



SUPPLEMENT TO THE JOURNAL OF WILDLIFE DISEASES

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Wildlife Diseases Newsletter
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NEW ADDRESS!! Visit the WDA website at: <http://www.wildlifedisease.org>

Vice President's Corner

You da glue, folks!

I am a second-generation member of WDA; my M.Sc. and Ph.D. supervisors, Dick Beaudoin and Dan Trainer, were well known WDAers. Thanks to these gentlemen and others, WDA has played an important role in my career and life. I joined WDA in 1964 and have only missed a handful of annual meetings since. Highlights of my association with WDA have been serving on the Student Activities Committee and as current Vice-President. I promote WDA, plain and simple. We are a dedicated group; we have a flagship journal. We have done well.

WDA is at a pivotal time in its life. Disciplines or sub-disciplines that encompass wildlife disease, along with the development of technology in those disciplines, have emerged at about the same rate as emerging diseases. This has come toward the end of the careers of second-generation members like me. That is not the case for third-generation WDAers. Our younger members fall smack in the middle of this exciting time, and... 'You da glue, folks!'

Here is the context. Several years ago, at a WDA workshop, Tom Yuill talked about the need for glue in terms of WDAers uniting broad areas of biology. His message was that, with rapid progress in fields such as parasitology, my field, there was a tendency toward greater specialization and potentially a pulling apart of biology. Tom's glue was the generation of counterbalances to those narrowing, specialization, potentially "pull biology apart" forces. It was 'glue' represented by disciplines that are shared by biologists and the veterinary sciences, two major component groups in WDA. Today we see some WDAers that are part of that circle of glue, because some members are working in the glue areas of conservation biology, wildlife pathology, health and management, epidemiology, etc (see October 2000 *President's Corner*). But if WDA is to grow and expand in this era of rapid technological growth and expansion, it must become more multi-discipline oriented. That means that our membership must, as Tom stated, "cross-cut" both veterinary and biological disciplines (examples, epidemiology, pathology, and wildlife ecology and management). And who will make that happen? The third-generation members, the future of WDA, because 'you da glue, folks!'

A former WDA Vice-President once told me that getting young people to serve on committees was the worst part of the job. I am here to tell you that things have changed! We have glue coming out our ears; members volunteering on all fronts. So many in fact that recently, we have tended to ignore that part of our by-laws that stipulates a maximum of three members per committee (actually we are in the process of revising that part of our by-laws). As one example, the Promotions Committee has nine members. This committee, and others, are doing the job! Consider some of our most recent initiatives: new 'Adopt a Member' Program (most of us know a person somewhere who would appreciate—but cannot afford—a membership, or if you know two such people, you adopt a member and get a second generation

The Wildlife Disease Association does not regard the Supplement to the Journal of Wildlife Diseases (Wildlife Diseases Newsletter) as a citable publication and, therefore, it should not be referenced in the scientific literature.

WDA colleague to buy one), new 'Associate Member' category, new logo, new Journal design, new promotional poster, new look to web page, new Student Member on Council position, new support for 100 new WDA memberships in each of next three years (thank you *Field Veterinary Program* of the *Wildlife Conservation Society!*), newly formed and active Sections Committee, etc, etc, and renewed enthusiasm to add more cross-discipline glue and some international glue, too. In short, WDA will be what WDAers want it to be, because we are da glue, folks!

I have heard it said that the only way to accomplish things in the wildlife disease field is to first get your DVM, then go on from there. In other words, a graduate studies and career in Biological Sciences alone does not provide the background for good service to WDA. Helloooo. Are we listening to Tom's message or not? We need all the multi-discipline glue we can get. WDA must build strengths in diversified areas. And we have to round-up our wagons as a unified society and build new bridges with those many and rapidly progressing new branches of science that are out there.

Traditionally, our third generation 'glue' would beat each other up at our annual Don Forrester-sponsored volleyball game, but as surely as the hair on Don's head becomes whiter (I should be so lucky!), things will change. I could easily envision our young members forming their own 'Get Things Done Committee', perhaps with the new Student Representative on Council as the Chair, and bringing to our annual conference and society many new 'glue' initiatives. I can't wait for an Annual Wildlife Disease Quiz Bowl or other imaginative ways to link wildlife disease globally and publically (another Yuill idea). We second generation oldsters better be ready to step aside, because 'you da glue, folks!'

Bill Samuel, WDA Vice President

WDA ACTIVITIES

South Africa!!! The Wildlife Disease Association (WDA) and the Society for Tropical Veterinary Medicine (STVM) will hold a joint meeting with the theme "Wildlife and Livestock Disease and Sustainability: What Makes Sense?" from July 22–27, 2001 at Kwa Maritane, Pilansberg National Park, South Africa. The meeting will be the WDA's 50th annual and 8th international conference, and the 6th biennial conference of the STVM. The venue will allow plenty of opportunity for world class game viewing, social events and local entertainment, African folk art and craft shopping, and extension tours and safaris within southern Africa.

Themes of the Conference are emerging diseases, disease scourges of wildlife and livestock, new tools, technologies and vaccine development, sustainability of current management practices, what makes sense for future wildlife and livestock health management?, immunological and epidemiological approaches to disease mechanisms, vectors—role and control, holistic approaches for people, animals, and the environment and pathogen pollution.

The conference will be comprised of plenary sessions, breakaway sessions, and poster sessions. Participants are invited to submit papers and posters for the sessions. While topics in line with the conference theme will be given first consideration, papers and posters covering areas outside the general theme will also be considered. The deadline for the Call for Papers was January 19, 2001. The early registration deadline is March 1, 2001, and the hotel registration deadline is June 1, 2001. The standard registration deadline for conference is July 10, 2001.

Conference information, travel information, registration and the call for papers are being handled by Event Dynamics, P.O. Box 411177, Craighall 2024, South Africa. Telephone: 27 11 442 611; FAX: 27 11 442 5927. Email: sandra@eventdynamcis.co.za

WDA Student Activities. The Wildlife Disease Association offers a scholarship and two awards to encourage student participation in the Association and our annual conference, and to recognize outstanding student research. Students are defined as undergraduate or graduate students in the basic or veterinary sciences, and veterinary interns or residents. Potential recipients must be members of the Wildlife Disease Association or must apply for membership at the time of application for the award. Student supervisors are encouraged to bring these awards to the attention of their students well in advance of deadlines.

- 1) **Wildlife Disease Graduate Student Research Recognition Award: DEADLINE: April 15, 2001.** 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 presenter during the Student Presentation Session at the conference.

Applicants should submit three items:

- 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.**

- A cover letter stating how the research relates to WDA objectives (see inside back cover of WDA journal).
- 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.

GROUNDINGS FOR DISQUALIFICATION INCLUDE:

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

2) **Wildlife Disease Association Scholarship: DEADLINE: April 15, 2001.** 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:

- One copy of 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.
- 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.
- Evidence of superior scholastic achievement (course work, scholarships, awards, publications).

GROUNDINGS FOR DISQUALIFICATION INCLUDE:

- Items missing.
- Submissions postmarked beyond deadline date.

