



April 2008

Pauline Nol, Editor

Newsletter of the Wildlife Disease Association



Members' Corner

Tragic Loss: Fatal Pneumonic & Septicemic Plague in a Wildlife Biologist

Elisabeth Lawaczeck, DVM, State Public Health Veterinarian, Arizona Department of Health Services

WDA Conference

In August 2007, while attending the Wildlife Disease Association meeting in Colorado, I learned that plague was affecting mountain lions in Western U.S. As a public health veterinarian in Arizona where plague is endemic, I couldn't help but become concerned whether wildlife biologists working with mountain lions and bobcats were taking precautions. Human cases have been documented due to direct contact with domestic cats but very rarely with wild cats^{1,2}. At the time, Dr. Shender from Arizona

Inside this issue

<i>WDA News</i>	4
<i>WDA Students</i>	6
<i>News From the Field</i>	9
<i>WDA Sections</i>	15
<i>Training and Education</i>	20
<i>Meetings and Conferences</i>	22

Game & Fish Department and I were working on concerns for possible exposures of wildlife staff to rabies, but plague as a direct zoonosis was only mentioned in passing, as most human cases are due to transmission through flea bites. During the late summer months of 2007, plague activ-

ity was on the rise in northern Arizona with Flagstaff experiencing prairie dog losses confirmed to be due to *Yersinia pestis*, a domestic cat case from Prescott, and one human case from northeastern Arizona. Due to these findings, Arizona Department of Health Services (ADHS) was in communication with the Arizona Game & Fish Department, briefly with the National Park Service, and repeatedly with local animal control agencies and small animal veterinarians to enhance surveillance and awareness for plague.

Unexplained Death

On November 2, 2007, a 37-year old wildlife biologist was found deceased in his residence on the South Rim of Grand Canyon National Park. The National Park Service (NPS) and U. S. Public Health Service (USPHS) began an immediate investigation and enlisted the assistance of the Coconino County Department of Health Services who notified ADHS of the unexplained death and that the body was being transferred to the Coconino County Medical Examiner. Due to the patient history, clinical signs, and geographic location, pneumonic/septicemic plague and hantavirus pulmonary syndrome were top differential diagnoses. USPHS and NPS staff investigated his cause of death, which was eventually diagnosed as pneumonic plague.

Investigation

The investigation included interviews of medical clinic staff, colleagues, and friends, review of medical records, and a visit to the biologist's home. The patient had no chronic medical problems and a one-day history of chills, cough, streaks of blood in sputum, mild

Members' Corner

nausea, and muscle aches. Upon examination, the patient had fever of 102F, oropharynx was slightly red, lungs were clear to auscultation, and no lymphadenopathy was noted. Patient was negative on a rapid flu test, diagnosed with a viral syndrome, and told to return if symptoms worsened. The wildlife biologist did not state what his duties or activities were leading up to his illness and the healthcare provider did not inquire about his activities. Based on interviews with friends and colleagues, his symptoms progressively worsened over the next 36 hours. His last known interaction was on the evening of October 31, 2007. Colleagues reported that the patient had direct contact with wild rodents one week prior to illness, while he assisted with rodent removal at a historical building on the South Rim. The patient had also necropsied a mountain lion carcass five to six days prior to his clinic visit without wearing gloves or respiratory protection, and had exposure to rodent fleas through routine job activities. Due to these exposures and the clinical history, plague and hantavirus were top differential diagnoses. NPS & USPHS provided a 7 day course of prophylactic antibiotics to approximately 49 close contacts with the patient while he was symptomatic. Close contacts of patients were also told to watch for symptoms consistent with plague and to seek medical attention as soon as possible if they became symptomatic.

Upon autopsy, the medical examiner noted pneumonia with hemorrhagic fluid in and patchy consolidation of the lungs. The medical examiner submitted specimens to Arizona State Health Laboratory and the Centers for Disease Control and Prevention (CDC) in Atlanta and Fort Collins where infection with *Y. pestis* was confirmed. Further examination of brain tissues at CDC demonstrated evidence of *Y. pestis* in the meninges. Specimens from the mountain lion were also submitted to CDC in Fort Collins and were positive on culture for *Y. pestis*. DNA from the isolate from the mountain lion and the wildlife

biologist matched on pulsed field gel electrophoresis. A field survey of the rodent population along the South Rim in areas surrounding buildings was conducted, and no current losses of rodent population were noted. None of the contacts of this case contracted plague.

Discussion

Yersinia pestis is enzootic in western United States. Plague activity primarily occurs at elevations above 4,000 feet elevation for most western states, but can occur in lower elevations in coastal mountain ranges of the west coast. Since 1900, an average of 12 to 14 human cases are reported each year to CDC³. In the U.S., 85% to 90% of plague cases present as bubonic form, with primary pneumonic plague cases less than 10% of cases⁴. Most human cases occur due to transmission via flea bites. However, 20% of human cases where the mode of transmission is known are from direct contact with infected mammals, including domestic cats².

Due to preying on wild rodent species which are reservoirs for plague, wild feline carnivores are at increased risk for plague and can be a source of transmission to wildlife biologists. This tragic case highlights the elevated risk of zoonosis transmission for wildlife biologists who have direct contact with wild animals.

In the winter 2007 issue of *The Wildlife Professional*, Dr. James Mills and other CDC scientists wrote an article "Minimizing Infectious Disease Risks in the Field"⁵. The authors include reminders that minimizing risk in the field should include pre-trip vaccinations and attention to environmental conditions such as "inadequate or rustic housing at field stations" with resulting risks for exposure to vectors such as mosquitoes, ticks, and rodents, as well as foodborne & waterborne diseases. Some general guidelines worth review are provided on avoiding contact with animal fluids and excreta such as blood, saliva, urine, and feces. Wearing adequate clothing, boots,

Members' Corner

goggles, and impermeable gloves while handling animals, traps, and specimens are mentioned. Insect repellent should be applied along pant and shirt cuffs and along button lines prior to field work during the arbovirus season and year round prior to handling animals or nesting material. Personal protective equipment such as face shields or a combination of goggles and a mask should be donned to protect mucous membranes when performing duties that may generate droplets. PPE to protect the airways such as N-95, powered air purifying respirator (PAPR), or other respirators are discussed specifically pertaining to handling rodents to reduce risk of exposure to hantaviruses and other viral hemorrhagic fevers⁵⁻⁷. Similar PPE is recommended when handling bats in certain regions of the world due to certain filoviruses and henipaviruses⁵. I wholeheartedly agree with the author's closing statements: "Wildlife biologists are encouraged to consult with their institution's health and safety professionals to determine the appropriate safety precautions to be use for their specific work." Occupational health staff or industrial hygienists can assess the risks and recommend PPE, associated training, and vaccinations appropriate for the duties, project, and geographic area.

All agencies involved with this plague case agreed on the need for increased education and awareness of wildlife biologists on zoonoses in general (not just plague and rabies) and proper use of PPE. I hope this case will lead to increased training and education for wildlife biologists nationwide and that it stimulates conversations among wildlife biologists, wildlife veterinarians, occupational health staff, and public health officials on ensuring training and education on vector-borne and zoonotic diseases and the use of personal protective equipment. I think the wildlife biologist who lost his life, his family and friends - would wish for that as well.

Comments can be directed to: Elisabeth Lawaczek, DVM, State Public Health Veterinarian, Arizona Department of Health Services, 602-364-3852, lawacze@azdhs.gov

The collaboration between NPS, USPHS, CDC, Arizona Department of Health Services, and Coconino County Department of Health Services was critical in the rapid and thorough investigation of this case.

