

SUPPLEMENT TO THE JOURNAL OF WILDLIFE DISEASES

JANUARY, 2006

Wildlife Diseases Newsletter

JWD Vol. 42: No. 1

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President's Corner

Watcha Doin? Your Officers, Council and executive manager have been very busy during the first half of the WDA year. As much as possible we have taken advantage of electronic access for communications as well as telephone conferencing. These tools are not new to the WDA. Past Officers and Councils have used them as well, as they give us the opportunity to address important issues in a timely manner. What is relatively new is the executive manager providing written briefings on issues that I feel need to go before Council. Through his efforts, Ed Addison (aka Eddie or ECOEd), has substantially improved the operations of Council. With these briefings as well as his initiative, Council is able to address a great deal more. I simply cannot imagine how in the world past Presidents were able to accomplish so much. I am humbled daily by their contributions, and I am blessed to have the benefit of working with an executive manager.

Because we lacked a quorum at the meeting in Australia, I asked Council to hold a special conference call in late August to discuss and vote on motions made at the earlier meeting. Council considered a total of 17 motions. They asked for further discussion on about half although all were passed. The first three motions dealt with accepting minutes from the 2004 meeting, accepting the financial report from 2004, and thanking Torsten Morner for his many and outstanding contributions as the President of the WDA. Several motions were suggested to assist the Editors (David Stallknecht and Buffy Howerth). These included an allowance for Assistant Editors to publish up to five Journal pages free per year (total costs for all Assistant Editors not to exceed \$7000/year). This benefit was to recognize the hard work Assistant Editors perform for the WDA and to encourage them to continue. Some reviewers provide excellent reviews and are experts in their fields but they are not members of the WDA. A motion was passed that allows the Editors to nominate, and the Council to approve, a one year free membership for select reviewers to encourage them to join the WDA. Other motions dealt with using pdf files for papers published in the Journal and providing the Editors with a WDA credit card to use for editorial expenses. Most importantly, the Council recognized through motion, the outstanding efforts of Buffy and Dave in making the transition to Journal Editors. They are still working very hard to get the Journal on schedule.

Other important motions included requiring that proceeds from the annual auctions at the annual meetings be used to support student awards and activities. Council now requires Sections to hold a meeting at least every second year and encourages at least one WDA Council member or the executive manager to attend the meetings of each Section. Council expanded the definition of student member to include a student enrolled in an undergraduate or graduate student program at least half time or participating fulltime in an internship or residency program approved for credit toward board certification. Council also decided that the WDA will not sell or rent the membership mailing list. Council approved the Budget and Audit Committee guidelines and the Information Committee

guidelines. Council passed a motion to ensure that only current WDA members receive a discounted registration fee for annual meetings.

The regular fall telephone conference call occurred December 12, 2005. These calls are very interesting because they include people from around the world who are calling in at very different times, literally day and night. Council considered 8 issues most of which led to motions. Council had previously agreed to share revenues from the 2005 annual meeting in Australia with the Australasian Section. Because the Australasian Section was responsible for organizing the meeting, and because they financially support multiple initiatives that improve understanding of wildlife diseases, I moved that the entire proceeds (\$12,430US) remain with the Section. As a part of the motion which passed unanimously, Council made it clear that this action was specific to the 2005 meeting. Another very important issue was Section membership and WDA membership. The WDA Bylaws are clear; all Section members must be members of the WDA. However, we cannot expect Section members to pay dues to the Section and also to the Association. Further, if Section members only pay dues to the Association, Sections lose a critical source of revenue to run the Section. Therefore Council approved to return to the Sections the *difference* between the cost of an associate membership and the cost the WDA pays to Allen Marketing and Management to manage each WDA membership. For 2006 that is a return of \$15.25US per member of each Section.

During his visit to Allen Press in September, Eddie Addison investigated a software package offered by the publisher to track manuscripts. This tool will greatly improve the ability of submitting authors and the Editors to manage manuscripts through the submission process. This is an added service. Council approved contracting with Allen Press for the 'AllenTrack' software over the next three years. In a related matter, Council approved a motion to double the price of a multi-site subscription fee for electronic access to the JWD. Council also approved a motion that meeting programs and abstracts (starting with 2003) are made available electronically only to members for two years following a meeting (<http://wda.allenmm.com>) after which they will be available without restriction on the Association website (www.wildlifedisease.org). Procedures are now in place for approval of WDA student chapters. And finally, Council approved the 2006 budget. As part of the budget development process, the Treasurer (Carol Meteyer) past Treasurer (Charlotte Quist) and Ed Addison developed a document explaining the budget line by line. This historic document will become a permanent tool for future budget development.

I hope you can see that these past months have been very active. We know that more issues are coming and we are already preparing for the next conference call later this year. Arrangements are moving along for the 2006 meeting in Connecticut as well as developments by the *ad hoc* WDA/AAWV committee working on the Tom Thorne and Beth Williams Memorial Award.

Stay Tuned!

-Scott D. Wright, President

WDA NEWS

The 55th Annual Meeting of the Wildlife Disease Association. August 6-11, 2006. The 55th annual meeting of the WDA will be held August 6 through 11 at the University of Connecticut in Storrs, CT. More information at <http://www.conferences.uconn.edu/wildlife>.

WDA STANDING COMMITTEES

Awards Committee

Lynn Creekmore (Chair) (2005-2008)

Steve Schmitt (2005-2008)

Don Forrester (2004-2007)

Terry Creekmore

Budget and Audit Committee

Carol Meteyer (Chair) (2002-2008)

Charlotte Quist (2003-2008)

Dave Stallknecht

Ed Addison

Charles Rupprecht (2005-2008)

Charles van Riper III (2003-2006)

Tonie Rocke (2003-2006)

Editorial Board

Buffy Howerth (Co-Editor)

Dave Stallknecht (Co-Editor)

Ed Addison

Carter Atkinson

Trent Bollinger

Rick Botzler (past editor)

Randy Davidson

Philip Elzer

Anne Fairbrother

Don Forrester (past editor)

Kai Frölich

Charlotte Quist (book editor)

Pauline Nol (newsletter editor)

Mike Ziccardi (web editor)

Terry Kreeger

David Ley

Bob McLean

Scott McMurry

Lena Measures

Mike Miller

Victor Nettles

Danny Pence (past editor)

Margo Pybus

Chuck Rupprecht

Bill Samuel

Michael Samuel

Gary Wobeser

Michael Yabsley

Tom Yuill (past editor)

Charles van Riper

Information Committee

Pauline Nol (Co-Chair) (2003-2006)

Samantha Gibbs (2003-2006)

Richard Kock (2003-2006)

Joe Corn (2002-2006)

Julie Langenberg (2005-2008)

Mike Ziccardi (Co-Chair) (2003-2006)

Peter Holz (2004-2006)

Erik Ågren (2004-2007)

Mark Drew (2005-2008)

Membership Committee

Angela Ellis (Chair)

Susan Kutz (2003-2006)

Markus Peterson

Page Lutrell

Nominations Committee

Torsten Mörner (Chair) (2005-2007)

Thierry Work (2005-2008)

Margo Pybus (2003-2006)

Sections Committee

Tonie Rocke (Chair) (2003-2006)

Tim Portas (2003-2007)

Torsten Mörner

Helen Schwantje (2003-2006)

Student Awards Committee

Todd Cornish (Chair) (2003-2006)

Emi K. Saito (2005-2008)

Dolores Gavier-Widén (2004-2006)

Peter Holz (2004-2006)

Thierry Work (2002-2005)

Samantha Gibbs (2004-2006)

Bruce Morrison (2005-2008)

Marguerite Pappaioanou

Student Activities Committee

Claire Jardine (Chair) (2004-2006)

Leslie Reperant (2005-2008)

Joe Gaydos (2005-2008)

Teller Committee

Margaret Wild (Chair) (2005-2008)

Jenny Powers (2005-2008)

Andrea Torres (2005-2008)

Promotions Committee

Alan Fedynich (Chair) 2004-2006
Kathryn Converse (2003-2006)
Shelli Dubay (2005-2008)