3) **Terry Amundsen Student Presentation Award: DEADLINE for the 2001 Conference WAS January 19, 2001!** 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 in the special student session. Students wishing to be considered for the award should submit an abstract according to guidelines in the "Call for Papers" to the Program Chair of the Annual WDA Conference. The deadline for the 2001 Conference in South Africa was January 19, 2001. (If you missed this date, apply next year!) A copy of the abstract also should have been submitted to the Head of the Student Activities Committee, Dr. Thierry 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 awards are non-renewable and can be received only once by a given candidate. Applications for the Research and Scholarship Awards must be submitted by April 15, 2001 to: Thierry M. Work, USGS-NWHC-HFS, PO Box 50167, Honolulu, HI 96850, USA.

Changes at the Journal of Wildlife Diseases! Dr. Danny Pence has retired as editor of the *Journal of Wildlife Diseases*. We thank him for his many years of service. As of January 1, 2001, Dr. Pence's duties were taken over by Dr. Beth Williams. Look for other changes to the *Journal!* Instructions for authors and other documents related to the *Journal* are published in the January issue of the *Journal* and at www.wildlivedisease.org

The new address and contact information for the *Journal* is:

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University of Wyoming
1174 Snowy Range Road
Laramie, Wyoming 82070
Telephone: 307-742-6638
FAX: 307-721-2051
Email (preferred method of communication): jwd@uwyo.edu

Changes at the WDA Web Site!! 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. Recent issues of the *JWD Supplement* have already been password-protected, and members who have email addresses listed with the WDA business office have been sent password information. 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. Previous *Supplements* that are already posted will remain public access, but *Supplements* from July 2000 onward will require password access.

News from the Membership Committee.

New WDA Membership Directory In 2001: We will be producing a 2000–2001 WDA Membership Directory this year, to be distributed with the July issue of the *JWD*. Please make sure that when you send in your 2001 dues remittance envelope, you **update your contact information** so that we may include your correct information in the directory. We will be forwarding member names and addresses to the publisher at the end of February, so please update your contact information as soon as possible (i.e. send in your dues!).

And A Reminder. Also, don't forget that there is a new "Associate" member category. At a reduced annual dues of \$21, associate members will receive the password for the members-only section of the WDA website, where he/she can view the *JWD Supplement*, titles of papers in *JWD*, and titles and abstracts from WDA conference proceedings. As well, a new "Adopt a Member" program allows you to sponsor a new or continuing member by paying his/her dues. Check the "Adopt a Member" box on your remittance envelope and include the name and address of the member you wish to sponsor. We hope these new programs make it more feasible for overseas colleagues to join our organization.

Call for Award Nominees.

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

WDA Emeritus Award. Emeritus status is an honorary category of membership awarded by Council to members of the WDA who have retired from their professions and who, in the opinion of Council, have contributed significantly to the study of wildlife diseases. Emeritus Award recipients will be full voting members who receive the *Journal* without further payments of dues.

Nominations for both awards must be received on or before 25 February 2001. A complete nomination consists of a letter to the Committee giving a full account of the nominee's accomplishments and contributions relevant to the award, and an up-to-date *curriculum vitae* of the nominee. Additional supporting letters from other WDA members are very helpful. The Committee also would be pleased to receive suggestions for nominations by members who are not in a position to make a complete nomination, but who would like to identify to the Committee a potential nominee and indicate one or more persons who might be able to provide a full nomination for that person. Nominations should be sent to Ted Leighton, Department of Veterinary Pathology, University of Saskatchewan, 52 Campus Drive, Saskatoon, SK, S7N 5B4 Canada (Tel: 306-966-7281. Email: Ted.Leighton@Usask.ca). Submission of all materials in electronic form is encouraged.

Nominations for WDA Offices, 2001. SECOND AND FINAL CALL. The Nominations Committee is seeking nominations for President, Vice-President, and two seats on Council of the Association. Please contact Todd O' Hara with your nominations no later than February 20, 2001. After this time nominations will be closed. Please submit nominations to: Todd M. O' Hara, North Slope Borough, Box 69, Barrow, Alaska 99723, FAX 907-852-0351. Email: tohara@co.north-slope.ak.us. Current nominations include:

(Full biographical sketches will be sent to members along with their ballots in the spring.)

President	Paul Barrows (retired), formerly Commander of the U.S. Army Veterinary Corp.
Vice President	Torsten Morner, National Veterinary Institute, Uppsala, Sweden. Charles van Riper III, Research Scientist/Station Leader, USGS, FRESC, Colorado Plateau Field Station, & Professor, Department of Biological Sciences, Northern Arizona University, Flagstaff, Arizona.
WDA Council	Mark L. Drew, Wildlife Veterinarian, Idaho Department of Fish and Game and Idaho State Department of Agriculture, Caldwell, Idaho. John R. Fischer, Director, Southeastern Cooperative Wildlife Disease Study, and Associate Professor of Pathology, University of Georgia, Athens, Georgia. Carol Meteyer, Wildlife Pathologist, National Wildlife Health Center, Madison, Wisconsin. Margaret Wild, Wildlife Veterinarian, National Park Service, Fort Collins, Colorado. Mike Ziccardi, Wildlife Veterinarian, Wildlife Health Center, Davis, California

HAPPENINGS IN THE FIELD

A Look Ahead at West Nile Virus. West Nile virus (WNV) is an arthropod-borne virus that was first reported in the Western Hemisphere in the fall of 1999. Wild and exotic bird species provided the first virus isolates identified as WNV in the US and wildlife played a critical public health role as sentinels in both the 1999 and 2000 outbreaks. The 2000 outbreak exceeded the expectations of arbovirus experts by starting earlier in the mosquito season, extending further geographically, and infecting a wider range of wildlife species than anticipated. There are no known barriers to the spread of WNV in North America or the rest of the Western Hemisphere. In 1999, the range of WNV infected birds extended from the greater New York City area to limited areas of southern New Jersey and a crow in Baltimore, MD. Last spring's northward bird migration was followed by WNV positive birds in more northern states and areas of New York extending to the Canada border and Lake Erie. This fall, WNV infected birds found in more southern states heightened concern that WNV may soon reach subtropical climates with a potential for year round arbovirus transmission. What does the southern movement of WNV mean to wildlife? New species will be added to the list of WNV infected wildlife and new wildlife populations will be exposed to WNV. Birds migrating south throughout North America merge on overwintering areas along the US Gulf Coast and Central and South America and could provide millions of hosts for this exotic virus. Under the right conditions, birds could then carry this virus back north in the spring along multiple migration pathways that often vary from their fall migration pathways. Although birds are a primary host for many arboviruses, this newly introduced, particularly virulent strain of WNV may have more impact on naive western bird populations than other arboviruses, such as Eastern equine encephalitis and St. Louis encephalitis, which have coexisted with our North American species for thousands of years. Species already at risk at national or local levels could be the first species impacted by this viral infection. Of particular concern are members of the *Corvidae* family, some of which are highly susceptible to this virus. The American crow was the predominant wildlife species found affected by WNV in both the 1999 and 2000 outbreaks; thousands of crows are estimated to have died in each outbreak. Preliminary findings of research studies reinforce this bird species is highly susceptible to WNV.

