

“Bucket Biologists” Beware

by Jim Negus, Tennessee Wildlife Resources Agency - 2006

Fisheries managers across the country are facing an epidemic of exotic (non-native) species introductions. Regardless of whether these introductions are intentional by the so called “bucket biologists” or not, exotics can severely disrupt the dynamics of aquatic communities.

Recent improvements in livewell and bait tank technologies have dramatically increased the chances of relocating species since anglers now transport bait greater distances. The transport of organisms between river drainage systems is particularly troublesome and can result in the rapid spread of nuisance species by those unaware of **ALL** the organisms contained within their livewells.

Asian carp, river herring, zebra mussels, rusty crayfish, hydrilla, and parasites or diseases like *Achtheres* (“gill maggots”) and largemouth bass virus are among the multitude of organisms that cause headaches to Tennessee biologists. Laws designed to limit the spread of exotics have been established across the country with limited success. The continued education of the public to the dangers of bait and water transfers between systems is likely the only solution.



Photos by Jim Negus of striper angler, Tim Horton of Spartanburg, SC on Norris Reservoir Sept., 2005

There are many detrimental effects exotics can have on established fisheries. They include, but are not limited to: competing for food and space, disruption of spawning, introduction of diseases and parasites, and predation.

Tennessee biologists are regularly contacted by out-of-state anglers interested in bringing blueback herring into the state. Although we already have the similar, non-native alewife in many of our reservoirs, we advise them never to transport river herring from one place to another. Herring are difficult to identify without dissecting the abdominal cavity and an angler might easily mistake a blueback for an alewife. We wish to limit the spread of bluebacks since they prey on black bass fry and have adversely impacted largemouth bass populations in Georgia's Burton and Nottely Reservoirs soon after being introduced. We have made it is illegal to possess live or dead blueback herring in Tennessee and penalties for violators are severe.

The recent arrival of bluebacks into Hiwassee Reservoir, NC has had a very detrimental effect on the lake's walleye fishery similar to the problems alewife have imposed on Tennessee's walleye. Although the exact mechanism of how the two species of river herring hurt walleye populations is unclear, it is theorized they prey on walleye fry and/or eggs thus limiting recruitment.

Other examples of non-native fish introductions abound and one does not have to look hard to find recent cases and the reasons to limit their expansion to other systems.

Yellow bass showed up a few years ago in Norris, one of East Tennessee's premier striper lakes. This most likely occurred because anglers routinely collect and transport bait to Norris from the tailwaters of Melton Hill and Douglas Dams where yellow bass are common. These small Moronids will likely compete for food and habitat with the similar, but more important white bass.

Everyone is familiar with common carp that were introduced into the US in the late 1800's as a food fish. Their feeding habits negatively impact the environment by stirring up sediment and increasing turbidity. They also prey on the eggs of other fish and compete for food with a variety of native species. Common carp are child's play when compared to their newly arrived cousins, the silver carp that bolt out of the water like missiles when disturbed. Any accidental bait bucket transfer of the fry or fingerlings of these monster filter feeders will impact food webs and pose a serious hazard to recreational boaters.

The list of problem species grows every year as do the reasons for limiting the introduction exotics into new systems. Following are a few simple precautions you can take to help with the difficult task of slowing the spread of non-natives.

- **Never release unused bait or water if they did not originate from the area fished.**
- **Never transport fish from one water body to another.**
- **Remove mud and plants from boats and trailers before departing an access site.**
- **Drain all water from live wells and bait tanks if moving to a different system.**
- **Never release aquarium fish to the wild.**
- **Dry boats and equipment thoroughly after use.**
- **Flush bilges and clean boats with very hot water or steam clean.**