1. Gage, KL et al. Cases of Cat-Associated Human Plague in the Western US, 1977-1998. *Clinical Infectious Diseases* 2000; 30: 893-900.
2. Poland JD, Barnes A.M, Herman JJ. Human Bubonic Plague from Exposure to a Naturally Infected Wild Carnivore. *American Journal of Epidemiology* 1973; 97: 332-337.
3. Heyman, DL, et al. *Control of Communicable Diseases Manual*. 2004; 18th ed: 407.
4. Levy, CE and Gage KL, Plague in the United States, 1995 – 1997. *Infections in Medicine*, January 1999.
5. Mills, JN et al. Minimizing Infectious Disease Risks in the Field. *The Wildlife Professional*. Winter 2007. The Wildlife Society.
6. [CDC. Hantavirus pulmonary syndrome---United States: updated recommendations for risk reduction. MMWR 2002;51\(No. RR-9\):1--12.](#)
7. Mills, JN et al. Guidelines for Working with Rodents Potentially Infected with Hantavirus. *Journal of Mammology* 1995; 76(3): 716-722



WDA 2008Call for Papers!!!

2008
WDA
Edmonton



Those wishing to contribute a paper or poster for consideration as a presentation at the 2008 WDA conference in Edmonton, August 3-8 should submit an abstract no later than May 1, 2008 via the online submission process provided at [http://](http://www2.biology.ualberta.ca/parasites/WDA08/index.html)

www2.biology.ualberta.ca/parasites/WDA08/index.html. Each abstract will be limited to no more than 225 words (including names and addresses!) and will be accepted only in the format identified in the abstract submission form. In particular, abstracts for student competition must be suitably identified **and must also be submitted to the Chair of the Student Awards Committee**. Working through the online form you will be asked to provide the name and email of the presenter, name and address of all authors, underline the name of the presenter, indicate which topic area and session (oral or poster) you prefer, and whether the abstract is for consideration in student competition.

Those actually presenting the paper or poster must register for the conference no later than May 25, 2008 before the abstract will be considered for inclusion in the program. A maximum of 2 (two) abstracts will be accepted from any one individual, only one of which can be an oral presentation. Oral presentations will be limited to a maximum of 15 minutes, including time for questions and discussion. Presentations should be compatible with an LCD projector connected to an IBM computer with PowerPoint software and displayed on one screen. Additional visual aids must be

requested when the abstract is submitted. See page 23 of this newsletter for more Conference details.

Editor for the Journal of Wildlife Diseases

The Wildlife Disease Association (WDA) is seeking an editor for the Journal of Wildlife Diseases (JWD), an interdisciplinary, international, quarterly, peer-reviewed journal. The mission of the Wildlife Disease Association is "to acquire, disseminate, and apply knowledge of the health and diseases of wild animals in relation to their biology, conservation, and ecology, including interactions with humans and domestic animals". The JWD is the primary method by which the WDA disseminates scientific information. It is printed in hard copy and electronically on-line. The editor provides management and scientific oversight for the JWD. This includes management of manuscripts submitted for consideration, working with a panel of assistant editors representing appropriate disciplines in scientific review of submitted manuscripts, interacting with authors to facilitate publication of high quality scientific information, and making editorial decisions on manuscripts that are published. Management of manuscripts includes use of specifically developed software. Approximately 50% time commitment to the JWD is necessary. An editorial assistant (approximately 50% time) works with the editor to manage flow of manuscripts and routine correspondence. Remuneration will be negotiable and subject to acceptance by the WDA governing council. Candidates for the editorship must be members of the WDA, have an understanding of the breadth of disciplines encompassed by the study of wildlife diseases, have a record of scientific publications, a reputation for being fair and objective and be familiar with and supportive of "Ethical Guidelines to Publication in the Journal of Wildlife Diseases" (JWD, January, 1996). The editor is responsible for maintaining a publication schedule with printing and distribution of the 4 annual issues occurring within January, April,

WDA News

July and October. The editor will begin handling manuscripts in January-April 2009, overlap with the current editors for 12-16 months, and will assume sole responsibility for the JWD beginning with the April 2010 issue. The expected term of office is five years. Applications should include a current curriculum vitae, a statement of interest and goals for the Journal, and the names of three references. Applications will be considered by the WDA Editorial Search Committee comprised of Drs. David Stallknecht, Elizabeth Howerth, Donald Forrester, Alonso Aguirre and Edward Addison and are to be sent to:

Dr. Edward M. Addison
107 Kennedy Street West Aurora, ON L4G 2L8
CANADA
Phone: 905-727-4476 or electronically to
ecolink@aci.on.ca

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

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 (Lynn Creekmore, Catherine Soos, Kay Mehren, Elliott Jacobson or Dave Edmunds) by March 15, 2005.

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.

Request for Data

Meta-analysis seeking data on group size and parasitism. A National Evolutionary Synthesis Center (NESCent: www.nescent.org) working group is exploring ways to enhance meta-analyses and syntheses through broader requests for data. Here, we present one pilot request for data for a proposed synthetic work. Charles Nunn and Laszlo Garamszegi seek unpublished results and "pointers" to published results involving the association between group size and parasitism in vertebrates. The data will be used in a meta-analysis to investigate the links between sociality and parasitism. All published studies will be cited in resultant publications, and unpublished work may be given credit through consortium coauthorship for the person providing the data. For more information, please see: <http://www.biology.duke.edu/noorlab/Nunn.html>. If you have questions about the broader NESCent project of enhancing synthetic works, or have an idea for a synthetic work that you'd like to pursue that also would benefit from broader requests for data, please contact Mohamed Noor (Duke) or Maria Servedio (UNC-Chapel Hill), or see: <http://www.biology.duke.edu/noorlab/SEED.pdf>

WDA Students

Create a Student Chapter of the WDA!

Student Chapters of the WDA aim at:

Educating students interested in wildlife health and disease about the profession, career opportunities, job qualifications and education, and externships, volunteer, and research opportunities.

Enhancing the skills of students interested in wildlife health and disease through lectures, workshops, conferences, and field trips.

Connecting students interested in wildlife health and disease to mentors in WDA through the faculty advisor and guest lecturers.

Student Chapters are run by student officers, including a president and a vice-president, and if filled, a secretary and a treasurer, under the supervision of a faculty advisor.

Become a WDA Student Ambassador!

We have created a special power point slide show to introduce wildlife health students to the WDA. This presentation includes information on how to start a WDA student chapter. Become a WDA student ambassador by presenting the power point slide show to students at your University and actively take part in the promotion of the Wildlife Disease Association!

Visit our website at <http://www.wildlifedisease.org> or please contact Leslie Reperant, WDA Student Representative on Council, with any questions or ideas at reperant@princeton.edu.

2008 WDA Student Awards!!

http://www.wildlifedisease.org/Student_Awards.htm

Each year the Wildlife Disease Association sponsors student awards competitions. These awards are the

Terry Amundson Student Presentation Award, the WDA Poster Presentation Award, the Graduate Student Research Recognition Award, and the WDA Scholarship Award. The WDA Student Awards Committee (comprised of 8 members from around the globe) judge the Graduate Student Research Recognition Award and Scholarship Award. Members of the audience attending the annual WDA meeting judge the Terry Amundson Student Presentation Award and Student Poster Award. Criteria for judging of the awards are available on the WDA website.

Wildlife Disease Association Terry Amundson Student Presentation Award

DEADLINE: TBA (deadline for abstract submission will correspond with the deadline for general abstract submissions for the annual WDA conference)

This award acknowledges outstanding oral presentation of research findings. The winner receives \$250 US and a plaque. To be considered, the student must give an oral presentation (usually 12 minutes with 3 minutes for questions) on their research project to the WDA conference audience in the student presentation session. Students wishing to be considered for the award **must** submit a presentation abstract following the guidelines in the "Call for Abstracts/Papers" to **both** the Scientific Program Chair for the annual conference **and** to the Chair of the Student Awards Committee (contact information above), clearly identifying the abstract as a student submission for consideration for this award.

Abstracts may be scored on a competitive basis to determine which will be chosen for the conference and for consideration for this award. Abstracts describing completed research projects with conclusions based upon the data generated are more likely to be selected.

