



Photo by Ralph Arwood  
([www.ralpharwood.com](http://www.ralpharwood.com))



## Members' Corner

### Open-Access in the Wildlife Health Discipline

**Damien O. Joly and Robert A. Cook**

**Wildlife Conservation Society**

A movement within science towards open access to scientific data and publication, as demonstrated by the rise and success of the PLoS and BMC families of journals, begs the question, would we serve wildlife, livestock, and human health better by making the *Journal of Wildlife Diseases* an open access journal? Would open access to data provide a similar benefit?

There is a compelling argument for open access to data and literature: this information is necessary to protect the health of wildlife, our livestock, and ourselves. Some of the world's most important disease threats emerged from wildlife: SARS, avian influenza, HIV, Marburg and Ebola viruses, and so many more. These diseases form real and imminent threats, and even esoteric or minor data on their distribution or epidemiology could prove invaluable in managing risk of transmission. Timely access to current methodologies, baseline data, and scientific publications is a necessary cornerstone of effective surveillance. Many of these pathogens have emerged in regions of the planet where the cost of a subscription to the scientific literature is at best prohibitive. Furthermore, even in affluent parts of the globe, shrinking library budgets are leading to reductions in institutional journal subscriptions, something to which our small discipline is particularly vulnerable. Consequently, those that

most need access to the current scientific information to detect and respond to emerging wildlife diseases are unable to access it.

This said, it would be a futile exercise to call for open access to wildlife disease data and publications without an understanding of why this has not happened in the past. Impediments to open access in the wildlife health sciences differ between pre- and post-publication. In our opinion, the single largest impediment to sharing of pre-publication data is the loss of control. Many scientists worry that their data will be misused, misrepresented or taken by others who will publish it as their own. This is a real concern as future funding may hinge on the exclusivity of the findings or the numbers of research papers published. To resolve this problem, any system for sharing wildlife disease data has to have built-in mechanisms for giving appropriate credit, allowing the original collector to have some control in how the data may be used by the broader secondary community. Another closely related aspect of scientific publication is the requirement that the data be original to that manuscript. Most journals ask authors to certify that "the research findings" being submitted for publication have not been published "in whole or in part" in other forms. Although the intent of these policies are to avoid duplicate publication of research findings, they have a negative impact on data sharing due to the uncertainty surrounding what exactly constitutes original research findings. For example, does archiving raw data from a long-term research program in a public database constitute a publication, or is it only publication of the scientific paper with results, analysis and interpretation that meets the definition? The solution to this problem is for scientific journals to adopt clear policies that allow prepublication sharing of data.

Open access to published scientific papers involves a separate set of impediments, specifically surrounding the cost of publication and distribution. To date, the wildlife health community has not attracted significant resources relative to other scientific disciplines, and consequently development of the discipline has come from the efforts of small numbers of dedicated, largely volunteers through small societies such as the WDA. The cost of publication of the *Journal of Wildlife Disease* is supported by individual and institutional memberships, and one could argue that the principal motivation for becoming a member has been

### Inside this issue

WDA News	3
WDA Section News	5
News From the Field	7
Training, Education and Employment Opportunities	9
Meetings and Conferences	10

# Members' Corner

to receive the Journal. Removal of the need to become a member to receive the Journal (as would happen in an open access publication model) may also remove its primary funding support. Alternative approaches to sustainably funding publication of the Journal would have to be explored, including increasing page charges, philanthropic funding sources, advertisements, among others.

Following its mission to "disseminate knowledge", the WDA has undertaken a number of efforts to confront the issue of open access. Most recently, to promote open access to data, the Journal's Editorial Board has agreed to modify the "instructions to authors" to specifically state that pre-publication sharing of data does not preclude publication in the Journal, provided that the intellectual added-value of the manuscript is novel to the submission. While this is not a unique policy in science (e.g., BioMed Central has a similar policy), to our knowledge this is the first time a major veterinary or wildlife health journal has enacted such a policy. To promote open access, and yet still derive revenue, the Association has adopted a tiered strategy. First, open access to the Journal has been granted to everyone for articles older than 18 months, a reasonable time frame given the long citation half-life for the journal of around 10 years. Second, support from the Wildlife Conservation Society and the WDA allows free access to the journal in the countries classified by the World Bank as Lower- and Lower-middle income countries (135 countries in all, representing 75% of the global human population). In 2010, people from 124 of these countries downloaded over 32,000 HTML files and over 90,000 pdf articles, resulting in over 120,000 downloads from the journal. Furthermore, full access until 2014 has been granted to all countries in Latin America to foster the wildlife health discipline.

Ultimately, we believe that open access is in everyone's best interest, provided that proper measures are taken to preserve the benefits and incentives for individual scientists, scientific institutions, and societies. Has the Association done enough? Do the current policies provide sufficient access to data and literature to provide wildlife health practitioners the best scientific foundation to manage wildlife diseases? Is our current subscription-based funding model sustainable in the long term? Should we go down the commercial route, following other small scientific organizations? Should we pursue a full open access model? There aren't simple answers to these questions, but they are questions we implore members of this society to consider, debate, and discuss as we continue in the second half of the organization's first century.

## NEW Members Forum!

If you have thoughts, comments or discussion on this topic please go to the following WDA Members Forum website and contribute to the commentary. This link can also be found at the bottom of the WDA homepage.