Collin Gillin (2003-2006)
Elvira Schettler (2003-2006)

Public Awareness Committee

John Fischer (Chair) (2004-2006)
Paul Barrows (2003-2006)

Dave Jessup (2003-2006)

Time and Place Committee

Michael Miller (Chair) (2004-2005)
Margaret Wild (2005-2008)

Richard French (2006 meeting)

AD HOC COMMITTEES

Carlton M. Herman Founders Fund

Anne Fairbrother (Chair)
Robert McLean

Don Forrester

JWD "On Line" Publishing Committee

Charles Van Riper III (Chair)
Mike Zicardi
Ed Addison

Michael Yabsley
Pauline Nol

Fund Raising Committee + New WDA Fund

Scott Wright (Chair)
Ed Addison

Dave Jessup

Long Term Vision Committee

Torsten Mörner (Chair) (2005-2007)
Paul Barrows
Ted Leighton
Michael W. Miller (2005-2008)

Scott Wright (2004-2007)
Claire Jardine (2004-2006)
Anne Fairbrother (2005-2008)
Samantha Gibbs (2005-2008)

Tom Thorne and Beth Williams Memorial Award Committee (WDA reps)

Scott Wright (Co chair)
Charlotte Quist

Dave Jessup (Co-chair) representing AAWV
Margaret Wild

Executive Manager

Ed Addison
ecolink@aci.on.ca

WDA STUDENT ACTIVITIES

STUDENT NEWS

European Student Chapter of the Wildlife Disease Association. We are pleased to announce the creation of the **EWDA Student Chapter**, the European Student Chapter of the Wildlife Disease Association! With a prime objective to promote shared knowledge between established researchers and wildlife disease students. Subscribe to the *EWDA discussion E-list*, learn about the latest wildlife health and disease news, job and education opportunities, and discuss and debate wildlife health hot topics! Participate in the *EWDA Student Workshop*, enhance your wildlife disease research skills, and meet renowned scientists and potential mentors! Don't miss the *EWDA Conference Student Mixer*, develop international relationships with students from all over Europe and beyond, and have fun!

Whether you are undergraduate, MSc, PhD, or post-doc, become TODAY a EWDA Student Chapter MEMBER! Membership form and all you need to know are on the student page of the EWDA website (European section of the Wildlife Disease Association: www.ewda.org).
-Leslie A Reperant, EWDA Student Representative (reperant@Princeton.EDU).

STUDENT AWARDS COMPETITION

ATTENTION MENTORS AND ADVISORS! Please encourage your students to apply for WDA's student awards. Each year the WDA sponsors student awards competitions. For 2006, students are encouraged to apply for three awards. The WDA Student Awards Committee (comprised of 8 members from around the globe) will judge the Graduate Student Research Recognition Award and Scholarship Award. Members of the audience attending the 2006 WDA meeting will judge the Terry Amundson Student Presentation Award. Criteria for judging of the awards are available on the WDA website at the following URL: http://www.wildlifedisease.org/Student_Awards.htm.

Applicants MUST be Student Members of the WDA at the time applications for the Graduate Student Research Recognition and Scholarship Awards are received and/or at the time the abstract for the Terry Amundson Student Presentation Award is submitted for consideration.

Furthermore, students applying for the Graduate Student Research Recognition Award and Scholarship Award MUST be pursuing an advanced degree at the time of application.

Awards:

1. Wildlife Disease Association Graduate Student Research Recognition Award

DEADLINE: Applications must be received no later than April 20, 2006.

This award is given to the student judged to have the best research project in the field of wildlife disease, based on written communication and scientific achievement. The winner receives a plaque and up to \$2000 US to cover travel, housing, registration, etc. related to the annual conference. The student will be the featured speaker during the student presentation session at the conference. For consideration, applicants must submit 8 copies of the following documents (electronic submissions formatted as MS Word or PDF files also acceptable):

- 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) A 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.

2. Wildlife Disease Association Scholarship

DEADLINE: Applications must be received no later than April 20, 2006.

This award acknowledges outstanding academic and research accomplishment, development, and 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 percentage systems will receive priority – **it helps the awards committee greatly if students not scored on the 4.0 grade point system include an official explanation of grade point or grade score systems used at their institutions.** The candidate should be committed to leadership, scholarship, and service in the wildlife health profession. To be considered, applicants must submit 8 copies of the following documents (electronic submissions formatted as MS Word or PDF files also acceptable):

- 1) All relevant 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.*
- 3) Evidence of superior scholastic achievement (coursework, scholarships, awards, publications, and presentations).

Grounds for disqualification include:

- Items missing.
- Submissions postmarked beyond deadline date.

3. Terry Amundson Student Presentation Award

DEADLINE: TBA (deadline for abstract submission to match deadline for general abstract submissions for the annual WDA meeting).

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 meeting audience in the student presentation session. Students wishing to be considered for the award must submit an abstract following the guidelines in the "Call for Abstracts/Papers" to both the Scientific Program Chair for the annual meeting and to the Chair of the Student Awards Committee (contact information below), clearly identifying the abstract as a student submission for consideration for this award. Candidates will be scored on the following criteria:

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

The student with the highest score will receive the award. Members of the WDA Student Awards Committee will adjudicate tied scores.

These awards are non-renewable and each award can be received only once by a given candidate. Applications for the Graduate Student Research Recognition and Scholarship Awards must be submitted by April 20, 2006 to:
Dr. Todd Cornish, Wyoming State Veterinary Laboratory, University of Wyoming, 1174 Snowy Range Road, Laramie, WY 82070 USA.
For further information, contact Dr. Cornish at: (307) 742-6638; tcornish@uwyo.edu.

WDA SUSTAINING MEMBER

The WDA is proud to recognize members and member organizations who make a significant contribution to support particular interest in the objectives of the Association as Sustaining Members. Between 2000 and 2005, the **Wildlife Conservation Society, Field Veterinary Program (WCS-FVP)** has made one year memberships in the Wildlife Disease Association available to more than 250 scientists in less economically developed countries of the world! The WDA greatly appreciates the contributions of the WCS-FVP towards fulfilling the mission of the Association! For more information, please see the January, 2005 issue of Supplement to the Journal of Wildlife Diseases (41:1) and visit the WCS-FVP website at http://www.wcs.org/sw-high_tech_tools/wildlifehealthscience/fvp.

WDA HISTORY



The Gavel Set

When Scott Wright became president of the WDA in Cairns, Australia in 2005, he was presented with a gavel set by outgoing president Torsten Mörner. This gavel set has now been in the custody of 13 presidents of the Association, including Roy Anderson to whom it was presented at the WDA banquet on August 20, 1981 in Laramie, Wyoming. Very few people other than our presidents have had a good look at this special piece of our history.

The gavel set was presented to the Association by Dr. Carlton M. Herman, one of the founders of the WDA and our first president. Carlton had a longstanding hobby of woodworking that included serving as president of the International Wood Collectors' Society and as an associate editor of "World of Wood". Carlton melded his long term commitments to both the WDA and to woodworking into the design and production of this truly unique gift.

The gavel is a single piece of wood denoting the stability and singleness of purpose of the WDA. It was made from a piece of Mountain mahogany (*Cerocarpis* sp.) which was collected by Carlton on a field trip to the Sierras in northern California during 1949 when the possibility of forming a wildlife disease organization was first considered. The sound box was made from two types of wood. The hollow top was fashioned from spalted (fungus-infected) pecan (*Carya illinoensis*) collected from a limb that had been struck by lightning in North Carolina. The base of the sound box was made from wormy chestnut (*Castenia dentata*) that had been killed by blight in Pennsylvania. Thus, disease is very well represented in the woods of the sound box. The containing box within which the gavel set was presented was constructed of black cherry (*Prunus serotina*) and purchased from a commercial dealer in Maryland.

The symbolism and high quality craftsmanship of the gavel set are exceptional. If you have not seen this part of our history and are at an annual meeting, attend the business meeting of the Association and ask the president if you can see the gavel set.

