

SUPPLEMENT TO THE JOURNAL OF WILDLIFE DISEASES

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PRESIDENT'S CORNER

In today's hectic, buzzing around, world it seems we are constantly being bombarded with both useful, as well as superfluous information. Those whose vocations focus on disease issues, and more particularly on wildlife diseases, are presented with a cornucopia of information sources designed to help keep us "abreast" of the latest pertinent information. Selecting and monitoring sources best tailored to individual needs is a challenge of the first order! We don't want to be overwhelmed, yet we also have a concern that we not miss anything important.

For many it is reassuring that traditional, as well as some newer, modes of communication can solve portions of our information seeking dilemmas. Reliance on traditional "hard copy" journals and bulletins, along with oral and electronic communication with our colleagues at home and abroad, continue to be of great value. However, as I peruse my list of Web Site "favorites" I am led to wonder how much homology exists between my frequently viewed sources and those of other WDA members.

The daily assault of my E-mail is regularly punctuated by postings from Pro Med. However, as one who is just generally trying to keep up with what is "going on out there" in the world of wildlife and wildlife diseases, I most frequently visit these home pages: WDA, AAWV, AAZV, AVMA, NWHC, SCWDS, Michigan DNR (my birth state), USAHA, IAFWA and TWS. It is these sites that I have marked for quick access and I attempt to visit the sites every week or so to see "what's up". The computer world makes this extremely convenient.

Regarding one such site, you might wish to review the U.S. Animal Health Association's (USAHA) October 2001 Special Edition: Wildlife Diseases. It provides excellent synopses of wildlife diseases in general, wildlife-livestock disease interactions and updates on specific disease entities such as HD, CWD, TB, rabies, etc. It's "on the Web", well done, and WDA members are at the core of its authorship!

Our own Supplement to the JWD, the SCWDS Briefs, the AAWV Newsletter, and other similar publications are always welcome receipts. However, I find that it is the personal contacts with colleagues, either at meetings or by phone, that lead me to less familiar, yet no less intriguing, information sources. For example: My current membership on AVMA's Committee on Environmental Issues (CEI) has exposed me to some of the challenges wildlife disease researchers encounter in regard to the "Select Agent Rule". Regulatory requirements regarding laboratory registration and the constraints associated with transference of pathogens among disease researchers had essentially slid under my radar screen. For some, the Rule makes life very, very complicated! For a sense of its importance you may wish to check out: www.phppo.cdc.gov/nltn/sar.asp

Another example: Some of you may not be aware of the existence of a draft National Invasive Species Management Plan to be released in June of this year. As a result of a Presidential Executive Order, issued in 1999, an Invasive Species Advisory Committee, which includes representatives of State and local agencies, academia, private and public interest and environmental groups, and the agricultural and maritime industries, has been developing the plan. Once released, the management plan will be open to public comment. I know neither its contents nor its real world implications. I only hope that wildlife disease concerns are being represented. This issue, along with many others, can be viewed with greater clarity as a result of "the Web".

In sum, each of us must find our own path for information acquisition as well as how to filter it. If you have tips, ideas, or recommendations as to how we might streamline or enhance our pursuit of wildlife disease related information, please do not hesitate to speak up. The Supplement would be a great place to contribute your thoughts!

As has been done by other Presidents, I have invited our current Vice President (and Chairperson, European Section) to author our next Supplement "corner". I have asked Torsten to address the importance, involvement, and future relevance of our WDA Sections, and he has graciously agreed. The role played by our Sections will be critical in influencing the direction the WDA takes in the years ahead!

- Paul L. Barrows, WDA President

WDA ACTIVITIES

51st Annual Meeting of the Wildlife Disease Association. Theme: Preparing for Emerging Diseases. The 51st Annual Conference of the WDA will be held **28 July to 1 August 2002** at the Redwood Coast Conference Center, Humboldt State University (HSU), Arcata, California, USA. The Conference Center is situated at the north end of the HSU campus, lying adjacent to the City of Arcata's Redwood Park near Jolly Giant Creek.

The conference will be sponsored by HSU's College of Natural Resources and Sciences, and several other agencies and organizations. The Editorial Board and WDA Council will meet on Sunday, 28 July, prior to the start of the general sessions. On Sunday evening, the Wildlife Health Center (UC Davis) will host a special reception for students at 6 p.m. that is followed by a general welcoming reception for all members at 7 p.m. General sessions will begin on Monday, 29 July and continue through Thursday, 1 August. Social events will include the picnic on Monday, auction on Tuesday, and awards banquet on Wednesday. Please be sure to bring your auction items!

Details of the Conference will be forthcoming and regularly revised on the Conference website (www.humboldt.edu/~wda/); additional questions or concerns can be directed to local arrangements co-chairs, Rick Botzler (Tel. 707-826-3724; fax: 707-826-4060; e-mail: RGB2@humboldt.edu) and Rick Brown (Tel. 707-826-3320; fax 707-826-4060, e-mail: RNB2@humboldt.edu).

Participants will be housed at the Creek View or Cypress Halls on the HSU campus. Costs per day are \$54.35 per person for double and \$61.35 for single occupancy for Creekview, and \$42.05 per person for a double and \$49.05 for a single at Cypress. Room rates include all meals except the picnic and banquet. Housing arrangements should be made directly with the HSU Housing Office (Telephone **707-826-5312**); mention should be made that this is for the WDA Conference. A list of local lodges and motels as well as local state parks and RV parks are on the conference website; copies of this list also can be provided on request from local arrangements chair, Rick Botzler. Participants lodging off-campus will need to purchase their own meals, but are welcome to purchase and share their meals with other participants at the HSU dining facilities; the Welcoming reception and all coffee breaks are included as part of the registration fee. Planned field trips tentatively include an offshore trip on HSU's research vessel, Coral Sea, a whitewater rafting trip, and a tour of the Redwood National and State Parks.

Two airline carriers, United and Horizon Air, serve the Eureka/Arcata Airport. Because of the limited number of flights arriving and leaving the airport, **it is very important to make your travel arrangements as early as possible.** Three rental car companies (Avis, Hertz, National) serve the airport. Also, availability of shuttle service to and from the airport will be posted on the website once arrangements are made.

Call for Papers. Requests to contribute a paper at the 2002 WDA conference, as well as the accompanying abstracts, should be received no later than **Friday, 3 May 2002**. Please send the abstract via electronic mail to the Program Chair at: WDA@ucdavis.edu. If electronic mailing is not possible, please send a copy of your abstract in ASCII format on a computer diskette along with your printed copy to the Program Chair at the address below. Please include the names and complete addresses for all authors on the abstract and underline the individual presenting the paper, following the format of the attached sample abstract. Abstracts should be no longer than 2 full pages including title, authors and addresses (please use 12 point font). Longer abstracts may be edited. Indicate whether you prefer to present your paper during a platform session, as a poster presentation, or if either option is acceptable. Abstracts of papers being submitted for the student competition should be clearly identified as such, and a copy also submitted to the Chair of the Student Activities

Committee. **Please note that the deadline for submission of abstracts for student scholarship and research awards to the Student Activities Committee is 15 April 2002** (see Student Activities announcement).

Oral presentations will be limited to a maximum of 15 minutes. A presentation of approximately 12 minutes is recommended to allow time for questions and discussion at the end of each presentation. In fairness to others, please plan for the time allotted. Carousel 2 x 2 inch slide projectors and an LCD projector connected to an IBM-compatible computer with PowerPoint 2000 will be provided. Slides or PowerPoint presentations (on a floppy disk, zip drive or CD) should be given to the session's projectionist at the beginning of your session. It is the author's responsibility to have the slides loaded into the carousel correctly or appropriately formatted for the available computer. If other audiovisual equipment is needed, please request these when the abstract is submitted.

Special sessions are being planned on "Preparing for Emerging Wildlife Diseases" and "Diseases of Wild Sheep". If you wish to present during either of these sessions it is especially critical that you submit your abstract early.

