

Newsletter of the Wildlife Disease Association



Members' Corner

New Section Chairs

Ed Addison

Welcome to Paul Duff, the new chair of the European Section [EWDA] and to Jenny McLelland, the new chair of the Australasian Section [WDA] of the WDA.

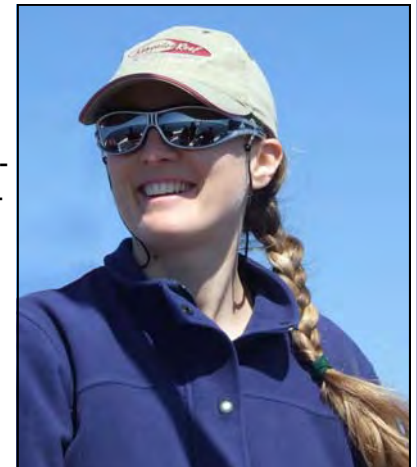
Paul was born in Ireland, but his professional life has been in England where he now lives. Following completion of a zoology degree, Paul received veterinary and Master's degrees. For the



past 21 years Paul worked in the U.K. government Veterinary Laboratories Agency (VLA) investigating disease in all species including wildlife. For the past 10 years, he has led the government's Diseases of Wildlife Scheme (VLADoWS) in England and Wales. Paul has served on the executive board of the EWDA and as faculty advisor to the very dynamic European student chapter of the WDA. Paul has also been

instrumental in development of the MedVetNet subgroup on wildlife diseases, a group to enhance communications among agencies and groups working on wildlife health in countries of the EU. It was great pleasure to meet Paul when he attended the 2007 WDA meeting in Estes Park, Colorado and it will be a pleasure to have him making decisions on our behalf as a part of the WDA Council.

Jenny was elected to the chair of the WDA at the September 2008 meeting in Kioloa, NSW. Jenny is a veterinary graduate of the University of Melbourne and came to WDA meetings as a student where she met David McLelland whom she later married. Jenny and David were conveners of the WDA meeting in Darwin in 2003 and proceeding editors for the international WDA conference in Cairns, 2005. Jenny and David headed to Canada in 2004 and were based at the Ontario Veterinary College in Guelph where she worked with Ian Barker on West Nile Virus and with the Animal Health Laboratory. Jenny then undertook a Master of Veterinary Science in wildlife health at Massey University, New Zealand. In the summer of 2007 she headed back to Canada and worked with Toronto Zoo and Parks Canada on the black-footed ferret reintroduction into the Canadian Prairies. Returning to Australia, Jenny worked at Healesville Sanctuary, Victoria, before moving to Adelaide, South Australia to join David, who is a veterinarian at Adelaide Zoo. We welcome Jenny and her international experience to the WDA Council.



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New JWD Book Review Editor

Charles van Riper

Tonie Rocke will be the new Journal of Wildlife Disease book review editor, and will be assisted by Rachel Abbott. Tonie and Rachel will assume full responsibility for book reviews starting with the 2009 Vol 45 issue 3. If you have suggestions for book reviews or would like to contribute one please contact Tonie.

Obituaries

Todd Cornish and Ed Addison

Cluff E. Hopla

The Wildlife Disease Association [WDA] lost one of its longest standing members when Dr. Cluff Hopla died at age 90 in October 2008. There are many in the WDA who may not have known Dr. Hopla which is not surprising when he was described as follows while being inducted during 1980 into the Oklahoma Hall of Fame: "In the age of science,....there are those who labor outside the spotlight, whose work benefits us all, but with little public attention. Such a scientist is Dr. Cluff E. Hopla".

Cluff Hopla was from Utah. His undergraduate training was performed at Brigham Young University [BYU] (BS, 1941) and his MS degree studies were interrupted by service in the U.S. Navy in World War II where he became involved in work on tropical diseases. He completed his MS degree at BYU in 1947, and his Ph.D. degree at the University of Kansas in 1950. Dr. Hopla began his career at the University of Oklahoma [UO] in 1951 and chaired the Zoology Department for 15 of his more than 50 years at UO. Dr. Hopla served in many other roles including as chair of the International Council for Laboratory Animal Science.

Those who worked in entomology, medical entomology, parasitology, and on zoonotic parasites and diseases were very familiar with Cluff Hopla's scientific contributions. Some may know Dr. Hopla as the expert in fleas that he was but his interests and publication record covered many other taxa of insects, arachnids, bacteria, viruses and other organisms.

Dr. Hopla was a scientist who appreciated the importance of providing his support to his broader scientific community. He was a member of many societies including the American Arachnological Society, Ameri-

can Society of Parasitology, Entomological Society of America and the WDA. His continued membership for over 50 years in at least these latter two societies reflects his professional commitment to his area of science. It is a very special group of people in the WDA and any other science society who volunteer for the onerous task of chairing major scientific meetings in addition to their other work. Dr. Hopla was one of those special WDA conference hosts having chaired our conference in Norman, Oklahoma in 1979. We are honored to have been fellow members of the WDA.

Stephen M. Kerr

Dr. Steve Kerr died in September 2008 while on a hunting trip in Colorado. Originally from Indiana, Steve completed an undergraduate degree in wildlife management in 1971 from Colorado State University [CSU] and a veterinary degree from CSU in 1976.

Throughout his life as a veterinary practitioner, Steve worked with health of both domestic animals and wildlife. He did considerable work on raptors and had been active in domestic and wildlife medicine in Africa in addition to the western U. S. states of Nebraska and Wyoming. Steve helped with field work on conservation of bighorn sheep and right up to the time of his death had been for many years the driving force behind the West Nile Virus surveillance program in Wyoming. Steve also worked several years as a trail veterinarian on the Iditarod Sled Dog Race and the Rocky Mountain (Pedigree) Stage Stop Sled Dog Race. Steve mentored many veterinary students from Wyoming and Nebraska over the years, many now working in companion animal and wildlife professions, and his students, clients, and collaborators all held him in the highest esteem, both personally and professionally.

Steve had been President of the Wyoming Veterinary Medical Association and received many acknowledgements of his contributions including being Nebraska Wildlife Conservationist of the Year and receiving the Leo Bustad Award for Companion Animal Veterinarian of the Year. Steve joined the Wildlife Disease Association in 1973, was a member intermittently throughout his career. Steve was a friend to many WDA members and to all who knew him, he was a gentleman.

International Diversity of the WDA

Ed Addison

In Corvallis, Oregon prior to the 1989 annual conference, an introspection was held regarding the future of the WDA. Becoming increasingly international was one objective identified during that introspection.

It has been challenging for us to become more international in our activities. Without a doubt, the biggest obstacle in addition to language differences has been the daunting challenge of currency exchange rates when we have had to pay for services in U.S. dollars which are excessively expensive for colleagues in less economically developed countries. In November 2003, our late dedicated friend and colleague Beth Williams wrote on this very obstacle " With each rising expense in \$US, we are making our current funding model less and less applicable to reaching those in less economically developed countries!We need to be thinking about development of new funding models!"

With this obstacle, how have we progressed towards achieving that goal of becoming more internationally diverse?

We can measure our degree of 'international orientation' in many ways including: the geographical distribution of members, location and timing of conferences, the geographic origin of members, the diversity of areas represented by papers in the *Journal of Wildlife Diseases* and the distribution of the *JWD*.

Progress Summary

- During the past 40-50 years, a much greater proportion of we WDA members are from outside North America.
- Intermittently we hold our annual Association conferences on different continents,
- Our governing Council is comprised of representatives of geographic sections.
- Association-wide members elected to Council are increasingly from outside North America.
- We have had our first vice president and president from outside North America.
- Our executive manager is from Canada.
- The number of countries in which research was conducted and papers published in the *Journal of Wildlife Diseases* [JWD] has doubled in the past 15-20 years.

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- 40-54 papers per volume have been published in each of the past four years based on research conducted on biota in countries outside North America.
- We have donated 57 partial or complete printed sets of the *Journal* to institutions in less developed countries.
- We have perhaps had our greatest impact on fulfilling our mission internationally by co-sponsoring with the Wildlife Conservation Society 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.

Chronic Wasting Disease Workshop Final Report: Edmonton, Alberta, August 2008

Margo Pybus

The final report from the Chronic Wasting Disease Workshop held in Edmonton, Alberta on August 8&9, 2008 is posted to <http://www.srd.alberta.ca/fishwildlife/livingwith/diseases/chronicwastingdisease.aspx>. The workshop was co-hosted by the Alberta and Saskatchewan wildlife management agencies and focused on a review of wildlife agency responses to chronic wasting disease in wild cervids in three risk scenarios (enzootic, newly detected, and at risk areas). Workshop participants then addressed specific questions and provided group responses in a problem-solving format. Scroll down towards the bottom of the web page to find the workshop report and available oral presentations. An Executive Summary and Summary Table are included in the report.



Photo courtesy of Rocky Mountain National Park

Multispecies mortalities associated with saxitoxin intoxication due to a toxic algal bloom of *Alexandrium tamarense*

Lena Measures and Stephane Lair

A toxic algal bloom, also known as red tide, some 600 square kilometers [232 square miles] in size, developed early August [2008] in the St. Lawrence Estuary (SLE), Quebec, Canada, and resulted in an unprecedented faunal mortality event in the SLE.

Alexandrium tamarense, a toxic dinoflagellate, naturally present in the SLE and Gulf of St. Lawrence can bloom when temperature rises and salinity decreases in surface waters as a result of increased freshwater runoff in the St. Lawrence River and coastal tributaries. *Alexandrium tamarense* produces saxitoxin that affects the nervous system of fish, birds, and mammals and can cause paralytic shellfish poisoning (PSP) following consumption of toxin-contaminated organisms.

At the end of July and in early August [2008] heavy precipitation, warm temperatures and calm surface waters favored the blooming of the dinoflagellate at the mouth of the Saguenay River. On 8 Aug 2008 about 100 dead birds (8 different species) were 1st observed by Parks Canada staff near Tadoussac at the confluence of the Saguenay River and St. Lawrence Estuary. As the bloom drifted towards the south shore of the St. Lawrence Estuary and moved eastward with the Gaspé current, numerous dead fish, birds, whales and seals were observed floating dead or stranded dead on shore. The bloom dissipated due to strong winds during the week of 18 Aug 2008 as it reached the Gulf of St. Lawrence.