Evaluation of Presentations: Candidates will be scored on the following criteria:

WDA Students

- Quality, innovation and impact of science
- Quality of visual aids
- Delivery and style
- Relevance to management of wildlife health

WDA Student Poster Award

DEADLINE: TBA (deadline for abstract submission will correspond with the deadline for general abstract submissions for the annual WDA conference)

This award acknowledges the best student poster detailing a wildlife disease or wildlife health research project presented at the annual WDA conference. This award is not presented every year, but will be presented at the 2007 WDA conference in Estes Park, Colorado. The winner receives \$250 US and a plaque. To be considered the student must submit a poster abstract following the guidelines in the "Call for Abstracts/Papers" to **both** the Scientific Program Chair for the annual conference and to the Chair of the Student Awards Committee (contact information above), clearly identifying the abstract as a student submission to be considered for the poster award.

Evaluation: Candidates will be scored on the following criteria:

- Quality, innovation, and impact of science
- Organization and layout of poster
- Quality and style of text, figures, and images
- Relevance to management of wildlife and ecosystem health

Wildlife Disease Association Graduate Student Research Recognition Award

APPLICATION DEADLINE: Received no later than Friday April 18, 2008

This award is given to the student judged to have the

best research project in the field of wildlife health/disease, based on written communication and scientific achievement. The winner receives a plaque and up to \$5000 US to cover travel, housing, registration, etc. related to the annual WDA conference. The student will be the featured presenter during the Student Presentation Session at the conference.

For consideration, applicants must submit 1 copy of the following documents (electronic submission as email attachment only, formatted as MS Word or PDF files):

1. A summary of their research (maximum of 10 pages double-spaced, typeface font 10 or larger, and 1" margins) structured as follows: Title, abstract, introduction, materials and methods, results, discussion, references, tables, and figures. The title page should be separate, and the 10-page limit applies only the title, abstract, introduction, materials and methods, results, and discussion.
2. A cover letter written by the applicant stating how the research relates to WDA objectives (see inside back cover of the Journal of Wildlife Diseases or the WDA website).
3. One letter of support from the faculty advisor indicating degree of student involvement in planning and execution of the research project.

Grounds for disqualification include:

- Items missing.
- Submissions postmarked beyond deadline date.

WDA Graduate Student Scholarship Award

APPLICATION DEADLINE: Received no later than Friday April 18, 2008

This award acknowledges outstanding academic and research accomplishment, productivity, and future

WDA Students

potential in pursuit of new knowledge in wildlife disease or health. The scholarship has a value of \$2000 US and is awarded annually to an outstanding student pursuing Master's or doctoral degrees specializing in research on wildlife disease. To be considered, the candidate must have completed a four-year baccalaureate degree. Candidates with an overall grade point average of 3.5 or above in 4.0 systems or 80% or better in percentile systems will receive priority – students not scored on the 4.0 grade point system must include an official explanation of the grade point or grade score system used at their institution and preferably provide a conversion to a 4.0 or percentile grade point average. The candidate should be committed to leadership, scholarship, and service in the wildlife health profession.

To be considered, applicants must submit 1 copy of the following documents (electronic submissions as email attachment only, formatted as MS Word or PDF files):

1. All relevant collegiate transcripts. Transcripts can be official (i.e., with the imprint or official seal of the institution and signature of the responsible university officer) or copies signed by the student's faculty advisor.
2. Up to 2 letters of support, including a letter from the student's faculty advisor, that directly address the following specific abilities of the applicant: academic achievement, scholarly promise, research ability, oral and written communications skills, industriousness, leadership abilities, judgment, and potential for contribution to the field of wildlife diseases. Additional letters (> 2) will not be read or evaluated, and letters not directly addressing the above qualities will not score well.
3. A curriculum vitae demonstrating evidence of superior scholastic achievement and productivity (specifically list and describe coursework and all scholarships, awards, publications, and presentations).

Grounds for disqualification include:

- tems missing.
- Submissions postmarked beyond deadline date.

Applicants for all awards **MUST** be Student Members of the WDA at the time applications or abstracts are received. Applicants for the Graduate Student Research Recognition and Scholarship Awards also **MUST** be pursuing an advanced (graduate) degree at the time of application.

All four awards are non-renewable and each award may be received only once by a given candidate. Submit applications electronically as email attachments to:

Dr. Kevin Keel

Chair, WDA Student Awards Committee,
kkeel@vet.uga.edu

College of Veterinary Medicine, SCWDS
The University of Georgia
Athens, GA 30602
Phone: (706) 542-1741
FAX: (706) 542-5865

Mail address and telephone number for inquiries only



Photo by Bruce Gill

News from the Field



National Wildlife Health Center's Quarterly Wildlife Mortality Report

Avian cholera outbreaks throughout California (CA)

Several counties in California have reported outbreaks of avian cholera in a variety of waterfowl beginning in mid-December and continuing presently. The most commonly afflicted species is American coot, but ruddy ducks, green-winged teal, widgeon, mallard, snow geese, and white-fronted geese have been affected. Aleutian Canada geese, removed from the endangered species list in 2001, were involved at the avian cholera outbreak at San Joaquin National Wildlife Refuge in Stanislaus County. Other refuges with avian cholera outbreaks include Butte Sink NWR in Sutter county, Colusa NWR in Colusa county, Sacramento NWR in Glenn county, and Salton Sea NWR in Imperial county. California Department of Fish and Game investigated mortality in Del Norte, Humboldt, and Sutter counties. Current mortality estimates are over 5000 birds. Many of these outbreaks are ongoing so final mortality numbers are not available.



Photo by Bruce Gill

Great Salt Lake mortality in eared grebes and northern shovelers (UT)

Avian cholera outbreaks at the Great Salt Lake gained national attention this year. There were two events, the first occurred in eared grebes near Promontory Point in November. Surveys conducted by Utah Division of Wildlife Resources estimated 15,000 eared grebes died out of a population of 1.5 million. Previous significant outbreaks occurred in 1994 where 15,000 grebes died; 44,000 in 1998; 30,000 in 2002; and 30,000 in 2004. This event appeared to subside around the beginning of December. A second event started mid-December about 15 miles away near the town of Saltair, Utah. The second event primarily involved northern shovelers with some California gulls and green-winged teal. An estimated 1,500 northern shovelers succumbed to avian cholera. The majority of mortality seemed to be over by the end of the year. Several media sources picked up the story, including the New York Times and Salt Lake Tribune. More information on avian cholera and links to news stories are available at:



[http:// Photo by Bruce Gill www.nwhc.usgs.gov/disease_information/avian_cholera/](http://www.nwhc.usgs.gov/disease_information/avian_cholera/)

Type E botulism claims thousands of birds in 4 of 5 Great Lakes during 2007

As in recent years, botulism type E was responsible for the mortality of waterbirds resident to and migrating across the Great Lakes during the summer and fall of 2007. Botulism type E was detected in a small sample of the *6982 dead birds collected on the shores of Lakes Ontario (June – December; *1753 carcasses), Erie (July – December, 1694 carcasses), Huron (September – December, 44 carcasses), and Michigan (June –

News from the Field



Photo by Bruce Gill

December, 3491 carcasses). The top 5 affected species were the ring-billed gull (2362), common loon (1458), double-crested cormorant (743), long-tailed duck (676), and horned grebe (354). Peak mortality occurred during October through December as fish-eating birds migrated southward, but there were avian botulism type E mortalities during the entire June to December period, including the death of 4 endangered piping plovers at Sleeping Bear Dunes National Lakeshore. The characteristics of the 2007 event were similar to botulism type E outbreaks that have occurred

annually in at least one of the Great Lakes since 1998. Estimating total avian mortality, the event's time-course in a lake, as well as the spatial extent the disease is difficult because efforts to detect and tally beached carcasses vary across the entire Great Lakes region. A systematic approach that is coordinated across many organizations is needed in order to track mortality. This would help to better understand the cumulative impact on bird populations, as well as the circumstances leading to the exposure of these varied avian species to botulinum type E toxin.

