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# Newsletter

January 2015

## Attending next year's international conference and looking for some sightseeing ideas to make for a great vacation?

*Tim Portas*

With an impressive line-up of local and international speakers and a fantastic venue on Queensland's Sunshine Coast, the 64th annual conference of the Wildlife Disease Association will be an event not to be missed. Registration and abstract submission is now open at <http://www.wda2015.org>. For

international delegates looking for something to do before or after this conference there is a wide range of unique experiences available in Queensland. Listed below are some options close to the conference venue in south-eastern Queensland and, for those with more time on their hands, further afield.

Explore the beautiful Moreton Bay Marine Park by boat with a chance to see dolphins, dugongs, whales and marine turtles. Take a guided snorkelling tour of the Tangalooma Wrecks or Flinders Reef. See <http://www.dolphinwild.com.au> for more information.

The Noosa Everglades are a pristine series of waterways formed by the Noosa River in the Great Sandy National Park. Despite being only two hours north of Brisbane and an hour from the conference venue few Australians have ever heard of this place let alone visited it. These waterways can be explored by canoe or kayak and with a range of campgrounds; you can spend several days exploring this remarkable region. See <http://www.noosaevergladesdiscovery.com.au> for further information.

Experience luxury accommodation, abundant birdlife and the subtropical rainforest of Lamington National Park located in the Gold Coast hinterland just over two hours south of the conference venue. O'Reilly's Rainforest retreat is known Australia wide (and internationally) for its bird watching opportunities and magnificent scenery. See <http://www.oreillys.com.au> for further information.

For those with a little more time on their hands Carnarvon Gorge offers an Australian wilderness experience second to none. Carnarvon Gorge National park is approximately 650 km northwest of the conference venue. The park offers aboriginal rock art, abundant wildlife and there is the opportunity for extended hiking with overnight camping amongst its spectacular sandstone gorges. For further information on this location, see <http://www.nprsr.qld.gov.au/parks/carnarvon-gorge>.

Only two hours by plane from Brisbane, Cairns is a cosmopolitan city and provides a convenient base for those wishing to explore far north Queensland. Far north Queensland provides some unparalleled nature based experiences and is best known for the Great Barrier Reef. Access to the reef is provided via a number of tour operators and options include snorkelling, diving, and viewing the reef from a glass bottom boat. See [http://www.greatbarrierreef.org/tourism\\_overview.php](http://www.greatbarrierreef.org/tourism_overview.php) and <http://www.cairns-greatbarrierreef.org.au> for further information. Other options include the Atherton Tablelands and Cape Tribulation where you can encounter some of Australia's unique wildlife including tree kangaroos, platypus, and southern cassowaries. Both locations have excellent opportunities for bird watching. For more information on activities and accommodation in Cape Tribulation see <http://www.capetribulation.com.au> and for information on the Atherton Tablelands see <http://www.athertontablelands.com.au> and <http://www.tablelands.org>.

## A Bright Future for WDA Students



*Michelle Verant, Student Representative to Council, Chair of the Student Activities Committee*

A new year brings hope and promise. The WDA membership can be proud of the accomplishments of its student members and the hard work invested over the past year to support new initiatives and opportunities for students in the WDA. These efforts remain the focus of the Student Activities Committee for 2015 as student membership continues to grow and contribute to the future

of the WDA and achievement of our One Health mission.

Support for student activities in 2014 reached an all-time high with New Mexico Conference income for the Student Activities Fund over \$9,000. This account provides essential funding for student awards, scholarship and chapter grants each year. In December WDA Council voted that in the future Student Awards would become a line item in the WDA yearly budget and that all WDA Auction funds, T-shirt and photo contest income, and member donations will be used for student activities.

Student travel awards were added in 2014 with \$2500 divided between five students to attend the annual conference. WDA is dedicated to expanding opportunities for students and as a result, more money will be available in the student activities account to support new and expanded student initiatives. Plans for implementation of these opportunities in 2015 are currently underway so stay tuned for updates!

Student membership in the WDA continues to grow and create additional opportunities for students around the globe. Four new student chapters were recently added for a total of twelve chapters in 2015. Welcome to students from Cornell University, North Carolina State University, University of Wisconsin-Madison, and the Australasian student section! Student chapters continue to inspire the next generation of wildlife health professionals through educational activities and events that align with the mission of the WDA.