During the toxic algal bloom the Canadian Department of Fisheries and Oceans (DFO) closed all the shellfish harvesting areas in the affected zone to protect public health. The Canadian Food Inspection Agency (CFIA) monitors various shellfish sites in the SLE and advises closure when levels of toxin in shellfish exceed the accepted norm. As a precaution the CFIA and Health Canada advised the public against eating the liver and viscera of fish and invertebrates caught in the SLE during the red tide event and advised against eating the viscera of waterfowl hunted this fall. Saxitoxin accumulates in the digestive system of affected organisms but not in the flesh. Shellfish harvesting sites will open to the public when monitoring indicates consumption is safe. Some sites have

opened already. See this link for the closed areas for shellfish harvesting, North shore:

<http://www.dfo-mpo.gc.ca/.../media/npress-communique/2008/qr-rq43-eng.htm>

In a joint effort the DFO, Environment Canada, the CFIA, Parks Canada, the University of Montreal, the Faculty of Veterinary Medicine and non-governmental organizations such as the Quebec Emergency Network for Marine Mammals, Group for Research and Education on Marine Mammals and St. Lawrence National Institute of Ecotoxicology collaborated to document mortalities of animals and collect carcasses or samples for necropsy, pathologic and toxicologic analyses. Scientific experts involved in this collaboration have concluded that this exceptional red tide event caused the majority of mortalities observed supporting the initial working hypothesis that the food chain was contaminated by saxitoxin produced by a bloom of *Alexandrium tamarense*.

From 5 Aug to 31 Aug 2008 carcasses of 10 beluga whales, 8 harbor porpoises and almost 100 grey, harbor or unidentified seals were reported dead on the shores of the SLE. Many carcasses were in an advanced state of decomposition and were likely reported more than once due to drifting with tides and currents. The number of seal and beluga strandings were above average for the month of August. For example, in the case of the St. Lawrence Estuary beluga, a threatened population, the 25-year average number stranded for the month of August is 2.7. In addition thousands of fish-eating birds including cormorants, gannets, kittiwakes, loons, eiders, fulmars, 4 species of gulls, razorbill, heron, fish such as sand lance, rainbow smelt, sturgeon, shad, and invertebrates such as sea cucumbers, crabs and whelks were also found dead. Aerial surveys documented the distribution of mortalities temporally and geographically associated with the drift of the bloom. Neurologically impaired fish and birds, and some seals and whales with unusual behavior were also observed. Pathological analyses to date have ruled out other possible causes of death for the majority of carcasses examined which include: 105 birds involving 15 species, 4 fish of 2 different species, 25 grey seals, 4 harbor seals, 3 harbor porpoises and 2 beluga. Most animals examined

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at necropsy were in good flesh and appeared to have died acutely.

Saxitoxin and its derivatives were confirmed in water samples using high performance liquid chromatography (HPLC) at the Institute for Marine Biosciences, NRC, Halifax and in tissue samples using ELISA at DFO, Mont-Joli with confirmation using HPLC. Animals positive for saxitoxin in their tissues included whelks, sand lance, smelt, razorbill, grey seal, harbour porpoise and beluga.



Although it is difficult to demonstrate cause of death due to saxitoxin intoxication pathologically, the presence of a toxic algal bloom in the SLE with saxitoxin detected in water samples, saxitoxin levels higher than the norm in molluscs, temporally and geographically associated mortalities of invertebrates, fish, birds, seals and whales without any other cause of death identified pathologically and with the detection of saxitoxin in various tissues from these animals and some observations of clinical neurological signs consistent with saxitoxin intoxication support a conclusion of a multispecies mortality event due to saxitoxin produced by a toxic algal bloom of *Alexandrium tamarense* in the SLE during the month of August.

Dr. Lena Measures, Marine mammal health, Fisheries and Oceans Canada, Maurice Lamontagne Institute, 850 route de la mer, Mont-Joli, Qc, Canada G5H 3Z4 <Lena.Measures@dfo-mpo.gc.ca>

Dr. Stephane Lair, Universiie de Montreal, Faculte de medecine veterinaire 3200 rue Sicotte, St-Hyacinthe, Qc, Canada J2S 7C6 <stephane.lair@umontreal.ca>

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Call for Nominations for the WDA Distinguished Service Award and the WDA Emeritus Award

Terry Creekmore

The WDA awards committee is seeking nominations for the Distinguished Service Award and the Emeritus Award. This is your opportunity help us provide recognition to deserving WDA members. Below is some information about these awards. This information as well as a list of past recipients also is posted on our website (<http://www.wildlifedisease.org>). Just click on the "About Us" tab and look under WDA Recognition and Awards.

Please take a few minutes from your busy schedule to consider potential nominees. Nominations, including a CV, should be sent to:

Terry Creekmore

Terry.Creekmore@wgf.state.wy.us

or to any of the other committee members by **March 15, 2009**.

Lynn Creekmore -

lynn.h.creekmore@aphis.usda.gov

Kay Mehren - daktari@rogers.com

Elliot Jacobson - jacobsons@mail.vetmed.ufl.edu

Dave Edmunds - edmunds@uwyo.edu

The Distinguished Service (DS) Award is the highest award of the Wildlife Disease Association. The purpose of the DS Award is to honor a WDA member of long standing who, by his/her outstanding accomplishments in research, teaching and other activities, including participation in WDA affairs, has made a noteworthy contribution furthering the aims of the Wildlife Disease Association.

The Emeritus Award confers Emeritus status, an honorary category of membership, to members of the WDA who have retired from their profession and who in the opinion of Council have contributed significantly to the study of wildlife diseases. Emeritus Award recipients will be considered full voting members who receive the Journal of Wildlife Diseases without further payment of dues.

WDA Students

Double Success for Masters Students

London Zoo's new Outback exhibition at its famous Mappin Terrace provided the backdrop for this year's presentation of prizes to the top students on the joint Royal Veterinary College (RVC)/Zoological Society of London (ZSL) Masters courses in wild animal health and wild animal biology. Professor Stephen May, deputy principal of the RVC and Mr. Ralph Armond, Director General of the ZSL awarded prizes on Sep-



Elizabeth Bonnin and Mark Jones receive awards for excellence in fields of wildlife health and biology

tember 10 for the highest aggregate marks and best project in both courses. This year's winners, Elizabeth Bonnin (wild animal biology) and Mark Jones (wild animal health), both received awards for achieving the highest aggregate marks and for producing the best project.

The two courses teach wild animal health to biologists and veterinarians.

281 students from 45 different countries have graduated from the two courses over the past 14 years and now work in wildlife conservation, health and research around the world.

New ACZM Diplomates

Established in 1983, the American College of Zoological Medicine (ACZM) is an international specialty organization recognized by the American Veterinary Medical Association (AVMA) for certification of veterinarians with special expertise in zoological medicine. ACZM Diplomates serve in responsible positions as zoo and wildlife veterinarians, teachers, researchers, government officials, and administrators of other relevant programs fostering high quality medical care for non-domestic animals and are actively involved in the discovery of new knowledge in the discipline and the dissemination of this knowledge to the veterinary profession and public. In order to become an ACZM Diplomate, one must successfully complete a two-part examination which consists of a qualifying examina-

tion on the first day, which includes the medicine of aquatic, avian, mammalian, reptilian, and wildlife species. Candidates who pass may take the certifying examination in either general zoological (birds, reptiles, and mammals), wildlife, aquatic, avian or herptile (reptile and amphibian) medicine offered on the following day. Successful candidates for Diplomate status must pass both the qualifying and certifying examinations.

The new 2008 Diplomates are:

A. Rae Gandolf, Zanesville, Ohio
Jennifer E. Graham, Boston, Massachusetts
Tara Myers Harrison, Lansing, Michigan
J. Jill Heatley, College Station, Texas
Natalie Mylniczenko, Brookfield, Illinois
Erika K. Travis, Salt Lake City, Utah
Allison D. Tuttle, Mystic, Connecticut

ACZM Short Course 2009

For 2009, the annual zoological medicine short course for American College of Zoological Medicine board preparation will be hosted by the University of California, Davis School of Veterinary Medicine. The five-day didactic course provides intensive in-depth information on important issues in zoological medicine. The course is designed to help participants prepare to take ACZM boards; it will include discussions on studying, test taking strategies, and practice examinations (essay, multiple choice, practical, and slide identifications).

Dates: May 31 – June 4, 2009. The course will begin at 8 am on May 31 and run through 5 pm on June 4.

Location: School of Vet Med, UC, Davis, California

Instructors: Scott Larsen, Kirsten Gilardi, Joanne Paul-Murphy, and Ray Wack, and other diplomates

Cost: \$600 for five full days of instruction

Registration: Registration materials should be available by January 2009. The course is limited to 30. Deadline for registration is May 1, 2009.

Lodging: Best Western University Lodge in Davis (530-756-7890).

Contact: Please direct inquires to Dr. Scott Larsen, slarsen@ucdavis.edu (530) 979-0704; (530) 754-2259

News from the Field



National Wildlife Health Center's Quarterly Wildlife Mortality Report

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

Virulent Newcastle Disease responsible for cormorant mortalities in multiple Minnesota counties (MN)

Summer mortality events beginning in July 2008 involving double-crested cormorants were determined to be the result of virulent Newcastle Disease (vND) in 8 MN counties. In addition, individual cases of Newcastle Disease in cormorants were reported to NWHC from WI, MI, CT and MO. Mortality counts ranged from less than 10 birds up to 1200 birds at the various sites and often included other species such as ring-billed gulls and American white pelicans. While the virus was isolated from several pelicans and a common loon in this epizootic, characteristic brain lesions were not observed. At one MN site, infections of West Nile virus, salmonellosis, and intestinal parasitism contributed to the large number of pelican mortalities (1900 estimated) where the overall avian mortality was estimated to be 2500 birds. This was the second consecutive year that vND occurred at two of the MN sites. On-site incineration of carcasses and restricted access to affected areas were instituted to reduce spread of the virus. Canada also experienced increased cormorant mortality associated with avian paramyxovirus-1, the agent of Newcastle Disease, this summer around Lakes Ontario, Erie and Huron. Virulent Newcastle Disease outbreaks in cormorants have occurred intermittently throughout the United States since 1992. No known domestic poultry was involved with this summer's outbreak.