*This estimate is low because the New York Department of Environmental Conservation continues to analyze their transect data.

Range expansion of epizootic hemorrhagic disease in the eastern USA

Twenty-two states and the District of Columbia detected epizootic hemorrhagic disease (EHD) in white-tailed deer during the summer and fall of 2007. New York State's first ever recorded case of EHD occurred October 2007 in white-tailed deer that were collected from Albany County; several more white-tailed deer from other NY counties were found positive into November 2007. It is not possible to determine total EHD-associated mortality because detection is generally opportunistic rather than through systematic surveillance. However, the extensive 2007 EHD outbreak resulted in a high number



Photo by Bruce Gill

Quarterly Wildlife Mortality Report October 2007 to December 2007

State	Location	Dates	Species	Mortality	Diagnosis	Labsite
	Lake Erie, Entire Basin, Multiple U.S. Counties and Ontario, Canada	10/29/07-12/30/07	Gull, Ring-Billed Loon, Common Gull, Herring Scoter, White-Winged Gull, Great Black-Backed	1,694	Botulism type E	CCW, NW
	Lake Michigan, Entire Basin, Multiple U.S. Counties	09/20/07-12/15/07	Loon, Common Cormorant, Double-Crested Duck, Long-Tailed	3,491	Botulism type E	CCW, MI MNS, NW WI

News from the Field

State	Location	Dates	Species	Mortality	Diagnosis	Labsite
			Gull, Ring-Billed			
			Grebe, Horned			
Lake Ontario,	Entire Basin,	06/07/07-12/15/07	Gull, Ring-Billed	1,753**	Botulism type E	CCW, NW
	Multiple U.S.		Tern, Caspian			NY, UPA
	Counties and		Cormorant, Double-Crested			
	Ontario, Canada		Duck, Long-Tailed			
	Lake Huron,	09/15/07-12/20/07	Loon, Common	44	Botulism type E	CCW
	Entire Basin,		Grebe, Red-Necked			
	Ontario, Canada		Cormorant, Double-Crested			
			Socter, White-Winged			
			Duck, Long-Tailed			
AZ	Maricopa	10/12/07-10/15/07	Sparrow, House	58	Toxicosis suspect	NW
	County		Dove, Mourning			
			Dove, Inca			
AZ	Organ Pipe	10/10/07-11/18/07	Turtle, Sonoran Mud	5	Open	NW
	Cactus National					
	Monument					
CA	Butte Sink NWR,	12/17/07-ongoing	Coot, American	1,070(e)	Avian cholera	NW
	Colusa NWR,		Pintail, Northern			
	Sacramento NWR		Shoveler, Northern			
			Duck, Gadwall			
			Wigeon, American			
CA	Huntington	10/11/07-10/14/07	Shorebird, Unidentified	890(e)	Botulism type C	NW
	Beach		Sanderling			
			Plover, Black-Bellied			
			Plover, Western Snowy			
			Sandpiper, NOS			
CA	Butte County	10/30/07-10/31/07	Pintail, Northern	13	Electrocution:	NW
			Shoveler, Northern		lightning strike	
			Duck, Gadwall			
CA	San Francisco	11/07/07-01/07/08	Scaup, Unidentified	2,509	Toxicosis:	UCD
	Bay		Scoter, Surf		petroleum (oil)	
			Seabird, Unidentified			
			Mammal, NOS			

News from the Field

State	Location	Dates	Species	Mortality	Diagnosis	Labsite
CA	San Joaquin NWR	12/20/07-ongoing	Goose, Aleutian Canada Coot, American Goose, Ross' Goose, Greater White-Fronted	600(e)	Avian cholera	NW
FL	Canaveral National Seashore	12/01/07-12/28/07	Sea Turtle, Green Sea Turtle, Loggerhead Dolphin, Bottlenose Manatee Fish, Unidentified	45	Toxicosis: brevetoxin suspect	HSW
IA	Cedar Rapids	12/20/07-12/21/07	Crow, American	12	Enteritis: Hemorrhagic Viral Infection: NOS	NW
MA	Jeremy Point	10/01/07-12/10/07	Eider, Common Loon, Common Grebe, Red-Necked Duck, Long-Tailed Grebe, Horned Cormorant, Double-Crested	2,400(e)	Open	NW
MN	Lake Winnibigoshish	10/29/07-11/20/07	Scaup, Lesser Coot, American Goldeneye, Unidentified	6,500(e)	Parasitism: <i>Sphaeridiotrema globulus</i> , <i>Leyogonimus</i> sp.	NW
MT	Butte	12/17/07-12/19/07	Waxwing, Bohemian	60	Toxicosis: ethanol suspect	NW
MT	Smith Lake	09/28/07-10/01/07	Coot, American Duck, Mallard	100(e)	Parasitism: <i>Cyathocotyle bushiensis</i>	NW
ND	Lone Tree Island	09/18/07-10/18/07	Gull, Unidentified Pelican, American White Goose, Canada (Giant,Interior,Lesser)	1,000(e)	Undetermined	NON
NY	Staten Island	12/21/07-12/21/07	Grackle , Common	26(e)	Toxicosis: Avitrol	COR
OH	Holmes County	10/07/07-10/26/07	Goose, Canada (Giant,Interior,Lesser)	20(e)	Lead poisoning	NW
OH	Toledo	11/01/07-11/30/07	Dove, Mourning Pigeon , Unidentified	35(e)	Toxicosis suspect	NW
OR	Lane County	09/16/07-09/30/07	Bat, Long-legged	24	Rabies	NW

News from the Field

State	Location	Dates	Species	Mortality	Diagnosis	Labsite
OR	Finley NWR	11/16/07-11/16/07	Goose, Cackling	104	Open	NW
OR	Washington County	11/02/07-11/02/07	Goose, Cackling Goose, Canada (Giant,Interior,Lesser)	13	Toxicosis: rodenticide	NW
OR	Klamath and Siskiyou Counties	12/10/07-01/15/08	Duck, Mallard Coot, American Pintail, Northern Eagle, Bald	100(e)	Lead poisoning	NW
OR	Sauvie Island	12/21/07-01/28/08	Goose, Snow Lesser	10	Lead poisoning	NW
OR	Staats Lake	11/08/07-11/08/07	Goose, Cackling Gull, Unidentified	15	Aspergillosis	NW
OR	Douglas County	11/06/07-11/06/07	Dove, Rock	25(e)	Open	NW
UT	Great Salt Lake	12/17/07-01/08/08	Shoveler, Northern Gull, California	1,500(e)	Avian cholera	NW
UT	Great Salt Lake	11/06/07-12/06/07	Grebe, Eared	15,000(e)	Avian cholera	NW
WA	Indianola Beach	10/22/07-10/30/07	Murre , Common Loon , Pacific	309	Drowning suspect	NW
WA	S. Ocean Shores to N Ocean City	11/25/07-11/26/07	Grebe, Western Loon, Common Fulmar , Northern Loon , Pacific Shearwater, Sooty Goose, Canada (Giant,Interior,Lesser)	406	Open	NW
WI	Sun Prairie	10/10/07-10/11/07	Goose, Canada (Giant,Interior,Lesser)	9	Open	NW
<u>Update:</u>						
Multiple States		08/01/07-12/30/07	Deer, White-Tailed	***	Epizootic Hemorrhagic Disease	OT, PSU, SCW, ST
MT	Georgetown Lake	09/19/07-11/01/07	Coot, American	1,650	Parasitism: <i>Cyathocotyle bushiensis</i>	NW
TX	Austin	01/08/07-01/08/07	Grackle, NOS	63	Parasitism:	AHL, TVD

News from the Field

State	Location	Dates	Species	Mortality	Diagnosis	Labsite
			Sparrow, NOS		Multiple Species	
			Pigeon, NOS			
			Woodpecker, NOS			
TX	Galveston, County Beaches Aransas and Nueces Counties	06/07/07-10/01/07	Gannet, Northern	100(e)	Emaciation: Starvation suspect	HZ, NW
WI	Upper Mississippi River NWFR	09/26/07-11/27/07	Coot, American Scaup, Lesser Duck, Ruddy(s) Duck, Gadwall(s) Duck, Ring-necked(s)	14,200(e)	Parasitism: Trematodiasis	NW

(e) = estimate, ** Mortality subject to change pending transect data, *** Mortality estimate not available at this time.