Submit abstracts to the Program Chair, Dr. Michael Ziccardi, at the Wildlife Health Center, University of California, Davis, CA 95616 USA. Phone: (530) 752-4167; Fax (530) 752-3318; Abstract E-mail: WDA@ucdavis.edu; Program Chair E-mail: mhziccardi@ucdavis.edu

Sample Abstract

DETECTION OF THE CAUSATIVE AGENT OF DISSEMINATED VISCERAL COCCIDIOSIS (*EIMERIA* SP.) IN SANDHILL CRANES (*GRUS CANADENSIS*) AND WHOOPING CRANES (*GRUS AMERICANA*) BY POLYMERASE CHAIN REACTION AMPLIFICATION OF 18S rDNA.

SCOTT P. TERRELL, Department of Pathobiology, College of Veterinary Medicine, University of Florida, Gainesville, FL 32610; SUSAN E. LITTLE, Department of Medical Microbiology and Parasitology, College of Veterinary Medicine, University of Georgia, Athens, GA 30602; MARILYN G. SPALDING, Department of Pathobiology, College of Veterinary Medicine, University of Florida, Gainesville, FL 32610; CALVIN M. JOHNSON, Department of Pathobiology, College of Veterinary Medicine, University of Florida, Gainesville, FL 32610.

Disseminated visceral coccidiosis (DVC) is a disease characterized by the presence of disseminated lymphohistiocytic inflammatory lesions in sandhill cranes (*Grus canadensis*) and whooping cranes (*Grus americana*). The etiologic agent of DVC is a coccidian parasite of the genus *Eimeria*. Currently, diagnosis of this disease requires microscopic identification of the *Eimeria* parasite in tissue samples. However, microscopic identification of this parasite is often difficult due to the small numbers of organisms present or severe autolysis of field-collected specimens. A polymerase chain reaction (PCR) based assay was developed to detect *Eimeria* spp. DNA in frozen tissue samples from cranes known or suspected to have DVC. The PCR assay successfully detected *Eimeria* spp. DNA in tissue lesions known to contain coccidian organisms and also detected DNA in highly suspicious lesions in which organisms were not microscopically visible. Tissue samples that did not contain lesions consistent with DVC and tissue samples from uninfected control birds did not produce a positive result with the PCR assay. This work provides a useful diagnostic tool, the PCR assay, to confirm the presence of coccidian DNA in tissue lesions suspected to be the result of DVC.

WDA Student Activities.

Guidelines for the 2002 WDA Student Awards.

Wildlife Disease Graduate Student Research Recognition Award: DEADLINE: April 15, 2002.

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 \$1000 US to cover travel, housing, registration, etc. related to the annual conference. The student will be the featured presenter during the Student Presentation Session at the conference.

Applicants should submit three items:

- 1) A summary of their research (10 pages double spaced written in type face font 10 or larger) structured as follows: Title, abstract, introduction, methods, results, discussion, references, tables and figures. The title page should be separate, and the 10-page limit applies only the Title, abstract, introduction, methods, results, and discussion.
PLEASE ENCLOSE 3 COPIES.

- 2) A cover letter stating how the research relates to WDA objectives (see inside back cover of WDA journal).
- 3) A letter of support from the faculty advisor indicating degree of student involvement in planning and execution of the research project.

Selection criteria: Each item (1-3) will receive a score and the sum of these scores will determine the rank of the candidate. **GROUND FOR DISQUALIFICATION INCLUDE:**

- Items missing.
- Summary exceeds 10 pages (excluding tables, figures, and references).
- Submissions postmarked beyond deadline date.

Wildlife Disease Association Scholarship: DEADLINE: April 15, 2002. This scholarship acknowledges outstanding academic and research accomplishment, commitment, 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 who is pursuing a master's or doctoral degree 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 system or 80% or better in percentage system will receive priority. The candidate should be committed to leadership, scholarship, and service in the wildlife health profession. To be considered, you should submit the following items:

- 1) One *Original* and two *photocopies* of all relevant transcripts. *Original* transcripts means: Official transcripts (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) 3 copies of a single page giving cumulative grade point average for all undergraduate degrees, graduate degrees, and ongoing coursework.
- 3) Up to 3 letters of support, including a letter from the student's faculty advisor, that address the following specific abilities of the applicant: academic achievement, scholarly promise, research ability, verbal and writing skills, industriousness, leadership abilities, judgment and potential for contribution to the field of wildlife diseases.
- 4) Evidence of superior scholastic achievement (course work, scholarships, awards, publications)

GROUND FOR DISQUALIFICATION INCLUDE:

- Items missing.
- Submissions postmarked beyond deadline date.

Terry Amundsen Student Presentation Award DEADLINE: April 15, 2002. This award acknowledges outstanding oral presentation of research findings. Winner receives \$250.00 and a plaque. To be considered, the student must give an oral presentation (13-15 min) of their topic of choice to the WDA meeting participants. To enter, submit an abstract by April 15, 2002 as specified in the "Call for Papers" in this issue of the *Supplement*, AND submit a copy of the abstract to Dr. Work at the address below. Upon completion of the presentations, evaluation forms will be handed out to the audience who will be asked to score the presentations for the following:

- Quality 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 Activities Committee will adjudicate tied scores.

These award are non-renewable and can be received only once by a given candidate. Applications must be submitted by April 15, 2002 to: Thierry M. Work, USGS-NWHC-HFS, PO Box 50167, Honolulu, HI 96850, USA (thierry_work@usgs.gov).

WDA ACTIVITIES.

Call for Nominations. This year the Association has several important vacancies. These include: Secretary, Treasurer, two seats on Council, and for the first time, there is a Student seat on Council. Please consider candidates for these important jobs and send your nominations to Dr. Scott Wright at swright@usgs.gov. The deadline for nominations is May 1, 2002.

Reminder: WDA Web Site Now Password-Protected!! The WDA web site has been partially password-protected to reflect the WDA Council's desire to provide access to some information to WDA members only, as a member benefit. If you are a current member, and have not received the password, and want it, please contact the business office at WDA@allenpress.com. The password will be changed annually, and that information will be provided to members.

HAPPENINGS IN THE FIELD

CWD News from Nebraska and Kansas. Infection with the chronic wasting disease (CWD) agent recently was found in 28 of 58 formerly wild white-tailed deer in a high fenced enclosure adjacent to a pen containing CWD-infected captive elk in northern Sioux County, Nebraska. Four of the positive deer were fawns approximately 8 months old, which is unusually young for animals testing positive for CWD. A January survey of 39 free-ranging deer collected within 15 miles of the positive elk and deer pens detected 8 (20%) infected animals. Test results are pending for additional deer collected inside and outside of the enclosure and additional surveillance is planned for free-ranging deer in northwestern Nebraska. Previously, CWD had been documented in Nebraska in only two wild mule deer, both of which came from Kimball County in the southwestern panhandle adjacent to the endemic area of northeastern Colorado and southwestern Wyoming.

The origin of CWD in this situation remains unknown, and there has been no documented commingling of the captive elk, enclosed deer, or free-ranging deer in the area. The elk facility and deer enclosure have been in existence since 1993. CWD first was found at that location in two elk in December 2000, and five additional positive elk have been detected since then. The Nebraska Department of Agriculture is formulating a plan to depopulate the remaining 80 captive elk at this facility, and the Nebraska Game and Parks Commission (NGPC) is working with the owner to destroy and test the remaining deer in the enclosure.