Intensive WNV surveillance efforts in several northeastern states have resulted in an unprecedented number of dead birds reported to government agencies when compared to historical data on wildlife mortality in a similar time frame and geographic area. When a large percentage of the general public was motivated to report dead birds and they knew whom to contact, an amazing number of birds were found! Over 65,000 dead birds were reported in the state of New York during their WNV surveillance season from May to November 2000! A few agencies were able to exploit this dead bird resource to learn more about causes of mortality in the primarily passerine birds collected during WNV surveillance efforts. Intensified surveillance and an expanded outbreak in 2000 dramatically increased the number of species found positive for WNV between the first and second outbreaks; from 18 free-ranging native North American bird species in 1999 to 54 in 2000. Wild mammals were also found infected with WNV in New York this August, perhaps just the beginning of WNV infections in mammals. Future WNV studies or surveillance efforts should include testing of mammal species to examine this potential source of virus. The current list of WNV positive species is likely just an indication of the potential host range for this virus in the Western Hemisphere; the wide host range of WNV in the Eastern Hemisphere suggests many species can be infected.

WNV is fairly well embedded in our North American continent. Wildlife will likely continue to play

a role in public health surveillance conducted for the purpose of minimizing human WNV infections. Hopefully, information gathered to benefit human health also will benefit wildlife health.

Linda Glaser & Bob McLean, NWHC.

Letter to the Editor:

I have been interested to note the increased use of the term “free-ranging” as an adjective to describe animals that are “wild”, in contrast to those that are “captive”.

The widespread use in North America and in American journals of the term “free-ranging” is creating some confusion. Traditionally, here in the United Kingdom—and to a large extent, elsewhere in Western Europe, in Africa and in Asia—the term “free-living” has been used to describe animals that live in the wild, as opposed to those that are maintained in captivity. In other words, “free-living” has been considered to be the opposite of “captive”. On this side of the Atlantic, we have tended to reserve the description “free-ranging” for animals that are essentially captive but are allowed, within limits, to wander free. Thus, for example, deer on a farm in Scotland are usually described as “free-ranging” because they are able to “range” on the hills.

Interestingly, the term “free-living” is probably more apt for most wild species since, with fragmentation of habitat, few of them can range freely but the majority can live an independent existence.

At a time when wildlife disease studies are becoming of increasing importance internationally, there is a clear need for standardisation of terminology if ambiguities are to be avoided. I would like to suggest that the whole question of terminology is discussed by the WDA, in consultation with other organisations, so that appropriate definitions can be drawn up that are acceptable to, and approved by, wildlife biologists and veterinarians throughout the world. This move could be on the lines of the efforts by IUCN to define such terms as “introduction”, “re-introduction” and “re-stocking”.

Standard terminology will enhance the quality of our discipline and our science. It will also make life easier for those working in different parts of the world, especially those colleagues who do not have English as their first language and who are often confused by differences between what is spoken in North America and what is standard in Europe and elsewhere.

I should be interested to hear members’ comments on this proposal.

Yours faithfully,

John E Cooper; Wildlife Health Services, PO Box 153, WELLINGBOROUGH, Northants, NN8 2ZA UK
[Editor’s Note: Should anyone wish to respond to Dr. Cooper’s letter, appropriate responses will be printed in the April issue of the JWD Supplement.]

NATIONAL WILDLIFE HEALTH CENTER’S QUARTERLY MORTALITY REPORT

WNV 2000. West Nile virus (WNV) was a cause of wildlife mortality in the eastern US again this year. WNV is an arthropod-borne virus that had never been reported in the Western Hemisphere until the fall of 1999 when wild birds (primarily crows), horses, and people were affected in an outbreak in the greater New York City (NYC) area. This year, WNV was first detected in wild birds found dead the third week of May in southeastern New York and northeastern New Jersey, and mortality in wild birds has been ongoing. Horses and people were affected again this year also. This year’s outbreak expanded both geographically and in the number of species found infected with WNV when compared to last year’s outbreak. See the National Atlas website for maps of the outbreak at <<http://nationalatlas.gov/virusmap.html>>.

This year, over 4000 WNV positive dead birds were found in 12 states (NY, NJ, CT, MA, MD, PA, RI, NH, DE, VT, VA, and NC) and Washington D.C. Approximately 3500 of the positive WNV birds identified were American crows; however, the impact to crow or other bird populations is unknown at this time. WNV has infected over 70 species of birds including 54 free-ranging native North American (N.A.) species, 6 native N.A. species in captivity, 5 non-native free-ranging species, and several exotic and pet bird species. See the NWHC website at <http://www.umesc.usgs.gov/http_data/nwhc/news/westnil2.html> for a list of species found positive for WNV.

Wild mammals were first found positive for WNV in August this year. Initially, bats found alive in private homes were submitted for rabies testing and then subsequently tested for WNV after being found rabies negative. A total of 25 wild mammals including bats, raccoons, chipmunks, and squirrels were found infected with WNV in the state of NY. A WNV positive skunk was found in CT. It appears that at least some of the bats found positive for WNV are dying of WNV, but it is unknown whether these species are incidental hosts or if they are capable of transmitting WNV through a mosquito vector. At least 14 species of mosquitoes were found positive for WNV including both mammal and bird feeding species, species active at dawn and dusk, and species active during the day.

Most of the diagnostic work evaluating wild animals for the presence of WNV has been initiated and funded by public health agencies. The detection of WNV in wild species has provided critical information to health departments in responding to the public health concern of WNV. An enhanced passive surveillance system for reporting and testing dead birds has been the most sensitive method for detecting WNV activity, surpassing more traditional arbovirus surveillance tools such as mosquito surveillance and

sentinel chickens. Once WNV was detected in an area, public health agencies responded with public health education and sometimes targeted mosquito spraying to minimize human exposure to mosquitoes that could be harboring WNV virus. With the onset of cold weather and reduced mosquito activity, surveillance activities decreased significantly in the north but will continue through the winter in the south.

Amphibian Mortality/Morbidity. Chytridiomycosis, epidermal infections by the pathogenic chytrid fungus, *Batrachochytrium dendrobatidis*, was detected in multiple species of frogs, toads and salamanders, including tadpoles, larvae, neotenes and adults from 6 states. This was the first detection of the pathogenic chytrid fungus in three states (MN, NC & TX). Chytridiomycosis had been previously diagnosed in amphibians in 1999 or previous years in the other 3 states. Amphibian mortalities were attributed to the chytrid fungal infection only in adult (post-metamorphic) frogs and toads, while the chytrid infections in tadpoles and salamanders were considered incidental findings. Although the chytrid infections probably were subclinical cases in the salamanders, at two sites, it was reported that sympatric frogs and toads had suffered marked population declines. These findings provide further support to the theory that the pathogenic chytrid fungus is an important etiology in mortality events and may contribute to population declines in adult frogs and toads.

Iridovirus epizootics were considered the cause of mortality events in 9 amphibian species in 6 states. For the first time, mortality events attributable to iridovirus infections were observed in marbled salamanders and spring peepers in 2000. In addition, mortality events that simultaneously affected both ranid tadpoles and salamanders were observed at casualty sites in three states (MA, MN & NC). At two sites, mortality events have recurred annually for at least 3 consecutive years.