<http://groups.google.com/group/wda-members-forum>

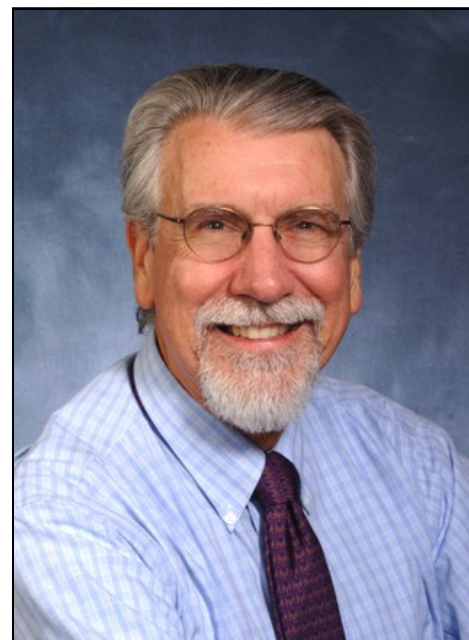
## Meet an Assistant Editor

### *Journal of Wildlife Diseases*

This is a continuation of earlier 'introductions' in our quarterly newsletter of some assistant editors of the *Journal of Wildlife Diseases*. As stated in an earlier issue, our assistant editors are among the busiest volunteers in the Wildlife Disease Association.

David received his post-secondary education in California, United States, receiving a BS from UC, Irvine [1971], a MS and PhD from UC, Davis in microbiology [1982] and a DVM degree also in 1982 from UC Davis. Following a residency at UC Davis, David furthered his teaching and research careers in the College of Veterinary Medicine at North Carolina State University where he arrived in 1984. With the exception of a sabbatical at the University of Melbourne, David has remained at North Carolina State where he has been professor since 1997.

The principle areas of David's research have been in the area of microbiology in birds with a special focus on *Mycoplasma*. David has published more than 70 papers in peer reviewed journals and has contributed a number of book chapters. In addition, David has made hundreds of presentations at conferences and in extension education. David has served as an assistant editor of the *Journal of Wildlife Diseases* since 2005 and we thank him very much for his volunteer contributions towards publication of our journal!



David Ley

## The Wildlife Disease Association goes International

**Ed Addison with contributions from Dave Jessup**

In 1989, just before the Wildlife Disease Association's annual meeting in Corvallis, Oregon, an introspection was held regarding the future of the WDA. Becoming more international was one of the most important objectives identified. Languages, and the time and costs of travel were obvious barriers, as well as first world prices and costs, and difficulties of currency exchange for WDA membership. Personal computers were not ubiquitous and the internet was just being born. Flash forward to today, and by a number of measures WDA has succeeded in internationalizing its activities, operations, outlook and membership.

There is not sufficient room in the WDA Newsletter to fully explore internationalization but the following summarizes the information available at the following link to the [WDA webpage](#).

During the past 40-50 years, a steadily increasing proportion of WDA members have come from outside North America. Intermittently WDA holds its annual Association conferences on different continents, notably at Iguazu Falls in Argentina in 2010, Quebec City, Canada in 2011 and Lyon, France in 2012. The 2013 meeting will be on the East Coast of North America and the relative value to all WDA members of worldwide meeting locations is a topic being explored by WDA committees and Council. WDA member input is welcomed.

WDA's governing Council includes representatives of geographic sections (Nordic, European, Australasian and in the near future Latin). Also the WDA's elections for at-large Council seats have increasingly gone to members from outside North America. We had our first vice president and president from outside North America, and the current vice-president is from outside North America. WDA's past executive manager is from Canada. We have active international Sections in Australasia, Europe, and the Nordic countries that have their own scientific meetings. These meetings are somewhat smaller than the annual International meeting, but are open to all WDA members. The Australasian Section meets yearly (see page 11) and the Nordic and European Sections meet every other year on a rotating basis. The Africa/Middle Eastern section formed in 2001 but is currently not active. A Latin American section is well on the way to formation. The WDA Wildlife Veterinary Section is in the process of reforming along more international lines.

The number of countries in which research was conducted and papers published in the *Journal of Wildlife Diseases* [JWD] has more than doubled in the past 15-20 years. In 2010, 82 papers were published in Volume 46 based on research conducted on biota in countries outside North America. WDA has donated 57 partial or complete printed sets of the *Journal* to institutions in less developed countries. In 2006, perhaps the greatest step toward fulfilling WDA's internationalization efforts came about

as a result of co-sponsoring by the Wildlife Conservation Society's Global Health Programs the free electronic distribution of all volumes of the JWD to the 113 least economically developed countries of the world, countries that represent 73% of the global human population.

In 2009, on a five year trial basis, the number of countries receiving complete free open access to the e-JWD was increased to 141. A recent review of this program revealed that in the calendar year 2010, our colleagues in 124 of the 141 countries eligible for free access had downloaded over 123,000 pdf's or full HTML articles. Clearly the *Journal of Wildlife Diseases* is being widely utilized and is contributing to the education of a future generation of wildlife health professionals in the developing world. We have come a long way in 22 years.

## Read All About It! New Journal Articles on Wildlife Management and Disease

**Summarized by Dave Jessup**

The [Spring 2011 Wildlife Professional](#), addresses the question of are tasers appropriate for use in wildlife? Lewis et al. provides documentation of a five successful examples of the use of a TASER by technicians of the Alaska Department of Fish and Game (ADFG). Four cases involved use of electronic control devices (ECD) for short procedures on moose and one involved a yearling brown bear. The article concludes in part, "ECD's can help minimize the potential for conflict and reduce the need for lethal force." In related news the ADFG is currently seeking to make it illegal for the public to use ECDs on wildlife.