To help support these activities, a total of \$2800 in student chapter grants was awarded to the eight established chapters in 2014 and an additional \$1,000 provided by WDA to support the upcoming European WDA student workshop along with any donations made by renewing members for that purpose. This highly successful bi-annual event offers a unique opportunity for hands-on training and networking among students and current leaders in wildlife health fields. Options for sharing conference materials with other WDA members and students chapters are being explored to extend the benefits of this valuable experience.

Sharing information and connecting with peers and future colleagues are two important functions of WDA student chapters. To help support these functions across geographically diverse chapters, we are striving to build an online community of students and wildlife professionals with shared common interests and goals. The WDA Students Facebook group is comprised of over 400 members with representation from all WDA sections. The purpose of the group is to facilitate communication and sharing of resources through routine posts of current news, upcoming events, photos, and training or job opportunities related to wildlife health. Add a resolution for 2015 to join and contribute to this growing online community of WDA members and future wildlife professionals!

Finally, thank you to Lisa Shender, the past Student Representative, and the members of the Student Activities Committee for their tireless efforts and dedication to enhancing student opportunities in the WDA over the past two years. They have ensured a bright future for the WDA and its student members.

#### **Important dates for your 2015 calendar:**

The 2015 WDA conference will be July 26th – 30th on the Sunshine Coast in Queensland, Australia! Registration and abstract submissions are now open.

Visit the conference website for details - [www.wda2015.org](http://www.wda2015.org)

Information on the student awards completion and call for applications can be found on the WDA Student Awards page - <http://www.wildlifedisease.org/wda/ABOUTWDA/AwardsandRecognition/WDAStudentAwards.aspx>

Student travel grants to attend the annual WDA conference are back for the second year with potentially more funds available to help support travel costs. Requests for applications will be announced sometime in February with an April deadline - watch the WDA Student Resources page for updates.

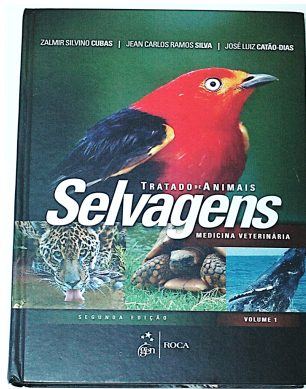
Student chapter grant applications are due May 1st. It's never too early to start planning activities for next year!

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## **Second Edition of the “Wildlife Treatise: Veterinary Medicine” just published!**

*José Luiz Catão Dias, Latin America Section*

The second edition of the Wildlife Treatise: Veterinary Medicine, revised and significantly extended, has just been published. The textbook, focused mainly on South American fauna, provides an unparalleled reference source for all professionals in the field of wildlife medicine, as well as for those working with exotic and ornamental pet medicine and husbandry. Also, due to its comprehensive and multidisciplinary traits, this book is of enormous value for a broad group of professionals in the field of Biodiversity



Conservation, such as ecologists, epidemiologists, educators, environmental analysts and scientific researchers.

Accurate data combined with the valuable experience of 184 renowned specialists - 167 Brazilian experts and 17 from nine other nationalities - are shared in 134 chapters, organized into 11 different sections. Edited by Drs. Zalmir Cubas, Jean C. R. da Silva and José L. Catão-Dias, and written in Portuguese to target a Latin American audience, the work covers a vast field of knowledge and introduces the readers to highly relevant themes including:

Ethical, legal and conceptual issues regarding biodiversity conservation and animal welfare applied to wild fauna;

Biological, anatomical, physiological, clinical, anatomopathological and therapeutic aspects of invertebrates, fish, reptiles, birds and mammals, with special emphasis on South American wildlife;

Relevant information accurately displayed in 448 tables and 3560 pictures;

Thorough and detailed updated information on relevant diseases of special interest;

Diagnostic procedures, including clinical pathology, forensic pathology, necropsy techniques, molecular biology and serology, cytology, radiology, ultrasonography, endoscopy and computerized tomography;

Anesthetic, analgesic, surgical, and therapeutic protocols and techniques employed in intensive care;

The most recent breakthroughs in ophthalmology, odontostomatology, physical therapy and rehabilitation;

Zoonosis and epidemiological surveillance methods for wildlife;

Nutritional planning;

Cryobiology and gene storage banks, noninvasive hormonal monitoring and reproductive aspects of various taxa;

Current issues related to Conservation Medicine, such as global climate change, environmental emergencies, implications and risks of fauna movement, invasive exotic species, population genetics, management of fish resources in reservoirs, and prospects and challenges faced by the Neotropical fauna.