The prevalence of CWD in deer in the enclosure and in free-ranging deer is alarmingly high and is an indicator of the great risk this disease represents to wild white-tailed deer populations. The NGPC has declared CWD a wildlife disease emergency and has taken action to determine the extent of the problem and control it. During the 2001 hunting season, samples were collected from 805 hunter-killed deer in western Nebraska, including 125 deer from Sioux and Dawes counties. Laboratory results are pending on approximately 500 samples, but 1 of 37 deer from Kimball County tested positive. The positive animal was taken within 7 miles of the two positive wild mule deer found last year in Kimball County. CWD was not detected in 32 additional deer from throughout the state that fit the CWD target profile of an animal older than 1½ years with emaciation and neurological signs. All wild elk harvested in Nebraska since 1997 have tested negative for CWD, and results are pending on 31 elk harvested during the 2001 hunting season.

The NGPC recently decided to disallow private ownership and importation of mule deer. Currently there are five captive mule deer facilities with approximately 300 animals operating in the panhandle region. These operations may keep the deer and their offspring; however, they may not import animals into the state and cannot sell live animals within the state to other operators.

In addition to the Nebraska cases, CWD has been diagnosed for the first time in Kansas. In December 2001, CWD infection was confirmed in a captive elk that had been moved from a positive herd in Colorado to a small herd of captive elk and deer in south-central Kansas. Elk from the positive Colorado herd had been shipped to commercial elk facilities in 19 states, and positive animals have been found in 2 of more than 40 other Colorado elk ranches that received animals from the source herd. The remaining 17 elk and 2 white-tailed deer in the Kansas herd were depopulated in mid-January 2002. The state of Kansas is providing one-half of the compensation to the owner for the destruction of the animals and the USDA's Animal and Plant Health Inspection Service (APHIS) is providing the remainder.

- John Fischer and Bruce Morrison. Taken from the SCWDS Briefs. Vol. 17 (4); January 2002.

Federal Dough for CWD in Colorado. After months of waiting and a special plea for U.S. Senator Wayne Allard, a veterinarian, the U.S. government finally recently released \$12.5 million to help compensate ranchers for eradication of 350 game farm elk exposed to chronic wasting disease (CWD) in Colorado's San Luis Valley. A final hurdle to the release of dollars involved in the amount of state matching funds required by the agency that administers the federal funds. Officials in Colorado wanted 100% federal aid, but finally agreed to a 5% match. Part of the money will go towards testing brain tissue from the destroyed elk to look for concrete evidence of CWD. The funds will lessen the burden of nine elk ranchers who have been forced to spend thousands of dollars feeding the exposed animals that are destined to be killed. Besides the 350 elk at the San Luis Valley ranch, approximately 1,200 more elk are quarantined on other ranches mainly in northern Colorado and must be destroyed. Both the elk ranching community and the Colorado Department of Natural Resources consider receiving the federal dollars a big step forward in gaining control of this worrisome disease.

- Adapted from the *Outdoor News Bulletin of the Wildlife Management Institute*. Vol. 56 (2); February 11, 2002.

National Wildlife Health Center's Quarterly Mortality Report

Steatitis in Maryland: Steatitis was determined to be the cause of morbidity/mortality in 10 great blue herons found sick and dead on a golf course near Chesapeake Bay, Maryland in mid-October. Steatitis can result when there is a vitamin E deficiency, which in turn can occur when birds consume fish high in polyunsaturated fats or dead rancid fish containing oxidized fatty acids that destroy stored vitamin E. This problem has been documented before in great blue herons in Maryland (Nichols et al, *JAVMA* 189 (9), 1986).

Tower Strike in North Carolina: On 24 October 2001, for the second year in a row, over 100 songbirds of various species were found dead under a water tower on the Outer Banks near the town of Emerald Isle, North Carolina. Residents in the area noted that the carcasses were not there the day before. There had been high winds and much colder temperatures (in the 30s) overnight. Diagnostic evaluation at USGS National Wildlife Health Center (NWHC) confirmed trauma as the cause of death in the birds examined.

AVM in Southern States: Once again, avian vacuolar myelinopathy (AVM) has been documented by NWHC and the Southeastern Cooperative Wildlife Disease Study on a few lakes in southern states. AVM was confirmed in a few coots on De Gray Lake, Arkansas; a bald eagle from Lake Ouachita, Arkansas; several coots on Woodlake, North Carolina and Lake Juliette, Georgia; and several Canada geese, coots and few bald eagles on Strom Thurmond/Clark's Hill Lake, which is on the Georgia and South Carolina border. AVM has previously been documented at all of these locations. AVM appears to be occurring at a low level so far this year.

Eared Grebes and Gulls in Utah: Wildlife biologists with the Utah Division of Wildlife Resources (UDWR) reported low-level mortality in eared grebes and California gulls on the south arm of the Great Salt Lake (GSL) in early December 2001. On December 19, a raft of 1500 to 2000 dead eared grebes and gulls were observed in open water during an aerial survey. The NWHC received seven freshly dead eared grebes and two California gulls. Necropsy and histopathologic examination confirmed a bacterial septicemia. *Erysipelothrix rhusiopathiae* was cultured from the livers of all birds and from the lung and brain in some birds. Follow up surveys for dead birds on GSL were hampered by poor weather; however, UDWR biologists estimated that approximately 9500 eared grebes and 500 California gulls died. A similar mortality event in eared grebes and California gulls due to erysipelas occurred in December in 1975 (Jensen and Cotter, 1976. *Journal of Wildlife Diseases* 12:583-586). As a reportable disease, erysipelas was reported to the Utah State Veterinarian and Department of Public Health as well as California biologists at sites along the impending migration route for the eared grebes.

Leopard Frog Tadpoles in Arkansas: In November 2001, NWHC received southern leopard frog tadpoles collected and preserved on May 19, 2001, during a mass mortality event involving an estimated 20,000 frogs in Burdette, Arkansas. The frogs were collected at a farm pond that was being drained, which produced highly stressful environmental conditions for the tadpoles including exposure to avian predation, high environmental temperatures, and potentially depleted food and oxygen supplies. Many of the live and dead tadpoles observed had skin discoloration and fungal infections on their flanks. Sick tadpoles taken into captivity died within 48 hours. Diagnostic evaluation of five specimens submitted to NWHC determined 3 of 5 had skin ulcers of unknown etiology, and 1 tadpole had unidentified immature trematodes in its skin.

All specimens were somewhat autolyzed and no significant infectious diseases were detected. These findings were secondary, as the environmental stress was probably the ultimate cause of death.

Update on West Nile Virus: West Nile virus (WNV) infections continued to be confirmed this quarter. In the United States, the Centers for Disease Control and Prevention (CDC) reported 7058 positive birds to date in 2001 (plus 122 in Canada), with the highest prevalence in the American crow. In addition to avian mortality, the USDA APHIS reported a total of 416 cases of WNV infection in horses from 19 states in 2001 to date, however the Florida Department of Health reports 451 cases in Florida (<http://www9.myflorida.com/disease%5Fctrl/epi/htopics/arbo/data/weekly.htm>). Approximately 24% of equine infections reported to USDA were fatal or required euthanasia. In 2001, 58 human cases of WNV were reported in the following states: New York (13), Florida (11), New Jersey (8), Connecticut (6), Maryland (6), Georgia (5), Massachusetts (3), Pennsylvania (3), Alabama (2), and Louisiana (1), plus the Cayman Islands (1). There were nine human mortalities related to WNV (<http://www.cdc.gov>). Please note that these data are from various sources in which the inclusive dates and total numbers of cases varied among sites. Maps of the distribution of the 2001 WNV infections are available at: http://cindi.usgs.gov/hazard/event/west_nile/west_nile.html. A cumulative list of avian and mammalian species confirmed positive for WNV is available at: http://www.nwhc.usgs.gov/research/west_nile/wnvaffected.html.

