

## ***News from the Watershed***

# ***Ecology lessons: short-term pest fixes may lead to bigger problems later***

It's not difficult to find examples of people finding a short term solution to a problem in the natural world, only to discover later they have created a much worse problem long term. The natural world is a community, where what happens to one species has an effect on other species.

**Eliminating predators.** Take the case of the people who decided to save the deer herd on the Kaibab Plateau in Arizona. They killed every puma and wolf that had preyed on the deer herd. Sure enough, the deer herd began to grow quickly. But after several years, the deer began to fall ill and die in large numbers. Soon, there were fewer deer than when the pumas and wolves controlled their numbers. What happened?

An analysis showed the larger herd of deer had destroyed plant life, and with limited food supplies the weakened deer were more susceptible to disease. The deer also greatly missed the predators that had helped limit the spread of disease by killing weak and sick animals and eating dead deer to destroy sources of infection.

Similarly, the red-banded leaf roller became a dominant pest in Virginia apple orchards only after a spraying of DDT killed all its predators. It hadn't been considered a dangerous pest before the spraying, but afterward killed half the crop.

Florida citrus growers had success with biological control since the 1880's with an insect called the Vedalia. But in the 1940's they decided to switch to chemical controls. Their spray wiped out the Vedalia, and they lost huge numbers of citrus trees. Insect resistance to chemical spraying began almost as soon as the spraying began. Repeated chemical spraying weeds out the weaker members of species and reinforces the strongest. Often, insecticide use produces short term successes and long term imbalances- insects multiply through generations so fast they can be resistant within a year. The list of resistant insects includes almost all of those that are a danger to human health, such as mosquitoes that carry malaria and encephalitis and body lice that carry typhus.

Sometimes, the "quick fix" isn't the answer. The big picture and long term results should be analyzed before any rash decisions are made. Remember, everything in nature is a balance and when that balance is disrupted, the situation begins to deteriorate. The predator/prey scenario has been around since the beginning of time and both sides are equally important. We may not like some of the creatures that inhabit this planet, but they are all here for a reason.

For information on wildlife habitat and other conservation practices, stop at our office at 4505 George Blvd., Sebring, call 863-402-6545 or visit our website at [www.highlandsswcd.org](http://www.highlandsswcd.org)  
The NRCS Wildlife Habitat Management Institute also has information on native wildlife species on the web at <http://www.whmi.nrcs.usda.gov/>

*Deer populations are more stable with natural predators present than when the predators have been eliminated.*

**Did you know....**Scientists say 70 to 80 percent of the earth's creatures are insects. Most insect populations are held in check by natural predators--often other insects. This balance of nature is one that has been upset by humans who have killed predator insects as they killed targeted insects.