



SUPPLEMENT TO THE JOURNAL OF WILDLIFE DISEASES

APRIL, 2001

Wildlife Diseases Newsletter
JWD Vol. 37: No. 2

Charlotte F. Quist, Editor

Southeastern Cooperative Wildlife Disease Study
College of Veterinary Medicine
University of Georgia
Athens, GA USA 30602
Telephone: 706-542-5349
Fax: 706-542-5977
E-mail: CQUIST@CVM.VET.UGA.EDU

Visit the WDA website at: <http://www.wildlifedisease.org>

Happy 50th Birthday, WDA!

President's Corner

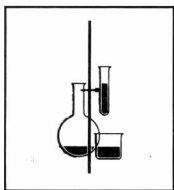
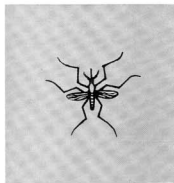


FIG. 1

In commemoration of WDA's 50th anniversary, a brief review of our roots as an organization and other important historical events is in order. In March 1951, a group of 28 U.S. and Canadian wildlife biologists attending the 16th North American Wildlife Conference in Milwaukee Wisconsin, met informally for discussion and founded an organization called the Committee on Wildlife Diseases. I imagine most of these individuals had attended the technical session on disease, nutrition, and control problems, which included presentations on the effects of ingested lead shot upon waterfowl, screw-worm infestations in deer in the southeast, trichomoniasis in mourning doves, foot rot in California deer, and an analysis of the 1949-50 fowl cholera epizootic in Texas. The same group met the next year in Miami, Florida, and changed the name to the Wildlife Disease Association, thus establishing an international scientific organization dedicated solely to the study and understanding of diseases of wild animals. The WDA grew to 200 members by 1954 and began to assess annual dues of \$1. Five years later, in 1959, a formal constitution was drafted and approved by the members; this is essentially the same document that our association is governed by today, with relatively minor changes over the years.

Dr. Carlton Herman, a scientist at the U.S. Fish and Wildlife Services's Patuxent Wildlife Research Center, first espoused the idea of a society for the wildlife disease discipline; he was WDA's founding Chairman from 1951-1959 and first elected President from 1959-1961. Dr. Herman also prepared and printed the association's first Newsletter from 1951-1959 and served as editor of *Wildlife Disease*, a microfiche journal, from 1959-1972. In 1991, Dr. Herman established the Carlton M. Herman Founder's Fund "to provide a perpetual source of money in support of activities of the Wildlife Disease Association." Over the last 10 years, the fund has supported invitation of a number of speakers to our annual meeting to specifically address topics related to population health and density resulting from changes in habitat. Dr. Herman died in 1997, but through the Herman Fund, his influence on and commitment to the WDA continues. Other members have also had a profound influence on the WDA, many of whom served as officers and editors of WDA's various publications and/or received WDA's highest honors: the Distinguished Service and Emeritus Awards (see Tables 1, 2, and 3 on pages 4, 5, and 6).

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.

During the first 15 years of its existence, the WDA conference was held in conjunction with the North American Wildlife Conference, with the exception of 1962, when the First International Conference on Wildlife Disease organized by WDA was held in High View, New York. Beginning in 1966, WDA meetings were held independently or in conjunction with other societies. International conferences have been held in Sussex, England (1971), Munich, Germany (1975), Sydney, Australia (1981), Uppsala, Sweden, (1985), East Berlin, Germany (1990), and Lansing, Michigan (1995). This year, the WDA will be meeting jointly with the Society for Tropical Veterinary Medicine in Pilanesberg National Park in South Africa. It is a fitting tribute to the WDA that our 50th annual meeting is an international conference.