A description of the gavel set and a photo of Carlton Herman were first published in the *Journal of Wildlife Diseases* in 1982 [JWD 18: 263-264].

-Submitted by Ed Addison

<Still to come: PHOTO OF CARLTON HERMAN>

MORE NEWS

Congratulations to the new 2005 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 examination 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 2005 Diplomates are: Christopher John Dutton, Lisa Harrenstien, Kelly Helmick, Lauren Lynn Howard, Terra Renee Kelly, Donald L. Neiffer, Johanna Sherrill Bell, Meg Sutherland-Smith, and James F.X. Wellehan, Jr.

HAPPENINGS IN THE FIELD

Infrared cameras used to detect wildlife diseases. Researchers at the U.S. Department of Agriculture's National Wildlife Research Center (NWRC) recently completed trial studies using infrared thermography to successfully detect rabies in experimentally infected raccoons and foot-and-mouth disease in experimentally infected domestic cattle and pronghorn antelope. NWRC's studies were conducted in conjunction with existing disease research at Colorado State University and with USDA's veterinary services program. "The use of infrared thermography in the initial screening, surveillance and monitoring of foreign and domestic animal diseases could potentially save millions of dollars for animal industries, public health and wildlife management agencies," said NWRC Director Richard Bruggers.

Thermography is a technique that detects and measures variations in the heat emitted by various regions of the body and transforms them into visible signals that can be recorded photographically.

Coupled with what we know about certain diseases and their clinical signs, this technique could potentially be used to detect and measure increases in an animal's surface temperature as a result of infections. These changes in temperature often occur at specific locations on the animal's body and form thermal patterns that may be unique to particular diseases. For instance, in the case of rabies, heat associated with viral activity is most prevalent in the nose and rostrum area and shows up as white (hot) or bright red (very warm) on thermal images. With foot-and-mouth disease, heat associated with viral activity is visible in and around the feet and in oral lesions. In rabies, the pattern of infection using infrared thermography appears to be unique. More research is needed to determine if the thermal pattern is unique for foot-and-mouth disease.

To use infrared thermography, one simply needs an infrared camera and its associated computer software; thus, the technique has the potential to be easily adaptable to field situations. Using newer models of infrared cameras, thermal images of rabies-infected raccoons may be detected from as far away as 100–150 feet. More sophisticated models used in aerial applications may detect infected animals at much greater distances.

NWRC scientists plan to field test the use of infrared thermography to detect rabies in wild raccoons later this year. Foot-and-mouth disease has not been found in the United States since 1929, but is endemic in other regions of the world. Eventually, scientists want to expand the use of infrared thermography to other animal diseases including vesicular stomatitis, rinderpest, African swine fever, classical swine fever, bovine tuberculosis, and others. NWRC scientists are seeking interest and working to coordinate with foreign governments to field-test the technique on foot-and-mouth and other exotic diseases.

-USDA News Release, Fort Collins, CO, Sept. 23, 2005

Bats potential hosts for SARS. A study from China has provided evidence that bats may be the natural reservoir for severe acute respiratory syndrome coronavirus (SARS-CoV) [1]. Bats are already well recognized as a potential source of human rabies cases caused by bat lyssavirus, and of emerging viral infections such as Nipah virus [2]. Bats may also be a host for Ebola virus [3]. Direct interactions between bats and humans are rare, although there are exceptions, such as the trained bat handlers in many countries. However, changing ecology or other circumstances can bring endemic bat infections to humans by means of an intermediary species [4] and this may have occurred in the case of SARS.

Since the emergence of SARS-CoV in 2003, researchers have been seeking the original source of the infection. SARS-CoV was discovered in palm civets in Chinese markets, leading to culling of these cat-like animals. Further studies have shown that civets infected with SARS-CoV show symptoms of disease, and the virus has not been found in other civet populations, suggesting that civets are not the natural reservoir [5,6].

Researchers in China have recently identified viruses similar to human SARS-CoV in 3 species of horseshoe bat. In 4 locations in China, they collected blood, fecal and throat samples from 408 bats representing 9 species. Three species of horseshoe bat (genus *Rhinolophus*) showed a high prevalence (28-71 percent) of antibodies to SARS-CoV, consistent with their being a wildlife reservoir for this virus. The viruses found in these bats were further characterized using PCR, and putative evolutionary relationships to other coronaviruses were determined, based on conserved and variable viral proteins. These analyses suggested that the viruses were closely related to human SARS-CoV, with 92 percent sequence identity.

Bats may pass disease on to humans directly through biting or salivary contact (European bat lyssavirus [7]), or through human ingestion of food chewed by the bat (Nipah virus [4]). Another probably more common route is transmission through another species, which is in contact with both bats and humans. Changing circumstances, such as bringing livestock into areas populated by bats, or selling bats or bat products in markets where other animals are present, may cause a 'spillover' of infection into a new species [4,8]. In the case of SARS this may have been the palm civet [6], sold in markets alongside

bats; in the case of Nipah virus, it is domesticated livestock [2]. Transmission of Nipah and Hendra viruses may follow ingestion of insects or fruit partly digested by bats [4], and a similar mechanism is suggested to account for the presence of Ebola virus in primates and duikers following fruiting events [4]. The intermediate animal may amplify the infection, increasing the chances of transmission to humans.

Bats comprise 20 percent of the diversity of mammalian species, so it should not be surprising that they are the zoonotic host for a number of infections. Expert opinion is that they are not over-represented as hosts for infections [4]. Why infections endemic in bats should be so pathogenic in humans is less clear, but may relate to the (currently poorly understood) bat immune system: bats, lacking bone marrow in their hollow bones, may have different antiviral responses, possibly including viral inhibitors.

What are the implications for humans and bats in Europe? Horseshoe bats are widely distributed from Australia to Europe, but the species cited in the Chinese study are not indigenous to Europe [9]. Bat migration and trade in bats for traditional medicines have the potential to introduce new infections into European bat species. There are also risks from the spillover effect: intermediary species may be imported having already acquired infection from bats, or could acquire infections already endemic in European bats [10]. Finally, global travel and migration mean that new human infections arising anywhere in the world could potentially become a problem in Europe.

References:

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-Adapted from *ProMED*, 10 Nov 2005. Source: *Eurosurveillance Weekly Vol. 10 / Issue 11 [edited]*, <http://www.eurosurveillance.org/ew/2005/051110.asp#1>

USGS/National Wildlife Health Center's Quarterly Wildlife Mortality Report

White pelican mortality due to West Nile virus. In late July 2005 wildlife biologists from the Nevada Department of Wildlife and the U.S. Fish and Wildlife Service began observing sick and dead American white pelicans (*Pelecanus erythrorhynchos*) at saline wetlands in western Nevada. Over 90% of the pelicans observed were adults and 45 affected pelicans were picked up at the wetlands through early September. Sick birds were lethargic and lacked muscle coordination. Oral swabs from seven birds were

confirmed positive for West Nile virus (WNV) by the State of Nevada WNV surveillance system. Subsequently, two of three adult pelicans submitted to the NWHC for diagnostic evaluation were positive for WNV by virus isolation. Significant mortality of juvenile American white pelicans also continued for the fourth consecutive year in Montana, North Dakota, South Dakota and Minnesota colonies. Similarly, mortality first noted in late June and July, continued until the birds fledged in August. Banding and surveillance data are being analyzed to determine the overall losses and fledging success in these colonies. There is concern that continued annual WNV mortality will have a negative impact on this species. If histopathology links the pelican mortality in Nevada to WNV, it will be the first reported mortality event involving primarily adult white pelicans.

Newcastle disease in Nevada double-crested cormorants. During routine colonial nesting bird surveys at Anaho Island NWR on 8/16/06, U.S. Fish and Wildlife Service biologists discovered 10 dead and 3 sick double-crested cormorant fledglings at a nesting colony with an estimated population of 2,000 cormorants. The sick fledglings, which showed some degree of flaccid paralysis and hemorrhage from the mouth, were euthanized and submitted to the NWHC. Hemagglutination inhibition tests identified virus isolates as NDV. Samples of the viruses were sent to the USDA National Veterinary Services Lab, which confirmed the identification as NDV and determined that the isolates were highly pathogenic for chickens. NVSL conducted genetic analysis of the virus isolates and reported that they were different from the NDV strain that affected domestic poultry in southern California, Nevada and Texas in 2002 and 2003. However, the viruses were determined to have a high genetic homology with strains isolated from double-crested cormorants in the United States since 1992.