Botulism type C outbreaks at the Capital Reflecting Pool (Washington, DC)

On July 11, 2008, Capital Police observed multiple mallard ducks displaying neurologic signs and dying upon entering the Capital Reflecting Pool. Earlier reports in the vicinity that day indicated possible human illnesses which were later found to be unrelated. Onsite testing conducted by the FBI was negative for particular agents of concern and the US National Park Service Crew Supervisor confirmed no pesticide application had occurred recently in the immediate area. A total of 17 mallards were collected from the pool and necropsied at the MD Veterinary Diagnostic Lab. Tissues from those necropsied and an additional dead mallard collected from a nearby park were flown to NWHC for further evaluation. Botulism type C toxin was detected in samples from both locations. A second mortality event at the Reflecting Pool, involving 26 mallards, occurred on July 26-27. Samples submitted to NWHC were again confirmed to be botulism type C. Since draining and cleaning of the Pool as the potential source of the toxin, no additional mortalities have been reported.

Botulism type E mortalities recurring in the Great Lakes region (Lakes Michigan, Erie and Ontario)

Beach monitoring along the shores of the Great Lakes this summer has again detected a variety of birds dying from botulism type E intoxication. The first mortality reports attributed to the toxin began in late June from the western shores of Lake Michigan (Mason Co., MI) and northern shores of Lake Ontario (Canadian Cooperative Wildlife Health Centre reporting). Species affected have been mostly common loons, double-crested cormorants, several gull species, and various shorebirds, including Caspian terns and sandpipers. Botulism Type E was also suspected in the death of an endangered piping plover juvenile at Sleeping Bear Dunes National Lakeshore. Four affected Michigan counties (Oceana, Mason, Benzie, and Emmet) represent the furthest southern extent reported along the western Lake Michigan shoreline. Along the eastern shore, September mortalities were detected in Door (bayside) and Milwaukee counties in Wisconsin. Total numbers of birds

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affected thus far are estimated at 200 for Lake Michigan, 113 for Lake Erie, and 12 for Lake Ontario. Last year, the total mortality from the four lakes was estimated at 17,125 with the majority of the mortalities detected between Oct-Nov. Botulism type C toxin has been detected at some locations including the Kingston, Ontario area and Presque Isle State Park (Erie, PA).

Seasonal summer avian botulism outbreaks across the states (HI, CA, NV, UT, MT, ND, SD, WI, FL, OH, PA, MA)

Botulism type C mortality events were observed in waterfowl across several states during the summer months. Botulism mortality occurs when birds ingest toxins produced by *Clostridium botulinum* bacteria. The Midway Atoll experienced a significant die-off of endangered Laysan ducks. An estimated 140 ducks died in a population of approximately 200-400 individuals. US Fish and Wildlife Service management actions were to drain and remove sediments from a catchment pond that was the primary site of the event. The largest avian botulism event was at Lake Bowdoin, Montana, where 2000 ducks and coots died in two locations on the lake. Turtle Lake Wildlife Development Area, North Dakota, experienced a month-long botulism event that killed more than 700 ducks and coots. Another large event occurred at Horicon National Wildlife Refuge, Wisconsin, where approximately 1000 birds, primarily mallards and green-winged teal, died over a 6 week period. The Salton Sea National Wildlife Refuge, California, lost 200 birds, mostly American white pelicans and some endangered brown pelicans, black-legged stilts, and gulls. Many affected areas experience annual mortality from botulism. Dry conditions, hot temperatures, and low oxygen levels in wetlands during late summer contribute to botulism outbreaks. Prompt carcass removal of impacted areas can reduce additional mortality from birds eating toxin-contaminated maggots on decomposing carcasses.

Expansion of plague-affected area into black-footed ferret area in Conata Basin (SD)

Sylvatic plague reached the Conata Basin area of South Dakota earlier this July. The Conata Basin is a portion of the Buffalo Gap National Grasslands, south of Badlands National Park, where the last remaining plague-free area existed for black-footed ferret reintroduction. Prior estimates indicated the plague had spread to about 10,000 of the 25,000 acres of black-tailed prairie dog habitat. Prairie dogs carry fleas infected with *Yersinia pestis*, the bacteria that causes plague. Black-footed ferrets primarily feed on prairie dogs. Ferret populations in Conata Basin were estimated around 300 animals (roughly half of the free-ranging black-footed ferret population), but the plague outbreak may have killed as many as 100. Fall spotlight surveys are underway to obtain more accurate estimates. US Fish and Wildlife Service and partners plan to dust 11,000 acres with insecticide and continue to vaccinate ferrets against plague. As a new management option, USGS – National Wildlife Health Center and other partners are working to develop a plague vaccine that can be delivered via oral bait for prairie dogs and ferrets to protect against plague-associated mortalities.

Documented anthrax mortality in wildlife (MT)

Two deer, 14 elk, and a black bear are suspected to have died from naturally occurring anthrax in several creek drainages near a ranch that was experiencing anthrax mortality in bison. An estimated 250 bison died. Wildlife mortalities were spotted during aerial surveys around the ranch by Montana Fish, Wildlife and Parks. Anthrax is a bacterial disease caused by *Bacillus anthracis*. Bacterial spores can remain dormant in soil for long periods of time and mortalities tend to recur at contaminated sites although this was the first documentation of anthrax in Gallatin County, Montana. Appropriate weather conditions during summer promote germination of the spores that animals then ingest during feeding. Since anthrax is a zoonotic disease Montana Fish, Wildlife and Parks provided information on proper field dressing of harvested animals to hunters.

News from the Field

Epizootic hemorrhagic disease detected in northern US (WA, SD, MI)

Reports of epizootic hemorrhagic disease (EHD) in white-tailed deer occurred in 3 new northern states during August and September 2008. Die-offs involving 20-500 animals were detected in the Snake River Drainage area (Walla Walla, WA), Butte and Lawrence counties (SD) and Oakland County, MI. EHD is caused by a virus, closely related to bluetongue viruses, and is transmitted by the *Culicoides* sp. midge. Because of the insect vector, mortalities are more commonly detected in the southeastern US, although it has occurred previously in CO, AZ, and NE. A northward range expansion in the eastern US was noted in 2007 (2007-4 Quarterly Mortality Report).

Quarterly Wildlife Mortality Report July 2008 to September 2008

State	Location	Dates	Species	Mortality	Diagnosis	Labsites
AK	Shoup Bay	07/25/08-08/01/08	Black-legged Kittiwake	40 (e)	Trauma,	NW Emaciation
AL	Decatur	07/27/08-07/29/08	Canada Goose	41	Open: emaciation	NW
CA	Stanislaus	05/28/08-06/23/08	Mallard	65 (e)	Botulism type C, Airsacculitis, Viral infection suspect	CSS
CA	Dublin	07/14/08-07/21/08	Mallard Canada Goose	15 (e)	Undetermined	UCD
CA	Newark	09/04/08-09/06/08	Mallard	15 (e)	Botulism suspect	NON
CA	Rancho Cordova	09/08/08-09/12/08	Mallard	15 (e)	Botulism type C	UCD
CA	Salton Sea	08/11/08-10/24/08	American White Pelican Unidentified Gull California Brown Pelican Unidentified Teal Northern Shoveler	358 (e)	Botulism type C	NW
DC	US Capitol Reflecting Pool	07/11/08-07/27/08	Mallard	45	Botulism type C	MD, NW
FL	Davie	09/15/08-ongoing	Muscovy Duck Mallard	13	Open: botulism suspect	UNK
FL	Indian Town	09/20/08-09/21/08	Black-bellied Whistling Duck Domestic Mallard	20 (e)	Undetermined	NON
FL	St. George Island	07/15/08-7/16/08	Unidentified Gull	25	Undetermined	NON
GA	Floyd County	07/01/08-07/05/08	House Finch	14 (e)	Undetermined	SCW
GA	Houston County	08/07/08-09/22/08	Purple Martin	8	Aspergillosis	SCW
LA	Bossier County	05/01/08-08/13/08	Mourning Dove	6	Trichomoniasis	SCW
MA	Lowell	07/01/08-07/15/08	Mallard	24 (e)	Botulism suspect	NON
MD	Jug Bay Wetlands Sanctuary	07/31/08-08/20/08	Eastern Box Turtle	6	Viral Infection: Ranavirus	NW
MD	Elkton	07/16/08-07/30/08	Red Bat	10	Trauma	NW
MI	Bloomer Park, Rochester	08/08/08-08/25/08	White-tailed Deer	20 (e)	Epizootic hemorrhagic disease	MI, MSU
MI	Ludington State Park, Mason Co., Emmett Co., Mears State Park, Oceana Co.	06/27/08-ongoing	Ring-billed Gull Double-crested Cormorant Unidentified Tern Herring Gull	52	Botulism type E	MI
MI	Sleeping Bear Dunes National Seashore	06/30/08-ongoing	Caspian Tern Ring-billed Gull Least Sandpiper Double-crested Cormorant Common Merganser	20 (e)	Botulism type E	NW, OT
MN	Voyageurs National Park, Angle Island WMA, Agassiz NWR	07/14/08-09/30/08	Double-crested Cormorant American White Pelican Ring-billed Gull	1,250 (e)	Newcastle Disease Virus, Emaciation, Trauma	NVL, NW