Affected life stages were usually tadpoles, larvae, neotenes or recent metamorphs. Infected frogs and salamanders presented a variety of gross abnormalities, including hyperemia and petechiae in the ventral skin, skin ulcers, hydrocoelom, and mild focal ventral dermal edema to very severe generalized dermal edema of the body and limbs. All isolated iridoviruses are believed to be the genus, Ranavirus, in the family, Iridoviridae, but confirmatory molecular analyses are pending.

QUARTERLY WILDLIFE MORTALITY REPORT July 2000 to September 2000

State	Location	Dates	Species	Mortality	Diagnosis	Reported by
AK	Kenai Peninsula Co., Skilak Lake	07/15/00-07/18/00	Double-crested Cormorant	10	Open	NW
CA	Glenn Co., Sacramento NWR	08/07/00-08/29/00	Mallard White Ibis Unidentified Egret Unidentified Pelican Pied-billed Grebe	143	Botulism type C	NW
CA	Mono Co., Toiyabe NF	08/16/00-09/15/00	Mountain Yellow-legged Frog	7	Fungal infection: Chytrid	NW
CA	Santa Cruz, Ellicott Slough NWR	05/20/00-05/20/00	Santa Cruz Long-toed Salamander	10 (e)	Fungal infection: Chytrid	NW
CA	Imperial Co., Seeley	05/23/00-05/23/00	Brown Pelican	9	Toxicosis: organophosphate Trauma: impact	NW
CA	Siskiyou Co., Lower Klamath Basin NWR	07/20/00-08/28/00	Mallard Northern Pintail Gadwall American Coot Northern Shoveler	950 (e)	Botulism type C	NW
CA	Sonny Bono Salton Sea NWR	06/26/00-ongoing	Brown Pelican American White Pelican	1,025	Botulism type C	NW
CA	Trinity Co., South Fork Trinity River	07/18/00-10/03/00	Pacific Giant Salamander Rough-skinned Newt	4	Parasitism: trematodiasis	NW
CA	Sonny Bono Salton Sea NWR	08/02/00-08/25/00	Cattle Egret	800 (e)	Salmonellosis	NW
ID	Jefferson Co., Camas NWR	07/14/00-09/05/00	Unidentified Duck Pied-billed Grebe American Coot Canada Goose	106	Botulism type C	NW

QUARTERLY WILDLIFE MORTALITY REPORT

July 2000 to September 2000

Continued

State	Location	Dates	Species	Mortality	Diagnosis	Reported by
ID	Jefferson Co., Market Lake WMA	07/07/00-08/22/00	Franklin's Gull Unidentified Duck Green-winged Teal	65	Botulism suspect	ID, NW
IL	Havana, Chautauqua NWR	09/08/00-10/10/00	Northern Pintail Mallard Northern Shoveler Green-winged Teal Unidentified Shorebird	933	Botulism type C	NW
IL	Lake Co., Lake Calumet	07/06/00-07/15/00	Unidentified Gull	100	Open	IL
KY	Adair Co., Columbia	09/09/00-09/09/00	Unidentified Passerine Tennessee Warbler Ovenbird American Redstart Magnolia Warbler	137	Trauma: powerline suspect	SC
ME	Albany Twp., Crocker Pond	07/01/00-07/05/00	American Toad Bull Frog	150 (e)	Toxicosis suspect	NW
ME	Hancock Co., Acadia NP	06/26/00-08/14/00	Green Frog Spotted Salamander Spring Peeper	100 (e)	Viral infection: iridovirus Deformities: etiology unknown	NW
ME	Rachel Carson NWR	07/16/00-08/01/00	Green Frog	30	Open	NW
MI	Saginaw Bay, Lake Huron	07/05/00-07/26/00	Mallard	13 (e)	Botulism type C	MI
MN	Dakota Co., Apple Valley	07/03/00-09/06/00	Mallard Canada Goose	121	Botulism type C	NW
MO	Franklin Co., Washington	08/09/00-08/09/00	Common Grackle Unidentified Blackbird	4	Open	NW
MS	Grenada Co., Grenada Lake	08/15/00-08/16/00	Cattle Egret	200 (e)	Open	MS
MT	Missoula Co., Missoula	07/14/00-07/17/00	Black-billed Magpie	20 (e)	Toxicosis: organophosphorus compd. suspect	NW
MT	Phillips Co., Bowdoin NWR	07/05/00-10/02/00	Mallard American Wigeon Blue-winged Teal Gadwall Northern Pintail	3,236 (e)	Botulism type C	NW
MT	Sheridan Co., Daphne & Gaffney Lakes	07/17/00-09/01/00	Mallard Blue-winged Teal American Wigeon Canada Goose Least Bittern	200 (e)	Botulism suspect	ML
MT	Sheridan Co., Medicine Lake NWR	06/28/00-07/17/00	Unidentified Waterfowl Muskrat Canada Goose Garter Snake Painted Turtle	700 (e)	Open	NW
NC	New Bern, Union Point Park	07/06/00-07/26/00	Hybrid Mallard Laughing Gull Herring Gull	150 (e)	Botulism type C	NC
NC	Onslow Co.	05/19/00-08/23/00	Southern Leopard Frog Barking Tree Frog	8 (e)	Fungal infection: chytrid	NW

QUARTERLY WILDLIFE MORTALITY REPORT
July 2000 to September 2000
Continued

State	Location	Dates	Species	Mortality	Diagnosis	Reported by
NC	Onslow Co.	05/23/00-07/26/00	Cottonmouth Snake Red-bellied Water Snake	4 (sick)	Parasitism: nematodiasis	NW
ND	McIntosh Co., Kulm WMD	07/26/00-08/23/00	Gadwall Bufflehead Mallard	189	Botulism type C	NW
ND	McLean Co., Turtle Lake II WDA	08/03/00-09/15/00	Unidentified Duck American Coot Black-crowned Night Heron Eared Grebe Northern Shoveler	831	Botulism type C	NW
ND	Ramsey Co., Lake Alice NWR	07/13/00-08/29/00	Mallard Gadwall American Coot Blue-winged Teal Northern Shoveler	1,128	Botulism type C	NW
ND	Richland Co., Gaukler Wetland	08/01/00-08/30/00	Ring-billed Gull American Coot Pied-billed Grebe Unidentified Duck	10	Botulism type C	NW
NH	Great Bay NWR	07/14/00-07/27/00	Bull Frog	8	Viral infection: ranavirus	NW
NV	Churchill Co., Canvasback Club & Fallon Sewer Ponds	07/07/00-08/06/00	Mallard Gadwall White-faced Ibis Green-winged Teal Redhead Duck	90	Botulism type C	NW
NY	NJ, MD, MA, RI, CT, PA	05/20/00-ongoing	American Crow Blue Jay Fish Crow	5000 (e)	Viral infection: West Nile	NW, NY, AS
NY	Throughout state	08/04/00-11/06/00	Mourning Dove	143	Parasitism: trichomoniasis	NY
NY	Ontario Co., Canandaigua Lake	07/24/00-07/28/00	Mudpuppy Salamander	9	Open	NW
OH	Richland Co.	07/08/00-07/08/00	Canada Goose	12	Open	NW
OH	Kenton & Hamilton Co.	06/05/00-06/22/00	Screech Owl Cooper's Hawk Red-shouldered Hawk Great-horned Owl	9	Toxicosis suspect	NW
PA	Erie Co., Presque Isle SP	07/17/00-09/01/00	Ring-billed Gull Semipalmated Sandpiper Great Black-backed Gull Herring Gull Bonaparte's Gull	150 (e)	Botulism type E	NW
SC	Jasper Co., Savannah	08/30/00-09/18/00	Snowy Egret Great Egret	50	Botulism suspect	NW
SD	Bennett Co., La-Creek NWR	07/14/00-09/01/00	American White Pelican Mallard Unidentified Duck Double-crested Cormorant Unidentified Goose	420	Botulism type C	NW
TX	Austin, Stillhouse Hollow Stream	07/18/97-04/17/00	Jollyville Plateau Salamander	26 (sick)	Deformities: scoliosis	NW
TX	Willacy Co., Laguna Madre	07/25/00-07/29/00	Tricolored Heron Louisiana Heron Royal Tern Reddish Egret	50 (e)	Exposure: hypothermia Dehydration	NW