Also in the Spring Wildlife Professional, Samuel Wasser discusses the use of hyper, obsessive and high energy dogs, for scent detection and finding killer whale scat in Puget Sound. The same technique has been used to find scat of North Atlantic right whales. Scat recovery allows health assessment and detection of hormones and anthropogenic toxins. Given the ability of dogs to detect various disease processes in humans, could their use in wildlife health studies be far behind?

In [Journal of Zoo and Wildlife Medicine 42\(1\)](#), pages 1-11, Fahlman et al. give an excellent summary of the effects of medetomidine and telazol for immobilization of 6 captive and 52 free-ranging brown bear in Norway. Free-ranging bears showed a number of physiologic changes associated with exertion related stress and use of supplemental oxygen was recommended. This paper was also presented at the 2010 WDA meeting.

In the same journal, pages 18-27, Boesch et al. compared biochemical values in white-tailed deer captured in clover traps to those ground darted, after anesthesia. Various measures, including creatine kinase and cardiac troponin I, showed the clover trapped deer had higher stress levels, which suggests they may suffer some cardiac damage.



The [Winter 2011 Conservation](#) contained an article “Raining Lethal Mice” by J. Hance that briefly summarized the first attempts at aerial delivery of acetaminophen laced mouse carcasses on Guam to attempt to reduce and control the non-native brown tree snake. Beside the protection for endangered and native species impacts, the goal is to reduce direct damage and lost annual productivity (\$1 – 4 million) caused by snakes, mostly due to power outages.

In [PLoS One Van Houtan et al.](#) further explore the causality of fibropapillomatosis (FP) in green sea turtles. Various etiologic agents, including herpes viruses, have been suggested as the cause of disease, but none satisfactorily explain all manifestations of the disease. This article documents the relationship between the oceanic “nitrogen footprints” of Hawaiian agriculture and sewage, the invasive algal growth it spurs, turtles’ dependence on these non-native algae in degraded areas, and the presence or absence of FP. Apparently, the invasive algae store nitrogen as arginine which is important for the growth of herpes viruses.

From each of the last 4 issues of [Journal of Wildlife Disease](#), 2-4 articles judged to be of particular conservation or wildlife management significance have been selected for brief summarization. These are then summarized with the corresponding cover photo and sent to other scientific journals, news outlets and potentially interested parties as a [WDA News Release](#). They are available at the WDA website. We hope this new service will increase interest in JWD, bring more recognition to some of our excellent authors and expand coverage of wildlife health issues in general.

## Sea Otter Health and Recovery

**Dave Jessup**

Despite many decades of State and Federal protection, the southern sea otter (*Enhydra lutis nereis*) has not recovered well, following their rediscovery (they were thought to be extinct) around 1900. Currently there are about 2700 individuals between Pt. Conception (near Santa Barbara) and Half Moon Bay (just south of San Francisco). That is only about 250 more than there were in 1994.

Sea otters have some very unique attributes. They are an ecological keystone species in Pacific kelp forest ecosystem, their voracious diets helping to control the echinoderms and mollusks that prey off the kelp stipe and holdfast. In their presence there are higher levels of biodiversity in kelp forest ecosystems than in their absence. Recent work has shown that kelp stores vast amounts of carbon across the northern Pacific arc from California to Japan, so there are regional and global health implications to their recovery.

California Department of Fish and Game (CDFG) began recovering sea otter carcasses and examining them for cause of death over 36 years ago, but these were primarily gross examinations by biologists. This work established the fact that a high percentage of adult sea otters died yearly, and that adult prime



A sea otter mother holds her 2-week-old pup close in the waters of Elkhorn Slough, Moss Landing, California. Photographed by Suzi Eszterhas /www.suzieszterhas.com.

age mortality was driving poor recovery. In 1995 the National Wildlife Health Laboratory began assisting and a number of new findings and causes of death emerged. In 1998 the CDFG Marine Wildlife Veterinary Care and Research Center took over this work.

Despite the fact that about half of the California sea otter's range along the Big Sur coast is very inaccessible to humans, for the last six years recovery of dead sea otters has averaged 10% of the known population, with 2010 bringing the highest number of carcasses ever. Sea otters, particularly those in California, are one of the most studied marine species in the world, but the puzzle keeps getting more interesting and is far from solved. One of the newest and most bizarre findings is that cyanotoxins, apparently from fresh water sources, have been killing sea otters ([Miller et al 2010 PLoS One](#)).

In fact, current research suggests that many of the more important causes of adult prime age mortality in California otters has as a common denominator land-sea connections to pollution and habitat degradation. Recent articles in JWD include [Jessup et al 46\(4\): 1214-1233](#) and in the most current issue [Brownstein et al 47\(2\): 278-292](#). But as Goldstein et al 47(3) in the upcoming issue will show, the picture for northern sea otters is different and far less clear. The cover picture from JWD 47(2) provides an obvious reason why sea otters are so fascinating to all who see them, not just scientists and wildlife health workers.

# WDA News

## Feral Cats and Wildlife Management

Dave Jessup

WDA members who are also members of The Wildlife Society (TWS) will know the [Spring 2011 issue of Wildlife Professional](#) contains a suite of articles about feral cats, trap neuter and release (TNR) programs for them, and their impacts on wildlife populations and health, human health and some of the welfare issues concerning the cats themselves. As part of our MOU with TWS, they have provided us a link to those articles. They include "Pick One: Outdoor Cats or Conservation" by N. Dauphine and R. Cooper, "Incompatible Neighbors in the Florida Keys" by P. J. Hatley, "Follow the Money: The Economics of TNR Advocacy" by N. Dauphine, "Cats as Carriers of Disease" by R. Gerhold, "The Trickle Down Effect" by D. Jessup and M. Miller, "By Land and Sea" by S. Hess, "An Issue with All-Too-Human Dimensions" by Lepczyk, Heezik and Cooper and "A New Zealand Perspective" by Y. Heezik.

