

## **BOZEMAN FISH HEALTH CENTER'S INVASIVE SPECIES DIAGNOSIS AND MONITORING PROGRAM<sup>MAS</sup>**

Linda Beck  
USDI Fish and Wildlife Service  
Fish Health Center, Bozeman, MT 59718

Invasive species have become an integral component to fish health. In the past, the Bozeman Fish Health Center primarily dealt with fish health diagnostics and hatchery certification. Currently, the facility is branching out to incorporate a more total ecosystem approach. Impacts to fish health from invasive species include infectious disease and environmental changes. Three infectious diseases the Center monitors in wild and hatchery systems are *Myxobolus cerebralis*, the causative agent of whirling disease, largemouth bass virus and spring viremia of carp virus. Examples of invertebrates that indirectly impact fish health are the New Zealand mudsnail (*Potamopyrgus antipodarum*), the Zebra Mussel (*Dreissena polymorpha*) and snail, *Melanoides tuberculata*. These organisms have an impact on the ecology of the aquatic environment and can also be utilized as an intermediate host for digenetic trematodes. The parasitic digenetic trematodes have the potential to become fish

pathogens. Research is being conducted to determine if any parasitism of fish is taking place via the New Zealand mudsnail.