Bill Deformities in Alaska Birds: Black-capped chickadees with deformed bills have been continuously observed in Alaska since 1991. There have been greater than 700 reports of deformed black-capped chickadees and greater than 100 reports of 19 other species with bill deformities. In most birds, the upper bill is greatly elongated and curved down, causing interference with feeding and preening. These birds are observed to mainly eat suet or other soft foods; cracking open seeds may not be possible. Some birds with deformities wait underneath feeders and forage on pieces of food dropped by other birds. Although these birds appear otherwise healthy, survival is affected by the inability to feed, susceptibility to predators while feeding on the ground, and inability to thermoregulate poorly maintained plumage. Most reports of these deformities have come from the Matanuska-Susitna Valley, Anchorage, and Eagle River. USGS Alaska Biological Science Center (ABSC) has completed contaminant screening on some birds; there were no consistent elevations of organochlorine compounds or heavy metals, although there were some increased levels of DDE and other DDT derivatives, PCBs and dioxins. ABSC has several banding stations where they are banding juvenile/immature birds and attempting recapture in fall/winter to look for changes. Nestlings that appeared normal had some elevated levels of toxins at the time of banding. So far, ABSC has recaptured three deformed birds that were normal at initial banding; results are pending. At this time, the cause of these deformities is unknown.

Quarterly Wildlife Mortality Report

October 2001 to December 2001

State	Location	Dates	Species	Mortality	Diagnosis	Reported by
AK	Anchorage & Matanuska-Susitna Valley	01/01/01-12/31/01	Black-capped Chickadee Black-billed Magpie Northwestern Crow Steller's Jay Downy Woodpecker	200*(e)	Deformities: Etiology undetermined	AK
AR	Garland Co., Lake Ouachita	12/13/01-ongoing	Bald Eagle	1	Vacuolar myelinopathy	NW
AR	Mississippi Co., Burdette	05/10/01-05/26/01	Southern Leopard Frog	20,000 (e)	Environmental stress	NW
CA	Los Angeles Co., San Francisquito Canyon	08/29/01-10/23/01	Pacific Tree Frog	9*	Fungal Infection: Chytrid	NW
CA	Santa Clara & Alameda Co.; Artesian Slough, Coyote Creek & San Jose	06/20/01-11/10/01	Mallard Green-winged Teal Gadwall Northern Shoveler	1,660	Botulism suspect	SF

CO	El Paso & Teller Co;	06/01/01-ongoing	California Gull Raccoon	900 (e)	Canine distemper	CO
CO	Colorado Springs area Otero Co., La Junta	09/17/01-09/21/01	Red Fox American White Pelican American Avocet Ring-billed Gull Northern Shoveler Green-winged Teal	1,825	Trauma: Hailstorm	CO
FL	Alachua Co., Gainesville	07/01/01-11/01/01	Southern Leopard Frog Green Tree Frog	180 (e)	Hepatitis, Ulcerative dermatitis	NW
FL	Lake Apopka	10/24/01-10/30/01	American Coot Bald Eagle	21	Trauma	NW
FL	Lee Co., Gasparilla Is.	12/14/01-ongoing	American White Pelican	14	Open	NW
GA	Glynn Co., Brunswick Harbor	10/09/01-10/14/01	Ruddy Turnstone	170 (e)	Toxicosis suspect: Urea	SC
GA	J. Strom Thurmond Lake/Clarks Hill Lake	10/20/01-ongoing	Canada Goose Bald Eagle American Coot	25	Vacuolar myelinopathy	SC
ID	Valley Co., S. Fork of Salmon River	08/25/01-10/09/01	Idaho Giant Salamander	11 (e)	Fungal Infection: Chytrid	NW
MD	Queen Annes Co., Stevensville	10/08/01-11/13/01	Great Blue Heron	10	Steatitis	MD, NW
MI	Saginaw Co., Saginaw	07/01/01-11/05/01	American Goldfinch	10	Trauma	NW
MS	Harrison Co., Gulfport	10/01/01-10/10/01	House Finch	4 (e)	Conjunctivitis: Mycoplasma suspect	NW
MT	Ravalli Co.	08/01/01-08/05/01	Boreal Toad	1,000 (e)	Open	NW
MT	Ravalli Co., Sweeney Creek Headwaters	06/08/01-06/14/01	Columbia Spotted Frog	111	Exposure: Hypothermia	NW
NC	Carteret Co., Bouge Banks	10/23/01-10/23/01	Yellow-rumped Warbler Palm Warbler Swamp Sparrow Common Yellowthroat Black-throated Blue Warbler	100 (e)	Trauma: Tower strike	NW
NC	Moore Co., Woodlake	10/24/01-ongoing	American Coot	2	Vacuolar myelinopathy	NW
NY	Dutchess Co., Poughkeepsie	10/22/01-10/22/01	Gray Squirrel	3	Toxicosis: Brodifacoum	NY
NY	Monroe Co., Perinton	10/05/01-10/08/01	American Crow	5	Toxicosis: Avitrol	NY
NY	Niagara Co., Lewiston	12/18/01-12/18/01	Canada Goose	14	Toxicosis: Zinc phosphide	NY
NY	Niagara Co., Niagara Falls	09/12/01-09/14/01	Rock Dove	4	Toxicosis: Avitrol	NY
NY	Rensselaer Co., Reichards Lake	11/09/01-11/23/01	Canada Goose	5	Lead poisoning	NY
NY	Schenectady Co., Scotia	06/22/01-08/22/01	Gray Squirrel	8	Toxicosis: Brodifacoum	NY
OR	Ankenny Slough NWR	10/24/01-11/10/01	Canada (Cackling) Goose	25	Aspergillosis	NW
PAN	Canal Zone, Panama	05/30/01-08/08/01	Tungara Frog	11	Toxicosis suspect: pesticide	NW
UT	Davis Co., Great Salt	12/17/01-12/31/01	Eared Grebe	10,000 (e)	Bacterial	NW

	Lake		California Gull		Infection: Erysipelothrix rhusiopathae	
UT	Salt Lake City, Mill Creek	10/05/01-10/12/01	Mallard	14	Botulism type C	NW
UT	Wasatch Co., Heber Valley	09/06/01-11/15/01	Columbia Spotted Frog	9	Fungal Infection: Chytrid	NW
WI	Door Co., Sturgeon Bay	08/31/01-09/28/01	Mallard Double-crested Cormorant Unidentified Scaup	42	Botulism type C & E	NW, WI
WI	Milwaukee Co., Jackson Park	09/10/01-09/13/01	Mallard Ring-billed Gull	9	Botulism type C	NW, WI
WI	Vilas Co., Lac Vieux Desert	07/01/01-07/31/01	Ring-billed Gull	10 (e)	Salmonellosis	WI
WI	WI River area	11/27/01-ongoing	Bald Eagle	7	Open	NW, WI
Updates/Corrections:						
CA	Imperial Co., Sonny Sonny Bono Salton Sea NWR	05/18/01-11/09/01	Brown Pelican American White Pelican Ring-billed Gull Northern Shoveler Ruddy Duck	262, 409*	Botulism type C	NW
CA	Sacramento NWR Complex	07/28/01-11/19/01	Northern Shoveler Mallard Northern Pintail Green-winged Teal American Coot	581	Botulism type C	NW
MT	Gallatin Co., Beaver Creek	07/10/01-07/11/01	Columbia Spotted Frog	27	Viral Infection: Iridovirus	NW
RI	Washington Co., Exeter	07/08/01-07/15/01	Wood Frog	10,000(e)	Viral Infection: Iridovirus	NW
UT	Utah Co., near Elberta	07/01/01-07/10/01	California Gull	500 (e)	Dehydration	NW

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

Colorado Division of Wildlife (CO), Maryland Dept. of Natural Resources (MD), New York State Dept. of Environmental Conservation (NY), San Francisco Bay Bird Observatory (SF), Southeastern Cooperative Wildlife Disease Study (SC), USGS Alaska Biological Science Center (AK), USGS National Wildlife Health Center (NW), Wisconsin Dept. of Natural Resources (WI).