(s) = suspect, Diagnosis not finalized, but field signs and historic patterns indicate the disease

Canadian Cooperative Wildlife Health Center (CCW), Cornell University (COR), Houston Zoo (HZ), Hubbs Sea World Research Institute (HSW), Michigan Department of Natural Resources (MI), Minnesota Department of Natural Resources (MNS), New York State, DEC, Division of Fish, Wildlife & Marine Resources (NY), No Diagnostics pursued (NON), Other (OT), Pennsylvania State University Animal Diagnostics Lab (PSU), Southeastern Cooperative Wildlife Disease Study (SCW), Texas A&M Veterinary Diagnostic Laboratory (TVD), UC Davis (UCD), University of Pennsylvania (UPA), USDA National Animal Health Laboratory (AHL), USGS National Wildlife Health Laboratory (NW), Various state lab sites (ST), Wisconsin Department of Natural Resources Wildlife Health Lab (WI).

Species:

Avian

Aleutian Canada Goose (*Branta canadensis leucopareia*); American Coot (*Fulica americana*); American Crow (*Corvus brachyrhynchos*); American Robin (*Turdus migratorus*); American Widgeon (*Anas Americana*); American White Pelican (*Pelecanus erythrorhynchos*); Bald Eagle (*Haliaeetus leucocephalus*); Black-bellied Plover (*Pluvialis squatarola*); Bohemian Waxwing (*Bombycilla garrulous*); Cackling Goose (*Branta hutchinsii*); California Gull (*Larus californicus*); Canada Goose (*Branta Canadensis*); Caspian Tern (*Sterna caspia*); Common Eider (*Somateria mollissima*); Common Grackle (*Quiscalus quiscula*); Common Loon (*Gavia immer*); Common Murre (*Uria aalge*); Double-crested Cormorant (*Phalacrocorax auritus*); Eared Grebe (*Podiceps nigricollis*); Gadwall (*Anas strepera*); Great Black-backed Gull (*Larus fuscus*); Greater White-fronted Goose (*Anser albifrons*); Green-winged Teal (*Anas crecca*); Herring Gull (*Larus argentatus*); House Sparrow (*Passer domesticus*); Horned Grebe (*Podiceps auritus*); Inca Dove (*Columbina inca*); Lesser Scaup (*Aythya affinis*); Lesser Snow Goose (*Chen caerulescens*); Long-tailed Duck (*Clangula hyemalis*); Mallard (*Anas platyrhynchos*); Mourning Dove (*Zenaida macroura*); Northern Fulmar (*Fulmarus glacialis*); Northern Gannet (*Morus bassanus*); Northern Pintail (*Anas acuta*); Northern Shoveler (*Anas clypeata*); Pacific Loon (*Gavia pacifica*); Red-necked Grebe (*Podiceps grisegena*); Ring-billed Gull (*Larus delawarensis*); Ring-necked Duck (*Aythya collaris*); Rock Dove (*Columba livia*); Ross' Goose (*Chen rossii*); Ruddy Duck (*Oxyura jamaicensis*); Sanderling (*Calidrus alba*); Sooty Shearwater (*Puffinus griseus*); Surf Scoter (*Melanitta perspicillata*); Western Grebe (*Aechmophorus occidentalis*); Western Snowy Plover (*Charadrius alexandrinus*); White-winged Scoter (*Melanitta fusca*);

News from the Field

Reptile

Sonoran Mud Turtle (*Kinosternon sonoriense*); Green Sea Turtle (*Chelonia mydas*); Loggerhead Sea Turtle (*Caretta Caretta*),

Mammalian

White-tailed deer (*Odocoileus virginianus*); Bottlenose Dolphin (*Tursiops truncatus*); Manatee (*Trichechus manatus*)

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

Written and compiled by: Mark Jankowski – Eastern US, Krysten Schuler – Western US, and Jennifer Bradsby – Technician. To report mortality or receive information about this report, please contact the USGS National Wildlife Health Center, 6006 Schroeder Road, Madison, WI 53711

Eastern United States

Mark Jankowski
Wildlife Disease Ecologist
Phone: (608) 270-2443
FAX: (608) 270-2415
Email: mjankowski@usgs.gov

Western United States

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

Hawaiian Islands

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

WDA Sections

NEWS FROM THE EUROPEAN SECTION

Visit the EWDA website at www.ewda.org and find out about our activities, including conferences, work-



shops, courses and members' interests. The website is kindly provided free of charge by the UK Central Science Laboratory. Please contact r.delahay@cs.l.gov.uk if

you have any announcements or other material for submission to the site.

The EWDA Bulletin is now available! The first edition is in colour and has been sent to EWDA members by Email.

8th Conference of the European Wildlife Disease Association, Rovinj, Croatia, October 2-5, 2008. Registration for the conference opens on May 2nd 2008. The deadline for abstract submissions is June 16th 2008. For more information on the conference program and important dates please visit the conference website at <http://www.ewda2008.org>. See Page 24 of this Newsletter as well for more information.

WDA Sections

To all students interested in wildlife diseases

research: Have you always wanted to do more with your passion for wildlife diseases? Are you interested in wildlife research and do you want to meet people with the same interest? Working with others, do you have the talent to organize activities for students all over Europe and abroad? Then apply for a position in the EWDA Student Chapter Board! Being an officer of the Student Chapter will enable you to share all your interests in research and wildlife diseases with other students and researchers from all over Europe. The student chapter, an active and growing part of the European Wildlife Disease Association, is the ideal way to realize all your creative ideas how to let people share their knowledge with each other. You will meet students from all over Europe and beyond, and will get "a look into the world of research". It is the ideal starting point for students that are interested in a career in wildlife diseases.

To apply for a position in the EWDA Student Chapter Board, please visit the student website at www.ewda.org, and send the requested information to ewdastudent@gmail.com. You can also send questions about the board to this address.

The EWDA Student Chapter Board '06-'08 looks forward to hearing from you!

Miriam Maas, EWDA Student Representative-

Sweden

In Sweden, a mild winter has had different effects on the wildlife situation in the southern and the northern parts of the country. In the southern part, badgers are coming out of their hibernation earlier than usual, and in the north, the reindeer, although with plenty of food, have faced another outbreak of keratoconjunctivitis which in part might be a result of the warm winter. Another observation is that the tick population is expanding increasingly northward. These ticks may possibly introduce some of the tick-borne diseases we

have in the south to the northern populations of moose, deer and possibly reindeer. Some of these ruminants may be naive to exposure to pathogens such as *Anaplasma*, *Borrelia*, and Tick-borne encephalitis virus and it is unclear how they will respond to infection. In addition to the possible health risks to wildlife itself, the wild ruminants may serve as reservoirs for these agents, which have human health implications.

Furthermore, the former Department of Wildlife, Fish & Environment at our National Veterinary Institute (SVA) in Uppsala, Sweden, has since Jan. 1, 2008 been divided, and new departments have been formed. The wildlife section of the former department is now merged with our fellow livestock and pet pathologists, to form the Department of Pathology and Wildlife Diseases. This has resulted in a department with a much deeper and wider expertise in the field of pathology, which we are all very excited about.