Botulism type C at Bear River MBR. From late July to mid-September U.S. Fish and Wildlife Service personnel picked up the carcasses of approximately 6,000 waterbirds from a 1,800 acre wetland management unit at Bear River Migratory Bird Refuge at the Northeast edge of the Great Salt Lake. The primary species involved were dabbling ducks and small wading birds. Ducks that were submitted to the NWHC in early August were positive for botulism type C toxin. The birds were negative for West Nile virus by virus isolation. Bear River MBR has a history of major botulism die-offs tracing back to the early part of the twentieth century. No significant mortality due to botulism type C has been documented since 1997 and 1998. More than 500,000 birds were estimated dead in 1997 and 10,627 birds were picked up in 1998.

Trematodiasis at Upper Mississippi National Wildlife Refuge, Wisconsin (UMNWR). Blue wing teal (*Anas discors*) began succumbing to trematodiasis in late August, the first time the small puddle ducks have been involved in the seven recurring outbreaks at the UMNWR since Fall 2002. Mortality attributed to infection by two tiny flukes, *Sphaeridiotrema globulus* and *Cyathocotyle bushiensis*, had its earliest start yet for waterfowl in their fall migration period. By the end of August, nearly 200 teal and about two dozen other dabbling ducks, including mallards (*Anas platyrhynchos*), shovelers (*Anas clypeata*), pintail (*Anas acuta*), and black ducks (*Anas rubripes*), had been found dead. The birds were feeding in wild rice beds in an area of UMNWR where mortality from the trematodes had not previously been recorded. Carcasses of each species found were submitted to the NWHC for necropsies. Ongoing research on the distribution of invertebrates on the UMRNWR and in nearby waterways will help to determine if the non-native faucet snail, *Bithynia tentaculata*, which can act as both primary and secondary host to the flukes, is increasing its range in the Mississippi River. Monitoring of later-arriving coots and diving ducks will provide data for comparison to die-offs in previous years.

State	Location	Dates	Species	Mortality	Diagnosis	by
AK	Cape Glazenap and Operl Island	07/20/05-08/07/05	Short-Tailed Shearwater Fulmar Glaucous Gull Common Murre Unidentified Kittiwake	149	Emaciation	NW
AZ	Lakeview and Flagstaff	07/04/05-07/22/05	Red Crossbill Lesser GoldFinch Pine Siskin Mourning Dove	20	Salmonellosis	NW
CA	Alameda NWR, Alameda Point	06/03/05-08/25/05	California Least Tern	274	Undetermined	
CA	Delevan NWR and Sacramento NWR	07/10/05-10/20/05	Mallard American White Pelican	320	Botulism type	NW
CA	Lake Isabella	08/12/05-09/15/05	Clark's Grebe Western Grebe	1,000 (e)	Open	NW
CA	Sacramento NWR	07/01/05-07/20/05	House Finch American GoldFinch	15	Viral Infection: WNV suspect	NW
CA	Santa Rosa and San Jacinto Mountains	07/25/05-08/15/05	Bighorn Sheep	7	Broncho- pneumonia	CAF
CA	Tule Lake NWR	08/09/05-10/05/05	Gadwall American Coot Mallard Lesser Scaup Pintail	1,447	Botulism type C	NW
DE	Woodland Beach Wildlife Area	08/12/05-08/14/05	Semipalmated Sandpiper Lesser Yellowlegs	10 (e)	Toxicosis: suspect	NW
GA	Brunswick,	07/03/05-07/28/05	Canada Goose	24 (e)	Open	SCW
ID	Lewiston	04/01/05-06/30/05	Red Crossbill Pine Siskin	28	Salmonellosis	ID
IN	Hammond, George Lake	09/01/05-09/23/05	Mallard Semipalmated Sandpiper Least Sandpiper Killdeer Semipalmated Plover	60 (e)	Botulism type	NW, PUL
MA	Monomoy NWR South Monomoy Is.	07/23/05-09/01/05	Common Tern	2,600 (e)	Salmonellosis	NW, TU
MD	City Yacht Basin, Havre de Grace	08/08/05-09/30/05	Mallard Unidentified Gull Canada goose Great Blue Heron	136 (e)	Botulism type	MD, NW
MD	Coaches & Poplar Islands, Chesapeake Bay	09/14/05-12/01/05	Great Blue Heron	20	Steatitis	NW
MD	Poplar Island, Chesapeake Bay	08/15/05-12/01/05	Laughing Gull Common Tern Unidentified Gull Great Black-Backed Gull Mute Swan	40(e)	Botulism type C	NW
ME	Acadia NP	07/11/05-07/24/05	Wood Frog Green Frog	50 (e)	Viral Infection: Ranavirus	NW
MI	Townsend Park, near Grand Rapids	08/20/05-10/15/05	White-Tailed Deer	15 (e)	Eastern equine encephalitis	MSU
MN	Lac Qui Parle	07/02/05-08/15/05	American White Pelican	1,800 (e)	Viral Infection: West Nile virus	NW
MN	Lake Superior	09/07/05-09/07/05	Unidentified Warbler White-Throated Warbler Swainsons Thrush	100 (e)	Trauma: weather	MN
MN	Mud Lake	09/01/05-09/20/05	Mallard Blue-Winged Teal American Coot Green-Winged Teal Unidentified	900 (e)	Botulism suspect	MNS
MT	Bowdoin NWR	06/30/05-09/30/05	Wigeon, American Eared Grebe American Coot Green-Winged Teal	35 (e)	Botulism type	NW
MT	Medicine Lake NWR	06/23/05-08/18/05	American White Pelican	300 (e)	Viral Infection: West Nile virus	NW
MT	Stinger Creek,	09/01/05-09/07/05	Northern Leopard Frog	3 (e)	Open	NW
ND	Chase Lake NWR	06/17/05-08/23/05	American White Pelican	1,500 (e)	Viral Infection: West Nile virus	NW
ND	Horsehead Lake	07/18/05-08/29/05	Ring-Billed Gull	186 (e)	Botulism type C	NW

