

Largemouth Bass Virus Factsheet

Largemouth bass virus (LMBV) was first identified about ten years ago in largemouth bass from Florida. Since then, the virus has been found in many southern states and within the past few years, has been detected in Michigan, Indiana, Illinois, and the Mississippi River. In 2003, LMBV was detected in largemouth bass from Geneva Lake near Lake Geneva, WI. The virus can be present in bass in a carrier state, without causing any sign of disease. However, when infected fish are stressed, the virus can kill largemouth bass.

The Virus LMBV is in the same group of viruses that infect other fish, frogs, salamanders and insects. It is not a human health concern.

Susceptible Hosts Largemouth bass are considered the principal host for LMBV, but the virus has also been isolated from smallmouth bass, bluegill, spotted bass, Suwanee bass, redbreast sunfish, white crappie, black crappie and rock bass. However, the virus appears to cause mortality only in largemouth bass.

Signs of Disease Largemouth bass infected with LMBV may appear perfectly normal when the virus is in the carrier state. Fish that are dying from LMBV lose equilibrium, are near the water surface, and the swim bladder may be filled with yellow to brown fluid. Some bass infected with LMBV may also have red skin lesions or fungal infections on the skin, but these are considered secondary infections.

Transmission of the Virus It is not known for certain how LMBV is transmitted. Because of this uncertainty, it is very important that largemouth bass and other susceptible fish are not moved from one lake or river to another. Also, it is critical that any fish blood, mucous, or internal organs be removed from live wells and the live well disinfected between trips to different lakes. Any other gear used to handle fish should also be disinfected when fishing in a waterbody where LMBV is present.

The Role of Stress and LMBV Outbreaks of LMBV have generally occurred during the summer months, when water temperatures are very high (80 F or above) and other water quality factors are poor (such as low levels of dissolved oxygen). When fish are stressed by environmental conditions or by handling, hormones are released by the fish which suppress the fish's immune system. This makes the fish more vulnerable to infection by viruses, bacteria and parasites. Every effort should be made to reduce stress when handling fish that will be released back to the wild.

Effect of LMBV on Largemouth Bass Populations When LMBV causes a bass kill, it will take some time for the bass population to rebuild to pre-kill levels. Anglers may notice that it takes more effort (hours of fishing) to catch a bass after a kill occurs. At the time LMBV was detected in largemouth bass in Geneva Lake, the virus was in the carrier state- the fish were not dying from the infection. DNR has not detected any changes in the largemouth bass population in Geneva Lake.

Disinfection of Livewells and Gear Water from livewells and bilges should be drained on land, away from lakes and rivers. Research has shown that the following are equally effective disinfectants for LMBV when surfaces are kept wet for 1-5 minutes:

70% ethanol

200 ppm povidone iodine solution (3 ounces of a 1% iodine solution per gallon of water)

200 ppm chlorine bleach (0.5 ounces of 5.25% bleach solution per gallon of water)

Iodine and chlorine are corrosive to metal. Treated surfaces should be rinsed several times with clean water after disinfecting. Make sure the disinfectants do not enter surface waters. Iodine and chlorine are neutralized when exposed to sunlight and organic debris.