The WDA produced a number of publications during the last 50 years, starting with the first Newsletter (1951–1964), as a means for distribution of WDA news and brief reports of wildlife disease investigations. In 1965, this newsletter grew into a journal for research papers, case reports, etc. entitled the *Bulletin of the Wildlife Disease Association*. Five years later, the name was changed to the *Journal of Wildlife Diseases*, as we know it today, and the journal has become the primary peer-reviewed publication for wildlife health issues. Prior to the journal (1959), the WDA published a unique microfiche journal entitled *Wildlife Disease* for longer manuscripts, reviews, bibliographies, etc., and continued to use this format until 1986. In 1978, the association began distributing another newsletter along with the journal, the Wildlife Disease newsletter, which is now known as the Supplement to JWD (1986–present). Of course, in keeping with today's technology, the WDA now also maintains a web page at www.wildlifedisease.org.

The WDA logo or visual identifier has evolved as well. The first image on the *Bulletin of the Wildlife Disease Association* included drawings of flying waterfowl, a mosquito, and test tubes (Fig. 1). In 1970, when the journal changed names, the image included a fish instead of a mosquito (Fig. 2). In 1983, when the journal cover was updated, a new logo was introduced that incorporated all of the old elements with 2 new ones, a deer and a microscope (Fig. 3). This logo served the WDA well for the last 18 years, but a majority of the membership has agreed that it is time for a change. Thus, we began 2001, our 50th year, with a new logo and a new look. The new logo is more stylish and updated, but still retains most of the previous elements: a deer, flying waterfowl, fish, mosquito, and microscope, reflecting the diversity of animals and issues the WDA is concerned with (Fig. 4). (Many thanks to Mike Ziccardi, who worked very hard the last couple years to develop the new logo!)

The WDA constitution provides for membership subdivisions or Sections for members who have common scientific interests or share common geographical boundaries, and a number of WDA sections have been organized over the last several decades. The Australasian section, established in 1973, was WDA's first offspring. Other geographic sections that have thrived include the Nordic section, established in 1987, and the European section, established in 1993. Each of these sections elects their own officers, holds a seat on WDA Council, convenes annual meetings within their respective geographic regions, and publishes newsletters. Two other geographic sections have been formed in recent years, and members (both within and outside the section) are working to expand their activities: the Latin American and African sections. Another section, the Wildlife Veterinarian section—established in 1980 and now known as the American Association of Wildlife Veterinarians—also elects its own officers, holds a seat on WDA Council, publishes its own newsletter, and convenes its annual meeting with WDA. The sections of WDA serve an important function, both in uniting common interests and bridging disparate geographic regions. I strongly believe that continuation and further expansion of sections, particularly in developing countries, is vital to the future of the WDA as an international organization.

Throughout the history of WDA, shared communication at our annual meetings and through publications has been the primary focus of the association, but the WDA has also collectively spoken out on important issues, including some that were quite controversial and caused dissension even among our own ranks. Resolutions, first approved by WDA Council and then put to the membership for vote, have been passed, published, and distributed to various agencies on a diversity of subjects, e.g. concern for the spread of foot and mouth disease northward via the Darien Gap Highway in Panama, the use of non-toxic shot to reduce waterfowl mortality from lead poisoning, and a request to the Wildlife Society to support and encourage its members and others to consider the potential short and long term adverse impacts that result from transmission of some diseases to native and indigenous species of wildlife (see Table 4 for complete list of WDA resolutions). A new resolution has recently been submitted to WDA and is currently being reviewed by committee, regarding recommendations to the international donor

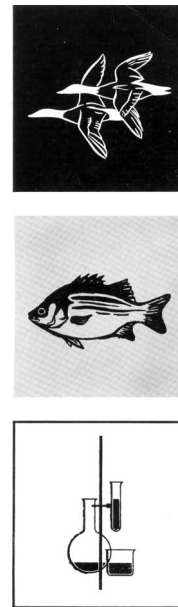


FIG. 2



FIG. 3

community to consider and integrate wildlife and livestock disease issues and sustainability in their evaluation of potential projects. If passed by WDA Council and membership, this resolution would be released at our meeting in South Africa and forwarded to pertinent donor agencies and other outlets. Resolutions, such as this, serve: 1) to inform the public, government, and non-government agencies of the collective opinions of scientists with specialized expertise in wildlife disease issues and 2) to further the common aims of our association.