Written and compiled by Kathryn Converse/Rex Sohn - Western US, Kimberli Miller/Grace McLaughlin - Eastern US and Audra Schrader - technical support, NWHC. The Quarterly Wildlife Mortality Report is available at <http://www.nwhc.usgs.gov>. To report mortality, or to receive information about this report, contact one of 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 EUROPE

Wildlife Diseases in Europe in 2001

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OIE Report. The World Organization for Animal Health (OIE) with headquarters in Paris and an international reporting system, regularly monitors wildlife diseases world-wide. A working group with representatives from Europe, America, Africa and Australasia is responsible for this work. The report below is a summary of some of this data from different countries in Europe collected in 2001. We would like to thank all those who were involved and who collected this data.

Foot and Mouth Disease (FMD). Apparently, there was no involvement of wildlife in the recent outbreak of FMD in the Netherlands, the UK or France, in 2001. No cases of FMD were observed in wildlife in any of the areas in these countries where the disease affected domesticated animals. Serological investigations were performed on a number of deer in the Netherlands and in the UK, and on boar in the Netherlands, but no positive reactions were demonstrated.

Classical Swine Fever (CSF). CSF continues to be present in wild boar (*Sus scrofa*) populations in some parts of Europe and in 2001 was reported from Austria, Germany, Luxembourg, the Slovak Republic and the Ukraine. These outbreaks were generally restricted to wild boar populations and, except in Germany and Sardinia, disease was not observed in domestic pigs from the same locality. Vaccination of wild boars through a baiting system is currently in progress in Germany.

Mycobacterial infections - Bovine and avian tuberculosis, paratuberculosis. Bovine tuberculosis (TB) was reported not only in traditional foci in badger (*Meles meles*) in the UK and Ireland but also in other wild animals in Andorra, France, Hungary, Italy, UK and Spain. Wild boar appear to be the species most commonly infected in continental Europe, but the disease was also reported in red deer (*Cervus elaphus*), roe deer (*Capreolus capreolus*), fallow deer (*Dama dama*), muntjac deer (*Muntiacus reevesi*) and red fox (*Vulpes vulpes*) from Spain, France, UK (muntjac) and Austria. Avian tuberculosis was reported from different mammalian and avian species in many parts of Europe. Red, roe and fallow deer are the species most frequently infected. Paratuberculosis caused by infection with *Mycobacterium avium* subsp. *paratuberculosis* was reported from roe deer and ibex (*Capra ibex*) in France, and from a red fox in Italy.

Rabies. Rabies in Europe has in 2001 been observed and reported from Bulgaria, Croatia, Czech Republic, Estonia, Germany, Federal Republic of Yugoslavia, Hungary, Latvia, Lithuania, Poland, Romania, Russian Federation, Slovak Republic, Slovenia and Turkey. Rabies was most frequently observed in red foxes (*Vulpes vulpes*), racoon dogs (*Nyctyreutes procyonoides*), mustelids and deer. European Bat Lyssavirus was reported from Serotine bats (*Eptesicus serotinus*) from Denmark, France, Germany, the Netherlands and Poland. We are grateful to the WHO (World Health Organization) for these data, which they collected and posted on their Tübingen web site : <http://www.who-rabies-bulletin.org/>.

Brucellosis. *Brucella suis* type 2 is frequently found in wild boar in continental Europe and particularly causes problems for domestic pigs on those pastures where regular crossbreeding may occur. A case of *Brucella melitensis* infection was reported in a Chamois (*Rupicapra rupicapra*) in the French Alps.

Sarcoptic mange. Sarcoptic mange is still reported to be common in Northern Europe in red fox and racoon dog. The disease is occasionally observed in lynx (*Lynx lynx*), pine marten (*Martes martes*) and wolf (*Canis lupus*). In central and southern Europe, sarcoptic mange was reported in red deer, roe deer, chamois, and in a hedgehog (*Erinaceus europaeus*) in Switzerland.

Echinococcosis. *Echinococcus multilocularis* was reported from several European countries including Austria, Denmark, France and Switzerland. The adult form of the parasite was most commonly found in the red fox, but larvae (cysts) were

reported from France in a single marmot (*Marmotta marmotta*), and a European beaver (*Castor fiber*). *Echinococcus granulosus* was reported from a moose (*Alces alces*) in Finland.

Caliciviruses of Lagomorphs. European Brown Hare Syndrome (EBHS) and Rabbit Haemorrhagic Disease (RHD) are frequently reported from most countries in Europe and are believed to have a significant impact on lagomorph populations in several areas.

Mass Mortality of Frogs. Mass mortality among common frogs (*Rana temporaria*) was reported to occur in the UK in 2001. The mortality is considered to be primarily caused by a ranavirus (Family Iridoviridae). How this virus was introduced into the frog population in UK is uncertain, but it might have been through importation of infected amphibians or fish.

Tularemia. Tularemia was reported to be common in European brown hares (*Lepus lepus*) in France and Austria, but there were few reports of this disease in other countries in 2001. A follow-up of the epizootic outbreak of tularemia in Scandinavia in 2000 revealed very few cases in 2001.

Pasteurellosis. Infections with *Pasteurella multocida* and *P. hemolytica* (*Mannheimia hemolytica*) are widespread in Europe and were reported from several countries causing mortality in European brown hares, mountain hares (*Lepus timidus*), wild rabbits (*Oryctolagus cuniculi*), squirrels (*Sciurus vulgaris*), red fox, wild boar, chamois, roe deer, and white tailed deer (*Odocoileus virginianus*) [– the latter species were introduced to Scandinavia several years ago]. No major outbreak of Fowl cholera was observed or reported in Europe during 2001.

Pseudotuberculosis. Infections with *Yersinia pseudotuberculosis* (pseudotuberculosis) is one of the most common causes of death in European brown hares in many European countries. This disease was also recorded in mountain hare, roe deer, red deer and chamois.

Salmonellosis. Infections with *Salmonella typhimurium* in small passerine birds, gulls and pigeons are widespread in Europe and mortality from the resulting disease in 2001 was reported from Finland, Sweden, Norway, France, UK, Italy and Hungary. Salmonellosis in mammals was reported in hedgehog, red fox, raccoon dog, roe deer, ibex and wild boar from different countries.

Botulism. Botulism outbreaks were observed among waterfowl in UK, and sporadically from other countries.

Avian pox. Avian pox was reported frequently among small passerine birds in Sweden, UK and Finland.

Chlamydiosis. Infection with *Chlamydia psittaci* has been observed in partridge (*Perdix perdix*), mallards (*Anas platyrhynchos*) and rooks (*Corvus frugilegus*). The infection seems to be subclinical in many instances but mortality increases when secondary factors like poor environment or high populations are present. Future reports from Europe indicate that this infection may be prevalent in several species of wild birds.

Circovirus infection in gulls. Mass mortality among gulls, especially herring gulls (*Larus argentatus*), black-backed gulls (*Larus marinus*) and black-headed gulls (*Larus ridibundus*), and some other waterfowl have been observed in Sweden and the Netherlands. Virological investigations have indicated that a Circovirus is a probable cause of this disease and mortality. Virology and electronmicroscopy studies are currently in progress to attempt to further determine the cause of the disease.

New Conditions? If you are investigating a disease that may be previously unreported, why not provide a short preliminary description and leave your contact details. The disease outlined this month is not particularly new but it is the subject of on-going research in the UK.

Red squirrel parapoxvirus. Red squirrel parapoxvirus (RSPPV) causes an apparently fatal disease in red squirrels (*Sciurus vulgaris*) in the UK. Signs in affected squirrels include an exudative erythematous dermatitis particularly in the facial area, toes, vulva, prepuce and medial skin surfaces of the body. A serological survey has shown that very few red squirrels have antibodies to the virus but that over 60% of the introduced North American grey squirrels (*Sciurus carolinensis*) are seropositive, suggesting that the grey squirrel is a reservoir host. Cases of the disease in grey squirrels appear to be rare. The interesting epizootiology of this virus infection is encouraging further investigation of the

seroprevalence, pathology and mode of transmission. I would be interested to hear from colleagues in North America who have sera from grey squirrels which they would be willing to donate for serological screening.

