



Credit: Wildlife Disease Association

## Bait Traps Spread Infection

In 2005, Canada's Inter-agency Wild Bird Influenza Survey began testing wild ducks for avian influenza virus (AIV) in an effort to keep ahead of new and emerging flu strains that could make the jump to humans. Field biologists began to suspect that ducks trapped in bait traps—the most commonly employed method of capture in waterfowl surveys—were more often infected with AIV than their counterparts caught by other methods. In a study published in the *Journal of Wildlife Diseases* (v. 48/2), Catherine Soos of Environment Canada and colleagues confirm that bait-trapped ducks suffer an infection rate that is 2.6 times higher than in ducks netted from airboats. The researchers used both methods to capture 514 ducks from five species (American black duck, American green-winged teal, American wigeon, mallard, and a mallard-black duck hybrid) in New Brunswick and Nova Scotia before testing them for AIV. Bait traps confine ducks together at high densities, which can not only increase disease transmission, but may also result in falsely higher estimates of AIV in wild duck populations. The common use of bait traps for banding waterfowl may therefore put waterfowl at greater risk of contracting other pathogens that enter their populations, including ones that could spread to humans.



Credit: Springer-Verlag

## Top Predators Protect Forests

The return of wolves to some parts of the world has sparked controversies that are unlikely to be resolved soon. But researchers at Oregon State University have just added another argument for why wolves should be encouraged to come back—they may protect forest vegetation from heavy browsing by cervids. Non-migratory cervids (deer, caribou, elk, and moose) are, on average, six times more populous in ecosystems without wolves. Feeding unchecked, these herbivores can threaten native plant biodiversity and reduce forest biomass. In their study published in the *European Journal of Wildlife Research* (online 4/4/12), William Ripple and Robert Beschta gathered carnivore and herbivore population estimates plus plant damage data collected at 42 forest sites throughout North America and Eurasia during the last 50 years. While either wolves or bears can decrease cervid density, preliminary results suggest that these predators control cervid populations more-effectively together than alone. In ecosystems with wolves and bears, cervid density ranged from 0.03 to 8.4 deer equivalents (caribou counted as two deer, elk as three, and moose as six) per square kilometer. The researchers propose that this density range might be used by game managers as a target in ecosystems that lack natural predator controls and as a consideration for bringing back wolves.



Credit: PLoS ONE

## Climate a Risk for Birds

Researchers from PRBO Conservation Science and the California Department of Fish and Game have incorporated a long-overlooked risk—climate change—to recalculate rankings on the state's list of Bird Species of Special Concern. Prior to their research, the rankings included only threats from habitat loss and degradation, invasive species, pollution, over-harvesting, and disease—all of which can worsen with climate change. The researchers evaluated all 358 California bird species and found that 128 are vulnerable to climate change. Each species' so-called Climate Change Vulnerability Score was then combined with scores for the traditional threats to recalculate rankings. Reporting in *PLoS ONE* (v. 7/3), the researchers note that incorporating climate change vulnerability resulted in the addition of five bird species to California's Bird Species of Special Concern list and an increase in conservation priority for 10 species. The new scores also reveal that wetland species are more vulnerable to climate change and that 21 of the state's 29 threatened and endangered species are at increased risk of extinction due to climate change. The researchers suggest that the new scoring system provides a simple tool that can be used to quickly identify at-risk species, and may also help shape policy, determine management actions, and direct allocation of scarce resources.