QUARTERLY WILDLIFE MORTALITY REPORT

July 2000 to September 2000

Continued

State	Location	Dates	Species	Mortality	Diagnosis	Reported by
VT	Franklin Co., Lake Carmi	08/09/00-08/30/00	Mallard	15	Botulism type C	NW
VT	Franklin Co., Missisquoi NWR	08/19/00-09/24/00	Mallard Wood Duck Northern Shoveler Blue-winged Teal Green-winged Teal	155	Botulism type C	NW
WA	Grays Harbor Co.	07/16/00-08/20/00	Sea Otter	18	Open	NW
WI	Kenosha Co. Harbor	09/14/00-10/01/00	Mallard	40	Botulism type C	NW
WI	Manitowoc Co. Harbor	07/03/00-07/20/00	Ring-billed Gull	200 (e)	Salmonellosis	NW
WI	Milwaukee, Lake Michigan	07/18/00-08/24/00	Mallard Ring-billed Gull Herring Gull	87	Botulism type C	NW
WI	Outagamie Co., Little Lake Butte Des Morts	08/12/00-09/05/00	Mallard Blue-winged Teal Double-crested Cormorant	65	Botulism type C	NW, WI
WI	Racine Co., Lake Michigan	08/16/00-08/22/00	Mallard Unidentified Teal Herring Gull Unidentified Shorebird	24	Botulism type C	NW, WI
WI	Washburn Co.	04/01/00-04/30/00	Red-winged Blackbird Brewer's Blackbird Brown-headed Cowbird	30	Toxicosis: strychnine	WI
WY	Carbon & Laramie Co.	09/08/00-09/08/00	Wyoming Toad	3	Open	NW
WY	Teton Co., National Elk Refuge	07/22/00-09/05/00	Boreal Toad	2	Fungal Infection: chytrid	NW
Updates/Corrections:						
CA	Sonny Bono Salton Sea NWR	04/05/00-04/27/00	American White Pelican California Gull Double-crested Cormorant	8	Botulism type E	NW
CA	Shasta Co., Whiskeytown NRA	06/14/00-06/30/00	Bull Frog	100 (e)	Stomatitis Branchitis	NW
CO	Larimer Co., Rocky Mountain NP	05/01/00-05/01/00	Boreal Toad	1	Fungal infection: chytrid	NW
MA	Hampshire Co., Granby	06/15/00-07/25/00	Spotted Salamander Wood Frog	11,000 (e)	Viral infection: iridovirus	NW
ME	Penobscot Co. Acadia NP	08/01/00-08/11/00	Green Frog Bull Frog	200 (e)	Viral infection: iridovirus	NW
MN	Crow Wing Co. (CWB & CWN sites)	06/15/00-07/13/00	Mink Frog Green Frog Northern Leopard Frog	100 (e)	Fungal infection: yeast-like Viral infection: iridovirus	NW
MN	Crow Wing Co., Esden Lake	06/20/00-09/15/00	Mink Frog	100 (e)	Viral infection: iridovirus	NW
NC	Graham Co., Tulula Wetlands	03/27/00-04/16/00	Spotted Salamander Wood Frog	3,000 (e)	Viral infection: iridovirus	NW
NC	Graham Co., Tulula Wetlands	06/12/00-07/13/00	Spotted Salamander Bull Frog	10 (e)	Viral infection: iridovirus Fungal infections: yeast-like & chytrid	NW
ND	Stutsman Co., Cottonwood Lake	06/04/00-07/18/00	Tiger Salamander	1,000 (e)	Viral infection: iridovirus	NW

QUARTERLY WILDLIFE MORTALITY REPORT

July 2000 to September 2000

Continued

State	Location	Dates	Species	Mortality	Diagnosis	Reported by
ND	Kidder Co., Horse-head Lake	06/22/00–09/09/00	Eared Grebe Blue-winged Teal Western Grebe Northern Pintail Franklin's Gull	3,655	Botulism type C	NW
NE	Omaha, Fontenelle Park	06/27/00–07/15/00	Canada Goose Wood Duck Mallard Domestic Goose Domestic Duck	30 (e)	Botulism type C	NW
SC	Charleston Co.	05/26/00–06/26/00	Muscovy Duck Mallard	42 (e)	Duck plague	SC
TN	Blount Co., Great Smokey Mtns.	05/10/00–06/01/00	Wood Frog Marbled Salamander Eastern Spotted Newt	24 (e)	Viral infection: iridovirus	NW
WA	Okanogan Co., Okanogan NF	05/18/00–06/01/00	Pine Siskin Cassin's Finch	50 (e)	Salmonellosis	NW

All participating State Health Departments (AS), Idaho Fish & Game (ID), Illinois State Diagnostic Lab (IL), Medicine Lake NWR (ML), Michigan State Department of Natural Resources (MI), Mississippi Corps of Engineers (MS), Nat'l Wildlife Health Center (NW), New York State Department of Environmental Contaminants (NY), North Carolina Diagnostic Lab (NC), Southeastern Cooperative Wildlife Disease Study (SC), Wisconsin Department of Natural Resources (WI).

Written and compiled by Kathryn A. Converse and Audra K. Schrader, NWHC. The Quarterly Wildlife Mortality Report is also available on the Internet at <http://www.umesc.usgs.gov/nwhc/home.html/>. To report mortality or if you would like specific information on these mortalities, contact one of the following NWHC staff: Western US—Kathryn Converse; Eastern US—Kimberli Miller; West Nile virus—Linda Glaser; Hawaiian Islands—Thierry Work. Phone (608) 270-2400, FAX (608) 270-2415 or E-mail kathy_converse@usgs.gov. National Wildlife Health Center, 6006 Schroeder Road, Madison, WI 53711.