So with the solid foundation provided by our founders and others over the past 50 years, what will the next 50 years bring to the WDA? Our membership has increased to over 1,000 regular or student members and approximately 450 institutional members from 45 countries, and I expect our membership will continue to grow. New promotional displays have been prepared this year and are being distributed to our geographic sections and used at various meetings to advertise our association's

activities and accomplishments. Many of our newest members are from outside the U.S., and we are working hard to increase that trend. This year, the WDA created a new membership category called an Associate Member with lower dues and has initiated a program to sponsor memberships in developing countries. We are also donating back issues of *JWD* to libraries in a number of countries in Africa, Latin America, and elsewhere. As a result of these efforts, I am confident the WDA will grow in stature as an international organization. Student participation is currently strong, and a Student Member of Council has been proposed and approved by the WDA Council. This change in our constitution will be presented to membership for final vote in the next few months, and if passed, next year we will elect our first student representative to Council. The *Journal of Wildlife Diseases* will remain the premier publication for wildlife disease issues, but it is likely that both *JWD* and the *Supplement* will eventually be published and available to all online as the Internet becomes our primary means of communication. From an administrative point of view, the increase in size and complexity of our organization will necessitate that WDA employ an executive director to manage day to day business; although elected officers, dedicated members, and volunteers will continue to provide the vital spirit of the association. Most importantly, over the next 50 years, the WDA will play an increasingly more relevant role in wildlife conservation. New disease issues arise every day that require input from wildlife disease specialists, e.g. mortality events such as the recent undiagnosed brant mortality in New Jersey; the controversy over chronic wasting disease in elk and mule deer and potential implications for human health; newly emerging diseases, such as avian vacuolar myelinopathy in southeastern U.S.; and the role of disease in species and population declines, such as the worldwide amphibian crisis. I believe, as our founders clearly did, that the WDA provides a critical link and forum for communication between wildlife disease specialists, pathologists, toxicologists and wildlife biologists, managers, and others with the common goal of wildlife conservation. Let us all raise a glass in celebration of the WDA's first 50 years and in anticipation of our next 50 years!

—*Tonie E. Rocke, WDA President*



FIG. 4

WDA ACTIVITIES

Open Letter to the Members of WDA:

I recently benefited from a totally unselfish professional gesture by a colleague. I would like to share this story with other WDA members.

Dr. Brett Elkin works for the Government of the Northwest Territories in Canada. Last year, he produced a pocket-sized booklet entitled "A Field Guide to Common Wildlife Diseases and Parasites in the Northwest Territories and Nunavut."

A few copies of the booklet drifted across the border to Alaska. Several of my co-workers with the Alaska Department of Fish and Game suggested that we purchase copies of the booklet for distribution in Alaska. After some limited debate, we decided that it would be better to write our own booklet.

I contacted Dr. Elkin and asked if we could "borrow" his format and some of the information published in his booklet. To my surprise, he sent us a complete electronic copy of his booklet AND his permission to use any of the information we desired. We made a few additions and modifications. However, 90(+)% of the material in our Alaska booklet came directly from Dr. Elkin's booklet.

Dr. Elkin's generosity saved us an untold amount of time and work. As I indicated above, this is the most unselfish act of professional courtesy I have ever witnessed. The people of Alaska owe Dr. Elkin a big "Thank You." The members of WDA owe Brett a hearty round of applause.