-Jonas Malmsten, Dept. of Pathology & Wildlife Diseases, National Veterinary Institute, Uppsala, Sweden

Infection of cats and humans with wild bird strains of *Salmonella* Typhimurium in the UK

Wild bird strains of *Salmonella enterica* serovar Typhimurium, including phage types (definitive types) DT40 and DT56 variant, have been identified in finches and sparrows in the family *Fringillidae* in the United Kingdom (Pennycott et al. 2006). These strains of *Salmonella* Typhimurium were isolated from nine cats with enteric disease in England, Scotland and Northern Ireland from 2003 to 2007 (Philbey et al. 2008). Affected cats were 1 to 14 years of age and had a history of hunting small birds. One cat died and eight cats recovered following treatment with antibiotics after exhibiting dullness, pyrexia, inappetence and diarrhoea, sometimes with dysentery, for 36 hours to 3 weeks. Cats appear to contract infection with these

WDA Sections

strains of *Salmonella* Typhimurium by hunting small birds that congregate around artificial bird feeding stations during the cooler months of the year. Wild bird strains of *Salmonella* Typhimurium have also been identified as a cause of diarrhoea in humans in Scotland, particularly in children less than 5 years of age.

Refs:

Pennycott TW, Park A, Mather HA. Isolation of different serovars of *Salmonella enterica* from wild birds in Great Britain between 1995 and 2003. *Veterinary Record* 2006;158:817-820

Philbey AW, Mather HA, Taylor DJ, Coia JE. Isolation of avian strains of *Salmonella enterica* serovar Typhimurium from cats with enteric disease in the United Kingdom. *Veterinary Record* 2008;162:120-122

-Dr Adrian W Philbey BVSc(Hon) PhD MACVSc (Pathology) MRCVS, Division of Pathological Sciences, Institute of Comparative Medicine, University of Glasgow Veterinary School, Garscube Estate, Bearsden, Road, Glasgow G61 1QH, Scotland, United Kingdom

Summary of Recent HPNAI H5N1 Activities

Whilst Highly Pathogenic Notifiable Avian Influenza (HPNAI) H5N1 was not detected in any wild birds tested during the course of Avian Influenza Wild Bird Surveillance (AIWBS) activities in Great Britain (GB) during the second half of 2007, HPNAI H5N1 was confirmed affecting ten wild Mute swans (*Cygnus olor*) and one Canada Goose (*Branta canadensis*) in South Dorset during January and February 2008. The carcasses were collected from within the Fleet Reserve and the adjacent Dorset coast as part of the EC-mandated AIWBS programme, conducted to provide an early warning of the presence of H5N1 in the EU (European Commission, 2007). Analysis of this most recent HPNAI H5N1 virus indicated that it is related to contemporary viruses from continental

Europe, and is most closely related to a cluster of isolates recovered in mid to late 2007 from wild and domestic birds in the Czech Republic, Romania and Poland. No infection has been identified in any other individual or species of wild bird in Great Britain since April 2006, when an infected Whooper swan (*Cygnus cygnus*) was found dead, washed up in Cellardyke harbour in Scotland. A preliminary epidemiology report has been published (Defra, 2008) describing the current incident.

The episode in Dorset provides further evidence that dead wild waterfowl such as swans (*Cygnus* spp.) continue to be good indicator species for the presence of HPNAI H5N1 infection in wild bird populations. The findings from the European surveillance programme during 2006 also reinforced the value of passive surveillance for the detection of these viruses from predominately wild swans found dead across Europe (Hesterberg *et al.*, 2007).

During 2007 three outbreaks of notifiable avian influenza occurred in domestic poultry in Great Britain; HPNAI H5N1 in February (Irvine *et al.*, 2007; VLA, 2007a) affecting a large commercial turkey premises in Suffolk, LPNAI H7N2 affecting backyard poultry in North Wales and Merseyside during May (VLA, 2007b), and during November, a second outbreak of HPNAI H5N1 in free-range, mixed poultry premises in Suffolk. The year also witnessed the familiar temporal and spatial trends of westward global spread of the virus from South East Asia in both poultry and wild birds, including wild bird incursions into and across the European Union (EU) from mid-2007 (VLA, 2007c; FAO, 2008). Molecular and epidemiological studies indicated that these episodes affecting both wild and domestic birds within the EU have been due to a new independent introduction of the HPNAI H5N1; the phylogenetic group of this virus (clade 2.2) comprising a sublineage originating from the Middle East and Central Asia. It is considered a possibility that the virus may have been introduced into wild bird popula-

WDA Sections

tions in a number of discrete pockets and maintained at a very low level that remained unnoticed. Spread has continued more recently in domestic birds in Poland and Romania.

A close genetic relationship exists between these contemporary viruses from wild and domestic bird populations isolated within Europe since June 2007. Furthermore, a likely hypothesis for the primary introduction of HPNAI H5N1 virus resulting in the poultry outbreak in Suffolk during November 2007 and the current wild bird incident in Dorset is via contact of the respective free-range turkey and sedentary wild Mute swan populations with infected wild birds, most likely migratory species from central Europe (Defra, 2007a; Defra, 2008). It is also postulated that the progenitor virus of the HPNAI H5N1 outbreak in Suffolk during February 2007 was introduced to Hungarian domestic poultry by wild bird contact (Defra, 2007b).

References

- Defra, (2008). Highly pathogenic avian influenza – H5N1 in swans in Dorset. Epidemiology Report 1A Page Street, London, SW1P 4PQ, United Kingdom. Version 1, Released 29 January 2008. <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/epireport-hpaiswan080129.pdf>
- Defra, (2007a). Preliminary epidemiology report: Avian influenza outbreak in Suffolk, November 2007 as at 26 November 2007; National Emergency Epidemiology Group. <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/ai-prelim-epireport071129.pdf>
- Defra, (2007b). Outbreak of highly pathogenic H5N1 avian influenza in Suffolk in January 2007 - a report of the epidemiological findings by the National Emergency Epidemiology Group, Defra 5th April 2007. http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/epid_findings050407.pdf
- European Commission, (2007). DG Health and Consumer Protection. Wild bird surveillance in the EU: See Guidelines for AI surveillance in wild birds and poultry. http://ec.europa.eu/food/animal/diseases/controlmeasures/avian/eu_resp_surveillance_en.htm
- FAO, (2008). Emergency Prevention System (EMPRES) Maps. <http://www.fao.org/ag/againfo/programmes/en/empres/maps.html>
- Hesterberg U., Harris K., Cook A. and I.H. Brown (2007). Annual Report - Surveillance for avian influenza in wild birds carried out by Member States February-December 2006, prepared by the Community Reference Laboratory for avian influenza and Newcastle disease. European Commission Health & Consumer Protection Directorate-General, SANCO/10194/2007 REV 1. http://ec.europa.eu/food/animal/diseases/controlmeasures/avian/annrepres_surv_wb_02-12-2006_en.pdf
- Irvine R.M., Banks J., Londt B.Z., Lister S., Manvell R.J., Outtrim L., Russell C., Cox B., Ceeraz V., Shell W., Landeg F., Wilesmith J.W., Alexander D.J., & Brown I.H (2007). An outbreak of highly pathogenic avian influenza caused by Asian lineage H5N1 virus in turkeys in Great Britain in February 2007. *Veterinary Record* 161: 100-101.
- VLA, (2007a). Surveillance Report Avian, Quarterly Report Vol. 11, No 1, January - March 2007 (May 2007). Highly Pathogenic Avian Influenza (HPAI) H5N1 Virus Infection in Commercial Meat Turkeys: Suffolk, UK, February 2007. <http://www.defra.gov.uk/corporate/vla/science/documents/science-end-survrep-qtlya0107.pdf>
- VLA, (2007b). Surveillance Report Avian, Quarterly Report Vol. 11, No 2, April - June 2007 (August 2007). Low Pathogenicity Notifiable Avian Influenza (LPNAI) H7N2 Virus Infection in Backyard Chickens, May 2007. <http://www.defra.gov.uk/corporate/vla/science/documents/science-end-survrep-qtlya0207.pdf>
- VLA, (2007c). Surveillance Report Avian, Quarterly Report Vol. 11 No 3, July - September 2007 (November 2007). Summary of Current International HPAI H5N1 Asian lineage Status in Birds and People. <http://www.defra.gov.uk/corporate/vla/science/documents/science-end-survrep-qtlya0307.pdf>
- Richard Irvine, Jill Banks, Bhudipa Choudhury and Ian Brown, EU/ OIE/ FAO International Reference Laboratory for Avian Influenza and Newcastle Disease, VLA Weybridge, New Haw, Addlestone, Surrey, KT15 3NB.*

WDA Sections

MedVetNet, Special Interest Group on WiREDZ (Wildlife Related Emerging Diseases and Zoonoses). Anyone investigating wildlife diseases anywhere in Europe please contact Paul Duff- p.duff@vla.defra.gsi.gov.uk .