WDA SECTION NEWS

NEWS FROM EUROPE

European Wildlife Diseases Network Workshop. The first workshop of the European Wildlife Diseases Network, held under the European Union (EU) FAIR Concerted Action Project, took place in Madrid on 18 and 19 June 2000. The meeting was entitled "Reporting and a Digest of Published Papers on Wildlife Diseases in Europe during the Last Decade". The objectives of this programme are to establish lines of communication between centres and laboratories within the EU for the purposes of research and diagnosis of wildlife diseases, and to assess the implications of these diseases for human and animal health.

Introduction. Dr. Victor Briones (Madrid) welcomed delegates from 15 countries (Austria, Belgium, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Spain, Sweden, Denmark, Finland, Switzerland and Norway) to the meeting. The purpose of the meeting was to produce a document reviewing wildlife disease surveillance in Europe with particular reference to the last European review carried out by F. A. Leighton in 1994.

Dr. Briones made the point that relatively few wild animal species in Europe were truly wild; many could be described as "peri-domesticated". Accordingly, the term "animal health", in the European context, meant the health of all animals. The importance of wildlife in public health issues was emphasised; increasingly new wildlife hosts for important diseases of man and domestic animals were being found. Dr. Briones stated that lack of national surveillance for wildlife diseases could not be justified in Europe. However, a sense of balance was required between the value of the surveillance information gathered and the cost of this surveillance. In addition, but frequently omitted, were the considerations of environmental quality and species conservation. Conservation and animal health are linked, and it follows that animal health, public health and environmental quality will also be inter-related.

Dr. Marc Artois (France) summarised the wildlife disease literature since 1990. There has been a year-on-year increase in articles; currently at least 80 papers are published per annum.

Country Reports. Delegates from each EU country then gave a 20-minute presentation covering surveillance for wildlife disease in their country and listing the more significant diseases diagnosed during the last 10 years. This information is not easily summarised but it would appear that, for most countries, a national surveillance scheme is not in place. In this respect, there has been little movement since the last review in 1994. Many countries reported that a variety of institutes and organisations were undertaking a considerable body of work in diverse projects and studies. There was a need to co-ordinate this work and to improve, if possible, communications between the various groups within countries, particularly where there were autonomous regions. A related challenge was to improve the transfer of data to the reporting bodies of each country.

Classical swine fever, brucellosis and Aujeszky's disease in boars, rabies in bats, bovine tuberculosis in boars and badgers, trichinosis in carnivores, and echinococcosis in foxes were diseases listed as significant by several countries. Finally, the problems of reporting at international level were discussed. National authorities may be reluctant to release information concerning OIE list A and B diseases, and there was a need to improve the reporting at national level. Wildlife disease reporting could be considered separate from the reporting of disease in domesticated animals. International reporting was officially only concerned with disease in domesticated animals. This may change, so that countries could not be declared free of a disease if it occurred in their wildlife. In some instances, the central authorities may not be aware of the occurrence of certain diseases in the wildlife of their country.

Acknowledgements: The organisers in Madrid were thanked for their efforts in making this important review possible and delegates were thanked for their participation. Paul Duff, Veterinary Investigation Centre, Calthwaite, Cumbria CA11 9RR, UK. E-mail: P.Duff@vla.maff.gsi.gov.uk

4th Meeting of the European Wildlife Disease Association. This meeting was held in Zaragoza, Spain from 20–23 September 2000. The conference was attended by approximately 90 delegates from 12 European countries. Speakers also came from the USA (Aguirre: *Wildlife Disease without Frontiers*) and Australia (Cooke: *Epidemiology of RHD in Australia*). Thirty-two oral presentations were given with 40 posters. Although the two main themes were diseases of game species and predators, sessions covered a wide range of subjects with an emphasis on the OIE (Office International des Epizooties) List A and B, zoonotic and notifiable diseases. This was the 4th meeting of the EWDA which is now the major forum for discussion of investigations of wildlife disease in Europe. The EWDA fosters good relationships with other organisations in the field notably the World Association of Wildlife Veterinarians and the OIE. The beautiful 2000 year-old city of Zaragoza, (named after Caesar Augustus, the founder) was an excellent venue for this conference which started in the oldest building of the historic university. The presentations were given in a large auditorium at the veterinary facility, and excellent public transport enabled delegates to re-assemble in the evenings for dinner in the city centre surrounded by architecture from three civilisations.

The opening lecture, given by Mariano Domingo, was a clear and well-illustrated account of the diseases of stranded cetaceans on the Spanish Mediterranean coast. The significant mortality caused in 1990–91 by dolphin morbillivirus virus infection was described in addition to cases of toxoplasmosis, hepatic sarcocystosis and nocardiosis in dolphin species. Following this opening talk, the oral presentations were grouped into sessions on brucellosis, mycobacterial infections, and diseases of lagomorphs, carnivores, ruminants (two sessions) and avian diseases (two sessions). Poster sessions mirrored these topics.

A declining seroprevalence of *Brucella abortus* in Italian chamois was described, while in France, the sporadic incidence of *Brucella suis* in open-air pig farms was thought to be linked to infection in wild boar—keeping the domesticated pigs isolated from the boar is obviously essential. Several presentations described aspects of bovine tuberculosis in Spanish wildlife with boar possibly an endemically infected reservoir host.

Rabbit haemorrhagic disease and wildlife paratuberculosis (and several others diseases) were described by mixed teams of veterinarians and ecologists. Work in Scotland has shown that paratuberculosis organisms may be isolated from intestinal tissue from a range of wild species and this may have a bearing on the epidemiology of this important disease in domesticated stock.

Many of us like a mystery disease with an as-yet-unknown cause to exercise our diagnostic skills and several examples were presented. Roe deer mortality has remained an unsolved problem in France since 1977 and still continues. Balanoposthitis in bison appears to be similar to digital dermatitis in cattle in that *Treponema*-like spirochaetes in conjunction with *Fusobacterium* spp were detected. Oral ulceration in Scops owls was described, and although trichomoniasis appears to have been excluded, a cause for this condition in Spanish owls has not yet been found.

The sessions ended with the annual general meeting of the EWDA hosted by Torsten Morner, Sweden, and Marc Artois, France. This was preceded by a successful auction to raise funds for student presentation awards. Saturday saw an early start at 7am for a trip to the Ordesa National Park in the Pyrenees.

The organising committee is to be congratulated for providing a well-organised, scientifically suc-

cessful and socially enjoyable conference. Paul Duff, Veterinary Investigation Centre, Calthwaite, Cumbria CA11 9RR, UK. E-mail: P.Duff@vla.maff.gsi.gov.uk

Distemper Epizootic in Caspian Seals. Thousands of Caspian seals (*Phoca caspica*) have died in the Caspian Sea since April 2000. An international team of scientists, working as part of the Caspian Environment Programme Ecotoxicology Project (ECOTOX), recently concluded that canine distemper virus (CDV) infection was the primary cause of this epizootic.