ND	Lake Sakakawea	07/25/05-07/25/05	Eared Grebe Sandpiper, Unidentified American Coot Franklin's Gull Common Tern	13 (e)	Viral Infection: West Nile virus	NW
NE	Keith County, Lake McConaughy	09/19/05-09/25/05	Green-Winged Teal	200 (e)	Botulism type C	NW
NV	Anaho Island NWR	08/09/05-09/15/05	Double-Crested Cormorant	130 (e)	Newcastle Disease Virus	NW, NVL
NV	Humboldt Sink	07/21/05-09/06/05	American White Pelican American White Pelican	45	Viral Infection: West Nile virus	NV, NW
NV	Las Vegas Valley	06/01/05-09/12/05	Duck, Unidentified American Coot White-Faced Ibis Killdeer Black-Necked Stilt	102	Botulism type C	CAF
OH	Grigg's Reservoir Park, Columbus	09/10/05-09/15/05	Hybrid, Domestic Mallard	10 (e)	Botulism suspect	
OH	Griggs Reservoir Park, Columbus,	07/15/05-08/15/05	Mallard	30 (e)	Botulism type C	NW
OH	Urbana City Park, Urbana	08/13/05-08/19/05	Hybrid, Domestic duck Canada Goose	15 (e)	Botulism suspect	
OR	Coastal Beach 2 miles South of Newport	07/10/05-10/31/05	Common Murre Brandt's Cormorant	360	Emaciation	NW
SD	Bitter Lake, Waubay NWR	07/06/05-08/18/05	American White Pelican	1,000 (e)	Viral Infection: West Nile virus	NW
UT	Bear River MBR	07/25/05-09/15/05	Duck, Unidentified Pintail American Avocet White-Faced Ibis Mallard	6,000 (e)	Botulism type C	NW
VA	Byrd Park, Richmond	07/25/05-08/19/05	Mallard Canada goose Unidentified, Domestic Or Hybrid Goose	26	Botulism suspect	VA
VA	Cedar Island	08/10/05-08/25/05	Laughing Gull Black Skimmer Herring Gull Great Black-Backed Gull Black-Bellied Plover	100 (e)	Botulism type C	NW, VA
WA	Ocean Shores	07/15/05-ongoing	Alaskan Sea Otter	3	Parasitism: Protozoal encephalitis	NW
WA	Pend Oreille River Between Usk and Cusick	07/01/05-08/01/05	Double-Crested Cormorant	25 (e)	Starvation	WAS
WI	Appleton	08/23/05-09/15/05	Mallard	60 (e)	Botulism type C	NW, WVW
WI	Channel 15, NWHC,	09/14/05-09/14/05	Ovenbird Black and White Warbler Unidentified Warbler Red-Eyed Vireo Tennessee Warbler	400 (e)	Trauma: tower strike	NW
WI	Green Bay	07/25/05-09/01/05	Double-Crested Cormorant	20 (e)	Botulism type C	NW, WI
WI	Horicon Marsh Wildlife Area	09/23/05-ongoing	American White Pelican Shoveler Green-Winged Teal Pectoral Sandpiper Wood Duck Blue-Winged Teal	60 (e)	Botulism type C	NW
WI	Horicon NWR	07/15/05-08/08/05	Mallard Wood Duck Blue-Winged Teal Green-Winged Teal Unidentified	5,600 (e)	Botulism type C	NW
WI	Horicon NWR, Main Pool	08/08/05-09/01/05	American White Pelican	10	Viral Infection: West Nile virus	NW

WI	Lake Onalaska, Upper Miss NWR	08/30/05-ongoing	American Coot Lesser Scaup Blue-Winged Teal Ring-Necked Duck Mallard	4,350 (e)	Parasitism: <i>Cyathocotyle bushiensis</i> and <i>Sphaeriootrema globulus</i>	NW
WI	Nelson Lake	09/22/05-09/26/05	American Coot	10	Trauma: gunshot	NW
WI	W. of Fredonia	07/27/05-07/27/05	Canada Goose	10	Open: toxicosis	NW, WI
WY	Lodge Creek Lagoon	08/25/05-09/09/05	Columbia Spotted Frog	41 (e)	Fungal Infection chytrid	NW
WY	Yellowstone NP, Gibbon Meadows	06/30/05-06/30/05	Western Toad	2	Viral Infection (suspect): Iridovirus	NW
WY	Yellowstone NP, near Tanager Lake	07/15/05-08/01/05	Columbia Spotted Frog	100 (e)	Viral Infection (suspect): Iridovirus	NW

Updates:

FL	Atlantic coast/beaches Orange, Nassau, St. Johns, Volusia, Brevard Co.'s	06/09/05-08/01/05	Greater Shearwater Shearwater, nos Unidentified Gull Northern Gannet Unidentified Tern	734	Starvation	FMR, NMF, NW, SCW, UFL
WA	Yakima, Selah, and Tieton	05/31/05-06/30/05	Evening Grosbeak	234	Salmonellosis	NW, WA

(e) = estimate; * = morbidity, not mortality

California Animal Health FS Laboratory Network (CAF), Florida Fish and Wildlife Commission (FL), Florida Fish and Wildlife Research Institute, St. Petersburg, FL (FMR), Idaho Wildlife Health Laboratory, Boise, Idaho (ID), Maryland Diagnostic Laboratory (MD), Michigan State University (MSU), Minnesota Department of Natural Resources (MNS), Nevada Veterinary Diagnostic Laboratory (NV), National Veterinary Services Laboratory, Ames, IA (NVL), National Marine Fisheries Service (NMF), Purdue University Animal Disease Diagnostic Laboratory (PUL), Southeastern Cooperative Wildlife Disease Study, Athens, GA (SCW), Tufts, Cummings School of Veterinary Medicine (TU), USGS National Wildlife Health Center (NW), University of Florida (UFL), Virginia Game and Fish (VA), Wisconsin Veterinary Diagnostic Laboratory (WVL), Wisconsin Dept. of Natural Resources (WI), Washington Department of Fish and Wildlife (WAS), and Washington Animal Disease Diagnostic Laboratory (WA)

Written and compiled by Rex Sohn - Western US, Kathryn Converse- Central US, Grace McLaughlin - Eastern US, NWHC. The Quarterly Wildlife Mortality Report is available at <http://www.nwhc.usgs.gov>. To report mortality or receive information about this report, contact the above NWHC staff, or for Hawaiian Islands contact Thierry Work. Phone: (608) 270-2400, FAX: (608) 270-2415 or e-mail: kathy_converse@usgs.gov. USGS National Wildlife Health Center, 6006 Schroeder Road, Madison, WI 53711.

WDA SECTION NEWS

NEWS FROM THE EUROPEAN SECTION

VII European Wildlife Diseases Congress. S.Vincent (Aosta) Italy 27-30 September 2006. Second Announcement. Topics will include: Wildlife and emerging infectious diseases; Mutual transmission of infectious diseases between wildlife and livestock; Wildlife diseases in conservation; Wildlife disease surveillance; Free topics.

Organising Committee: Contact address: Riccardo Orusa CERMAS Centro di Referenza per le Malattie degli Animali Selvatici Via G. Rey, 5 -11100 Aosta, Italy, tel: +39 0165 238558 fax: +39 0165 236775. e-mail: cermas@izsto.it.

Scientific Programme: Contact address: Ezio Ferroglio Università degli Studi di Torino, Facoltà di Medicina Veterinaria, Via Leonardo da Vinci, 44 - 10095 Grugliasco (TO), Italy, tel: +39 011 6709002 fax: +39 011 6709000. e-mail: ezio.ferroglio@unito.it

More information on: www.ewda2006.it. accessible from March.

The EWDA. The European Wildlife Disease Association (www.ewda.org) represents the European section of the Wildlife Disease Association (WDA, www.wildlifedisease.org). The EWDA encourages the exchange of knowledge on wildlife diseases between scientists, wildlife veterinarians and other workers with a common interest in European wildlife. At the moment the EWDA has 120 members

representing the European countries. Members of the EWDA have developed several multi-lateral collaborative initiatives such as joint research projects and publications, workshops and the three operating working groups, namely: "Wildlife Surveillance in Europe", "European Wildlife Disease Research" and "Training in wildlife diseases in Europe".

Since its creation in 1994, the EWDA has promoted the exchange of information between its members, and organised a bi-annual International Conference hosted by alternating European states. Meetings have been held in Maisons Alfort, France in 1994, Wroclaw, Poland in 1996, Edinburgh, Scotland in 1998, Saragossa, Spain in 2000, Heidelberg, Germany in 2002, and in Uppsala, Sweden in 2004 (www.sva.se/ewda/) where the number of participants had grown to 200 delegates. The next meeting is in Aosta, Italy 27-30 September 2006.



The BWDS board and also the BWDS Symposium 2005 steering committee: Paul Heman, Stefan Roels, and Paul Tavernier

First Symposium of the Belgian Wildlife Disease Society held on November 26th, 2005. The Belgian Wildlife Disease Society (BWDS) was established at the beginning of 2003 as a response to a national and international demand for better co-operation and a better communication in the field of wildlife disease study and surveillance. The main objectives of the BWDS are to promote research and to exchange information in the field of wildlife diseases in Belgium. Additional to the collection of basic information on wildlife diseases for the Belgian territory, these goals will be pursued by the monitoring of unusual wildlife mortalities and the surveillance of known pathogens and newly emerging diseases. The organisation also aims at advising the Belgian authorities about wildlife diseases in order to meet their obligations towards the OIE. Last but not least, the BWDS wants to constitute a forum and an information desk for anyone interested in wildlife diseases in Belgium, or trying to find answers to particular questions in this field.