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MN	Marsh Lake, Lac qui Parle WMA	07/10/08-09/30/08	American White Pelican Double-crested Cormorant Unidentified Gull Great Egret Canada Goose	2,800 (e)	Viral Infection: West Nile, Newcastle Disease Virus, Salmonellosis, Parasitism: Coccidiosis (<i>Eimeria sp.</i>), Parasitism: Contraceacum, Undetermined	NVL, NW
MN	Minnesota Lake, Faribault Co., Pigeon Lake, Meeker Co., Lake Superior, Cook Co., Mille Lacs, Mille Lacs Co.	06/30/08-09/30/08	Double-crested Cormorant American White Pelican Ring-billed Gull Common Loon Great Blue Heron	1,000(e)	Newcastle Disease Virus, Viral Infection: Avian Paramyxovirus 1, Emaciation, Botulism type C	NVL, NW
MO	Round Spring Cave	08/24/08-08/24/08	Eastern Pipistrelle	24 (e)	Trauma	NW
MT	Eyraud Lakes	08/25/08-09/01/08	American White Pelican	5	Emaciation: starvation	NW
MT	Lake Bowdoin, Malta	07/20/08-09/30/08	Mallard Blue-winged Teal Green-winged Teal Northern Shoveler Gadwall	2,000	Botulism type C	NW
MT	Lewis and Clark County	08/27/08-09/01/08	Long-legged Bat	50 (e)	Emaciation	NW
MT	Florence	06/26/08-07/01/08	Red Crossbill House Finch Pine Siskin	50 (e)	Salmonellosis	NW
MT	Spanish, Elk, and Cherry Creeks	07/01/08-09/01/08	Elk Deer	16	Bacterial Infection: anthrax	MT
ND	Chase Lake NWR	07/03/08-08/20/08	Black-crowned Night-Heron Unidentified Gull American White Pelican	16	Emaciation, Salmonellosis, Viral infection: West Nile	NW
ND	Kellys Slough NWR	08/21/08-08/27/08	Semipalmated Sandpiper Least Sandpiper Franklin's Gull	13 (e)	Botulism type C, Aspergillois	NW
ND	Oahe Reservoir, Missouri River	08/29/08-10/01/08	Mallard Gadwall	57 (e)	Botulism type C	NW
ND	Turtle Lake 2 Wildlife Development Area	08/04/08-09/02/08	Mallard American Coot American Wigeon Blue-winged Teal Gadwall	719	Botulism type C	NW
NC	Beaufort County	08/23/08-09/30/08	Mallard	1,300 (e)	Botulism	SCW
NE	Massie and Wilkins Waterfowl Production Area	07/14/08-08/06/08	Plains Leopard Frog	200 (e)	Viral Infection: Ranavirus, Parasitism suspect	NW
NV	Reno-Sparks Area	07/14/08-09/01/08	Rock Dove Mourning Dove	300 (e)	Parasitism: Trichomoniasis	NVA
NV	South Reno	07/01/08-07/18/08	Canada Goose Mallard Gadwall American Coot Rock Dove	22	Botulism type C	NW
OH	Dublin	06/29/08-07/03/08	Mallard Hybrid Mallard	22	Botulism type C	NW
OM	Midway Atoll, Papahānaumokuākea Marine National Monument	08/10/08-08/21/08	Laysan Duck	140 (e)	Botulism type C	NW
PA	Presque Isle State Park	05/26/08-ongoing	Ring-billed Gull	113 (e)	Botulism type C,	NW

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			American Crow		Botulism type E,	
			Common Loon		Trauma	
			Great Blue Heron			
			Unidentified Waterfowl			
SD	Black Hills Area	09/22/08-10/15/08	Deer	25 (e)	Epizootic hemorrhagic disease	SD
SD	Conata Basin, Buffalo Gap National Grasslands	05/15/08-08/15/08	Black-footed Ferret	100 (e)	Sylvatic plague	CDC
SD	Waubay NWR, Bitter Lake	07/25/08-09/01/08	Black-tailed Prairie Dog			
SD	Zabrasha Game Production Area	08/01/08-08/25/08	American White Pelican	34 (e)	Viral Infection: West Nile	NW
			Redhead Duck	77	Botulism type C	NW
			Unidentified Gull			
			Unidentified Grebe			
			Unidentified Duck			
TX	Study Butte	07/01/08-8/1/08	Mourning Dove	10 (e)	Parasitism: Trichomoniasis	NW
UT	Bear River Marshes	07/03/08-07/31/08	California Gull	12 (e)	Undetermined	NW
UT	Logan	09/04/08-09/05/08	Mallard	5 (e)	Botulism type C	NW
VT	Windsor, Fairlee, East Poultney, Rupert	04/01/08-7/7/08	Little Brown Bat	15 (e)	Trauma suspect,	NW
			Indiana Bat		Open: emaciation	
WA	Snake River drainage	08/29/08-09/12/08	White-tailed Deer	500 (e)	Epizootic hemorrhagic disease	WA
WI	Alma	06/30/08-07/15/08	Little Brown Bat	7	Undetermined	NW
WI	Blue River	06/01/08-07/15/08	Little Brown Bat	40 (e)	Emaciation: starvation suspect	NW
WI	Deerwood Park, Holmen	07/01/08-07/27/08	Eastern Bluebird	100	Emaciation	NW
WI	Fort McCoy	06/01/08-07/31/08	Eastern Bluebird	80 (e)	Parasitism: Simuliidae	NW
WI	Horicon NWR	08/10/08-09/22/08	Mallard	1,000 (e)	Botulism type C	NW
			Green-winged Teal			
			Great Blue Heron			
			Ring-billed Gull			
			Unidentified Shorebird			
WI	Lake Onalaska, Upper Mississippi River NWR	09/15/08-ongoing	American Coot	430 (e)	Parasitism:	NW
			Lesser Scaup		<i>Cyathocotyle bushiensis</i> ,	
			Blue-winged Teal		Parasitism:	
			Double-crested Cormorant		<i>Sphaeridiotrema globulus</i>	
			Ruddy Duck			
WI	Milwaukee Harbor	09/10/08-ongoing	Ring-billed Gull	50 (e)	Botulism type E	NW, WI, WVL
			Herring Gull			
			Double-crested Cormorant			
WI	Neenah	06/16/08-07/21/08	Little Brown Bat	50 (e)	Pasteurellosis	NW
			Big Brown Bat			
WI	Wisconsin Rapids	06/25/08-07/22/08	Little Brown Bat	10	Emaciation	NW
WV	Tucker County High School, Hambleton	09/29/08-09/29/08	Blackpoll Warbler	501	Trauma	SCW
			Black-throated Blue Warbler			
			Common Yellowthroat			
			Magnolia Warbler			
			Ovenbird			
<u>Updates:</u>						
AZ	Biltmore Lake	06/01/08-07/01/08	Mallard	70 (e)	Botulism type C	NW
			Unidentified Goose			
			NOS Passerine			
			Canada Goose			
AZ	Maricopa	05/01/08-07/01/08	Muscovy Duck	30 (e)	Botulism suspect	NW
			Mallard			
CA	Redding	02/12/08-05/20/08	Skunk	60 (e)	Canine distemper	UCD
			Unidentified Fox			
			Raccoon			

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CA	Southern California	01/01/08-04/01/08	Gray Fox			
FL	Hillsborough	05/01/08-05/13/08	Red-tailed Hawk	18 (e)	Chlamydiosis	SDC, UCD
GA	Houston	01/20/08-01/21/08	Muscovy Duck	11	Duck plague	SCW
			Red-winged Blackbird	25 (e)	Salmonellosis	SCW
			Passerine, NOS			
KS	Lake McKinney	03/14/08-04/30/08	Lesser Snow Goose	550 (e)	Avian cholera	NW
			Mallard			
			Northern Pintail			
			American Wigeon			
			Green-winged Teal			
KY	Coal Run Village, Frankfort	03/25/08-03/26/08	American Crow	50 (e)	Undetermined	SCW
					Clostridium perfringens suspect	
ND	White Lake	06/20/08-07/14/08	Mallard	110 (e)	Salt toxicosis	NW
			Gadwall			
			Eared Grebe			
			Ruddy Duck			
			Franklin's Gull			
			Unidentified Teal			
			Northern Shoveler			
			American Wigeon			
			American Coot			
NE	Keith	05/26/08-08/30/08	House Sparrow	100 (e)	Viral Infection suspect	NW
NH	Sargents Purchase	05/04/08-05/29/08	Little Brown Bat	10 (e)	Predation,	NW
					Emaciation	

(e) = estimate; "suspect" = Diagnosis not finalized, but field signs and historic patterns indicate the disease.

Center for Disease Control (CDC), California State University at Stanislaus (CSS), Maryland Diagnostic Laboratory (MD), Michigan Department of Natural Resources (MI), Michigan State University (MSU), Montana Fish, Wildlife and Parks Diagnostic Lab (MT), No diagnostics pursued (NON), Nevada Dept of Agriculture - Animal Disease & Food Safety Lab (NVA), National Veterinary Services Laboratory, Ames IA (NVL), USGS National Wildlife Health Center (NW), Other (OT), Southeastern Cooperative Wildlife Disease Study (SCW), South Dakota University Diagnostic Laboratory (SD), University of California-Davis (UCD), Unknown (UNK), Washington State Disease Laboratory (WA), Wisconsin Veterinary Diagnostic Laboratory (WVL).
Written and compiled by: Anne Ballmann - Eastern US, Krysten Schuler - Western US, and Julia Hoeh - Technician.

To report mortality or receive information about this report, please contact the USGS National Wildlife Health Center, 6006 Schroeder Road, Madison, WI 53711

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

Species:

Avian:American Coot (*Fulica americana*); American Crow (*Corvus brachyrhynchos*); American White Pelican (*Pelecanus erythrorhynchos*); American Wigeon (*Anas Americana*); Black-bellied Whistling Duck (*Dendrocygna autumnalis*); Black-crowned Night Heron (*Nycticorax nycticorax*); Black-Legged Kittiwake (*Rissa tridactyla*); Blackpoll Warbler (*Dendroica striata*); Black-throated Blue Warbler (*Dendroica caerulescens*); Blue-Winged Teal (*Anas discors*); California Brown Pelican (*Pelecanus occidentalis californicus*); California Gull (*Larus californicus*); Caspian Tern (*Hydroprogne caspia*); Canada Goose (*Branta Canadensis*); Common Loon (*Gavia immer*); Common Merganser (*Mergus merganser*); Common Yellowthroat (*Geothlypis trichas*); Double-Crested Cormorant (*Phalacrocorax auritus*); Eared Grebe (*Podiceps nigricollis*); Eastern Bluebird (*Sialia sialis*); Franklin's Gull (*Leucophaeus pipixcan*); Gadwall (*Anas strepera*); Great Blue Heron (*Ardea herodias*); Great Egret (*Ardea alba*); Green-winged Teal (*Anas crecca*); Herring Gull (*Larus argentatus*); House Finch (*Carpodacus mexicanus*); House Sparrow (*Passer domesticus*); Laysan Duck (*Anas lay-sanensis*); Least Sandpiper (*Calidris minutilla*); Lesser Scaup (*Aythya affinis*); Lesser Snow Goose (*Chen*