Cats are wonderful animals. I'm crazy about our newest one Dexter, and, although he is an indoor cat, he isn't being raised vegetarian. This is a people issue, and an issue of balance, what is good for the most people, animals (wild and domestic) and ecosystems. Feral and free-roaming cats are an invasive species and one of the top killers of native small mammals, birds, reptiles and amphibians in continental North America and some other locations. They threaten the survival and recovery of endangered and sensitive species.

Free-roaming and TNR cats are not, as many TNR advocates claim, an insignificant human health issue (see the Gerhold article). Diseases and parasites they harbor cause human

and animal morbidity and mortality, and exposure to cats of unknown rabies vaccination history is the most common reason for human post exposure prophylaxis. Their feces, fleas, rotting cat food and other detritus fouls neighborhoods, and along with hyper-predation, degrades ecosystems. And they do not die peacefully or humanely when left to survive on the streets. Even PETA recognized TNR as "subsidized abandonment". WDA's policy on feral cats can be found on the WDA website.

## Parsitologists Rejoice— 59 years of Helminthological Abstracts are Available!

Ed Addison

**FOR SALE:** Fifty nine years of the journal *Helminthological Abstracts*! Entire purchase price to **benefit the WDA Student Activities Fund**.



Complete bound set of this major source on parasitology for sale to highest bidder on or before July 30<sup>th</sup>, 2011. Minimum bid \$200, increments of no less than \$25. Winner to pay for cost of shipping to their selected location or may arrange to pick up at the 2011 WDA meeting in Quebec City. Please email Dave Jessup at [wda.manager@gmail.com](mailto:wda.manager@gmail.com)

## WDA Section News

### Wildlife Disease Association - Nordic Section Quarterly Report of Wildlife Disease Incidents; January, February and March 2011

Edited by Bjørnar Ytrehus ([bjornar.ytrehus@vetinst.no](mailto:bjornar.ytrehus@vetinst.no))

### Unusual mortalities in mute swans (*Cygnus olor*) in lakes of Copenhagen

Anne Sofie Hammer ([ansh@vet.dtu.dk](mailto:ansh@vet.dtu.dk)), Trine Hammer Jensen, Jakob Le Fèvre Harslund, Lena Rangstrup-Christensen, National Center for Wildlife Health, National Veterinary Institute, Danish Technical University, Denmark

During February and March 2011 30-50 swans were found dead in the lakes of Copenhagen. Nineteen were submitted for necropsy to the National Center for Wildlife Health. It is not un-

usual that swans die following starvation at the end of the winter in Denmark, but it is unusual to find large numbers of dead swans in good nutritional condition. The swans had clinical signs of incoordination, lethargy and lameness before death. Samples were submitted for histopathological, microbiological and parasitological analyses. Also several toxicological investigations (including lead) were performed. All results were within normal limits. Pathological findings were inconclusive. Tests for avian influenza, Newcastle disease and West Nile virus were negative other virological analyses are still ongoing.

### Echinococcus multilocularis finding in Sweden

Erik Ågren, ([erik.agren@sva.se](mailto:erik.agren@sva.se)), Department of pathology and wildlife diseases, National veterinary institute, Sweden

The first finding of red fox dwarf tapeworm *Echinococcus multilocularis* (Em) in Sweden in a young vixen red fox (*Vulpes*



*vulpes*) shot in southwest Sweden in December 2010, led to intensive surveillance work the first quarter of 2011. After ten years of screening approximately 300 hunter shot foxes per year, over 3 000 foxes from all over Sweden have now been submitted for Em analysis at the National Veterinary Institute within a six week period. Intestinal segmental sedimentation and counting technique (Umhang et al, 2011) is used for screening, and any morphologic suspected findings are further confirmed by PCR-analysis. A second fox was found positive in late March 2011. This fox was shot in early March at the same location as the first positive animal. Hopefully, the presence of Em is limited to one small region, and plans for controlling the parasite are ongoing. With fox hunting season ending, surveillance will be continued with screening of intermediate hosts such as voles and other small rodents in the known infected area. Also fox scat analysis and passive surveillance of dead foxes will continue.

## Avian paramyxovirus

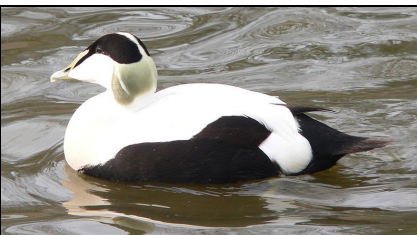
**Erik Ågren**

Sporadic reports and findings of sick or dead rock pigeons (*Columba livia*) positive for avian paramyxovirus continues from 2010 into this year. Single outbreaks in domestic fowl have led to regulatory removal of those farmed animals, in one case a pheasant (*Phasianus colchicus*) game bird breeding farm where the pigeons were clinically ill, but not the pheasants. The board of agriculture declares affected regions, where domestic fowl have to be kept indoors.