The structure of the BWDS is that of a de-facto organisation, independent from any official or private institution, uniting scientists and practitioners from different disciplines. Though most of the founding members are veterinarians, the BWDS is open to biologists, ecologists, bio-engineers and others actively working in wildlife disease-related disciplines. It is believed, as a matter of fact, that a multidisciplinary approach is the key to a broad exchange of knowledge and the development of an efficient wildlife disease-monitoring network.

Anyone involved or interested in wildlife disease related topics can become a member and will be informed of forthcoming meetings that will be organised at least once a year, often in connection with the more frequent board meetings. The board of directors and the general assembly will be re-elected every 4 years from among the regular members. The need for a structure such as the BWDS was proven by the interest from many professionals working on wildlife diseases who attended the first meetings. Soon after the foundation, it was decided to organise a Symposium in order to present an update of the work that is currently being done in Belgium. The first Symposium of the BWDS focused on "Emerging Diseases in Wildlife" - emerging diseases in wild animals being a source of growing international concern because of their ecological, zoonotic and veterinary implications. This Symposium was held on November 26th and was considered a successful "official" starting point for the BWDS. The abstracts of the Symposium can be found at the website <http://wildlife.var.fgov.be> which will be updated regularly. *-BWDA Board members: Paul Tavernier, Paul Heyman, and Stefan Roels*

<INSERT BWDSboardmembers.jpg with the caption below>

<INSERT caption for BWDSboardmembers.jpg>: The BWDS board and also the BWDS Symposium 2005 steering committee: Paul Heyman, Stefan Roels, and Paul Tavernier.

IREC: Wildlife Research in Spain. IREC, "Instituto de Investigación en Recursos Cinegéticos", is a national wildlife research institute run by the Spanish Council for Scientific Research (CSIC) and the University of Castilla – La Mancha (UCLM). It is a multidisciplinary institute with biologists, veterinarians and engineers.

Established in 1999, IREC currently has a staff of over 70 members that are working in competitive research projects dealing with wildlife ecology, diseases, and reproductive biology. The main building is placed in the UCLM campus of Ciudad Real, in the autonomous region of Castilla-La Mancha. IREC also has facilities for studies with captive gamebirds, rabbits, and foxes, and an experimental Iberian red deer farm.

IREC hosts six research groups. Among them, the "Animal Health" research group works on infectious diseases, parasitology and pathology. Research deals with fields such as tuberculosis, diseases shared between wildlife, livestock and man, and vector-borne diseases, covering all fields from epidemiology to the development of new diagnostic tools and vaccines. The "Wildlife Toxicology" research group studies acute and chronic, voluntary or accidental intoxications of wildlife. This includes the effects of agrochemicals, lead poisoning, botulism, illegal poisoning, and the relationship between chronic exposure to heavy metals and sperm quality in the red deer.

In addition to research, postgraduate teaching (with its own PhD) and public service are among the objectives of IREC. IREC is still in the early phase of its development. In the near future, the institute aims to become an international scientific and academic reference centre for wildlife research, including issues such as disease reservoirs or sources of emerging diseases, wildlife as sentinels of environmental changes, and the establishment of scientific basis for game animal science and reproduction.

For more information, contact address Christian Gortázar, Director, IREC (CSIC-UCLM-JCCM), Ronda de Toledo s.n., E-13071 Ciudad Real, Spain. Phone: +34 926 295 450. Fax: +34 926 295 451. Email: Christian.Gortazar@uclm.es. Website: <http://www.irec.csic.es/>

EWDA WEBSITE - www.ewda.org. Visit the EWDA website and find information on conferences, members interests, publications and lots more. The website is kindly provided free of charge by the UK Central Science Laboratory. We are currently considering a new look for the site so if you have any further suggestions or material then please send them to r.delahay@csl.gov.uk.

Submissions to the European Section. 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.

Please mail, fax or e-mail submissions to, Paul Duff, VLA Diseases of Wildlife, VLA Penrith, Merrythought, Calthwaite, PENRITH, Cumbria, CA11 9RR, United Kingdom, e-mail p.duff@vla.maff.gsi.gov.uk Fax ++44(0)-1768-885314 /phone ++44(0)-1768-885295.

WDA SECTION CHAIRS AND CONTACT INFORMATION

African Section. For information regarding the African Section, contact Elizabeth Wambwa, Kenya Wildlife Service, P.O. Box 40241, Nairobi, Kenya. Telephone: 254-2-504180; Fax: 254-2-505866; email: ewambwa@yahoo.com

Australasian Section. For information regarding the Australasian Section, contact Tim Portas, Western Plains Zoo, P.O. Box 831, Dubbo, NSW 2830, Australia. Telephone: 61 2 6881 1460; Fax: 61 2 6884 1496; email: tportas@zoo.nsw.gov.au.

European Section. For information regarding the European Section, contact Marc Artois, ENVL, Unite Pathologie Infectieuse, BP83, 69280 Marcy l'Etoile, France, Telephone: 33-487-87-27-74, email: m.artois@fvvet-lyon.fr.

Nordic Section. For information regarding the Nordic Section, contact Eric 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 Kirsten Gilardi, Wildlife Health Center, University of California Davis, CA 95616 USA. Telephone: 530-752-4896, FAX: 530-752-3318, email: kvgilardi@ucdavis.edu.

JOB ANNOUNCEMENTS

Visit the JWD website at <http://www.wildlifedisease.org/Jobs.htm> for up to date job listings.

TRAINING/EDUCATIONAL OPPORTUNITIES

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

4th Biennial Foreign Animal Diseases Training Course, Madison, WI, July 30-August 4, 2006. The University of Wisconsin School of Veterinary Medicine and the USDA Animal and Plant Health Inspection Service are pleased to announce the following upcoming meeting: FAD2006 - The Fourth Biennial Foreign Animal Diseases Training Course, July 30-August 4, 2006, which will be held at the Inn on the Park, Madison, WI. Building upon our successful meetings in 1999, 2001 and 2003, we will once again bring together experts from Africa, Europe and North America to provide in-depth presentations and discussions on the recognition, diagnosis and control of foreign animal diseases that threaten our livestock industries. Detailed information regarding the meeting can be found at: <http://www.vetmed.wisc.edu/pbs/courses/FAD2006>, along with registration materials. In addition, please use the attached announcements to make your colleagues aware of this educational opportunity. We look forward to welcoming you to Madison in July!

Avian, Reptile, Rabbit, Ferret, and Rodent Diagnostic Endoscopy Course. November 18 and 19, 2006. This 15 hour continuing education course is designed to teach the theory and practical applications of diagnostic endoscopy in birds, reptiles and small mammals. Whether you are a private practitioner, zoo/aquarium/wildlife veterinarian, or researcher this course will train you to perform minimally-invasive

endoscopic procedures including biopsy techniques. This is a basic to intermediate level course, and fundamental knowledge of avian and reptilian anatomy is assumed. You will be trained using PowerPoint lectures and video presentations in equipment choice and care; oral, aural, and upper respiratory endoscopy in small mammals; coelioscopy, gastro-intestinal and respiratory endoscopy of reptiles; coelioscopy, gastro-intestinal endoscopy and tracheoscopy of birds; biopsy and sampling techniques; and endoscopy fee structure and practice management. In addition, there will be over 8 hours of practical lab time in which you will be able to practice and develop your skills in anesthetized (non-recovery) research iguanas and pigeons scheduled for euthanasia. All procedures approved by the UGA Institutional Animal Care and Use Committee. Refreshments, lunches, certificate of training, and full color printed course notes containing all tutorial materials will be provided. Limited to 16 veterinarians. \$750 for veterinarians, \$150 for accompanying technicians. Course will be held in surgery suites at the College of Veterinary Medicine, University of Georgia, Athens, GA 30602, USA. The College is 1.5 hrs shuttle bus ride from the Atlanta International Airport, and only 10 minutes from the Athens Regional Airport with service from the Charlotte International Airport. For registration details contact Sandi Kilgo at Telephone: 1-706-542-1451 or Email: skilgo@vet.uga.edu. For more information, visit the following website: www.gactr.uga.edu/conferences.