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## European WDA recommends ban on veterinary use of diclofenac in Europe

*Submitted by Lisa Yon, European Section*



Veterinary use of the non-steroidal anti-inflammatory drug (NSAID) diclofenac is considered to be the primary cause of the loss of more than 99% of vultures on the Indian subcontinent. This drug has been shown to cause severe nephrotoxic effects in a number of vulture species. Vultures are exposed to diclofenac through the consumption of carcasses of livestock which have been treated with this drug, and many of the affected vultures die acutely. An important aspect of the problem is that contamination of even a very small percentage of livestock carcasses is sufficient to cause a rapid decline in vulture populations. In response to these findings, a ban was issued on the

veterinary use of diclofenac in the region. Evidence suggests that rate of decline of vulture populations has now slowed or ceased.

Diclofenac has been licensed for use in Italy, and more recently in Spain. This is of particular concern for the European vulture populations, as 95% of Europe's vultures reside in Spain, and include the griffon, bearded, Egyptian and cinereous vultures. All are rare species which are protected by EU law. Additionally, diclofenac may be toxic to other avian scavengers such as eagles. In Spain, there may be a particular risk of exposure to nephrotoxic levels of diclofenac from feeding on carcasses at 'muladares'; these are traditional locations where farmers bring their dead livestock in order to feed vultures and other scavenging birds.

In view of diclofenac's proven toxicity to avian scavengers, and the availability of alternative NSAIDs, which are not toxic to birds, the EWDA strongly supports a ban on the veterinary use of diclofenac throughout Europe.

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## University of Wyoming Hires Excellence Chair in Disease Ecology

*Published in Univ. of Wyoming News, December 17, 2014*

*Submitted by Anne Justice-Allen, Wildlife Veterinary Section*

The University of Wyoming's efforts to combat diseases affecting wildlife, livestock and humans in the state have received a boost with the arrival of a new faculty member in UW's Department of

Veterinary Sciences.

Dr. Holly Ernest has joined the university as the Wyoming Excellence Chair in Disease Ecology. She comes from the University of California-Davis, where she has been a professor of wildlife genetics and population health since 2010.

Her expertise lies in the ecology, population health and genomics of wildlife populations and veterinary medicine. Her research will focus on population-level impacts and genetics of diseases of wildlife and domestic animals such as respiratory illness in bighorn sheep and domestic sheep, blue tongue/epizootic hemorrhagic disease, brucellosis, chronic wasting disease, tularemia and plague. Her work will take into account climate, habitat alteration, land use and other environmental factors as they relate to animal disease ecology and management.



"The simple diseases, we know how to control. However, at least some of the inability of human and veterinary medicine to contain more complex diseases lies in our failure to consider the impacts of the interrelationships of environment, human activity, climate and other factors on the emergence and spread of infectious diseases in and between people and animals," says Will Laegreid, head of the Department of Veterinary Sciences and director of the Wyoming State Veterinary Laboratory. "The knowledge and

expertise Dr. Ernest brings to UW will help us to understand these relationships and, hopefully, use that knowledge to prevent or control disease."

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### Cummings School of Veterinary Medicine at Tufts University - MS programs that address emerging One Health challenges

*Tracey Glover, Program Assistant, Master of Science in Conservation Medicine Program, Cummings School of Veterinary Medicine at Tufts University*



**MS in Conservation Medicine** - Informational Webinar: Monday, December 15, 2014. Open Hours: Friday, January 9, 2015. Contact [mcm@tufts.edu](mailto:mcm@tufts.edu) to RSVP attendance for either event.

**MS in Animals and Public Policy** – Open House: Monday, January 12, 2015. Contact [capp@tufts.edu](mailto:capp@tufts.edu) to RSVP.

**MS in Infectious Disease and Global Health** – Open House: Friday, January 9, 2015. Contact [msidgh@tufts.edu](mailto:msidgh@tufts.edu) to RSVP.