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caerulescens); Magnolia Warbler (*Dendroica magnolia*); Mallard (*Anas platyrhynchos*); Mourning Dove (*Zenaida macroura*); Muscovy Duck (*Cairina moschata*); Northern Pintail (*Anas acuta*); Northern Shoveler (*Anas clypeata*); Ovenbird (*Seiurus aurocapillus*); Pine Siskin (*Carduelis pinus*); Purple Martin (*Progne subis*); Red Crossbill (*Loxia curvirostra*); Redhead Duck (*Aythya americana*); Red-tailed Hawk (*Buteo jamaicensis*); Red-Winged Blackbird (*Agelaius phoeniceus*); Ring-billed Gull (*Larus delawarensis*); Rock Dove (*Columba livia*); Ruddy Duck (*Oxyura jamaicensis*); Semipalmated Sandpiper (*Calidris pusilla*)

Mammalian:

Big Brown Bat (*Eptesicus fuscus*); Black-Footed Ferret (*Mustela nigripes*); Black-Tailed Prairie Dog (*Cynomys ludovicianus*); Eastern Pipistrelle Bat (*Pipistrellus subflavus*); Elk (*Cervus elaphus*); Gray Fox (*Urocyon cinereoargenteus*); Indiana Bat (*Myotis sodalis*); Little Brown Bat (*Myotis lucifugus*); Long-legged Bat (*Macrophyllum macrophyllum*); Mule Deer (*Odocoileus hemionus*); Raccoon (*Procyon lotor*); Red Bat (*Lasiurus borealis*); Skunk (*Mephitis*); White-Tailed Deer (*Odocoileus virginianus*)

Amphibian:

Plains Leopard Frog (*Rana blairi*).

Reptile:

Eastern Box Turtle (*Terrapene carolina carolina*).

WDA Section News

News from Europe

Paul Duff

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Ivan Vickovic and Branko Sostaric

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It was great having you in Rovinj, and hope to see you all in two years.

Tuberculosis in Cattle and Wild Boar in Catalonia, NE Spain

Ignasi Marco, Gregorio Mentaberre, Santiago Lavín.

Bovine tuberculosis caused by *Mycobacterium bovis* is a zoonotic disease distributed worldwide that affects a wide range of domestic and wildlife species. Despite the success of eradication campaigns, infection has persisted in many parts of the world. It has often been linked to wild mammal reservoir hosts. In 2004, an adult male wild boar, hunted at a Catalonian Hunting Reserve, presented lesions consistent with tuberculosis during an investigation into diseases in this species in Catalonia (NE Spain). It was the first description of the disease in a free-living wild species in NE Spain. In the same area, 150 free-ranging cattle co-existed in an extensive regime and the herd was known to be affected with the disease for several years. In 2005, the prevalence of tuberculosis in the wild boar from this area was estimated to be about 76%. It was decided to reduce the wild boar density in the affected area by means of hunting and test as much as possible. However, during 2006 and 2007 prevalence of the infection did not

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decrease either in wild boar or in cattle. In 2008, the animal health authorities decided to try to eradicate the disease by removing the cattle. Simultaneously, the reduction of wild boar densities has continued. There are many examples of wildlife reservoirs for bovine tuberculosis worldwide, which have been the frequent objective of control measures, such as by increasing the hunting pressure to reduce their densities. However, we have not found in the literature the elimination of cattle as a control measure to eradicate the disease in an area where tuberculosis was shared by domestic animals and wildlife. In this particular case, the difficulty to control the disease in a relatively small herd of cattle and in a relatively small area (316 ha) led to this decision. Further monitoring over coming years will assess if the measure has been successful to control the disease; or to assess whether the infection will be maintained in the wild boar population.

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Ljungan Virus in Wild Rodents

Bo Niklasson

Ljungan virus (LV), a member of the Parechovirus genus in the family *Picornaviridae* was isolated from one of its

wild rodent reservoirs the bank vole (*Myodes glareolus*), near the Ljungan River in central Sweden in the mid 1990s [1]. LV has since been found in a number of wild small rodents trapped at various locations across Europe. Virus isolates originating from voles trapped in the USA in the 1960s have also been identified as Ljungan virus [2, 3]. LV infected bank voles in captivity develop several different pathological signs and symptoms including diabetes [4, 5]. Studies on wild and colonized bank voles as well as studies on laboratory mice showed that stress

is an essential component in LV pathogenesis including the development of diabetes [6]. Infection and stress alone had minimal or no obvious negative effect on the animals while the combination of infection and stress caused disease [7]. This observation has led to the hypothesis that LV may play a role in cyclic rodent population regulation inducing the rapid density decline when population and stress level reach a peak [2]. Studies on

laboratory mice showed that more than half of the dams infected with LV during pregnancy and exposed to stress gave birth to young that died during the perinatal period. Malformation of the central nervous system including hydrocephaly and anencephaly was seen in some of these offspring [7]. The findings in wild animals followed up by experiments in laboratory animals prompted studies to determine if LV also plays a role as a human pathogen. Studies from Sweden have recently found LV in tissue from human cases of intrauterine fetal death and malformations [8, 9]. Another intriguing observation is the association between the incidence of diabetes, myocarditis and intrauterine fetal death in Sweden and the rodent density in the north of Sweden where rodent density show cyclic variations [10, 11]. As a control patients with diabetes, myocarditis and intrauterine fetal death in the north of Sweden where rodent density show cyclic variations were compared to patients in the south of Sweden, where the rodent population does not fluctuate. Association was absent, both between patients in the north vs. patients in the south and between rodent density in the north and patients in the south. It will be important to investigate LV from different parts of the world, in order to make a complete assessment of the genetic and antigenic variation of this new virus. We also suggest that LV is included in the diagnostic arsenal in both human and veterinary medicine so that the importance of this pathogen can be determined.

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The Pyrenean Chamois Population of Catalonia (NE Spain) Recovers

Ignasi Marcoa, Rosa Rosellb, Oscar Cabezóna, and Santiago Lavína

For the last decades, the Pyrenean chamois (*Rupicapra pyrenaica*) populations in the Spanish, French and Andorran Pyrenees have increased in number to about 48,000 chamois in 2000. However, in 2001 an outbreak of a previously unreported disease associated with Border Disease Virus infection (Genus Pestivirus, Family Flaviviridae) in Pyrenean chamois was considered responsible for an estimated decrease of 40-45 % in populations in the affected areas, within the National Hunting Reserve of Alt Pallars-Aran (Marco et al., 2007). This outbreak lasted for two years, 2001 and 2002, and it was the first of three severe mortality episodes that, up to now, have been reported. The second outbreak took place in early 2005, when a high mortality of chamois was observed at the National Hunting Reserve of Cerdanya-Alt Urgell, an area

close to the border with France, and about 40 km from the 2001-2002 outbreak. An estimated population decrease of 86% was reported. The third outbreak started in mid 2005 and spread to all the Cadí National Hunting Reserve until the end of 2007, producing an estimated cumulative decrease of nearly 63%. Last summer, the census performed each year at the National Hunting Reserves in Catalonia indicated a very slight increase in their numbers, after seven years of continuing decrease due to mortality of BDV-associated disease. 6,614 chamois were counted, while in 2007 the census yielded 6,560 chamois. Breeding success has also increased, which is also a good indicator of population recovery. However, if we look in detail at the epidemiological situation in the different areas, there are still some populations in which the trend is a decrease. We don't know if Border Disease Virus infection in chamois has negative effects on reproduction, as happens in sheep. These disorders could pass unnoticed, since abortions and perinatal deaths are difficult to study in this species. Therefore, reproduction parameters should be carefully assessed in the next years.

During 2008, only isolated cases of BDV-associated disease have been reported. In summary to date, the situation can be regarded with optimism. However, it has to be taken into account that the disease has become endemic in this and other populations and we don't know if it will have a significant impact on chamois population dynamics in the future (Pioz et al., 2007, Marco et al., 2008). Immunity at the population level may be an important factor that could explain why the disease has affected some areas and some others not, like the National Park of Aigüestortes and Sant Maurici and Freser-Setcases National Hunting Reserve. During the last years, we have observed a decrease of immunity in some of these areas and this could lead to new outbreaks of the disease in the future. However, there must be other factors that can influence the epidemiology of the disease that are currently being studied.

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International H5N1 HPAI Events: A Summary

Richard Irvine, Jill Banks, Vanessa Ceeraz, Bill Cox, and Ian Brown

H5N1 Highly Pathogenic Avian Influenza (HPAI) was not reported by any European Union (EU) Member State during the period July to September 2008, in either wild birds or poultry. However, on 10 October 2008, the detection of H5N1 HPAI was reported in domestic ducks on a single holding in Makersdorf, Saxony, close to the Polish border (OIE, 2008a). This was a result of apparently routine targeted virological surveillance sampling, rather than clinical presentation of disease. Concurrently, Eurasian H5 LPAI virus infections were detected in waterfowl in Leipzig zoo, Saxony and in a small mixed poultry holding near Leipzig (PROMED, 2008a). Current programmes of AI surveillance in EU wild bird populations have not resulted in the detection of H5N1 HPAI, but low-level maintenance in discrete local populations of wild birds cannot be discounted.