Fish and Chelonian Diagnostic Endoscopy Course. December 2 and 3, 2006. This 15 hour continuing education course is designed to teach the theory and practical applications of diagnostic endoscopy in fish (including koi and catfish) and chelonians (including turtles, tortoises and terrapins). Whether you are a private practitioner, zoo/aquarium/wildlife veterinarian, or researcher this course will train you to perform minimally-invasive endoscopic procedures including biopsy techniques in fish and turtles. The course will include PowerPoint video lectures and practical instruction in gastro-intestinal, respiratory, and coelomic endoscopy. Special emphasis will be placed upon equipment selection, animal preparation, endoscopic identification of tissues and organs, and the collection of biological samples for disease diagnosis and research purposes. In addition, there will be over 8 hours of practical wet-lab time to practice and develop endoscopy skills in anesthetized (non-recovery) farmed koi, catfish and red-eared sliders (terrapins). All procedures approved by the UGA Institutional Animal Care and Use Committee. Refreshments, lunch, certificate of training, and full color printed course notes containing all tutorial materials will be provided. Limited to 16 veterinarians. \$750 for veterinarians, \$150 for accompanying technicians. Course will be held in surgery suites at the College of Veterinary Medicine, University of Georgia, Athens, GA 30602, USA. The College is 1.5 hrs shuttle bus ride from the Atlanta International Airport, and only 10 minutes from the Athens Regional Airport with service from the Charlotte International Airport. For registration details contact Sandi Kilgo at Telephone: 1-706-542-1451 or Email: skilgo@vet.uga.edu. For more information, visit the following website: www.gactr.uga.edu/conferences.

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 MedARKS 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 Fwy., Dallas, Texas 75203-2996.

Envirovet Summer Institute. The goal of the Envirovet Summer Institute is to create a force of scientists with unique perspectives, knowledge, skills, and expertise required to implement an efficient approach to ecosystem repair that will enable synchronous gains in wildlife, domestic animal, human, and economic health. To meet this goal, Envirovet Summer Institute 2006 will provide six weeks of intensive lecture, laboratory, and field experiences to 25 veterinarians, veterinary students and wildlife biologists in the areas of terrestrial and aquatic wildlife and ecosystem health in developed and developing country contexts. Each participant in Envirovet Summer Institute 2006 will engage in comprehensive classroom, laboratory, and field interactions from mid-June to the beginning of August. Individuals with determination, stamina, sense of purpose, keen intelligence, and capacity to envision and pursue positive outcomes in the face of incomplete knowledge and institutional inertia are invited to apply for admission to the 2006 Envirovet Summer Institute. For more information, log onto .

Zoological Intern - Wildlife Safari. Wildlife Safari, Oregon's only 600-acre drive-through zoological park, is looking for college students with a strong interest in wildlife conservation. If you are majoring in the life sciences, wildlife management, animal science, or environmental education and are planning a career in the animal care field, we have an internship program for you. Join Wildlife Safari's Summer Internship Program and get hands-on experience in working with captive wild animals in a zoological park. Internships are available from May 24 through September 1, 2004. Work 40 hours per week and earn a \$550 per month stipend. Work as a tower guard monitoring animal and visitor activity in the cheetah, lion and bear areas. Work closely with our animal keepers taking care of hoofed animals, carnivores, primates, and birds. Take field trips and tour other zoological parks. Earn college credit (if available from your school). If you are interested in being part of Wildlife Safari this summer, send a resume and letter describing your areas of interest. Be sure to check your class schedules and let us know the dates you are available this summer. Send information to: Summer Intern Program Attn: Josh Jones Wildlife Safari P.O. Box 1600 Winston, OR 97496.

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 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 broodstock inspections are performed from September through November, juvenile inspections 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 encouraged 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 Services, International Crane Foundation, 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.

MEETING AND CONFERENCE ANNOUNCEMENTS

Visit the JWD website at <http://www.wildlifedisease.org> for more conference listings.

European Association of Zoo and Wildlife Veterinarians and Budapest Zoo (EAZWV), Budapest, Hungary, May 24-28 2006. For more info: Endre Sos, Viktor Molnar or Gyorgy Huszar, Blaguss Congress Bureau P.O. Box 706., 1365 Budapest, Hungary. Tel: +36 1 374 7030.

86th Annual Meeting of the American Society of Mammalogists, Amherst, MA, USA, June 17-21, 2006. The 86th Annual Meeting of the American Society of Mammalogists will be held 17-21 June, 2006 at the University of Massachusetts, Amherst MA. In addition to contributed oral and poster presentations covering all aspects of mammalian biology, this year's program will feature two symposia. "Large-scale marine ecosystem change and the conservation of marine mammals" will be convened by Drs. Tom O'Shea and Dan Odell. "The Northern flying squirrel: a biological portrait of a forest specialist in post-European North America" will be convened by Dr. Winston Smith. Special addresses will be offered by the recipients of the Joseph Grinnell (Dr. Mark Hafner) and C. Hart Merriam (Dr. Kay Holekamp) awards, as well as by student honorees. Our capstone speaker will be announced at a later date. Also included are the usual ASM socials, ideal for professional interaction. Non-members who are interested in attending the meetings and/or presenting papers should request materials from the Chairpersons of the Local Program Committee, Drs. Virginia Hayssen (Vhayssen@science.smith.edu) and Betsy Dumont (bdumont@bio.umass.edu). For additional information, please visit the meeting website at <http://asm06.org/>. For more information about the ASM, please visit our website at <http://www.mammalsociety.org>.

20th Annual Meeting of the The Society for Conservation Biology, San Jose, CA, USA, June 24-28, 2006. The Society for Conservation Biology looks forward to welcoming the global community of conservation professionals to its 20th annual meeting, *Conservation Without Borders*. A primary objective of the 2006 meeting is to transcend real and perceived boundaries of ecology, sociology, politics, and human behavior that impede conservation science and its application. By leveraging the intellectual capital of professionals and students with diverse expertise and affiliations, we aim to build conservation capacity at local, regional, and global levels. Major topic areas will range from partnerships with private landowners to marine and freshwater conservation to transboundary conservation. We also will share and celebrate the rich ecology and culture of California with our visitors from around the world. The literal and figurative conservation landscape is changing rapidly. Please join the Society for Conservation Biology in advancing the science and practice of conserving the Earth's biological diversity. For more information visit the SCB's website at <http://www.conbio.org/2006>

The 55th Annual Meeting of the Wildlife Disease Association. August 6-11, 2006. The 55th annual meeting of the WDA will be held August 6 through 11 at the University of Connecticut in Storrs, CT More information at <http://www.conferences.uconn.edu/wildlife>.

11th International Symposium on Veterinary Epidemiology and Economics (ISVEE XI), Cairns, Australia, August 6-11, 2006. In 2006, Australia, New Zealand and Southeast Asian epidemiologists are joining together to host the 11th International Symposium on Veterinary Epidemiology and Economics (ISVEE XI). This is the 11th in the series of International Symposia with recent symposia held in Chile (2003), Colorado, USA (2000) and Paris, France (1997). Those who have been to previous meetings will know that this symposium, held every three years, is not to be missed. However, it is to those who have never attended that we give a special welcome, in particular students and those who may not call themselves epidemiologists, but share common interests. Epidemiology is a discipline which depends on integrating expertise from a wide range of people, from virologists to sociologists, from engineers to ecologists. The Symposium Theme Innovation: Reshaping Veterinary Epidemiology has been selected for ISVEE XI and we would like to see cross-fertilisation with a wide range of other disciplines at this, our 11th Symposium. The Symposium will be held from the **6 - 11 August 2006** at the Cairns Convention Centre, Queensland, Australia. Cairns is the major centre of northern Queensland with easy access to the Great Barrier Reef World Heritage Area and surrounding natural tropical wonders including reefs, beaches, islands, rainforests and outback attractions. It also has an international airport with direct flights from many parts of the world. For further information on the Symposium please contact: ISVEE XI, C/- OzAccom Conference Services, PO Box 104, RBH Post Office 4029, AUSTRALIA, Tel: +61 (0)7 3854 1611, Fax: +61 (0)7 3854 1507, Email: isveexi@ozaccom.com.au, Website: www.isveexi.org