Submission to News from Europe

Material for publication in News from Europe can include 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, Mer-rythought, 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.

NEWS FROM THE AUSTRALASIAN SECTION

WDA Australasian conference, September 2008

The 2008 Australasian conference will be held at the Australian National University field station campus at Kioloa, September 20 – 26, 2008. For more details on the conference go to page 25 of this newsletter. Further information will be posted on the Australasian site <http://www.wda-aust.org/> or contact Chris Bunn at chris_b@webone.com.au. Information about the Kioloa site can be viewed at <http://kioloa.anu.edu.au/>

WDA SECTION CHAIRS

African Section. Vacant

Australasian Section. For information regarding the Australasian Section, contact Pam Whiteley, 1 Brinsley Road, Camberwell, VIC 3124, Australia; Ph: 61-3-98825608; FAX: 61-3-98823054; Email: pwhitele@bigpond.net.au

European Section . For information regarding the European Section, contact Dolores Gavier-Widén; Division of Wildlife Fish and Environment, SVA (National Veterinary Institute), SE 751 89 Uppsala, Sweden; Ph: 46-18-674-215; FAX: 46-18-30-91-62; Email: dolores@sva.se

Nordic Section. For information regarding the Nordic Section, contact Erik Agren, Department of Wildlife, National Veterinary Institute, SE-751 89 Uppsala, SWEDEN, Telephone +46 18 67 40 00 Fax +46 18 30 91 62 or E-mail: Erik.Agren@sva.se.

Wildlife Veterinarian Section. For information regarding the Wildlife Veterinarian Section, contact Jonathan Sleeman, Virginia Department of Game and Inland Fisheries, 4010 West Broad Street, Richmond, VA 23230, Tel: (804) 367 9492, Fax: (804) 367 9495.



Photo by Richard Yarnell

Training and Education

Visit the JWD website at <http://www.wildlifedisease.org> for more information on training opportunities

MSc in Wild Animal Health and MSc in Wild Animal Biology

The Institute of Zoology at the Zoological Society of London and the Royal Veterinary College at the University of London offer Master's of Science in wild animal health and wild animal biology.

One year full time study starting each Autumn, leading to an MSc qualification from the University of London. Courses are delivered in partnership with the Zoological Society of London.

MSc Wild Animal Health applicants require a first degree from a recognised veterinary school and learn alongside experts in the field, to acquire knowledge and skills in wild animal management and the epidemiology, treatment and control of disease.

MSc Wild Animal Biology applicants require a first degree in Biology or Zoology. Participants acquire an understanding of wild animal health and welfare through practical exposure, and receive training in relevant research methodologies.

As our courses are popular, we recommend early application. Visit our website or call to find out more. Web: www.rvc.ac.uk/postgrad. Tel: +44 (0) 20 7468 5134

Dallas Zoo and Dallas Aquarium Veterinary Student Preceptorship

A four to eight-week preceptorship offers exposure to clinical zoo and aquarium veterinary practice at a large metropolitan zoo. The student will work closely with the veterinary and keeper staff and receive an introduction to husbandry, restraint/immobilization, basic medical procedure techniques, and necropsies of zoo animals, the unique aspects of veterinary management of animals in a zoo setting, and the Me-dARKS recordkeeping system. An onsite library is

available for use. Responsibilities will be assigned based on the student's areas of interest and experience level. The student is expected to complete a project and present results to the veterinary staff, and will be responsible for local transportation, housing, and food. Applicants should be a fourth year veterinary student (or in final year of non-U.S. veterinary program) and have completed four weeks of a clinical medicine or surgery rotation before the start of the preceptorship. Negative tuberculin skin test within 60 days of the start of the preceptorship, current tetanus vaccination, and personal health insurance are required. Applicants should send a letter of intent, curriculum vitae, contact information for three references, and the name of their Zoo/Exotic Animal advisor to: Tim Storms, Associate Veterinarian at Dallas Zoo and Dallas Aquarium, 650 South R.L. Thornton Hwy., Dallas, Texas 75203-2996.

Training Available in Fish Diagnostics, Inspections, and Laboratory Methods

The US Fish and Wildlife Service Fish Health Centers provide laboratory and field examination services to the National Fish Hatcheries. Our main emphasis is to assist the hatcheries in producing quality fish that will contribute to the enhancement and restoration of aquatic ecosystems. At the Olympia and Idaho Fish Health Centers, the work may involve travel to field sites to perform diagnostic examinations and collect samples that are then evaluated in our laboratories. Routine testing procedures include bacteriology (biochemical, ELISA, and PCR methods), virology (cell culture, serological, and PCR methods), parasitology (microscopic and PCR methods), histology, and clinical chemistry. Training may be

Training and Education

arranged for one day or several weeks at one or both of these laboratories depending on the interests and availability of the individual. In general, most brood-



stock inspections are performed from September through November, juvenile

inspections oregonstate.edu

are performed

from January through April, and wild fish surveys are conducted from March through September. Routine diagnostic examinations are performed year round and special projects are conducted as time and necessity permit. For more information, please contact Joy Evered DVM, at the Olympia Fish Health Center; email joy_evered@fws.gov or Marilyn Blair DVM, at the Idaho Fish Health Center; email marilyn_j_blair@fws.gov.

Sr. Veterinary Student Preceptorship in Avian and Conservation Medicine

A four to six-week preceptorship in Avian and Conservation Medicine is being offered to a senior-year veterinary student by the International Crane Foundation (ICF) in Baraboo, Wisconsin. The preceptor will train with the Veterinary Services Unit of the Conservation Services Department in all phases of the clinical practice, but have opportunities for interaction with the Crane Conservation Department to learn captive propagation, husbandry, and management of this unique family of birds. The preceptor can expect to gain practical experience in crane capture, transport, anesthesia, preventive medicine, disease surveillance, and the contribution of veterinary medicine to crane conservation including field project support and professional consultations. Preceptors are encour-

aged to complete and report on a research or laboratory project during their stay. Opportunities for visiting the University of Wisconsin School of Veterinary Medicine and the National Wildlife Health Center in Madison, WI will be made available to interested preceptors. No stipend is available for this position; however, on-site housing in the ICF Guesthouse will be provided depending on availability at the time the preceptorship is scheduled.

Applicants should send a cover letter, curriculum vitae, or resume and one letter of recommendation from a faculty member of their home institution to: Barry Hartup, DVM, Director of Veterinary



fws.gov

Services, International

Crane Found-

ation, E-11376 Shady Lane Road, Baraboo, WI 53913, email hartup@savingcranes.org. Please view our website at www.savingcranes.org.