Preliminary phylogenetic analysis of H5N1 HPAI virus isolates from this most recent poultry outbreak in Germany indicates a high similarity to viruses detected in wild birds in the EU during early 2006 (and specifically an isolate obtained from a Tufted duck (*Aythya fuligula*) in Germany in 2006), and are therefore distinguishable from those H5N1 HPAI viruses associated with cases detected in both wild birds and poultry in Europe since June 2007. Further laboratory analyses continue. However, subject to confirmation this would indicate that the virus has been maintained largely

unchanged over a period of approximately 30 months, raising questions as to the mechanisms by which this might have occurred (Defra, 2008). In Great Britain, H5N1 HPAI was not detected from any of the 848 wild birds sampled and tested during July to September 2008. Evidence of infection with other avian influenza viruses was however detected from fifteen birds. An H3N8 virus was detected from a Mute swan (*Cygnus olor*) that had been found dead. LPAI H5 virus infection was detected from three wild birds (one Mute swan; two Teal, *Anas crecca*) that were legally trapped and sampled. Evidence of influenza A virus infection was also detected from a further ten legally trapped wild birds (eight Mallard ducks, *Anas platyrhynchos*; two Teal) and one wild bird that had been found dead (Herring gull, *Larus argentatus*) by Matrix gene RRT-PCR. H5 RRT-PCR and virus isolation in embryonated fowls'eggs were negative for these birds. As a result of increased scientific knowledge and practical experience in handling wild bird H5N1 HPAI incidents, Defra have confirmed changes to AIWBS activities in Great Britain for the 2008-09 survey period. Activities are focused on the patrolling of designated reserves by skilled wild bird ecologists and wardens. This is active all year round and provides enhanced screening and assessment of dead wild birds suitable for testing. Members of the public no longer need to report the finding of small numbers of dead wild birds, but are asked to remain vigilant for 'mass mortality' incidents involving 10 or more birds (in England and Wales), and report these to the Defra Helpline. There are separate arrangements for mass mortality events in Scotland, where findings of five or more dead birds are to be reported, and for Northern Ireland. Further information is available at: <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/wildbirds/survey.htm> Globally, reports of H5N1 HPAI have continued across three continents, including the Eastern hemisphere and Asia where disease is considered endemic, mainly affecting domestic poultry (UNFAO, 2008). Under reporting of disease remains a significant concern. In addition, on 7 July 2008, Egypt officially informed the OIE that H5N1 HPAI was endemic in the country (OIE,

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2008). Since 17 February 2006, Egypt has reported 1,086 outbreaks to the OIE, the majority of which have occurred in the Nile Delta region, and approximately ten million poultry have either died or been destroyed. In West Africa, Nigeria, Togo and Benin have also reported further H5N1 HPAI outbreaks in poultry (OIE, 2008; PROMED, 2008).

Submission to News from Europe

Material for publication in News from Europe can in-

clude recent wildlife disease outbreaks and new diseases in Europe, short case and meeting reports; job and scholarship announcements. We encourage submissions, and will help with the English language if required. The deadline for the next issue is May 2008. Please mail, fax or e-mail submissions to, Paul Duff, VLA Diseases of Wildlife Scheme, VLA Penrith, Merrythought, Calthwaite, PENRITH, Cumbria, CA11 9RR, United Kingdom, e-mail p.duff@vla.defra.gsi.gov.uk. Fax ++44(0)-1768-885314 /phone ++44(0)-1768-885295.

Training and Education

Postdoctoral Researcher, Cornell University

Postdoctoral Researcher: Studying climate effects on disease ecology. A postdoctoral position in the Department of Ecology and Evolutionary Biology at Cornell University. This position is funded by a new award from the Cornell Center for Sustainable Future for research on climate effects on disease dynamics in three parallel systems: sea corals, amphibian populations, and mosquito-borne diseases.

Primary responsibilities: of the postdoctoral researcher include 1) developing spatial and descriptive models of disease dynamics based on current datasets available for each system, and working collaboratively with climate specialists and biologists to create a climate-based forecasting tool, 2) analyzing results and writing manuscripts, 3) contributing to preparation of grant proposals for future work, and 4) coordinating projects and collaborations with other members of Cornell's ecology and evolution of infectious disease community.

To qualify, applicants should have a Ph.D. in ecology, epidemiology, or related biological field, demonstration of strong quantitative modeling

and writing skills, a record of consistent and high-quality publications, and the ability to work independently and collaboratively. Preference will

be given to applicants who have an understanding of ecological and population processes necessary for modeling of disease dynamics, as well as previous experience with statistical data analysis and modeling in the context of disease ecology.

Starting salary will be competitive and commensu-

rate with previous experience/expertise; position includes Cornell University Contract

Benefits: Funds are available for one year and renewable pending satisfactory progress. The position is available starting March 1, 2009;

starting date is negotiable. Review of applications will begin January 1, 2009 and continue until a suitable candidate is found.

To apply: Send a cover letter, CV, statement of research interests/experiences, and names and contact information for three references who are familiar with your work. Inquiries and applications

(PDF format preferred) should be e-mailed to Dr. Drew Harvell (cdh5@cornell.edu), Department of Ecology and Evolutionary Biology, Cornell University, Ithaca, NY-14853-2701.

Graduate Training in Wildlife Veterinary Pathology

The Department of Veterinary Pathology and the Canadian Cooperative Wildlife Health Centre (CCWHC) at the Western College of Veterinary Medicine, Saskatoon, Saskatchewan, Canada, has an opening for a veterinarian with wildlife disease and pathology interests to pursue a MS or PhD degree. The successful applicant will be expected to participate in the wildlife diagnostic service of the CCWHC and will be expected to undertake research related to wildlife diseases. The student will have ample opportunity to obtain anatomic pathology training in domestic animals and training to prepare for certifying examination of the Ameri-

Training and Education

can College of Veterinary Pathologists if desired. Various types of scholarship support are available. Qualified non-Canadian veterinarians are encouraged to apply. For further information contact via email: Dr. Gary Wobeser at <gary.wobeser@usask.ca> or Dr. Trent Bollinger at <trent.bollinger@usask.ca>

Postdoctoral Fellowship in Amphibian Pathology and Molecular Diagnostics

The Wildlife Disease Laboratories at the Zoological Society of San Diego are seeking a Postdoctoral Fellow in Amphibian Pathology and Molecular diagnostics in support of an Institute of Museum and Library Services funded project that will develop and refine tools necessary to control population-limiting infectious diseases (e.g. chytridiomycosis and Ranavirus infection) in amphibian survival assurance colonies maintained in zoological collections worldwide. The Fellow will be based in a newly established Amphibian Disease Diagnostic Laboratory within the Arnold and Mabel Beckman Center for Conservation Research at the San Diego Zoo's Wild Animal Park. The fellowship will provide exposure and/or training in a full spectrum of techniques applied to amphibian disease investigation including histopathology, real-time PCR and epidemiology. Training materials available for the fellowship are diverse and include diagnostic submissions from a variety of amphibian species recovery programs in the United States and Central America. Ideal candidates for this position will have a D.V.M. or equivalent degree and a minimum of two years post-DVM experience in disciplines that may include Anatomic Pathology, Epidemiology, Molecular Diagnostics or Microbiology. Opportunities to participate in the general zoo animal pathology diagnostic services at the San Diego Zoo and Wild Animal Park and/or to prepare for the certification examination in Veterinary Pathology are available depending on the interests and background of the applicant. The anticipated start date is negotiable, but the position will be available by July 2009. This is a 12-month program with an optional extension for an additional 12 months by mutual agreement. If you are interested please apply on line and e-mail your cover letter and curriculum vitae to Dr. Allan Pessier.

Closing date February 2, 2009

Allan P. Pessier, DVM, Dipl. ACVP

Wildlife Disease Laboratories
Zoological Society of San Diego
P.O. Box 120551
San Diego, CA 92112-0551
(619) 231-1515, Ext 4510#
apessier@sandiegozoo.org

Third Student Workshop of the European Student Chapter of the WDA

Josanne Verhagen, Miklos Gyuranecz, and Leslie Reperant

The Third EWDA Student Workshop will be held at the conference centre of the Merieux Foundation, Les Pensieres, in Veyrier-du-Lac, France, from March 19th to March 22nd, 2009! The central theme of the workshop is Infectious Diseases at the Wildlife / Domestic Animal / Human Interface.

The EWDA Student Workshop aims at giving advanced undergraduate and graduate students the opportunity to meet and share the experience of internationally renowned scientists working at the crossroads of human and animal health. During three days, students and professionals will share their knowledge through keynote lectures and outstanding oral communications, panel discussions, special sessions and student presentations. Special guests will be invited to enlarge the scope of the discussions, and will include representatives of leading Institutions supporting health initiatives, experts from pharmaceutical companies, European and governmental representatives, journalists, and more!

The objective of the workshop is to enhance the scientific skills of participating students, from study design to publication to media release, and offer a comprehensive view of the outlets and duties of the next generation of health scientists, under the One World – One Health framework.

The Third EWDA Student Workshop is open to graduate students (MSc and PhD) working on disease ecology in its broadest sense (from pathogenesis to epidemiology to control and management), and undergraduate students in their final years considering pursuing disease ecology research. Medical, veterinarian, biological, ecological, mathematical and other backgrounds are all welcome! Selection of 40 participating students will be based on a CV, motivation letter, reference letter from a Professor, a poster abstract if MSc

Training and Education



envirovet SUMMER INSTITUTE 2009



Terrestrial & Aquatic Wildlife & Ecosystem Health

An Intensive Course Providing Knowledge, Skills, Mentors, & Opportunities for Veterinary Careers that Enable Recovery of Free-Ranging Wildlife Populations & Protection of Public Health

Application Deadline is February 1, 2009
<http://vetmed.illinois.edu/envirovet/>

Session One: June 16 to July 19, 2009

Issues & Techniques for the Developed World with Outreach to Developing Countries

White Oak Conservation Center
 St. Catherines Island
 Harbor Branch Oceanographic Institution

Session Two: July 19 to August 10, 2009

Issues & Techniques for the Developing World

Tanzania National Parks
 Sokoine University, Faculty of Veterinary Medicine
 Zanzibar



Executive Director
 Dr. Val Beasley
 Department of Veterinary Biosciences
 College of Veterinary Medicine
 University of Illinois at Urbana-Champaign
 Email: val@illinois.edu
 Phone: 217.333.9360

Director, Envirovet Terrestrial
 Dr. Kirsten Gilardi
 Wildlife Health Center
 School of Veterinary Medicine
 University of California-Davis
 Email: kvgilardi@ucdavis.edu
 Phone: 530.752.4896

Course Fee for 2009 is \$7,500.
 Includes food, lodging, and ground transport at all study sites, plus airfare to the developing country location. Students are responsible for transportation to/from Florida.



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or PhD student and grade transcripts of latest semester if undergraduate. Willing undergraduates are welcome to send a poster abstract. Experience in disease ecology research is recommended. Application deadline: January 15th, 2009

More information, click here:

<http://sites.google.com/site/europeanstudentchapterofwda/Home/tools-and-events/ewda-student-workshop/upcoming-workshop>

For any queries, contact us at ewdastudent@gmail.com

Aquatic Animal, Wildlife, & Zoological Medicine Combined Internship Program

St. Matthew's University, School of Veterinary Medicine, and Boatswain's Beach/Cayman Turtle Farm Grand Cayman, Cayman Islands

The intern works under the supervision of faculty members at SMU and will be responsible for working with a wide variety of marine and terrestrial species (30% captive sea turtles and other reptiles, 30% fish, eels, and elasmobranchs, 30% avian and small mammal, and 10% wildlife). The intern position is a non-degree graduate student program leading to an official University Certificate of Internship in Zoologic and Aquatic Medicine from SMU.

