Anglers are key to containing LMBV

Biologists, resource managers share findings at workshop

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With the help and efforts from responsible anglers, we are starting to see a significant rebound in trophy-size largemouth bass.

WILMINGTON, N.C. — New research presented at the 2003 Largemouth Bass Virus Workshop confirms the important role that anglers can play in minimizing the impact of the mysterious ailment on the nation's bass fisheries.

"I can think of a million reasons for anglers not to move fish from one body of water to another and not one good reason to move them," said Tony Goldberg of the University of Illinois, following presentation of his findings.

Goldberg was but one of several scientists who provided resource managers and fisheries biologists with the latest information on the virus, which killed thousands of fish during the late 1990s and first years of this century, mostly in the Southeast.
Fatalities since seem to have diminished considerably, but LMBV continues to be found in new waters annually, and scientists as well as anglers worry about the long-range implications of this virus for America's most popular game fish.

"We don't know enough to know what the long-term effects are," said Robert Bakal, a veterinary medical officer for the U.S. Fish and Wildlife Service's (FWS) Warm Springs Regional Fish Health Center in Georgia. "What we know today probably will be different from what we'll know in two years."

During this fourth annual meeting sponsored by BASS, Goldberg added, "We're not looking to eliminate LMBV. We can't do that. But what we're learning could lead to management regulations that lessen its impact."

Anglers, in fact, can voluntarily lessen that impact right away, the veterinarian and associate assistant professor of epidemiology revealed, by following guidelines that resource managers have recommended for several years: Don't move fish or water from one fishery to another and clean water from your livewell and other compartments before taking your boat from one lake to another.
Before this past year's research, these guidelines were viewed as precautionary measures based on common sense. Moving fish and water from one place to another can spread exotic nuisance species and pathogens.

But now hard evidence confirms the need for such practices. Possibly most importantly, Goldberg and his associates confirmed that genetically different strains of LMBV exist, some more deadly than others.

"One viral strain killed bass more quickly than the others in the study, and it killed every fish," he said. "We now know that there are multiple strains that may have different effects. You shouldn't move fish even if you know that both bodies of water have LMBV."

University of Illinois researchers also learned that second-generation offspring are more likely to die from LMBV when pure parental stocks of bass are mixed. The interbreeding, Goldberg said, seems to scramble immune system genes and create "outbreeding depression."

Additionally, the Illinois scientists found that fish carrying the virus die 3.3 times faster at 30 degrees Centigrade (86 degrees Fahrenheit) than they do at 25 C (77 F). "Elevated temperatures do cause greater mortality," Goldberg said. This finding also confirms what resource managers have advised: Handle bass as little as possible during hot weather, since the additional stress reduces the fish's ability to combat the disease at a time when it's most likely to turn deadly.

Bakal, meanwhile, said that FWS researchers have learned that 1/4 cup of bleach per gallon of water will kill the virus in livewells. "It's important to let it dry out," he added.

FWS scientists also began work on a non-lethal sampling method, and they determined that LMBV does not seem to be spread through the digestive system of cormorants that eat fish in one lake and defecate in another. From Auburn University, Andy Noyes reported that a check of bass in several reservoirs with LMBV revealed that the largest bass do not have the highest prevalence of the virus. For years, body counts seemed to suggest that LMBV mostly was a killer of big fish, and resource managers feared that the disappearance of trophy bass in many waters was linked to the virus. "Is the virus really less prevalent in older fish?" Noyes asked. "Or maybe they've already died. But we are starting to see a rebound in trophy-size fish." At Mississippi State University, scientists began trying to determine if summer tournaments contribute to higher levels of LMBV and possibly trigger the virus to turn deadly.

For more definitive answers regarding tournament effects and other aspects of LMBV, research must continue. Some states, such as Alabama, Texas, and Florida, are conducting important studies on their own. But much of the work is financed by Wallop-Breaux (Sport Fish Restoration) reverted funds provided by FWS. Biologists at the meeting universally agreed that such federal money will be needed again in 2003 if progress is to continue in unraveling the mystery of LMBV.

While research was gearing up in the laboratory and in the field, state biologists noted few kills linked to LMBV during 2002. Arkansas reported one at Lake Columbia, while Texas recorded one at Lake Bastrop. But the virus continued to prove that it is not confined to southern waters, as resource managers said LMBV was detected in the Illinois portion of Lake Michigan, as well as in Vermont's Lake Champlain.