Sincerely,
Randall L. Zarnke

TABLE 1. Past officers of the Wildlife Disease Association

Office	Name	Term
Chairman	Carlton M. Herman	1951–1959
Vice Chairman	David E. Davis	1954–1959
President	Carlton M. Herman	1959–1961
"	David E. Davis	1961–1963
"	Lars H. Karstad	1963–1965
"	John J. Christian	1965–1967
"	Archibald B. Cowan	1967–1969
"	Daniel O. Trainer	1969–1971
"	Lowell Adams	1971–1972
"	Leslie A. Page	1972–1973
"	Milton Friend	1973–1975
"	William G. Winkler	1975–1977
"	John G. Debbie	1977–1979
"	Donald J. Forrester	1979–1981
"	Roy C. Anderson	1981–1983
"	Annie K. Prestwood	1983–1985
"	Thomas M. Yuill	1985–1987
"	Robert E. Lange	1987–1989
"	Edward M. Addison	1989–1991
"	Louis N. Locke	1991–1993
"	David A. Jessup	1993–1995
"	Anne Fairbrother	1995–1997
"	Robert G. McLean	1997–1999
"	Tonie E. Rocke	1999–2001
Vice President	David E. Davis	1959–1961
"	Lars H. Karstad	1961–1963
"	John J. Christian	1963–1965
"	Archibald B. Cowan	1965–1967
"	Daniel O. Trainer	1967–1969
"	Lowell Adams	1969–1971
"	Leslie A. Page	1971–1972
"	R. M. Robinson	1972–1975
"	Joan Budd	1975–1977
"	Donald J. Forrester	1977–1979
"	Gary A. Wobeser	1979–1981
"	Charles P. Hibler	1981–1983
"	E. Thomas Thorne	1983–1985
"	Werner P. Heuschele	1985–1987
"	Edward M. Addison	1987–1989
"	Elizabeth C. Burgess	1989–1991
"	David A. Jessup	1991–1993
"	Anne Fairbrother	1993–1995
"	Robert G. McLean	1995–1997
"	Tonie E. Rocke	1997–1999
"	William M. Samuel	1999–2001
Secretary	Robert Holdenreid	1959–1962
"	Daniel O. Trainer	1962–1965
"	Peter F. Olson	1965–1971
"	Milton Friend	1971–1973
"	Gerald L. Hoff	1974–1977
"	Annie K. Prestwood	1977–1980
"	Lynn Bishop	1980–1983
"	Sarah S. Hurley	1983–1985
"	Louis N. Locke	1986–1990
"	Paul Barrows	1990–1993
"	Kathy Converse	1993–1996
"	Elizabeth Howerth	1996–1999
"	Lynn Creekmore	1999–2002
Treasurer	Archibald B. Cowan	1959–1963
"	Lowell Adams	1963–1969
"	Richard L. Beaudoin	1969–1975
"	Leslie A. Page	1975–1980
"	Thomas M. Yuill	1980–1985
"	A. Alan Kocan	1985–1990
"	Anne Fairbrother	1990–1993
"	William Adrian	1993–1996
"	Leslie Uhazy	1996–2002

TABLE 2. Editors of various publications of the Wildlife Disease Association.

Publications	Editor	Years
Newsletter	Carlton M. Herman	1951–1959
	Robert Holdenreid	1959–1962
	Daniel O. Trainer	1962–1964
Wildlife Disease Newsletter	Charles P. Hibler	1978–1980
	Sarah S. Hurley	1980–1982
	William R. Davidson	1982–1989
Supplement to Journal of Wildlife Disease	Tonie E. Rocke	1989–1996
	Charlotte Quist	1997-
Wildlife Disease (Microfiche)	Carlton M. Herman	1959–1972
	Harry W. Huizinga	1972–1978
	Emmett B. Shotts	1978–1981
	Donald J. Forrester	1981–1986
Bulletin of the Wildlife Disease Association	Daniel O. Trainer	1965
	Leslie A. Page	1965–1967
	Lars H. Karstad	1968–1970
Journal of Wildlife Diseases	Lars H. Karstad	1970–1974
	Charles P. Hibler	1974–1981
	Donald J. Forrester	1981–1986
	Danny B. Pence	1986–1991
	Richard G. Botzler	1991–1996
	Danny B. Pence	1996–2000
	Elizabeth Williams	2001-

TABLE 3. Recipients of Distinguished Service Awards and Emeritus Awards from 1969.

