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

NEWS RELEASE ON ARTICLES FROM JOURNAL OF WILDLIFE DISEASES 55(3)

The health of wildlife, domestic animals and human beings, and the environments that support them (One Health), has been a focus of the Wildlife Disease Association for more than 60 years. The Journal of Wildlife Diseases (JWD) issue 55(3) has several articles with particular conservation and wildlife management significance that we would like to make you aware of.

Chronic wasting disease (CWD) is a fatal contagious prion disease naturally occurring in animals of the deer family in North America. In 2016 CWD was detected in wild reindeer and moose in Norway. **Turid Vikøren** and 20 co-authors from three **Norwegian institutions** report on the **First Detection of Chronic Wasting Disease in a Wild Red Deer (*Cervus elaphus*) in Europe**

Since 2006 a distinct canine distemper (CD) virus, Europe 1 (EU1), characterized by increased virulence and host range expansion, has emerged and been linked to multiple CD outbreaks in wild alpine carnivores. In **Canine Distemper Virus as an Emerging Multihost Pathogen in Wild Carnivores in Northwest Italy** a team of seventeen researchers from **Istituto Zooprofilattico Sperimentale del Piemonte**, led by **Alessia Di Blasio**, report outbreaks of CD, and dynamics of infection in a sample of 548 alpine wild carnivores in northwest Italy. CD may pose a serious threat to Alpine wild carnivores and affect their population dynamics.

Tuberculosis (TB) is a pathogenic bacterial disease affecting a wide range of species. Recent discovery of a fatal infection with *Mycobacterium tuberculosis* in a bull African elephant in the Kruger National Park (KNP) emphasize its importance. In **Seroprevalence of *Mycobacterium tuberculosis* Complex in Free-ranging African Elephants (*Loxodonta africana*) in Kruger National Park, South Africa, Tanya Kerr** and colleagues used two serologic assays to detect TB antibodies in 222 free-ranging elephants sampled between 2004 and 2018 in KNP. Estimated TB seroprevalence was between 6% and 9%. Males had higher TB seroprevalence than females. Adults (≥25 yr) had a higher prevalence than younger elephants (≤24 yr) on both tests. The relatively high TB seroprevalence found in asymptomatic elephants highlights the value of retrospective studies in free-ranging wildlife to better understand risk of disease transmission.

Developing techniques to quantify the spread and severity of diseases afflicting wildlife populations is important for disease ecology, animal ecology, and conservation. **Arthur Muneza** and 10 colleagues from six **UK, US, and African institutions** report on **Quantifying the Severity of Giraffe Skin Disease Via Photogrammetry Analysis of Camera Trap Data.** Giraffes are in the midst of a dramatic decline across Africa, but it is not known whether disease plays an important role in the broad-scale population reductions. Giraffe skin disease (GSD), recorded in 1995 in one Uganda population has since been detected in 13 populations in seven African countries. GSD on the limbs of giraffes in Ruaha and Serengeti National Parks in Tanzania was quantified by measuring the length of the lesion in relation to the total leg length. This study demonstrates that camera traps are useful in study of disease ecology.

Brucellosis has been eliminated from livestock in the US. Remaining wildlife reservoirs are the bison and elk populations in Yellowstone National Park and the surrounding area. Elk account for nearly all livestock exposure and the infection appears to be expanding in elk populations. Currently, there are no known effective vaccines for brucellosis in elk. **Jack Rhyan** and 10 associates from **USDA, Veterinary Services** report **Partial Protection in BALB/C Mice (*Mus musculus*) and Rocky Mountain Elk (*Cervus elpahus canadensis*) After Vaccination with a Killed, Mucosally Delivered *Brucella abortus* Vaccine.** Results suggest that multiple exposures to a mucosally delivered vaccine may provide an effective method of vaccinating wildlife.

Abstracts of these and other articles in JWD 55(3) are available at:
http://www.wildlifedisease.org/wda/PUBLICATIONS/JournalofWildlifeDiseases/OnlineJournal.aspx

If you are interested in getting access to the full article, contact wda.manager@gmail.com