

COLORADO DIVISION OF WILDLIFE

Viral Hemorrhagic Septicemia: A Threat to Colorado's Fish



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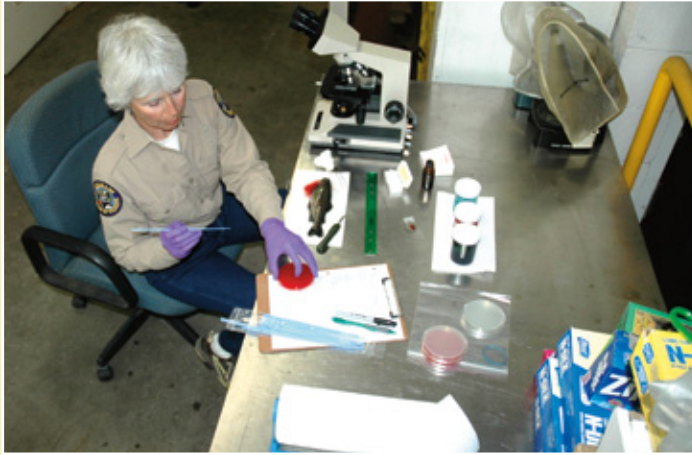
A Disease on the Move

Viral hemorrhagic septicemia, a serious viral disease that appeared recently in the Great Lakes, can kill a broad range of susceptible game fish and native fish. If the disease becomes established in Colorado, VHS would pose a significant threat to the state's aquatic resources and the \$1.26 billion economic contribution that the sport-fishing industry makes to the state. The Colorado Division of Wildlife wants to protect the native and sport fish of the state from this potentially devastating virus. Although the Great Lakes seem far-removed from Colorado, people can spread VHS by transporting contaminated water or infected fish.

Anglers and boaters can help prevent the spread of this dangerous disease.

What is VHS?

First identified in Europe by hatchery managers in 1963, VHS is a fatal disease of fish that has decimated native and sport fish in lakes, reservoirs and streams in the upper Midwest. Some fish species found in Colorado appear to be more susceptible to the disease than others, including bluegill, smallmouth bass, walleye, yellow perch, and gizzard shad. Other fish, such as black crappie, rainbow and brown trout, northern pike, largemouth bass and channel catfish can also become infected by VHS and serve to spread the disease. VHS



can also affect populations of forage fish upon which the success of many of Colorado's sport fisheries depend. Infected fish appear listless or limp, hang just beneath the surface, or exhibit abnormal swimming behavior, such as appearing to lose equilibrium or swimming in circles. Other symptoms may include red patches (hemorrhages) on the head and body surface, bulging eyes, bloated abdomens and patchy red discoloration of internal organs.

The disease does not affect humans and is not a threat to people who handle fish or who eat their catch.

How the Disease Spreads

VHS is spread from fish to fish through direct contact or contact with water that has been contaminated by the urine or reproductive fluids of infected fish. The virus enters fish through the gills or, possibly, through wounds. Predatory fish that eat infected fish can also acquire the disease.

Extensive research has been conducted on this disease since its discovery and its spread is being tracked. While not yet found in Colorado, the Division

strongly encourages efforts to keep VHS out of the state. Natural resource managers, anglers and other recreationists can help to prevent the spread of VHS.

VHS is known to spread by:

- ✓ Natural movements of infected fish within contiguous watersheds.
- ✓ Importations, transplantation and stocking of infected sport and baitfish.
- ✓ Movements of tropical fish or ornamental pond fish from tanks and backyard ponds into streams, ponds and reservoirs.

- ✓ Transport and release of VHS-infected water from boats, coolers, buckets or fish wells.
- ✓ Use of contaminated fishing gear.

State regulations concerning the importation, movement and stocking of fish have been established to prevent the introduction and spread of this disease. Natural resource management methods include surveillance, testing, adherence to regulations, and disinfection of boats and equipment.



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Colorado Needs Your Help

A well-educated public can be instrumental in prevention of the spread of this disease. Fortunately, many of the same precautions that responsible anglers and boaters have adopted to stop the spread of other invasive species, like zebra and quagga mussels, will also help prevent the establishment of VHS.

If you have boated or fished out of state, taking these precautions are especially important. But even if you only use Colorado waters, the Division of Wildlife requests that you take the following steps to prevent the spread of VHS:



- ✓ Drain water from your boat, live wells, bait containers, motor, and bilge before leaving a body of water.
- ✓ Remove plants and mud and wash your boat and trailer, then allow them to dry.
- ✓ Clean mud and debris from waders, wading boots and other angling equipment. Disinfect using three ounces of household bleach per five gallons (one tablespoon per gallon) of water for ten minutes, rinse well and dry.

- ✓ Dispose of unwanted bait, fish internal organs, skin, scales, heads and tails in the garbage. Never move live baitfish, fish guts or carcasses from one body of water to another.
- ✓ Never release aquatic plants or animals from pet stores, aquariums, or backyard ponds into the wild.
- ✓ Alert the Colorado Division of Wildlife if you see large numbers of dead or dying fish, see fish covered with red spots, or have caught a fish on which hemorrhages can be seen.
Call 1-303-291-7295 or e-mail ReportANS@state.co.us.
- ✓ **Do not take the fish to a hatchery.**





By working together, we can protect the waters of Colorado from this potential threat, continue to enjoy our sport fish recreation opportunities, and protect the native fish species of the state.

For more information about all invasive aquatic species, go to: <http://wildlife.state.co.us/Fishing/Management/>



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