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### USGS National Wildlife Health Center Quarterly Mortality Report

*Written and compiled by the U.S. Geological Survey National Wildlife Health Center Field Investigations Team members: Anne Ballmann, LeAnn White, Barb Bodenstein, and Jennifer Buckner*

#### Avian botulism type C summary



Avian botulism type C, both diagnosed and suspected cases, accounted for roughly a third of all wildlife mortality events (15/50) that the USGS National Wildlife Health Center (NWHC) has on record during the third quarter (July – September) of 2014. When data from these 15 events are combined with six botulism type C events from the rest of 2014, bird mortality was shown to span from early June to late October and occurred in all four migratory bird flyways (nine states) with a total estimated mortality of 7,710 birds. The majority of the reported mortality (89%) occurred at Tule Lake National Wildlife Refuge, California (6,841 birds between July and October), with the remaining 20 botulism type C events involving an average of only 43 dead birds per location. Mallards (*Anas platyrhynchos*) or mallard hybrids were affected in 19 of the 21 events, with almost 4,000 total known dead (3,860 at Tule Lake alone). Other ducks markedly impacted include teal (Cinnamon [*A. cyanoptera*], Blue-winged [*A. discors*], and Green-winged [*A. crecca*]; n = 1,009), Northern Pintail (*A. acuta*; n = 722), and Northern Shoveler (*A. clypeata*; n = 446). Waterfowl using the Tule Lake and Klamath Basin area have been affected by avian botulism most years since the late 1970s, with an average annual mortality of roughly 5,000 birds; thus, the 2014 mortality was not atypical.

NWHC received carcasses for diagnostic investigation from 13 of these 21 aforementioned events. The other eight events were reported by the California Department of Fish and Wildlife and the Michigan Department of Natural Resources. Concurrent diagnostic findings were aspergillosis, avian cholera, parasitism, predation, riemerellosis, and salmonellosis. Additionally, toxic microcystins were detected in water samples collected at two die-off locations.

More information about botulism can be found on the NWHC website [http://www.nwhc.usgs.gov/disease\\_information/avian\\_botulism/index.jsp](http://www.nwhc.usgs.gov/disease_information/avian_botulism/index.jsp).

#### Avian paramyxovirus-1 outbreaks in cormorants in the Midwest

Outbreaks of avian paramyxovirus-1 (APMV-1) in Double-crested Cormorant (*Phalacrocorax auritus*; DCCO) nesting colonies in the United States have been

sporadically reported since 1992. The majority of APMV-1 viruses isolated from DCCO have been further classified as virulent Newcastle Disease virus (NDV). This virulent strain of NDV has the potential to cause disease in poultry, thus knowledge of this disease is important for both wildlife management and agricultural production. In 2014, virulent NDV was documented in DCCO from Stutsman County, North Dakota and Meeker County, Minnesota. A third mortality event in Cass County, Minnesota was suspected to be attributed to APMV-1 based on microscopic examination of brain tissue, but no virus was isolated. All three of these counties have had APMV-1 associated DCCO mortality events in previous years; however, the specific DCCO breeding colony affected within Stutsman County in 2014 had no previous record of this disease. The last large APMV-1 outbreak in DCCO (over 1,000 DCCO total) was in 2012 and occurred at nine different mortality sites in four states: Minnesota, North Dakota, South Dakota, and Wisconsin. There were no APMV-1 mortality events in DCCO populations reported to, or investigated by, the USGS National Wildlife Health Center in 2013.

As is typical during APMV-1 mortality events in DCCO, mortality was also observed in other co-occurring species such as American White Pelican (*Pelecanus erythrorhynchos*), gulls (*Larus sp.*), Canada Goose (*Branta canadensis*), and Killdeer (*Charadrius vociferus*) at the 2014 mortality sites. No carcasses of these species were examined in 2014 but, in past years, species other than DCCO have been found to have alternate causes of death, including West Nile virus and botulism type C. Concurrent diagnostic findings found in APMV-1 positive DCCO examined during 2014 included avian cholera, aspergillosis, salmonellosis, and parasitism.