## A winter starving incident in Common Eider (*Somateria molissima*)

**Kjell Handeland (kjell.handeland@vetinst.no) and Olav Eikenæs, Norwegian Veterinary Institute, Norway**

During a two-week-period in January 2011, a die-off of about 150 Common Eiders (*Somateria mollissima*) occurred within the harbour of Andenes in North Norway (69.32° N, 16.12° E). At necropsy birds were emaciated and showed no signs of infectious disease, except for a moderate number of Thorny-headed worms (Polymorphidae, Acanthocephala) in their small intestines. Prior to the eider die-off, there was a period of harsh winter weather, coinciding with schooling of herring in the fjord basin. Large numbers of herring attracted Killer Whales (*Orcinus orca*), which also may hunt sea birds and are known to frighten eiders. It was concluded that the eider die-off incident was most likely linked to harsh winter weather conditions that, possibly in combination with the occurrence of Killer Whales, forced the birds away from good food resources in the fjord into poor feeding grounds in the town harbour.



known to frighten eiders. It was concluded that the eider die-off incident was most likely linked to harsh winter weather conditions that, possibly in combination with the occurrence of Killer Whales, forced the birds away from good food resources in the fjord into poor feeding grounds in the town harbour.

## Salmonella and avian pox infections in small passerines

**Kjell Handeland, Olav Eikenæs, Terje Josefsen, Turid Vikøren and Bjørnar Ytrehus, Norwegian Veterinary Institute, Norway**

A few outbreaks of *Salmonella typhimurium* infection

have been diagnosed in finches and siskins at winter feeding sites both in South and North Norway. This winter also an unusually large number of birds with signs of avian pox have been observed at the bird feeding stations. This diagnosis was based upon submitted photographs of birds showing typical cutaneous lesions and was restricted to the Great Tit (*Parus major*).



## No further cases of rabies in Polar Fox (*Vulpes lagopus*) in Arctic Norway

**Bjørnar Ytrehus (bjornar.ytrehus@vetinst.no) Norwegian Veterinary Institute, Norway**

In the previous WDA newsletter we reported the diagnosis of rabies in a Polar Fox (*Vulpes lagopus*) killed the 4<sup>th</sup> of January at the small arctic island of Hopen (76.30° N, 25.01° E). Two other Polar Foxes in the same location were culled and submitted for necropsy. These foxes had not shown any sign of disease and they were negative for rabies virus. Since then, no further cases have been reported from Hopen or other islands in the Svalbard Archipelago.

## Tularaemia in hares and humans in a "lemming year"

**Kjell Handeland**

Years with a great increase in the rodent population, especially of the Norwegian Lemming (*Lemmus lemmus*), occur at intervals of about three to four years. In the summer and autumn 2010 high densities of rodents (lemmings) were observed in southern and central Norway. The rodents are thought to function as a reservoir for *Francisella tularensis* for other animals and human beings, and the mountain hare (*Lepus timidus*) is especially sensitive to infection. During the autumn 2010, an unusually wide geographical distribution of fatal tularaemia in the mountain hare was diagnosed. In human beings, many small outbreaks of mainly oropharyngeal tularaemia occurred from January to March 2011 (Larssen et al., 2011). The human outbreaks were traced to the use of drinking water from private wells, which presumably were contaminated by rodent carcasses or excreta during a period of mild winter weather and snow melting.

## National Wildlife Health Center's Quarterly Wildlife Mortality Report

<http://www.nwhc.usgs.gov>

October 2010 to December 2010

State	Location	Dates <sup>a</sup>	Species	Mortality <sup>b</sup>	Diagnosis <sup>c</sup>	Labsite <sup>d</sup>
AR	Prairie County	12/09/10-12/09/10	American Wigeon Northern Shoveler Mallard	30 (e)	Open	NW
AZ	Maricopa County	10/21/10-10/28/10	Mallard	12	Botulism type C	NW
AZ	Tucson	12/26/10-12/27/10	Brazilian Free-tailed Bat	73 (e)	Trauma: gunshot	NW, OT
AZ	Buckeye	12/01/10-****	Eurasian Collared Dove	180 (e)	Viral Infection: pigeon paramyxovirus 1	NW
AZ	Phoenix	12/05/10-12/22/10	American Coot	75 (e)	Trauma	NW
CA	Monterey Bay	11/01/10-12/01/10	Northern Fulmar	2,750 (e)	Emaciation	CFG
CA	Salton Sea NWR	12/01/10-01/26/11	Northern Shoveler Eared Grebe Ruddy Duck Unidentified Gull Unidentified Grebe	1,312	Avian cholera	NW
FL	Southern Coastal Region	11/09/10-11/17/10	Turkey Vulture Broad-winged Hawk	875 (e)	Drowning	NW, FL
FL	Duval County	10/06/10-10/26/10	Mallard Muscovy Duck	200 (e)	Botulism type C	NW, FL, SCW
FL	Mirror Lake	10/14/10-11/08/10	Double-crested Cormorant Anhinga	30 (e)	Open: toxicosis suspect	NW
ID	Bear River Range	09/01/10-10/01/10	Tiger Salamander	1,500 (e)	Viral Infection: Ranavirus	NW
KS	Quivira NWR	11/13/10-12/04/10	Lesser Snow Goose Greater White-fronted Goose	6	Avian cholera	NW
LA	Catahoula Lake	01/01/10-01/28/10	Canvasback Northern Pintail Mallard Redhead Duck Ruddy Duck	21 (e)	Lead poisoning, Bacterial Infection: NOS	NW
MA	Wellfleet Bay, Cape Cod	10/10/10-12/17/10	Common Eider	750 (e)	Viral Infection: NOS	NVL, SCW
MI	Fisherman's Island State Park	10/07/10-11/05/10	Red-necked Grebe Double-crested Cormorant Long-Tailed Duck Common Loon White-winged Scoter	21		Botulism type E MI
MI	Wilderness State Park	10/25/10-10/25/10	White-winged Scoter Long-Tailed Duck Red-necked Grebe Common Loon Horned Grebe	223	Botulism suspect	NON
MN	Bowstring Lake	10/05/10-11/24/10	American Coot Lesser Scaup	1,200 (e)	Parasitism: <i>Cyathocotyle bushiensis</i> , <i>Sphaeridiotrema globulus</i>	NW
MS	Coldwater River NWR	12/08/10-12/28/10	Ross' Goose Snow Goose American Coot	52	Avian cholera	NW
NV	Topaz Lake	10/18/10-****	Western Grebe	25	Toxicosis: blue-green algae suspect	NW
NV	Virginia Lake	10/06/10-10/12/10	Mallard American Coot	23	Botulism type C	NW
NV	Washoe Lake	10/05/10-10/08/10	American White Pelican	23	Open	NW
OH	Groveport	11/22/10-11/29/10	American Robin	7	Trauma, Toxicosis, ethanol suspect	NW
OK	Hackberry Flat WMA	11/25/10-03/01/11	Ross' Goose	200 (e)	Aflatoxicosis	NW
OK	Sequoyah NWR	12/12/10-12/12/10	Lesser Snow Goose	31	Aflatoxicosis suspect	NW
UT	Great Salt Lake	11/01/10-01/12/11	Eared Grebe	10,000 (e)	Avian cholera	NW
VA	Hanover County	12/10/10-12/12/10	Common Grackle	350 (e)	Undetermined	NW
WA	Snohomish County	11/27/10-11/29/10	Lesser Scaup	20 (e)	Trauma	NW
WA	Westport	11/21/10-11/22/10	Brown Pelican	15 (e)	Open	NW
<b>Updates/Corrections</b>						
AZ	Mesa	06/01/10-09/17/10	Mourning Dove Eurasian Collared Dove White-winged Dove	8	Viral Infection: Avian Paramyxovirus 1 (Pigeon Paramyxovirus)	NW