6th International Deer Biology Congress, Prague, Czech Republic, August 7-11, 2006. The 6th International Deer Biology Congress, *Deer in a Changing World*, will be held in Prague, Czech Republic, August 7-11, 2006. The congress will cover all aspects of deer science. Session topics will include: Deer responses to global environmental change; Seasonal and non-seasonal deer: Arctic to Tropic; Censusing and modeling populations; Conservation of free-ranging populations: conflicts of interest; Deer management; Reproduction; Diseases of deer; Antler biology; Genetics and evolution; Problems of deer overabundance; Ecology and management of invasive species; Management of endangered deer; Behavior and welfare; Venison and its potential contribution to diet. ***The plenary speakers and their***

lectures to be presented are: **Valerius Geist** (Canada): *Deer Survival Past and Future: How to Combine Regional Differences in Survival Strategies of Deer with Insights into Effective Conservation Systems*; **George A. Bubenik** (Canada): *Seasonal versus non-seasonal deer: From tropic to arctic*; **Chunyi Li** (New Zealand): *Deer antler regeneration and stem cell research- recent progress*; **Mads C. Forchhammer** (Denmark): *To be announced*; **Marco Apollonio** (Italy): *To be announced*; **Murray Woodbury** (Canada): *The co-occurrence of disease in captive and free ranging cervid populations*; **William J. McShea** (U.S.A.): *Conservation of Tropical Deer: what does the future hold?* For more information, please refer to the following website: <http://www.af.czu.cz/idbc>.

Annual Conference of the Association of Avian Veterinarians-Australian Committee, Wellington, NZ, September 2-7, 2006. This is advance warning and call for papers to the Association of Avian Vets - Australian Committee, Annual Conference which will be held at the Icon Functions Area of Te Papa, the National Museum of New Zealand, Wellington, in association with the Unusual and Exotic Pets Group (UEP) of the Australian Veterinary Association, from September 2-7, 2006. The UEP will hold their part of the conference from Saturday September 2nd to Sunday September 3rd, while the AAVAC conference will follow from Monday September 4th to Wednesday September 7th. A field trip to Kapiti Island will be arranged for Thursday September 7th. The theme for the UEP part of the conference will be Diagnosis. The theme for the AAVAC part of the conference will be Diagnostic Techniques. A full Proceedings will be available and included in the Registration fee. All papers submitted must be in full. Abstracts on their own will not be published. The deadline for submissions of interest is May 2, 2006. Papers need to be received by 11 July 2006 to be included in the proceedings. Further information can be found at the conference website: <http://www.aavac.com.au/conference.html>. For conference queries please contact B.Gartrell@massey.ac.nz

Annual Conference of the American Association of Zoo Veterinarians, Tampa, FL, USA, September 20-24, 2006. The American Association of Zoo Veterinarians will hold its annual conference in Tampa, Florida, September 20-24, 2006. Topics for sessions will include Anesthesia, Aquatics Species Medicine, Avian Contraception, Carnivores, Small Mammals, and Sanctuary Medicine, Career Management, Case reports, Diagnostics and Imaging, Megavertebrates, Information Technology and Bioinformatics, Non-infectious Diseases, Pathology, Reptiles and Amphibians, Primates, Treatment of Chronic Diseases and Pain, Welfare, and Wildlife Health and Conservation. Please refer to the following website for more information: <http://www.aazv.org>. **The deadline for submission of titles to session chairs is February 24, 2006.**

13th Annual Conference of The Wildlife Society, Anchorage, Alaska, September 23-27, 2006. The Wildlife Society will hold its 13th Annual Conference in Anchorage, Alaska, September 23-27, 2006. For more information, please refer to the following website: <http://www.wildlife.org/conference/>.

7th European Wildlife Disease Association Conference (EWDA), Aosta, Italy, 27-30th September 2006. The 7th EWDA Conference will be held in Aosta, Italy from 27 to 30 September 2006 and is entitled - "Public health, management and conservation in wildlife disease". The plenary lectures will address: -Zoonoses and emerging diseases including avian influenza. Other sessions include Zoonoses and Emerging Diseases; Wildlife Disease Related to the Environment; Infectious Diseases of Wildlife; Diagnostic Approaches to Wildlife Disease. More details will be posted on the EWDA web site www.ewda.org, anticipated deadlines are: **February: 2, 2006** 2nd announcement with detailed scientific

programme and details of accommodation. **June 1, 2006:** deadline for registration at the ordinary (lower) rate. **July 1, 2006:** deadline for submission of presentation scientific abstracts.

3rd International Conference on Alpine Ibex, Pontresina, Switzerland, 12-14 October 2006. The third International Conference on Alpine Ibex will be held in Pontresina, Switzerland from 12-14 October 2006. There will be a section entitled Population dynamics and demography. Within this session, diseases are of particular importance. For more information, please go to the following website: www.steinbock2006.ch/conference.htm.

8th International Meeting "Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases" (MEEGID VIII), Bangkok Thailand, November 30-December 4, 2006. The 8th International Meeting "Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases" (MEEGID VIII) will be held in Bangkok, Thailand, 30 Nov-4 Dec 2006. As for the 7 first MEEGID meetings, it will be co-organized by the Centers for Disease Control and Prevention (<http://www.cdc.gov/>) in Atlanta, the Centre National de la Recherche Scientifique (<http://www.cnrs.fr/>) and the Institut de Recherche pour le Developpement (<http://www.ird.fr/>) in France. Mahidol University (<http://www.mahidol.ac.th/>) will be an official co-organizer of the meeting, which will be supported also by the French Embassy (<http://www.ambafrance-th.org/>). The MEEGID meetings are organized in synergy with the new journal *Infection, Genetics and Evolution* (Elsevier; <http://www.elsevier.com/locate/meegid>). Communications on genetics, genomics, proteomics, population biology, mathematical modelling, bioinformatics are welcome. They can deal with the host, the pathogen or the vector. Papers considering host/pathogen or pathogen/vector (co-evolution) are particularly encouraged. All pathogens are within the scope of MEEGID: viruses, parasitic protozoa, helminths, fungal organisms, prions. All infectious models can be considered, including those of veterinary or agronomical relevance. The papers accepted for MEEGID VIII will be published in a special issue of *Infection, Genetics and Evolution*, as already done for MEEGID VI (Paris, July 2002). Special emphasis will be given to health problems of special interest to Thailand and South-East Asia: avian flu, SARS, malaria, dengue. Contact: Michel Tibayrenc, MD, PhD, Editor -in-chief *Infection, Genetics and Evolution* (Elsevier), IRD representative in Thailand, IRD Representative Office, French Embassy, 29, Thanon Sathorn Tai, Bangkok 10120, Thailand, email Michel.Tibayrenc@ird.fr, (secretary) ird_th@ksc.th.com, Website: <http://www.th.ird.fr>, <http://www.elsevier.com/locate/meegid>.

Note from the Editor

Send any items such as reports, meeting announcements, diagnostic riddles, position and grant announcements, or anything else deemed appropriate for the Supplement to the *Journal of Wildlife Diseases* or the WDA website, to Pauline Nol (Supplement Editor) at USDA/APHIS, National Wildlife Research Center, 4101 LaPorte Avenue, Fort Collins, CO 80521 USA, Ph: (970) 266-6126, Fax: (970) 266- 6157, Email: pauline.nol@aphis.usda.gov, or Michael Ziccardi (Website Editor) at Wildlife Health Center, University of California, Davis, CA, 95616, USA, Ph: (530) 754-5701, Fax: (530) 752-3318, Email: mhzciccardi@ucdavis.edu. Files in Microsoft Word sent electronically or via disk are preferred, though submissions in any form are welcome. **MANY THANKS!**

—*Pauline*