those of a four-pound gafftop catfish are more than twice the size of those in a 15-pound tripletail.

I have the otoliths of about 40 different fishes, not including cobia. That most obstreperous of anything that swims has otoliths, but neither John Patrick nor I has ever been able to find them.

Why should one "do" otoliths? Some of us find great satisfaction in knowing how long it takes to create a fish. It makes the phrase, "catch & release" have more impact.