



July 17, 2014

All Wildlife Diseases, All Conservation, All One Health, All the Time!

### NEWS ON ARTICLES FROM JOURNAL OF WILDLIFE DISEASES 50(3)

Health of wildlife, domestic species and human beings, and the environments that support them (One Health), has been a focus of the Wildlife Disease Association for more than 50 years. The July 2014 Journal of Wildlife Diseases (JWD) issue 50(3) has several articles with particular conservation and wildlife management significance which we would like to make you aware of.

**Gregory Turner** and a group of researchers from a total of 10 agencies announced a diagnostic breakthrough, that **NONLETHAL SCREENING OF BAT-WING SKIN WITH THE USE OF ULTRAVIOLET FLUORESCENCE TO DETECT LESIONS INDICATIVE OF WHITE-NOSE SYNDROME (WNS)** is now possible. Wing membranes from 168 dead North American bats were examined with long-wave ultraviolet light (wavelength 366–385 nm) and 98.8% that showed foci of orange–yellow wing fluorescence ( $n=80$ ) were WNS positive based on microscopic examination. Bat wings that didn't fluoresce ( $n=88$ ) were all negative for WNS lesions.

The age of an animal (or plant) when exposed to a disease makes a big difference as to whether they live or die. **Penny Langhammer** and colleagues from **Arizona State University, University of Maryland, and University of Puerto Rico** have shown that **SUSCEPTIBILITY TO THE AMPHIBIAN CHYTRID FUNGUS VARIES WITH ONTOGENY IN THE DIRECT-DEVELOPING FROG (*ELEUTHERODACTYLUS COQUI*)**. Exposed froglets had significantly lower survival rates than control froglets, while adult frogs, even when exposed to a much higher dose of the chytrid fungus, largely cleared infection and had survival rates indistinguishable from unexposed frogs.

Monkeypox (MPX) is a re-emerging zoonotic disease endemic to Central and West Africa, where it can cause a smallpox-like disease in humans. In **EVALUATION OF MONKEYPOX VIRUS INFECTION OF BLACK-TAILED PRAIRIE DOGS (*CYNOMYS LUDOVICIANUS*) USING IN VIVO BIOLUMINESCENT IMAGING** a group of researchers from **United States Geological Survey (USGS)** led by **Elizabeth A. Falendysz** evaluated bioluminescent imaging (BLI) as a novel approach for tracking MPX virus infection in black-tailed prairie dogs. Virus was easily detected and quantified in skin and superficial tissues by BLI before and during clinical phases, as well as in subclinical secondary cases, but was not reliably detected in deep tissues.

Scientists are developing tools to help predict which viruses of wildlife may jump to new species. In **RECENT HOST RANGE EXPANSION OF CANINE DISTEMPER VIRUS AND VARIATION IN ITS RECEPTOR, THE SIGNALING LYMPHOCYTE ACTIVATION MOLECULE, IN CARNIVORES**, **Kazue Ohishi** and colleagues from several Japanese institutions explore why canine distemper virus is threatening the survival of large cats, including Siberian tigers. Although canines have more numerous and efficient receptors in the respiratory tract, where the virus first attaches, they found a subset of those receptors in felines.

Seeking a safe and reversible, non-narcotic way to capture elk, **Lisa Wolfe** and co-workers from the **Colorado Division of Wildlife** report on **Efficacy of a Low-Dosage Combination of**

**Butorphanol, Azaperone, and Medetomidine (BAM) to Immobilize Rocky Mountain Elk.** Based on clinical trials and data from free-ranging elk they recommend low-dose BAM (2 mL dose; with 46 mg butorphanol, 30 mg azaperone, and 18 mg medetomidine) and supplemental oxygen for adult elk; immobilization should be reversed with 3–5 mg atipamezole/mg medetomidine and 2 mg/kg tolazoline, with tolazoline injected 5–10 min before atipamezole for smoother recovery.

A waterfowl form of avian bornavirus (ABV) was first identified in free-ranging Canada Geese (*Branta canadensis*) and Trumpeter Swans (*Cygnus buccinator*) in 2009 in Ontario, Canada, where it was associated with encephalitis and mortality. It caused lesions similar to those of parrots affected with proventricular dilation disease, caused by various psittacine-associated genotypes of ABV. In **AVIAN BORNAVIRUS IN FREE-RANGING WATERFOWL: PREVALENCE OF ANTIBODIES AND CLOACAL SHEDDING OF VIRAL RNA**, **Pauline Delnatte** and her colleagues from **University of Guelph and Toronto Zoo** confirmed that exposure to, or infection with, ABV is widespread in asymptomatic free-ranging waterfowl in Canada.

Abstracts of these and other articles in JWD 50(3) are available at the WDA website...

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