- Tony Sainsbury, Zoological Society of London. *E-mail* tony.sainsbury@ioz.ac.uk

References Duff, J.P., Scott, A. & Keymer, I.F. (1996) Parapoxvirus infection of the grey squirrel. *Veterinary Record*, 138, 527.

Rushton, S.P., Lurz, P.W.W. and Gurnell, J. (2000) Modelling the spatial dynamics of parapox disease in red and grey squirrels: a possible cause of the decline in the red squirrel in the United Kingdom? *Journal of Applied Ecology* 37:1-18.

Sainsbury, A.W., Nettleton, P., Gilray, J. and Gurnell, J. (2000) Grey squirrels have high seroprevalence to a parapoxvirus associated with deaths in red squirrels. *Animal Conservation* 3, 229-233.

European Section. Material suitable for publication includes news of recent wildlife disease outbreaks and new diseases in Europe, short case reports, announcements and reports of relevant meetings in Europe, and job and scholarship announcements. Submissions should be in English, but members for whom English is a second language, will be accommodated as far as possible. The deadline for the next issue is May 2002.

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

WDA SECTION CHAIRS AND CONTACT INFORMATION

Australasian Section. For information regarding the Australasian Section, contact Peter Holz, Healesville Sanctuary, P.O. Box 248, Healesville, Victoria 3777 Australia. Telephone: 61 3 5957 2864; fax: 61 3 5957 2870; email: pholz@zoo.org.au

European Section. For information regarding the European Section, contact Torsten Morner, The National Veterinary Institute, Department of Wildlife, Box 7073, S750 07, Uppsala, Sweden. Telephone: +46-1867-4214; fax: +46-1830-9162; email: Torsten.Morner@SVA.SE

Latin American Section. For information regarding the Latin American Section, contact Alonso Aguirre, TUSVM Wildlife Clinic, 200 Westboro Road, North Grafton, MA 01536, USA. Telephone: (508) 839-7918; fax: (508) 839-7930; email: aguirre@wpti.org

Nordic Section. For information regarding the Nordic Section, contact Hans-Henrik Dietz, Danish Veterinary Laboratory, Department of Fur Animal and Wildlife Diseases, 2 Hangovej, DK-8200 Aarhus N, Denmark. Telephone: 45-89-37-24-17; fax: 45-89-37-24-70; email: hhd@svs.dk

Wildlife Veterinarian Section. For information regarding the Wildlife Veterinarian Section, contact Dr. Terry Kreeger, Wyoming Game and Fish Department, 2362 Highway 34, Wheatland, Wyoming 82201 USA. Telephone: 307-322-2571; FAX 307-766-5630; email: tekreege@wyoming.com

JOB ANNOUNCEMENT

Field Research Interns (2 Positions) Needed from mid-June 2002 to mid-December 2002 to conduct field work on avian disease in Hawaii. Research interns will conduct field work at Kipahulu Valley and adjacent areas on the island of Maui to document prevalence and distribution of avian pox and malaria in native and non-native forest birds. Field sites are located in Kipahulu Valley and adjacent areas in Haleakala National Park. Field work will consist of: (1) mist netting and banding forest birds; (2) trapping mosquitoes; (3) collecting data on feral pig disturbance, and larval mosquito habitat. Work schedule and duties will vary during the course of the internship. Applicants must be in excellent physical condition, able to walk long distances over, uneven, steep, slippery terrain, work in remote locations (camping 7-10 days at a time will be required) and live and work in close proximity with other interns. **QUALIFICATIONS:** Undergraduate coursework in ecology, ornithology, wildlife biology, microbiology and/or parasitology. Prior experience mist netting,

handling, and identifying forest birds is desirable. Food and laundry stipend of \$400 per month, dormitory-style housing, field equipment, and field training are provided; interns must provide their own airfare to Hilo, Hawaii. Days are long and field work is demanding, but schedule provides ample time for relaxation and exploring Hawaii (snorkeling, swimming, surfing, diving, hiking, biking). Interns will live on a small rural community next to Haleakala National Park on the island of Maui. Please send cover letter, resume, and names and current telephone numbers of 3 references to: CARTER ATKINSON, P.O. BOX 218, HAWAII NATIONAL PARK, HI 96718, EMAIL: Carter_Atkinson@usgs.gov, FAX: 808-967-8545.

Field And Lab Research Interns (17 Positions) Needed from mid-May 2002 to mid-September 2002 conduct field and laboratory work on avian disease in Hawaii. The Biocomplexity of Avian Disease project is a 5-year NSF-funded research program. Research interns will conduct field work at 9 sites from sea level to 6,000 ft elevation on the eastern slope of Mauna Loa Volcano, Hawaii. Field sites range from extremely hot and dry to extremely wet, muddy, and rainy. Field work will consist of: (1) mist netting and banding forest birds; (2) trapping mosquitoes; (3) collecting data on plant phenology, vegetation structure, small mammal abundance, feral pig disturbance, and larval mosquito habitat. Work schedule and duties will vary during the course of the internship. Laboratory work will consist of: (1) caring for experimental birds in aviaries; (2) microscope work to assist with the diagnosis and quantification of malarial infections in wild and experimental birds; (3) bench work assisting with serological diagnosis of chronic malarial infections in wild birds. Applicants must be in excellent physical condition, able to walk long distances over rugged, uneven terrain, work in remote locations (camping 4-8 days at a time may be required), live and work in close proximity with other volunteers, have full color vision and hearing, and be able to work for long periods at a compound microscope. **QUALIFICATIONS:** U.S. citizenship with undergraduate coursework in ecology, ornithology, wildlife biology, microbiology and/or parasitology. Prior experience mist netting, handling, and identifying forest birds is desirable. Food and laundry stipend of \$400 per month, dormitory-style housing, field equipment, and field and laboratory training are provided; interns must provide their own airfare to Hilo, Hawaii. Days are long and field and lab work is demanding, but schedule provides ample time for relaxation and exploring Hawaii (snorkeling, swimming, surfing, diving, hiking, biking). Interns live in a small rural community next to Hawaii Volcanoes National Park, site of one of the world's most active volcanoes. Please specify whether you are interested in a field or lab position and send cover letter, resume, and names and current telephone numbers of 3 references to: CARTER ATKINSON, P.O. BOX 218, HAWAII NATIONAL PARK, HI 96718, EMAIL: Carter_Atkinson@usgs.gov, FAX: 808-967-8545.

Assistant Director for the Consortium for Conservation Medicine. The CCM seeks an assistant director beginning in May-June of 2002. The successful candidate will have a DVM or PhD (MPH is an advantage) and a strong interest in the linkage between conservation and health. A proven record of grant writing and publications is required. The assistant director will have responsibility for projects and programs within one or more of the CCM's themes. These include emerging diseases and pathogen pollution, landscape scale disease ecology, marine health and climate change. The successful applicant will work closely with the Executive Director to plan and develop new initiatives in research, education and practical conservation medicine. The assistant director will act as a focal point for liaison with consortial partners, grantmakers, and or international network of affiliates. Applicants should send a full CV and a cover letter detailing professional aims in the field of conservation medicine, the position applied for, and names and addresses (include email) of 4 references to: Dr. Peter Daszak, Executive Director, Consortium for Conservation Medicine, PO Box 1000, 61 Route 9W, Palisades, New York 10964. Closing date for the application is April 15, 2002.