Scientists from the Institute of Zoology, Regents Park, London, the Seal Rehabilitation and Research Center, Pieterburen, The Netherlands, the Sea Mammal Research Unit, University of St. Andrews, Scotland, and the Tara Seal Research Centre, Portaferry Northern Ireland, visited areas of seal mortality in Kazakhstan and Azerbaijan during May and June 2000 to carry out post-mortem examinations and collect tissue and blood samples from dead seals. They worked in collaboration with staff from the Geological Institute of the Azerbaijan Republic Academy of Sciences, Baku, Azerbaijan, the Laboratory of Virus Ecology, Institute of Microbiology and Virology, Almaty, Kazakhstan and Akademgorodok, Institute of Zoology, Almaty, Kazakhstan.

Blood and tissue samples, collected from 16 dead seals found on the Caspian coasts of Kazakhstan, Azerbaijan and Turkmenistan, were then analysed in the Veterinary Sciences Division of the Department of Agriculture and Rural Development, Belfast, Northern Ireland, the Institute of Animal Health, Pirbright, England and the Institute of Virology, Erasmus Medical Center, Rotterdam, The Netherlands. Microscopic lesions, characteristic of canine distemper, were found in 7 seals from which suitable tissues were available. Canine distemper virus infection was confirmed by reverse transcriptase-polymerase chain reaction in tissues from 9 of 12 seals tested. IgG or IgM antibodies were found in 12 of 13 sera tested. These findings in seals from several geographically dispersed regions of the Caspian Sea indicate recent infection with CDV and provide strong evidence that this virus was the primary cause of the epizootic.

Canine distemper virus is a morbillivirus, which, in 1987–1988, caused high mortality in Baikal seals (*Phoca siberica*) in Lake Baikal in Siberia, and is suspected of having caused a die-off of crabeater seals in Antarctica in 1955. It was previously identified in a single Caspian seal in 1997, but could not be linked to disease in Caspian seals at that time. Other morbilliviruses (phocine and cetacean morbilliviruses) have caused several major epizootics among aquatic mammal populations in various regions of the world in recent years.

Further studies are underway to determine the potential role of pollution in the recent epizootic, which was recently continuing in some areas of the Caspian Sea. This investigation was supported by the World Bank through a donation by the Japanese Consultant Trust Fund, and by the Offshore Kazakhstan International Operating Company. Details of the results are available on the *Emerging Infectious Diseases* website at www.cdc.gov/ncidod/eid/index. Seamus Kennedy, Veterinary Sciences Division, Stonely Rd., Stormont, Belfast BT4 3SD, Northern Ireland. E-mail: seamus.kennedy@dardni.gov.uk.

New “Editor” for European Section. I retired as “editor” of the European Section of the Newsletter at the end of 2000. I would like to thank all those who have contributed articles over the past five years and have no doubt that their contributions have helped raise the profile of wildlife disease in Europe. Paul Duff has agreed to become the new section “editor” and I wish him every success in this role.

—*Seamus Kennedy.*

European Section. Material suitable for publication includes news of recent wildlife disease outbreaks 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 and who send material in basic English or in their own language, will be accommodated as far as possible. Deadline for submission of articles for the next issue (April 2001) is 21 February 2001. Please mail, fax or e-mail submissions to Paul Duff, Veterinary Investigation Centre, Calthwaite, Cumbria CA11 9RR, UK. E-mail: P.Duff@vla.maff.gsi.gov.uk.

WDA SECTION CHAIRS AND CONTACT INFORMATION

Australasian Section. For information regarding the Australasian Section, contact Lee Skerratt, School of Veterinary Science, University of Melbourne, Princes Hwy, Werribee, Victoria 3030 Australia. Telephone: 61 3 9742 8330; fax: 61 3 9741 0401; email: skerratt@pgrad.unimelb.edu.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

AVAILABLE PUBLICATIONS

New Version Available! The USGS-National Wildlife Health Center is pleased to announce that the "Field Manual of Wildlife Diseases: General Field Procedures and Disease of Birds" has been completed. This field manual is a revision and expansion of the 1988 "Volume 1: Field Guide to Wildlife Disease" and is funded by an Administrative Grant from the U.S. Fish and Wildlife Service, Division of Federal Aid. The Table of Contents and an order form can be found at: http://www.umesc.usgs.gov/http_data/nwhc/metapubs.html

JOB ANNOUNCEMENT

The Wildlife Center of Virginia seeks an ambitious, team-oriented veterinarian with strong clinical and interpersonal skills to direct their rehabilitation and training program. Experience is required. Applications will be accepted until the position is filled. Send resume, cover letter, and references to: Edward E. Clark, Jr., President, WCV, PO Box 1557, Waynesboro, VA 22980. Complete job description at www.wildlifecenter.org

TRAINING/EDUCATIONAL OPPORTUNITIES

Zoo Medicine Short Course. June 11–15, 2001; University of Tennessee, Knoxville, Tennessee. A five-day course on zoological medicine will be held at the University of Tennessee College of Veterinary Medicine from June 11–15, 2001. The program, consisting of lectures and laboratories, will be conducted in conjunction with the Knoxville Zoological Gardens. It is the third year of the program, which has attracted veterinarians and veterinary students from throughout the world.

The course will include a wide range of topics in captive wildlife medicine, focusing on those aspects of zoo animal medicine and husbandry not covered by other continuing education programs. Topics will include zoo animal nutrition, infectious diseases of reptiles and felids, raptor medicine, non-human primate preventive medicine, immobilization, darting systems and elephant and rhinoceros medicine.

Cost is \$900 (U. S.) for veterinarians and \$500 (U. S.) for veterinary students. Enrollment is limited to 15 people. For additional information, contact Dr. Ed Ramsay at 865/974-5576 (e-mail: eramsay@utk.edu). To register, contact Barbara Campbell at 865/974-7264 (e-mail: bcampbe4@utk.edu). Registration deadline is Mar. 15, 2001. Further details are available on the college's web site at <http://web.utk.edu:80/~vetmed/zooschool.html>

Envirovet Summer Institute 2001: An Intensive Course in Terrestrial and Aquatic Wildlife and Ecosystem Health; July 6–August 25, 2001. Envirovet Summer Institute 2001 will provide a broad base of information on wildlife and ecosystem health in a developed country and an international development context. The 2001 program will focus on both terrestrial and aquatic species. Enrollment will be limited to a maximum of 25 veterinary students, veterinarians, and wildlife biologists. The seven-week shortcourse will be held from July 6 to August 25, beginning at the White Oak Conservation Center near Jacksonville, Florida; continuing at the University of Minnesota-Duluth and on Lake Superior; and finishing in East Africa at the Kenya Wildlife Service, the University of Nairobi, the International Livestock Research Institute, and Kenyan National Parks/Preserves.

Utilizing ecosystem health as the organizing principle, the Envirovet Summer Institute will demonstrate how veterinarians are needed as essential contributors to research and problem-solving teams working to re-establish ecological integrity and the well being of wildlife. The program will highlight

essential concepts, tools, and methods for transdisciplinary management and research needed to sustain biodiversity and ecosystem services for the long term across a spectrum of regions. A strong emphasis will be placed on problems at the interface of natural areas with areas devoted to agriculture, forestry, mining, industry, and urban development. Participants will interact with cutting-edge leaders from a wide array of essential fields who serve as role models to help identify a range of options and pathways of preparation for important careers. Envirovet alumni now work as toxicologists, wildlife pathologists, conservation biologists, epidemiologists, zoo and aquarium veterinarians, and environmental educators for a range of universities, the military, governmental agencies, non-governmental organizations, and businesses.