#### **Sources of summer mortality in North American bats**

In the 20 years preceding the emergence of white-nose syndrome (WNS) in the United States, less than one summer bat mortality event per year was reported to the USGS National Wildlife Health Center from a total of 12 states. Since 2008, reports of summer mortality in bats have occurred annually (averaging 12 reports per year) and have originated from 29 states. Increased monitoring of bats at maternity colonies during summer months for population level impacts and increased public awareness of WNS may be responsible for this increase in bat mortality reporting rather than an overall decline in bat health. White-nose syndrome has only been identified as the cause of death in cave-hibernating bat species submitted during the hibernation period (generally, November to May), when dead or debilitated bats are found in or around hibernacula. Increased monitoring vigilance and reporting does allow some insight into common causes of summer bat mortality in North America, though almost 30% of all reported cases had undetermined causes. Known causes of death during the summer include trauma (including predation), emaciation, rabies, pasteurellosis, toxicosis, and parasitism. Summer mortality events involving bats have ranged from one to 2,000 individuals and were comprised of one or more species. Submission of fresh, dead bats for diagnostic evaluation from unusual or unexplained summer mortality events is encouraged to better understand the spatial and temporal patterns and species involved.

#### **USGS National Wildlife Health Center reorganization**

The USGS National Wildlife Health Center (NWHC) has recently reorganized for the purpose of aligning our organizational structure with our new strategic science goals. There are now three NWHC science branches: Wildlife Epidemiology and Emerging Diseases, Wildlife Disease Diagnostic Laboratories, and Applied Wildlife Health Research. The reorganization will also streamline and improve the epidemiological and diagnostic services provided by the NWHC to federal, state, and tribal natural resource partners. To report a wildlife mortality event or to discuss possible specimen submissions, please contact our Wildlife Epidemiology Team (Barb Bodenstein, Anne Ballmann, Bob Dusek, and Jenny Chipault). The epidemiologist assigned to your case will be your primary point of contact for technical assistance on disease epidemiology, management, and monitoring. If you submit specimens, a wildlife pathologist will also be assigned to your case and become your primary point of contact on diagnostic findings and cause of morbidity or mortality. Further information needed to report a mortality event and/or request our diagnostic services, instructions for collection and shipment of specimens, and guidelines for diagnostic case submissions can be found by clicking the large yellow button labeled "Disease Investigation Services" in the upper right corner of our website ([www.nwhc.usgs.gov](http://www.nwhc.usgs.gov)). We look forward to continuing to provide you with the best services possible. Please do not hesitate to contact a member of the Wildlife Epidemiology Team at (608) 270-2480 or [NWHC-epi@usgs.gov](mailto:NWHC-epi@usgs.gov) with any questions you have regarding this new system. To request services or report wildlife mortality events in Hawaii or Pacific Island territories, contact the NWHC Honolulu Field Station at (808) 792-9520 or [thierry\\_work@usgs.gov](mailto:thierry_work@usgs.gov).

The complete Quarterly Wildlife Mortality Report is available at:  
[http://www.nwhc.usgs.gov/publications/quarterly\\_reports/index.jsp](http://www.nwhc.usgs.gov/publications/quarterly_reports/index.jsp).

To view new and ongoing wildlife mortality events nationwide visit:  
[http://www.nwhc.usgs.gov/mortality\\_events/ongoing.jsp](http://www.nwhc.usgs.gov/mortality_events/ongoing.jsp).

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### **Nomination Format for the Tom & Beth Award**

*Thierry Work, WDA President*

**About the award:** Tom Thorne and Beth Williams were highly influential and revered members of the WDA. Their dedication to the organization, mentorship, scientific acumen, and plain collegiality were an inspiration to all. Their tragic deaths in 2004 left a huge void in the WDA and to commemorate their distinguished services to the WDA, an award was created in their names acknowledging either exemplary contribution or achievement combining wildlife disease research with wildlife management policy implementation or





elucidating particularly significant problems in wildlife health.

**Nominations shall consist of a letter (2 pages max) stating:**

1. The nominee's name
2. Affiliations
3. Brief biographical history
4. Brief description of the contribution or achievements for which the person(s) are nominated. Specifically, please

describe how the nominee made exemplary contribution or achievement combining wildlife disease research with wildlife management policy implementation or contributed to elucidating particularly significant problems in wildlife health.

**Please email nominations to:** Thierry Work ([thierry\\_work@usgs.gov](mailto:thierry_work@usgs.gov)) and Peregrine Wolff ([pwolff@ndow.org](mailto:pwolff@ndow.org)).

**Deadline: Feb 28 2014**