The CCM links centers of excellence at Harvard Medical School, Tufts School of Veterinary Medicine, Wildlife Trust and USGS National Wildlife Health Center. We are based at the Lamont-Doherty campus of Columbia University, in peasant surroundings 25 minutes north of New York City. To learn more about the field of conservation medicine, the CCM or these positions, visit: <http://www.conservationmedicine.org> or email daszak@conservationmedicine.org

Program Assistant, Consortium for Conservation Medicine. The CCM seeks a program assistant to help coordinate research and education programs in conservation medicine. An interest in the linkage between conservation and health are important for this position. An undergraduate degree in biological or environmental sciences is required and postgraduate qualifications or experience are an advantage. Good presentation and writing skills are vital for this position. The

program assistant will be responsible for researching, preparing and updating media kits, briefing documents and the CCM website, and coordinating CCM meetings. Applications should include full CV and list of 4 references (include email) to: Dr. Peter Daszak, Executive Director, Consortium for Conservation Medicine, PO Box 1000, 61 Route 9W, Palisades, New York 10964. Closing date for the application is April 15, 2002; the position starts late spring of 2002.

The CCM links centers of excellence at Harvard Medical School, Tufts School of Veterinary Medicine, Wildlife Trust and USGS National Wildlife Health Center. We are based at the Lamont-Doherty campus of Columbia University, in peasant surroundings 25 minutes north of New York City. To learn more about the field of conservation medicine, the CCM or these positions, visit: <http://www.conservationmedicine.org> or email daszak@conservationmedicine.org

TRAINING/EDUCATIONAL OPPORTUNITIES

Annual Veterinary Internship in Wildlife Medicine and Rehabilitation. The Clinic for the Rehabilitation of Wildlife, a non-profit hospital providing veterinary care for native and migratory wildlife, is inviting applications for its 1-year internship program. C.R.O.W. is a fully equipped wildlife clinic located on Sanibel Island along the Gulf Coast of Florida. The hospital admits approximately 3,000 patients a year representing nearly 200 different species. The internship program is designed to enhance clinical skills and introduce the intern to wildlife medicine with an emphasis on wildlife rehabilitation. The intern will be supervised by the full-time staff veterinarian and participate in all aspects of clinical work including diagnostics, medical treatment, radiology, anesthesia, surgery and necropsy. The intern will also assist in teaching veterinary externs.

Applicants must possess a DVM or equivalent and should have a strong interest in wildlife rehabilitation. On-island housing will be provided in addition to a stipend and benefits. A letter of intent, resume, veterinary school transcript, and three letters of reference will be required for application. The position rotates every July 1st. Please forward all questions and correspondence to: Dr. PJ Deitschel, Clinic for the Rehabilitation of Wildlife, Inc., PO Box 150, Sanibel, FL 33957. Telephone: (941) 472-3644.

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.

Two Wildlife Field Courses, South Africa. Offered by University of Pretoria and EcoLife Expeditions, South Africa International Universities Program.

ECOSYSTEMS AND WILDLIFE MANAGEMENT (4 credits – 2 weeks)

PEOPLE AND NATURE CONSERVATION (4 credits - 2 weeks).

The University of Pretoria Wildlife Management offers two wildlife field courses for students and professionals in wildlife biology, wildlife management, conservation, or ecotourism. Both courses are taught in nature reserve areas, where

students camp and participate in conservation projects. Course topics include wildlife management techniques, sustainable resource utilization, ecosystem and biodiversity conservation, reserve and resort management, African local community cultures and conservation perspectives, Africa tourism principles and historical sites.

The cost for one course is \$1250 (US dollars) per person, or \$2400 for both courses. The course fee does not include airfare. Courses are offered in December, April through September.

For more information contact Education@ecolife.co.za. Mailing address: Professor Wouter van Hoven, Ecolife Expeditions, 976 Duncan Street, Brooklyn, Pretoria, 0181, South Africa. Telephone: +27 12 460 5430, Fax: +27 12 460 9707, Email: education@ecolife.co.za, URL: www.ecolife.co.za/mainframe.html

Post-Graduate Studies in Wild Animal Health and Management: A Second Year for the Course in Uganda - and a New Masters Course. A one-year post-graduate training course in Wild Animal Health and Management has been introduced in Uganda, East Africa. It is organized by the Faculty of Veterinary Medicine, Makerere University. The course provides specialized instruction in such fields and animal ecology, wildlife disease, protected areas management and conservation legislation. Formal lectures are supplemented with fieldwork and students undertake their own research projects. Some modules take place in the field, in the stimulating and attractive atmosphere of Lake Mburo National Park, about four hours' drive from Kampala, where students and lecturers are able to work with indigenous wildlife and to interact with the Park's staff and local communities. The language of instruction is English, and lecturers are drawn from Europe as well as Uganda itself. A more extensive Masters (Msc) Course will start in 2001. At a time when health management and utilization of wildlife are attracting both interest and debate, these new courses provide much needed training opportunities for those planning to work in these fields, especially in Africa or other tropical regions.

Further information is available from Dr. Christine Dranzoa, WARM, Faculty of Veterinary Medicine, Makerere University, P.O. Box 7062, Kampala, Uganda. Email: warm@uga.healthnet.org. Additional information can be obtained from Professor John E. Cooper, Wildlife Health Services, P.O. Box 153, Wellingborough, NN8 2ZA, UK. Email: NGAGI@compuserve.com or the British Veterinary Association, 7 Mansfield Street, London W1G 9NQ, UK. Email: press@bva.co.uk

Preceptorships at Willowbrook Wildlife Center. Willowbrook is a wildlife rehabilitation and education center located in DuPage County, west of Chicago, IL. Preceptors receive training and significant hands-on experience in the diagnosis and treatment of wildlife species native to Illinois. Preceptors are expected to perform routine veterinary procedures under the supervision of Willowbrook's staff veterinarian. In the absence of the veterinarian, the preceptor will be expected to assist the wildlife keepers in their animal care duties. Qualifications include being a veterinary student or veterinarian, willingness to handle wild animals, ability to cooperate with staff, volunteers, and the public, and the ability to work independently.

Veterinary students receive a stipend (\$260 per week in 2000), paid every two weeks. The length of commitment is a minimum of 4 weeks (40 hrs/wk) to a maximum of 16 weeks. Housing arrangements and transportation are not provided and are the preceptor's responsibility. Tetanus toxoid and rabies pre-exposure vaccinations are also required. Veterinary students are asked to submit a Curriculum Vitae, official copy of their transcript, two written recommendations, and dates of availability.

This is an excellent opportunity for veterinary students to augment their training in non-domestic species. For further information, contact Dr. Catherine Brown at (630) 942-6204 ext.21 or email: kbrown@dupageforest.com

Training Position in Zoological Pathology. The Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin - Madison, in association with Research Animal Resources Center, University of Wisconsin - Madison, and the Milwaukee County Zoo is seeking a trainee in Zoo Pathology. Qualified applicants must hold a DVM or equivalent degree from an accredited College of Veterinary Medicine and be eligible for licensure in Wisconsin. Since residency training at the University of Wisconsin-Madison School of Veterinary Medicine involves the practice of veterinary medicine on privately owned animals, resident trainees are required to be licensed in the state of Wisconsin at the time they begin their residency program. Prospective resident trainees who are graduates of schools that

are not accredited by the AVMA must have passed either the NBE and CCT, or the NAVLE in order to obtain a license in Wisconsin. Graduates of schools that are not AVMA approved may register for the NAVLE examination through a limited number of states in the United States. (Some states require enrollment or completion of the ECFVG or similar program) You may want to visit the following web sites to learn more about licensing examinations and processes: <http://www.aavsb.org> and <http://www.nbec.org>.

Preference will be given to individuals with two or more years of residency training in anatomical pathology. The 2 year program, scheduled to begin July 2002 is designed to provide training and experience to prepare the trainee for a career in zoo, wildlife, avian, aquatic or exotic animal pathology and eligibility to sit the certification examination in anatomic pathology of the American College of Veterinary Pathologists. Stipend is \$25,000/yr.

Send curriculum vitae and the names of at least three references to: Dr. R.D. Schultz, Professor and Chair, Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin – Madison. 2015 Linden Drive West, Madison, Wisconsin 53706-1102. Telephone: (608) 2623-9888.