Directory of Post-Graduate Educational Opportunities in Zoo and Wildlife Medicine

The World Association of Wildlife Veterinarians has recently produced a Directory of Post-Graduate Educational Opportunities in Zoo and Wildlife Medicine. The Directory covers opportunities in over fifty countries and is a must for veterinary students or graduates interested in furthering their careers in the field of wildlife medicine. For further information, please contact the Secretary of the WAWV at: F.Scullion@zoo.co.uk.

Meetings and Conferences

Visit the JWD website at <http://www.wildlifedisease.org> for more on upcoming meetings

Avian Diseases and Conservation Conference. College of Veterinary Medicine-Western University of Health Sciences. Pomona, California May 29-31, 2008

The first **Avian Diseases and Conservation Conference** will be held at the College of Veterinary Medicine-Western University of Health Sciences, Pomona, California on May 29-31, 2008. The aim of this conference is to provide in-depth information on selected avian diseases and hands-on training to veterinarians, ornithologists, conservationists, zookeepers, rehabilitators, aviculturists, wildlife managers and park rangers that have a special interest in avian conservation and diseases. The registration fee for the course is \$200 if made before April 31st. After this date, the conference fee will be \$250. Student fee is \$150. **Lodging:** A block of rooms are reserved at the **Shilo Suites Hotel in Pomona** (800) 320-6291 or (909) 598-7666. When making a reservation, please mention that you are with the “**Avian Diseases and Conservation Conference**”. Registration forms, conference program and additional information can be found at www.westernu.edu/avianconference. For more information, please, feel free to contact **Dr. Miguel Saggese** at avianconference@westernu.edu or by phone at 909-706-3532.

29th World Veterinary Congress (WVC 2008), Vancouver, Canada, July 27 - 31, 2008

The **29th World Veterinary Congress** will be held in Vancouver, CA from July 27 to 31, 2008. It will be one of the premier events of the Veterinary Profession worldwide with attendance expected to reach over 2,500. Participants will include veterinarians, paraveterinarians, veterinary technicians and others who partner with us in animal care. While the program is designed to “Celebrate our Diversity” it is also in-

tended to bring veterinarians from all fields together in recognizing that, despite our diversity, we professionally have a common goal. For further information please visit the website at: <http://www.worldveterinarycongress2008.com>.

Symposium on the Ecology of Plague and its Effects on Wildlife.

The **Symposium on the Ecology of Plague and its Effects on Wildlife** will be held November 4 - November 6, 2008 in Fort Collins, Colorado, USA at the Hilton Hotel located adjacent to Colorado State University. A symposium will be held to present the latest information on the ecology of plague and its impacts on wildlife. Our mission in sponsoring this symposium is to increase the ability of scientists and resource managers to understand, evaluate, and mitigate wildlife risks associated with plague. We invite you to join us in this important and timely symposium. For more information on this symposium please go to <http://www.fort.usgs.gov/Plague> or contact Laura Ellison, U. S. Geological Survey, Fort Collins Science Center, 2150 Centre Avenue, Bldg C, Fort Collins, CO 80526-8118, (970) 226-9494, ellisonl@usgs.gov. Deadline for abstracts is May 1, 2008.



Photo by Bruce Gill

Meetings and Conferences

2008

Wildlife Disease
Association
Edmonton



57th Annual Meeting of the Wildlife Disease Association. August 3-8, 2008; Edmonton, Alberta Canada

Make tracks for Edmonton and gather with wildlife disease folks from far and wide. The University of Alberta and the Alberta Fish and Wildlife Division proudly host the 2008 annual meeting of the Wildlife Disease Association. Local organizers are tweaking the traditional template for WDA meetings. For example, the wildlife management agencies of British Columbia, Northwest Territories, and Yukon are participating as Regional Partner Hosts. The meeting also is held in conjunction with the American Association of Wildlife

Veterinarians and the Canadian Association of Zoo and Wildlife Veterinarians. Given our location and the makeup of our host group, the meeting will focus on western and northern aspects of wildlife diseases and parasites, including a symposium entitled *Wildlife Health in a Changing North*.

Traditional elements of successful WDA meetings will of course not be tampered with – the auction, picnic, banquet, and student presentations are embedded in the program. A hospitality poster session, and field trips ending in an outdoor picnic in a venue steeped in wildlife disease history, also are being planned. All information regarding the meeting can be found at <http://www.biology.ualberta.ca/parasites/WDA08/> It's a work in progress so check the web site for new information as the pieces of the puzzle come together.

Bring your data, bring your appetite, bring your stories, bring your friends.

Bring your heart and bring your mind.

Edmonton is the place to be in early August 2008.

Oh yes, and don't forget your auction items!

Meetings and Conferences

8th Conference of the European Wildlife Disease Association, Rovinj, Croatia, October 2-5, 2008

The 8th Conference of the European Wildlife Disease Association, Rovinj, Croatia, October 2-5, 2008. The European Wildlife Disease Association (EWDA) will hold its biennial Conference on the Adriatic coast, in



Rovinj, Croatia. The EWDA invites members and others interested in all aspects of wildlife diseases and in promoting wildlife health to submit papers and attend the Conference. Through the quality and the content of presentations we strive to make the EWDA Conference the leading event for the



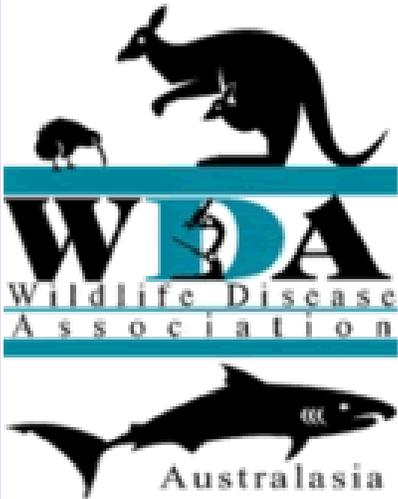
dissemination of important scientific information, as well as an enjoyable one. Veterinarians, pathologists, zoologists, wildlife biologists, epidemiologists, ecologists, and any person interested in wildlife health should attend and join together in what will be a challenging opportunity to discuss the imminent issues surrounding wildlife diseases. Associates from an array of animal and human health fields will also attend, promoting and sharing professional knowledge and discussing topics of

mutual interest. As we invite you to Croatia, we want you to share with us the feeling, and the spirit of "The Mediterranean as It Once Was". The Croatian Veterinary Institute will host the event. The town of Rovinj is one of the most popular seaside resorts in Croatia. It is located on the west coast of the Istrian peninsula and as such is a focal point in the Northern Adriatic, offering a wide range of interests for visitors in a picturesque ancient town, surrounded by beautiful pine forests.



Registration for the conference opens on May 2nd 2008. The deadline for abstract submissions is June 16th 2008. For more information on the conference program and important dates please visit the conference website at <http://www.ewda2008.org>.

Meetings and Conferences



WDA Australasian Conference, September 20—26, 2008

A highlight of the Australasian section is its Annual Conference.

These are typically held away from capital cities, at natural locations of major interest to members. Biologists and conservationists working in the local area are invited to share in the meeting.

In addition to the scientific programme there are field trips, bush walks, and a friendly atmosphere that encourages the sharing of knowledge and ideas. The catering by Shirley is outstanding, so you never have to last more than a few hours without eating something.

The 2008 Australasian conference will be held at the Australian National University field station campus at Kioloa, September 20–26, 2008. Kioloa is situated on the coast in South Eastern New South Wales in easy driving distance from Sydney (3 hours) and Canberra (2 hours).

Kioloa has a range of sleeping accommodation including bunkhouses and self-contained cottages. The bunks have mattresses and pillows. Users need to take their own pillowcases, sheets and blankets or sleeping bags. Alternatively, a bedding kit can be provided with a small charge. A range of other accommodation, including camping is available close by.

Further information will be posted on the Australasian site <http://www.wda-aust.org/> or contact Chris Bunn at chris_b@webone.com.au. Information about the Kioloa site can be viewed at <http://kioloa.anu.edu.au/>