Interns are encouraged to attend a veterinary conference, as well as college or university seminars or special lectures throughout the year. They are further encouraged to publish case reports or research papers in veterinary medical journals.

Responsibilities of this role:

- Participate in the daily activities of the medical service of the park, including primary case responsibility and case rounds with park staff and SMU faculty.
- Report to the Park's Chief Scientific Officer, the Manager of the Turtle Farming unit, the Curator of the Terrestrial and Education Exhibits Unit, and the Curator of the Marine Exhibits Unit, to establish and implement protocols for the proper husbandry and care of the animals.
- Work with the Water Chemist to establish and maintain optimal water quality parameters for the health of the fish and guests.

- Assist in determining research priorities and become involved as necessary in any research projects supported by the facility.
- Determine medication regimes and treatment methods as necessary.
- Establish industry standard record keeping.
- Plan/participate in research and conservation programs related to the goals of the facility.
- Prepare monthly reports for distribution to all relevant managers.
- Train and update husbandry staff in areas of basic medical care to ensure staff comprehension in cases of care for minor incidents.
- Provide assistance in instruction and supervision of veterinary students
- Provide emergency care for the animals in the park.

Requirements/Qualifications: Veterinary licensure in North America or the United Kingdom. Preference will be given to candidates with experience in a zoo, aquarium or exotic animal medicine OR who have served an academic internship in large or small animal medicine.

Salary: \$36,000 CI/yr plus benefits. Intern must register as a graduate student with SMU and pay \$725 US in tuition per semester. Student housing available.

Application procedure: A curriculum vitae and 3 letters of reference should be sent to Heather W. Barron, DVM, Dipl. ABVP-avian at hbarron@smu.ky by March 1, 2009. Applicants will be informed of decisions by March 4. Position starts May 4, 2009.

7th Annual Exotic Animal Symposium—University of Missouri

January 17-18, 2009 - 7th Annual Exotic Animal Symposium, hosted by the University of Missouri Zoo, Exotics, and Wildlife club. Covering topics from fish medicine to elephant reproduction, including wet labs and a side trip to a nature conservation station. Visit our website at <http://www.cvm.missouri.edu/exoticsymposium/> For additional Information: zooclub@missouri.edu.

This meeting announcement is listed with others through 2009 at <http://www.aawv.net/meetings.html>.

Employment

Wildlife Health Specialist Veterinary Diagnostician

Approximate Salary: \$59,194.80 to \$88,948.80

Permanent, full time vacancies as they may occur in this geographical location. In order to receive consideration, applicants must indicate their availability to work in one or more geographic locations.

Department: Wildlife, Division: Wildlife

Location: Reno, Sparks, Elko, Nevada, USA

Applications accepted until recruitment needs are satisfied. Qualified individuals are encouraged to apply immediately. Lists of eligible candidates will be established and hiring may occur early in the recruiting process. Recruitment will close without notice when a sufficient number of applications are received or a hiring decision has been made.

Wildlife Health Specialist performs a variety of duties to enhance and maintain the health of the State's wildlife; develops and administers wildlife disease and nutritional surveillance strategies; designs wildlife health studies; and provides technical expertise and science-based recommendations to department management in regard to new and established programs, projects, and activities.

Qualifications:

- Doctor of Veterinary Medicine degree from an accredited college or university and three years of animal disease diagnosis and pathology experience.
- Possession of licenses by the Nevada Pharmacy Board and the Nevada State Board of Veterinary Medicine to administer medicines including controlled substances is required within 12 months of appointment and as a condition of continuing employment.
- A license to practice veterinary medicine issued by the Nevada State Board of Veterinary Medicine is required within 12 months of appointment and as a condition of continuing employment.

It is essential that applications include extensively detailed information with time frames regarding education and experience. The most qualified applicants will be contacted by the hiring agency for interview. Announcement Number 8084 Posted 12/01/08, Direct Inquiries to: Kristina Ross (775)688-1522 or email

krisr@ndow.org For more information see: <https://nvapps.state.nv.us/NEATS/Recruiting/ViewAnnouncement.aep?recruitmentId=8084>

Veterinary Epidemiologist - Battelle

Battelle is a world leader in science and technology research. Atlanta Analytical Services (AAS) is a part of the Chemical and Advanced Material Solutions Product Line and provides laboratory support to the Centers for Disease Control and Prevention. The position is located in the National Center for Immunization and Respiratory Diseases (NCIRD), Influenza Division (ID) at the Roybal Campus, Atlanta, Georgia. AAS is working with HHS/CDC in supporting efforts for pandemic influenza preparedness. Rapid diagnosis and genetic characterization of circulating viral strains coupled with epidemiologic surveillance are essential components to increase influenza pandemic readiness and response. AAS is supporting CDC in research and development efforts to eliminate gaps in influenza by increasing the diagnostic tools available to clinical providers, public health laboratories and domestic and international partners, by monitoring influenza viruses in animal and human populations through molecular technologies, traditional surveillance strategies and incorporating laboratory surveillance with classic epidemiology to facilitate detection of new epidemic variants and provide complete and accurate information about influenza viruses posing a pandemic threat.

Position Summary: AAS is seeking a researcher to work in the Epidemiology and Prevention Branch, Influenza Division, CDC who has experience in veterinary medicine to develop and conduct surveillance and epidemiologic studies of human, animal and zoonotic influenza. The candidate will lead and coordinate activities in the Influenza Division to further investigate human cases of novel influenza A virus infections, (usually considered animal viruses) and provide coordination between the epidemiology and laboratory branches within the Influenza Division and also participate in new or ongoing studies in the Influenza Division related to influenza at the animal-human interface (AHI). The candidate will also provide input into communication materials and

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reports of novel influenza A in humans. The selected candidate will work in the Atlanta Metropolitan Area at the Centers for Disease Control and Prevention (CDC) Roybal Campuses. Salary will be determined based on education and experience. A full benefit package will be provided. Relocation support will not be provided. The selected candidate will have to obtain and maintain a CDC security clearance.

Position Responsibilities: The candidate will provide epidemiological support for novel Influenza A research, being studied at CDC and as part of one of the 4 World Health Organization's Collaborating Centers for Influenza Surveillance and Research. Specific duties will include:

1. Serve as the influenza technical and scientific lead for novel influenza A virus surveillance and investigation activities within the Epidemiology and Prevention Branch, Influenza Division
2. Lead and coordinate activities in the Influenza Division to further investigate human cases of novel influenza A virus infections; collaborate and communicate with state epidemiologists and veterinarians, USDA and other CDC researchers in such studies
3. Improve the development of influenza AHI surveillance of novel influenza A virus infection and develop plans and standard operating procedures for responding to human cases of novel influenza A virus infection through collaboration with federal, state, local authorities and Influenza Division colleagues and other groups
4. Work with other scientists in the development, design, and evaluation of operational research and demonstration projects intended to determine the most efficient and cost-effective methods of improving surveillance of novel influenza A virus infection
5. Develop operational policies and plans for surveillance, prevention and preparedness activities, to rapidly detect and respond to novel influenza A virus infection or outbreaks at the AHI occurring in the United States
6. Collaborate with scientists on the design, presentation, and evaluation of research and epidemiologic studies of novel influenza A virus infection and de-

velop recommendations impacting public health

7. Collect, analyze and interpret data; prepare reports for publication and presentation; participate in seminars and conferences and communicate progress orally and in writing to the technical monitor and senior scientist

Required Qualifications: Candidate must demonstrate the following minimum requirements in order to be forwarded for consideration:

- A doctorate in veterinary medicine. A mastery knowledge of veterinary medicine and public health
- Knowledge of epidemiology, ecology, pathophysiology, and prevention and treatment of influenza virus infections in animals (including wildlife) and humans
- Knowledge of the principles, concepts, methods, and techniques for the diagnosis of influenza as well as zoonotic diseases.
- Ability to perform epidemiologic studies and interpret results of studies to advance public health and scientific knowledge
- Ability to coordinate program evaluation and recommend improvements
- Ability to review, evaluate and interpret world literature on novel influenza A and apply this knowledge to ongoing work
- Posses excellent communications skills both orally and in writing so as to make clear, convincing presentations or recommendations, represent the client, provide guidance, and respond to inquiries
- Must have strong interpersonal relations and ability to relate to divergent scientists to foster and maintain a cooperative relationship with client's partners.

A bioterrorism risk assessment for handling select agents may be required. Preferred qualifications include experience with influenza epidemiology and novel Influenza A. Applicants may forward CVs to pasztorf@battelle.org

Born Free USA Primate Sanctuary Director

Born Free USA united with Animal Protection Institute ("Born Free USA") is a national non-profit animal advocacy organization, working to end animal cruelty and exploitation through legislation, litigation,

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public education, and direct care. Born Free USA provides "hands-on" care for animals at the Born Free USA Primate Sanctuary located in Dilley, Texas, where more than 500 primates, many rescued from abusive situations in laboratories, roadside zoos, and private possession, live in as natural an environment as possible with minimal human interference. The head office of the organization is in Sacramento, CA, with an office in Washington DC.

Born Free USA boasts a 40 year history of successful animal advocacy. Our main campaign activities include: animals in entertainment, with a focus on zoos and circuses; the international wildlife trade; trapping and fur; and working to prohibit the keeping of exotic animal as pets.

Born Free USA is currently seeking an experienced, energetic and hard-working individual (or possibly a couple) to manage the continued development and day-to-day operational activities of the Born Free USA Primate Sanctuary in Dilley, Texas. This position reports to the CEO of Born Free USA or to the Senior Executive as directed.

Applicants should be committed to the goals of the organization. The working environment and culture of the organization is friendly and team-oriented.