The University of Wisconsin is an Equal Opportunity and Affirmative Action Employer. Minorities and women are strongly urged to apply. Names, titles and/or occupation and addresses of applicants or nominees cannot be kept confidential.

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 ANNOUNCEMENTS

Symposium on the Medical Management and Captive Care of Chiroptera. May 15 - 18, 2002; Gainesville, Florida.

This symposium is hosted by Lube Foundation, Inc., the American Zoo and Aquarium Association Bat Taxon Advisory Group, and University of Florida Veterinary Medical Teaching Hospital.

The program includes presentations on medical management, emerging diseases, field programs, conservation, education and captive husbandry and management of Chiroptera. A separate two day Zoo Educators Workshop, a one day Florida Teachers Workshop and a Rodrigues Fruit Bat Family Extravaganza will also be held in conjunction with this conference.

Symposiums will be held at the Holiday Inn. Workshops, banquet dinner and Rodrigues Fruit Bat Family Extravaganza will be held at the Lube Foundation, Inc., 1309 NW 192nd Avenue, Gainesville, FL 32609

For further information on this conference or the workshops, please contact one of the following: John Seyjagat, Lube Foundation at 352 485-1250 or LUBEEBAT@aol.com, Peter Riger, Nashville Zoo at 615 746-2526 or priger@email.msn.com, Denise Tomlinson, OBC Florida Bat Center at 941 637-6990 or DRTomlinsn@aol.com

Inaugural Conference of the Dutch Society for Wildlife Health - First Announcement and Call for Papers. June 8, 2002; Amsterdam, The Netherlands. The Inaugural Conference of the Dutch Society for Wildlife Health (DSWH) will be held on Saturday, June 8, 2002 in Amsterdam, The Netherlands at the ARTIS Conference Center adjacent to the Zoo.

The central theme of the conference is the complex relationship between environmental parameters and wildlife and human health in the Netherlands. However, contributions relating to other geographical areas or other topics related to wildlife disease that are applicable to the Netherlands are encouraged. Keynote speakers are Dr. Corrie Brown from the College of Veterinary Medicine, University of Georgia, Athens, USA (The global increase of infectious disease outbreaks in wildlife) and Dr. Jef Vos from the National Institute of Public Health and the Environment, Bilthoven, The Netherlands (The effect of endocrine disruptors on wildlife and human health). The scientific programme will be followed by a buffet dinner and the Annual General Meeting of the DSWH.

Abstracts should be submitted by April 15, 2002, to Dr Ab Osterhaus, Institute of Virology, P.O.Box 1738, 3000 DR Rotterdam, The Netherlands preferably as an attachment in Word by e-mail: osterhaus@viro.fgg.eur.nl (Fax +31[0]10 4089485; Phone +31[0]10 4088066). Abstracts should include title, name and affiliation of authors, an informative

summary of up to 200 words, and preference for oral presentation or poster. Please contact Dr. Osterhaus for special abstract forms. The three best student abstracts will be awarded a prize of 300, 200 and 100 Euro, and free registration to the conference. Please indicate whether you wish to be judged and provide evidence of your student status.

- For registration please contact Dr. J.T. Lumeij, Division of Avian, Exotic Animal and Wildlife Medicine, Department of Clinical Sciences of Companion Animals, Utrecht University, Yalelaan 8, 3584 CM Utrecht, The Netherlands, preferably by e-mail: J.T.Lumeij@vet.uu.nl (Subject: Conference registration DSWH).

The above conference is a satellite meeting to the First International Meeting of Wildlife and Zoo Virology, which will be held consecutively, from June 9-11, 2002, at the same venue. For further information and registration on this virology conference, and hotel accommodation, please consult their website at www.wildlife2002.nl

First International Meeting of Wildlife and Zoo Virology. June 9-11, 2002; Amsterdam, The Netherlands. The First International Meeting of Wildlife and Zoo Virology, entitled “Encroachment on Wildlife ecosystems: new and re-emerging viral epidemics” will be held from June 9-11 in Amsterdam, at the ARTIS Conference Centre adjacent to the zoo. This meeting is focused on the consequences of altering eco-systems – alterations that affect an established virus-host balance, with new and re-emerging diseases as a consequence. Agents often persist in their natural reservoirs until an ecological imbalance, i.e. the destruction of forests, allows them to cross into a susceptible species where they may cause epidemics of a pandemic potential. When new species are introduced into “foreign” environments or when a virus-host relationship is altered i.e. by vaccination, another disequilibrium may arise.

Several new and re-emerging viral epidemics, like West Nile fever, Rift valley fever, foot-and-mouth disease, were witnessed during the last decade and illustrate the importance and timeliness of this meeting. Reservoirs of viruses in exotic species (e.g. fruit bats for Nipah virus) and in aquatic vertebrates (influenza B virus) were recognized, and their impact on human and animal health was significant. It is the aim of the organizers to have experts on wildlife and zoo animal virology discuss the consequences of trans-species transmission on wildlife, domestic animals and on the human population. These will find the meeting a welcome opportunity to exchange experience and expertise in the monitoring, diagnosis, prevention (including wildlife vaccination) and control of outbreaks. The scientific programme will include the following sessions: transmission between wildlife and domestic species, threats to biodiversity and human health, epidemiological consequences of ecology changes, and wildlife population die-offs.

Internationally recognized experts will present keynote lectures to introduce the sessions. The scientific advisory board is determined to compose a dynamic and interesting program. For further information and early registration you are invited to consult the website “www.wildlife2002.nl”.

As a satellite meeting the Dutch Society for Wildlife Health (DSWH) will organize its inaugural conference on June 8, 2002 at the same venue. The central theme is the complex relation between environmental variables and wildlife and human health in the Netherlands. For further information on the DSWH conference, submission of papers and registration please contact J.T.Lumeij@vet.uu.nl.

51st Annual Meeting of the Wildlife Disease Association. July 28-August 1, 2002; Humboldt State University, Arcata, California. Please see details of the meeting under “WDA Activities” in this issue.

Brucellosis in the Greater Yellowstone Area. September 17-18, 2002; Jackson, Wyoming. This two-day symposium will be held at the Snow King Resort on September 17-18 in Jackson, Wyoming. Symposium speakers will discuss all aspects of brucellosis in elk and bison including past, current, and future research and management activities. Government and non-government agencies will also present their perspectives on this issue. Registration before June 1, 2002 is \$75, including proceedings. For further information and registration materials, contact Becky Russell, Wyoming Game and Fish Department (307-766-5616; rrussell@uwyo.edu).

American Association of Zoo Veterinarians Annual Conference. October 6-10, 2002; Milwaukee, Wisconsin. The American Association of Zoo Veterinarians will hold its' annual conference in Milwaukee, Wisconsin, October 6-10, 2002. Program sessions include Reptiles and Amphibians, Avian Medicine, Hoofstock, Carnivores, Primates, Case Reports, Aquatic Animals, Pathology, Conservation Medicine, Emerging Diseases, Reproduction and Contraception, Behavior, Enrichment and Conditioning, and Biomaterial Banking. There will also be a poster session, veterinary and graduate student paper competitions, and workshops/wetlabs. For additional conference information, visit our website www.aazv.org or contact Wilbur Amand, VMD, Executive Director/AAZV, 6 North Pennell Road, Media, PA 19063, USA. Phone (610) 892-4812. Fax (610) 892-4813. Email: AAZV@aol.com.

Note from the Editor: Please send meeting announcements, diagnostic riddles, position and grant announcements, miscellaneous items, etc. for the Supplement to the Journal of Wildlife Diseases to Charlotte F. Quist, Wildlife Health Associates, P.O. Box 109, Dillon, MT 59725 USA. Telephone: (406) 683-8325. Email: cquist@bmt.net Double spaced typewritten or electronic mail files in WordPerfect or Microsoft Word are preferred. The deadline for submission of articles for the next issue (July 2002, JWD Vol. 38, No. 3) is May 25, 2002.