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

NEWS ON ARTICLES FROM JOURNAL OF WILDLIFE DISEASES 50(4)

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 October 2014 Journal of Wildlife Diseases (JWD) issue 50(4) has several articles with particular conservation and wildlife management significance which we would like to make you aware of.

Health data from some rare and vulnerable free-ranging species are hard to come by. In **Health Assessment of Wild Lowland Tapir (*Tapirus terrestris*) Populations in the Atlantic Forest and Pantanal Biomes, Brazil (1996–2012)** data from 65 wild tapir from two Brazilian biomes, Atlantic Forest (AF) and Pantanal (PA), are provided by **Emília Patrícia Medici** and colleagues from three Brazilian conservation organizations. The study includes physical, hematologic and biochemical evaluations, microbiologic cultures, urinalysis, and serologic analyses for antibodies against 13 viral and bacterial agents. Differences in overall health profiles of AF and PA tapir populations appear to be associated with environmental factors and infectious disease ecology, but both were healthy. The extensive dataset from this paper can be used as reference values for wild tapir and for comparison with values from captive animals.

In **Baseline Cutaneous Bacteria of Free-Living New Zealand Native Frogs (*Leiopelma archeyi* and *Leiopelma hochstetteri*) and Implications for their Role in Defense Against the Amphibian Chytrid (*Batrachochytrium dendrobatidis*) (Bd)**, **Stephanie Shaw** and a group of scientists from **James Cook University** and other collaborators showed that the skin bacterial flora of frogs may be important in immunity against the devastating fungal skin disease caused by Bd. In 2009, 92 bacterial isolates from two native New Zealand frog species were identified using molecular techniques. A *Flavobacterium* sp., one of the most common isolates from one frog species, inhibited growth of Bd in an in-vitro challenge assay. Knowledge of cutaneous bacterial microbiota may be useful in interpreting diagnostic cultures from captive sick frogs and as part of quarantine or pre-translocation disease screening.

Jessica McGuire and co-workers, primarily from **University of Georgia** and **Southeastern Cooperative Wildlife Disease Study** looked at **Effects of Mycoplasmal Upper-Respiratory-Tract Disease on Movement and Thermoregulatory Behavior of Gopher Tortoises (*Gopherus polyphemus*) in Georgia, USA**. They found that although home-range size did not differ between the asymptomatic tortoises and those with mild symptoms, those with severe disease had larger home ranges and they moved long distances over short periods, contradicting a hypothesis that chronically infected tortoises are less likely to emigrate. The carapacial temperature of tortoises with severe disease was significantly different from mildly diseased and asymptomatic tortoises. Comparison of population density with a study done 15 years previously suggested that, despite high prevalence of *Mycoplasma agassizii*, density has not decreased over time. But emigration, especially of tortoises with severe clinical disease, may play an important role in dispersal and persistence of pathogens.

Paralytic shellfish poisoning (PSP) is an acute toxic illness in humans resulting from ingestion of shellfish contaminated with a suite of neurotoxins produced by marine dinoflagellates, most commonly in the genus *Alexandrium*. In **Fatal Paralytic Shellfish Poisoning in Kittlitz's Murrelet Nestlings, Alaska, USA**, **Valerie Shearn-Bochsler** and colleagues from 5 Federal and one State agency used remote cameras on Kodiak Island to reveal that the nestlings died shortly after consuming sand lance (*Ammodytes*

hexapterus), a fish species known to biomagnify saxitoxin. High levels of saxitoxin were subsequently documented in crop content in 87% of nestling carcasses. Due to the remoteness of their breeding locations, significant marine bird mortality from PSP may be underreported, and may be particularly important for small, rare seabirds with declining populations like Kittlitz's Murrelet.

Morgan Slusher and others from **University of Georgia** and **Southeastern Cooperative Wildlife Disease Study** ask the question **Are Passerine Birds Reservoirs for Influenza A Viruses?** (IAV). Their answer: “Although passerines and terrestrial wild birds may have a limited role in the epidemiology of IAV when associated with infected domestic poultry or other aberrant hosts, there is no evidence supporting their involvement as natural reservoirs for IAV.”

Abstracts of these and other articles in JWD 50(4) are available at the WDA website...Publications. If you are interested in getting access to the full article contact wda.manager@gmail.com



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