Responsibilities include:

- Overall responsibility for the daily care of the animals at the Sanctuary, including feeding, habitat cleaning, maintenance of grounds and ensuring receipt of veterinary care as required and in line with official policy.
- Manage the on-site staff to ensure efficient and effective delivery of all operations at the Sanctuary.
- Develop and agree the annual operating budget with the CEO and ensure Sanctuary expenditures are managed and reported in line with the annually agreed budget.
- Maintain all records including; animals (numbers, health, behavior, status), equipment, utilities, insurance, buildings status, supplies and so forth relating to the Sanctuary.
- Ensure that all necessary equipment, feed and other supplies are available for Sanctuary use.
- In line with any protocols agreed with the CEO, manage volunteer support as appropriate.
- Provide regular updates and reports to the CEO as directed.

- Provide strategic input to the CEO and the Board for the continued development of the Sanctuary to ensure its ability to deliver high standards of animal welfare and quality of life for all residents throughout their lives.
- In line with relevant Board Policies and in consultation with the CEO make appropriate decisions regarding new residents. Liaise with the relevant individuals, outside bodies, law-enforcement agencies, etc.
- According to an agreed schedule, provide Born Free USA head office with text and images for public relations and fundraising purposes.
- In consultation with the CEO, act as spokesperson and contact point for the Sanctuary. Deal with all Sanctuary-related correspondence.
- Oversee all new construction to ensure it is completed on time, to specification and on or under budget (where possible).

Qualifications:

- Relevant qualifications (preferably veterinarian) in animal care (primates) and/or 3+ years experience at senior level managing/supervising the operation of an animal rescue and care facility.
- Must reside on Sanctuary property. Housing is provided.
- 3+ years experience of financial management of a project or program (budget, cash flow, expenses, operational costs, capital expenditure, etc.).
- Relevant experience directly managing staff.
- Knowledge of proper record-keeping practices.
- Working knowledge of general construction including plumbing, carpentry and electrical.
- Risk management skills including an understanding of relevant safety procedures and protocols to ensure operations are undertaken within a safe working environment.
- Excellent written and oral communication skills. Presentational skills a plus.
- Ability to prioritize daily tasks as needed and to apply adaptive management when necessary.
- Should possess the following skills and attributes: self-motivation, creativity, planning, multi-tasking, organizational, leadership, problem-solving, collegiality.
- Must be able to carry out the physical demands of the job.

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- Must share, uphold, and further the organization's vision and philosophy with respect to the goals and purpose for the Sanctuary, as well as aspire to the highest standards relating to the care of non-human animals.

Compensation: Salary commensurate with experience; excellent benefits package, including health insurance, paid vacation, and dental/vision reimbursement. This job is open to US citizens. Born Free USA is an Equal Opportunity Employer.

To Apply: Please send resume and cover letter by Email to Jessica Stout. jessica@bornfreeusa.org; fax to 916-447-3070, or mail to Born Free USA, c/o Human Resources, P.O. Box 22505 Sacramento, CA 95822.

Avian Toxicologist Opening – Bayer Crop-Science

Bayer CropScience is one of the world's leading innovative crop science companies in the areas of crop protection, non-agricultural pest control, seeds and plant biotechnology. We are seeking a highly motivated candidate to fill an anticipated avian toxicology opening within our Global Ecotoxicology Department. All applicants are expected to possess excellent communication and team skills and must be willing to work independently.

Position type: 1-2 year assignment with possible conversion to permanent at our research park in Kansas

Job description: You will design and oversee avian laboratory studies needed to achieve and maintain regulatory approvals for BCS products. You will develop partnerships within the academic, regulatory and industry communities and incorporate innovative and progressive approaches to avian effects testing and risk assessments. You will assist in the conduct of endangered species risk assessments. The incumbent will:

- Partner with other Bayer CropScience scientist to develop strategies and testing plans to support terrestrial (avian) risk assessments;
- Assist in data development and risk assessments involving terrestrial vertebrate endangered species;
- Provide scientific leadership in the experimental design of non-routine avian toxicity studies;
- Take an active role in the internal development of new testing methodologies to meet evolving guideline requirements;

- Assist in study protocol writing, data analysis and interpretation and report writing.
- Your qualifications: Higher degree (Ph.D. preferred) in avian toxicology or related subject.
- Experience with animal studies which may include dosing, animal observations, data collection, data analysis and reporting;
- In addition to a strong knowledge of applied avian toxicology, a background in ecology is also desirable
- Strong knowledge in bio-statistical analysis
- Basic understanding of GLP requirements;
- Proficiency with Windows, MS Office (Excel, Word, Access and Power Point) and statistical software;
- Ability to prioritize and adjust to a frequently changing environment;
- Some travel required

Contact: Matt Kern

(matt.kern@bayercropscience.com) or David Fischer (david.fischer@bayercropscience.com)

Pennington Endowed Chair for Wildlife Diseases—Louisiana State University

Location: The position will be located at the Bob R. Jones Idlewild Research Station (LSU AgCenter Southeast Region) near Clinton, Louisiana; however, depending on successful applicant's area of expertise, he/she will have a shared appointment in either the School of Renewable Natural Resources or the Department of Veterinary Science on the LSU AgCenter's Baton Rouge campus. The research station has 1,100 acres of woodlands, 70 acres of ponds and lakes, and 75 acres for the maintenance of captive white-tail and red deer herds. Opportunities for collaboration with faculty members in the LSU School of Veterinary Medicine are available and encouraged.

Position Description: The successful applicant will develop new and /or improved technologies to identify and manage diseases of Cervid species according to sound environmental and economic principles. The program should be designed to benefit the sportsmen, landowners, governmental agencies and businesses associated with deer management in Louisiana and throughout the nation.

General Information: Long known as the "Sportsman's Paradise" Louisiana has been recog-

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nized for its natural resources including its diverse wildlife component. Louisiana's wildlife contributes financially to the state as a whole (\$31 million in annual sales and taxes, 2006) and to its citizens directly supporting in excess of 12,000 jobs with a total economic effect of \$1.2 billion annually (2006). The bulk of this interest is divided between waterfowl and upland game, with the largest game component being whitetail deer. In addition to the native herds, there is a growing interest in captive herd management with an increase of 140% in captive herd licenses issued over the past five years, with an associated increase of 400% in fenced acres.

Qualifications: PhD in wildlife or range management; veterinary science, veterinary medicine, microbiological sciences, epidemiology, medical/veterinary entomology or closely related field. The successful applicant must have record of professional accomplishments in the area of wildlife diseases to warrant appointment to the rank of professor and member of the LSU Graduate Faculty. Additional requirements include 1) a national reputation in his/her academic discipline, as demonstrated by publications in peer-reviewed and popular periodicals and competitive funding from governmental agencies, stakeholder individuals/groups and industry; 2) leadership roles in professional organizations in his/her academic discipline and in professional organizations associated with wildlife improvement; 3) record of collaborations with wildlife enthusiasts and colleagues in other academic disciplines who conduct research and outreach activities associated with wildlife improvement; 4) record of excellence in graduate education and graduate student-mentoring; and 5) strong evidence of

participation in multi-state, multi-agency, and multi-disciplinary programs.

Salary and Benefits: Salary will be commensurate with qualifications and experience. The LSU AgCenter has an attractive benefits package with a wide variety of benefit options. Benefits offered include retirement, multiple medical insurance options, supplemental insurances (dental, life, long-term disability, accident, vision, long-term care, etc.), Tax Saver Flexible Benefits Plan (saves tax dollars on some child care and medical expenses), university holidays (14 per year, typically includes a week off at Christmas), generous annual (vacation) and sick leave benefits, Employee Assistance Program, and possible educational leave and tuition exemption for coursework at campuses of the LSU System. Specific benefits depend on job category, percent effort and length of employment.

Application Deadline: February 1, 2009 or until a suitable candidate is identified. Submit a letter of application, and full resume including a statement of research interests and goals, original transcripts and have three letters of reference along with address, email address and phone number of references sent to: Dr. Dearl Sanders, Chairman of the Search and Screening Committee/Bob R. Jones Idlewild Research Station 4419 Idlewild Road, Clinton, La. 70722

Phone: 225-683-5848; Fax: 225-683-3281

Email: dsanders1@agcenter.lsu.edu

Web Site: www.lsuagcenter.com

Meetings and Conferences



The Utah Division of Wildlife Resources would like to extend an invitation for you to attend the 3rd International Chronic Wasting Disease Symposium to be held in beautiful Park City, Utah on July 22-24, 2009. The theme for this symposium is "CWD - Advancing

the Science and Developing the Tools". As new research continues to broaden our understanding of CWD, wildlife managers have been presented with new and unique challenges that necessitate a fresh look at how CWD should be managed in cervid

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populations. This symposium will explore issues such as prion research and biology, management and control of CWD in wild and captive cervids, human dimensions of CWD, and CWD surveillance, just to name a few. The accommodations at the Park City Marriot are those of a First-class mountain hotel, and symposium registration includes breakfast, lunch, snacks, and a delicious banquet. Park City, Utah is a beautiful, historic Rocky Mountain town and premier summer vacation destination located only 36 miles from the Salt Lake International Airport. It is a great location to combine work and family, vacation, or to use as a starting point to tour some of the 7 National Parks of southern Utah that are within a 4-10 hour drive from Salt Lake City. Sign up now to take advantage of early registration pricing for this unique and informative symposium!

Please visit our website at https://www.regonline.com/cwd_symposium for more information and to take advantage of early registration pricing today!!! Please feel free to distribute to anyone that may be interested in attending this exciting symposium. At this time we are also making a call for contributed presentations and posters and invite submission of abstracts for contributed oral presentations and posters. The deadline is February 20, 2009. Please visit our website at Call for Contributed Presentations and Posters http://www.regonline.com/cwd_symposium for more information and guidelines



2009 Wildlife Disease Association Conference

August 2 – 7th, 2009

Semiahmoo Resort and Spa in Blaine, Washington

Mark your calendars now and we will ensure that you experience the best of the Pacific Northwest!

The luxurious, but affordable Semiahmoo Resort and Spa has been reserved for WDA 2009. This beautiful sea-side resort, set at the end of a mile-long sandy spit, is located about half way between Seattle, Washington and Vancouver, British Columbia. It is easily accessible from either international airport. Rooms are reasonably priced, lunches served outside overlooking Mt. Baker will be included with your registration and the picnic will be on the beach. 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 sunrise and sunset beach walks, wildlife watching from the grounds of the resort, whale watching, kayaking, salmon fishing, and hiking in the North Cascades wilderness. Watch the WDA website for more information.