# News from the Field

CA	Catalina Island	07/07/10-07/17/10	Bald Eagle	4	Undetermined, decomposed, Emaciation	NW
MN	Lake Johanna	07/27/10-08/01/10	Ring-billed Gull American White Pelican Double-crested Cormorant	100 (e)	Aspergillosis	NW
MN	Lake Vermillion	07/27/10-10/01/10	Double-crested Cormorant	125 (e)	Viral Infection: Avian Paramyxovirus 1 suspect	NW
MN	Upper Mississippi River NWFR	09/06/10-11/26/10	American Coot Lesser Scaup	4,290 (e)	Parasitism: <i>Cyathocotyle bushiensis</i> , <i>Sphaeridiotrema</i>	NW
			Ring-necked Duck Bufflehead Mallard		<i>globulus</i>	
MN	Mountain Lake and Bingham Lake	05/15/10-05/17/10	Purple Martin	13	Emaciation	NW
NV	Esmeralda County	05/01/10-12/08/10	Pied-billed Grebe Eared Grebe	45	Toxicosis: salt	NW

<sup>a</sup> \*\*\*\*Cessation date not available.

<sup>b</sup> (e) = estimate

<sup>c</sup> Suspect diagnosis = diagnosis is not finalized, but field signs and historic patterns indicate the disease, NOS = Not otherwise specified

<sup>d</sup> Disease Laboratory of the California Department of Fish & Game (CFG), Florida Fish and Wildlife Conservation Commission (FL), Michigan Department of Natural Resources and Environment (MI), No diagnostics pursued (NON), National Veterinary Services Laboratory (NVL), USGS National Wildlife Health Center (NW), Oregon State Diagnostic Laboratory (OR), Other (OT), Southeastern Cooperative Wildlife Disease Study (SCW).

Written and compiled by: Anne Ballmann, LeAnn White, and Jennifer Bradsby.

## Eastern United States

Dr. Anne Ballmann  
Wildlife Disease Specialist  
Phone: (608) 270-2445  
FAX: (608) 270-2415  
Email: aballmann@usgs.gov

## Central United States

Dr. LeAnn White  
Wildlife Disease Specialist  
Phone : (608) 270-2491  
FAX : (608) 270-2415  
Email : clwhite@usgs.gov

## Western United States

Dr. Krysten Schuler  
Wildlife Disease Specialist  
Phone: (608) 270-2447  
FAX: (608) 270-2415  
Email: kschuler@usgs.gov

## Hawaiian Islands

Dr. Thierry Work  
Wildlife Disease Ecologist  
PO Box 50167  
300 Ala Moana Blvd. Rm 8-132  
Honolulu, HI 96850  
Phone: (808) 792-9520  
FAX: (808) 792-9596  
Email: thierry\_work@usgs.gov

The Quarterly Wildlife Mortality Report is available at <http://www.nwhc.usgs.gov>

## Great Salt Lake mortality in eared grebes (Utah)

An avian cholera outbreak was observed at the Great Salt Lake in November 2010. Surveys conducted by Utah Division of Wildlife Resources estimated 10,000 eared grebes died out of a population of 200,000. No species other than grebes appeared to have been affected. Mortality subsided in early January 2011 and ceased when water started freezing. Significant cholera outbreaks in this area have occurred previously: in 1994 where 15,000 grebes died; 44,000 in 1998; 30,000 in 2002; 30,000 in 2004; and 15,000 in 2007. More information on avian cholera and links to news stories are available at:

[http://www.nwhc.usgs.gov/disease\\_information/avian\\_cholera/](http://www.nwhc.usgs.gov/disease_information/avian_cholera/)

## Northern fulmar mortality from Monterey Bay to southern Washington (California, Washington)

In November 2010, the Monterey Bay National Marine Sanctuary's BeachCOMBERS beach survey program documented increased numbers of Northern fulmars washing up dead on beaches in multiple counties (Monterey, Santa Cruz, and San Luis Obispo), with mortality conservatively estimated at 2500 - 3000 birds. Reports of concurrent fulmar mortality came from Clatsop County, Oregon, and Long Beach, Washington. It is estimated that 98% were young of the year and in poor body condition suggesting starvation may have been the main cause of mortality. Many birds were sent to rehabilitation centers and responded positively to feeding and sodium supplementation. Carcasses were examined by the California Department of Fish and Game at the Marine Wildlife Veterinary Care and Research Center. Ninety percent of the birds were hatchlings of the year, which were emaciated, had no body fat, no GI contents, and had atrophic pectoral musculature.

Northern fulmars are birds that regularly migrate through central California. Sometimes, large numbers of these migrant birds will strand on beaches in what is known as a "wreck". Wintertime wreck events in this area have occurred previously in 2003-2004, 1995, 1984, 1976, and 1907-1908.



# News from the Field

## Turkey vulture mortality off Southern Florida (Florida)

A large mortality event involving mostly juvenile turkey vultures was reported in early November 2010, extending from Biscayne Bay to Marathon, Florida. An estimated 875 turkey vultures died as a result of drowning after crashing into open water. Several broad-winged hawks were also involved. Florida Fish and Wildlife Conservation Commission personnel, National Park Service, and other agencies were involved in the recovery of live birds, several of which responded well to supportive care in rehabilitation facilities and were later released. The majority of the vultures found dead were in good body condition and no underlying diseases were identified. The area in question was too far from radar to reliably detect "micro bursts" or other localized downdrafts; however, weather or possibly aircraft disturbance is suspected to be a contributing factor in the deaths. A smaller drowning event involving turkey vultures occurred off Sandy Key in February 2001.

## Trematodiasis in Bowstring Lake (Minnesota)

For the third consecutive year, Bowstring Lake experienced avian mortalities in October and November due to intestinal trematode infections with *Sphaeridiotrema globulus* and *Cyathocotyle bushinesis*. Avian mortality due to intestinal trematodes was first detected at Bowstring Lake in 2008 and has been seen every year since. In this 2010 mortality event, an estimated 1200 birds died; primarily lesser scaup and American coots. Avian mortality due to intestinal trematodes has been observed at nearby Lake Winnibigoshish since 2005. Snail surveys conducted in the summer of 2008 at Lake Winnibigoshish found the invasive host snail, *Bithynia tentaculata*. Parasite infection rate for snails was between 0-93% with the highest prevalence occurring near shore. All 3 trematodes, *S. globulus*, *C. bushinesis*, and *Legyornimus polyoon* were detected and in some instances, a single snail was infected by more than 1 species of metacercariae, the intermediate life stage of the parasites.

## Training, Education, and Employment

### Conservation Medicine Resident Cleveland Metroparks Zoo



Full-time, three (3) year training position.

This residency program is uniquely designed to provide the trainee exposure to ecology, epidemiology and veterinary medicine in the study of wildlife populations.

Deadline for applying: Open until filled. Send résumé to: [resumes@clevelandmetroparks.com](mailto:resumes@clevelandmetroparks.com) referencing position #11024.

### Regional Field Veterinary Position Mountain Gorilla Veterinary Project

The Mountain Gorilla Veterinary Project, MGVP, Inc. is hiring a Regional Field Veterinarian, based in Rwanda, with frequent travel to Uganda and the Democratic Republic of Congo. Applicants should send a letter of intent, resume and 3 letters of recommendation to [cranfield.mike@gmail.com](mailto:cranfield.mike@gmail.com) by May 10, 2011.

### Graduate Projects on Chronic Wasting Disease Ecology and Management

Two well-funded Masters level research projects on the Northern Prairie Elk Project are available in the Wildlife Ecology and Community Resilience Lab of Dr. Ryan Brook at the University of Saskatchewan. Interested candidates should email Dr. Brook

([ryan.brook@usask.ca](mailto:ryan.brook@usask.ca)), along with a letter of interest, CV, and indication of academic performance (unofficial transcripts acceptable at this stage). Application review will begin June 15, 2011 and will continue until the positions are filled.

### Internship in Wildlife Veterinary Medicine 2011-2012 Wildlife Center of Virginia

One year veterinary/veterinary technician internship commencing September 1, 2011. Internship will have emphasis in veterinary diagnostic medicine. Veterinary license not required. Send cover letter, resume, and 3 letters of recommendation to the Director of Veterinary Services, Wildlife Center of Virginia, P.O. Box 1557, Waynesboro, VA or to [vethr@wildlifecenter.org](mailto:vethr@wildlifecenter.org)

WDA is in search of a new **newsletter editor**. This is an excellent opportunity for a new member to become more involved in WDA leadership. This volunteer position is open until filled. Members with skills in layout and design are encouraged to inquire. Please contact Jenny Powers ([jenny\\_powers@nps.gov](mailto:jenny_powers@nps.gov)) or Dave Jesup ([wda.manager@gmail.com](mailto:wda.manager@gmail.com)) for more information.

**These are only brief announcements. Please see the WDA website for full descriptions of training and [employment opportunities](#).**

# Meetings and Conferences



## Wildlife Disease Association Conference

August 14 – 19, 2011

Quebec City, Québec, Canada

**Make your reservations now!** This will ensure that you experience the best of this journey into the culture and nature of the province of Québec.