For further information, please log onto: <http://www/cvm.uiuc.edu/vb/envirovet> or contact: Dr. Val R. Beasley, Executive Director, Envirovet Summer Institute, Department of Veterinary Biosciences, College of Veterinary Medicine, University of Illinois at Urbana-Champaign, 2001 South Lincoln Avenue, Urbana, Illinois 56802-4714. Telephone: 217-333-9360; Fax: 217-244-1652. E-mail: v-beasley@uiuc.edu

American College Of Zoological Medicine Certification Examination. October, 2001; Yulee, Florida. The American College of Zoological Medicine Certification Examination will be offered at White Oak Conservation Center, Yulee, Florida in October 2001. An applicant must be a licensed veterinarian and senior author on at least five refereed publications. Candidates who have completed a two-year ACZM-approved post-graduate training program must have an additional year of experience under the supervision of an ACZM Diplomate. An alternate route requiring a minimum of six years post-graduate experience in zoological medicine also exists. A mentor program to assist all candidates is in place.

The two-part examination consists of a qualifying examination on the first day, which includes the medicine of avian, aquatic, reptilian, mammalian, 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 deadline for receipt of completed applications is March 31, 2001. For application materials, specific qualification requirements, or other questions concerning ACZM, contact Dr. Joanne Paul-Murphy, Secretary, ACZM, School of Veterinary Medicine, 2015 Linden Dr West, University of Wisconsin, Madison, WI 53706. Telephone (608) 265-2608, FAX (608) 263-7930, or email: jpmurphy@svm.vetmed.wisc.edu. An examination packet can also be downloaded from the ACZM web site at www.worldzoo.org/aczm/aczmindex.htm

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

Veterinary Conservation Biology: Wildlife Health and Management in Australasia. July 2-6 2001; Taronga Zoo, Sydney, NSW, Australia. This will be a combined meeting of the Australasian WDA, Australian Association of Veterinary Conservation Biology, World Association of Wildlife Veterinarians, and the Wildlife Interest Group of the New Zealand Veterinary Association. The focus of the conference will be a range of issues crucial to wildlife health and management and the conservation of biodiversity in the Australasian region. For general conference information, please contact the Program Convenor: Dr Larry Vogelneest, Taronga Zoo, PO Box 20, Mosman NSW 2088, Australia. Fax: 61 2 99784516; E-mail: lvogelneest@zoo.nsw.gov.au

Wildlife Disease Association and the Society for Tropical Veterinary Medicine (STVM) Conference. July 22-27, 2001; Kwa Maritane, Pilansberg National Park, South Africa. Plan now! The Wildlife Disease Association (WDA) and the Society for Tropical Veterinary Medicine (STVM) will hold a joint meeting with the theme "Wildlife and Livestock Disease and Sustainability: What Makes Sense?" from July 22-27, 2001 at Kwa Maritane, Pilansberg National Park, South Africa.

Conference information, travel information, registration and the call for papers will be handled by Event Dynamics, P.O. Box 411177, Craighall 2024, South Africa. Telephone: 27 11 442 611; FAX: 27 11 442 5927. Email: sandra@eventdynamcis.co.za Further information will be available on the WDA and STVM websites and upcoming newsletters.

American Association of Zoo Veterinarians. September 18-23, 2001; Orlando, Florida. The American Association of Zoo Veterinarians will hold its annual conference in Orlando, Florida, September

18-23, 2001, in conjunction with **the Association of Reptilian and Amphibian Veterinarians**, the **American Association of Wildlife Veterinarians**, and **the Nutritional Advisory Group**. Sessions include reptilian, avian and aquatic animal medicine, environmental activism, clinical pathology, anesthesia, behavior/escapes, megavertebrates, small mammals, nutrition, field project reports, and case reports. There will also be a poster session, veterinary student paper competitions, and workshops/wet labs.

If you wish to present a paper, please visit our website: www.worldzoo.org/aazv for a link to the conference chairperson page or contact Ray Wack, DVM, to obtain information for contacting the appropriate session chairperson. Dr. Ray Wack DVM, Program Chairman, Sacramento Zoo, 3930 West Land Park Drive, Sacramento, CA 95822-1123. Telephone: (916) 264-8808; FAX: (916) 264-5887. Email: rfwack@ucdavis.edu. The deadline for contacting session chairs is February 1, 2001. For additional conference or membership information, please contact Wilbur Amand, VMD, Executive Director/AAZV, 6 North Pennell Road, Media, PA 19063 USA. Telephone (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, SCWDS/Athens Diagnostic Lab, College of Veterinary Medicine, University of Georgia, Athens, Georgia 30602; telephone: (706) 542-5349; fax: (706) 542-5977; e-mail: CQUIST@CVM.VET.UGA.EDU **Double spaced typewritten or electronic mail files in WordPerfect 5.1 or Microsoft Word are preferred.** The deadline for submission of articles for the next issue (April 2001, JWD Vol. 37, No. 2) is February 25, 2001.

FOR THOSE WANTING TO MAKE AFRICAN TRAVEL PLANS

NOTE: Pilanesberg National Park is not a malaria endemic area and there are very few disease concerns in this part of Africa. If you are traveling to other portions of Africa consult area appropriate information sources.

FOR THOSE DESIRING HELP FINDING BEST AIRFARE RATES, MAKING TRAVEL PLANS AND RESERVATIONS:

We recommend you consider consulting Holbrook Travel at travel@holbrooktravel.com or www.holbrooktravel.com or 800-451-7111 or write them at 3540 NW 13th Street, Gainesville, FL 32609-2196.

Holbrook Travel is a company specializing in Natural History Education travel and has been in business for 27 years. They have a long history of working in East, Central and Southern Africa and have organized two veterinary group tours in South Africa in the last year. Holbrook partners with a local company Felix Unite in South Africa, which has outstanding knowledge of and ability to organize small groups or individual travel plans. Holbrook Travel has competitive international and domestic airfares and Felix Unite can help customize the land portion of your trip, particularly if you wish to tour in South Africa, Zimbabwe or Botswana. Tickets, departure information, pre-departure materials and payment would be made through Holbrook Travel in Gainesville, Florida, but you would be able to work directly with Felix Unite to ensure you get exactly what you want.

ALSO: "Jaluka" is a newsletter for those interested in South Africa. It can be reviewed at jaluka@erols.com or you can subscribe at P.O. Box 34095, Bethesda, MD 20827-0095 USA.

Jaluka features many travel agencies which offer specials rates (limited availability), some as low as \$775 roundtrip. Among the agencies listed in recent Jaluka issues are:

Travel Spirit, 6800 Owensmouth, Suite 310, Canoga Park, CA 91303 818-226-4326

Karell Travel, 814 Ponce De Leon Blvd, Suite 203, Coral Gables, FL 33134 305-446-7766

Premier Travel Services, 217 South 20th St., Philadelphia, PA 19103 215-893-9966

Cape to Cairo, Washington D.C. 800-356-4433