The 60<sup>th</sup> Wildlife Disease Association Annual International Meeting will be held August 14 – 19, 2011. This is going to be the first time that this international meeting will take place in the Province of Québec or eastern Canada.

Situated on the north shore of the mighty St. Lawrence River, part of the International St. Lawrence Seaway and gateway to the interior of the continent, Québec City is blessed with French European charm, and 400 years of history, culture and adventure. Founded in 1608, Québec City, the only walled city north of Mexico, is a popular tourist destination. In addition to a full week of wildlife disease continuing education and meeting with colleagues, you'll want to be sure to make time for excursions on the St. Lawrence River and nearby mountains and tours of historical sites as well as superb cuisine and hospitality, which will permit an appreciation for the fauna and flora characteristic of the surrounding forest and maritime region as well as the *Québécois* people and their rich culture.

Both a silent and live auction will be held on Monday August 15th. **Bring items to donate** and ask at check-in where to leave them. Items donated often have a wildlife them and/or are items from home countries.

This year's theme, "**Wildlife Resources in a Changing World**", will highlight the historical and contemporary significance of wildlife species as a resource for both native and non-native inhabitants of the province of Quebec. This sustainable use of wildlife as a resource is increasingly challenged by the growing changes in ecosystems, population dynamics and intrinsic values that wildlife have in the modern world.

Watch the [WDA Conference Web Page](#) for more information.



The Wildlife Disease Association (WDA) invites submission of abstracts for its 2011 Annual International Meeting that will be held August 14 – 19 in Quebec City, Quebec, Canada. The conference theme is "Wildlife Resources in a Changing World". Presentations and/or posters can be on any wildlife health-related topic.

Topics at this meeting will include:

- \* Disease Ecology
- \* Surveys & New Reports
- \* Tools and Techniques
- \* Wildlife-Domestic-Human Animal Interface
- \* Socio-political Challenges of Disease Management
- \* Impact of Diseases on Wildlife Resources
- \* Marine/Aquatic Health Issues
- \* Canadian Wildlife

See the WDA Conference website (<http://www.wildlifedisease.org/meetings.htm>)

If you have enquiries after submission please reach Lena Measures ([lena.Measures@dfo-mpo.gc.ca](mailto:lena.Measures@dfo-mpo.gc.ca))

# Meetings and Conferences

## Wildlife Disease Association, Australasian Section Annual Conference

25<sup>th</sup>–30<sup>th</sup> September, 2011

Camp Coorong, South Australia

(10min from Meningie)

Please join us on the shores of Lake Albert near the end of the great Murray/Darling river system for a week of fabulous food, walks and talks!

The Coorong is a strip of wetlands over 100km long at the end of the highly regulated Murray Darling system



Our hosts are the Ngarrindjeri people ([www.ngarrindjeri.com](http://www.ngarrindjeri.com)) who have lived in and with the Coorong for 1000s of years. Throughout the week they will be sharing their culture with us. Delegates and their families will have the opportunity to visit the onsite cultural museum and learn traditional weaving techniques among other things.

For further details contact [wdaaconference2011@gmail.com](mailto:wdaaconference2011@gmail.com) or [jen.mclelland@gmail.com](mailto:jen.mclelland@gmail.com)

---

## 8<sup>th</sup> International Conference on Behaviour, Physiology and Genetics of Wildlife

14<sup>th</sup> - 17<sup>th</sup> September 2011, Berlin, Germany

The aim of this conference is to foster an exchange of ideas among international specialists from many disciplines working with free-ranging and captive animals. See the website <http://www.izw-berlin.de/flink/BPG1.html> or email [symposium@izw-berlin.de](mailto:symposium@izw-berlin.de)

### Most important dates:

Conference date: 14<sup>th</sup> to 17<sup>th</sup> September 2011  
Deadline for the early bird registration fee: 1<sup>st</sup> June 2011  
Abstract submission deadline: 1<sup>st</sup> June 2011

### Registration fee:

Early bird registration fee till 1<sup>st</sup> June 2011:  
Normal fee: 130 Euro, reduced student fee: 60 Euro  
Registration fee after 1<sup>st</sup> June 2011:  
Normal fee: 200 Euro, reduced student fee: 100 Euro

---

## Nordic Wildlife Disease Association Meeting

Oravi, Lake Saimaa, 2<sup>nd</sup>-5<sup>th</sup> June 2011

Arrive at the Helsinki airport and travel by bus to Oravi on 2 June, spend 3 days enjoying Linnansaari National Park and learning about Finish raccoon dog parasites, viewing seals and sea birds, and relaxing in the sauna! Contact: Marja Isomursu [marja.isomursu@evira.fi](mailto:marja.isomursu@evira.fi) for more information.

---

## American Association of Zoo Veterinarians Presents: Exotic Animal Medicine for the Clinical Practitioner

22<sup>nd</sup>—23<sup>rd</sup> October 2011 (prior to the annual conference) Kansas City, MO

This 2 day course offers 14 hours of continuing education credits endorsed by the American College of Zoological Medicine. Topics will include hoofstock medicine, primate and macropod medicine/anesthesia, cutting edge topics in avian, herpetologic, small mammal, and invertebrate medicine. Registration includes lecture materials, refreshments, reception, and certificate of attendance. Registration fee is \$350 by 30 September or \$400 after 30 September.

For more information or to register see the [American Association of Zoo Veterinarians](http://www.aazv.org) website.