Year	Distinguished Service Award	Emeritus Award
1969	Carlton M. Herman	
1970	Stanislaus Snieszko	Carl O. Mohr
1971	Lars H. Karstad	Carlton M. Herman
1972	Archie McDiarmid	A. Murray Fallis
1973	Daniel O. Trainer	
1974	Harold N. Johnson	
1975	David E. Davis	William Jellison
1976	Glenn L. Hoffman	
1977	Joan Budd	Joan Budd
1978	Roy C. Anderson	David E. Davis
1979	John W. Davis	
1980	Leslie A. Page	Merton N. Rosen
1981	Charles P. Hibler	Archibald B. Cowan
1983	Robert L. Rausch	Wayne I. Jensen
1984	Louis N. Locke	Leslie A. Page
1985	Barry Mundy	Karl Borg
1986	Donald J. Forrester	L. Dale Fay
1987	Milton Friend	Ken Wolf
1988	Annie K. Prestwood	Frank A. Hayes
1989	Thomas M. Yuill	John H. Arundel
1991	Danny B. Pence	Lars H. Karstad
1992	Emmett B. Schotts, Jr.	
1993	Edward M. Addison	Roy C. Anderson
1994	Gary A. Wobeser	Louis N. Locke
1995	Werner P. Heuschele	Rudolph Ippen
	Victor F. Nettles	
1996	E. Thomas Thorne	Albert Franzmann
	Elizabeth Williams	
1997	Richard G. Botzler	Daniel O. Trainer
1998	William R. Davidson	Edward M. Addison
1999	Ian Barker	Bill Adrian
2000	David Jessup	

TABLE 4. Resolutions of the Wildlife Disease Association

Issue	Year	JWD publication (Vol:page no.)
Darien Gap Highway	1977	13:453
Role of Trapping in Disease Control	1978	15:154
African Swine Fever	1978	15:154
Non-toxic shot	1980	17:319–320
Index-Catalogue of Medical and Veterinary Zoology	1981	18:121
Continuation of NWHC	1982	19:74
Ban on lead shot	1984	21:83
Eradication of brucellosis/tuberculosis infected bison in Wood Buffalo Natl. Park	1989	26:152
Control of duck plague (Rescinded in 1997 due to procedural errors, 34:211)	1993	30:311
Request to Wildlife Society to consider adverse impacts of wildlife disease	1994	31:444

Nominations for WDA Offices, 2001. The Nominations Committee announces the following members as candidates for WDA Offices and Council. Full biographical sketches of each candidate will be included with the ballots.

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.

Last Announcement! Meet Us in 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, Pilanesberg 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 was 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

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 Wanting to Make African Travel Plans: 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 juluka@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

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.

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:

- 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, 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:

- 1) 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.
- 2) 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.

- 3) Evidence of superior scholastic achievement (course work, scholarships, awards, publications)

GROUNDINGS FOR DISQUALIFICATION INCLUDE:

- Items missing.
- Submissions postmarked beyond deadline date.

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.

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

USDA's Wildlife Authority. Former Montana Senator Dr. John Melcher recently wrote an article for the *United State Animal Health Association Newsletter* on “Wildlife Authority.” Dr. Melcher, who is a veterinarian, has been serving as a consultant to the Government Relations Division of the American Veterinary Medical Association (AVMA). Dr. Melcher is well respected among both the veterinary and political communities, and his article challenges the oft-heard statement that the Animal and Plant Health Inspection Service (APHIS), USDA, “never has had authority over wildlife.” To determine what authority the USDA has over wildlife, Dr. Melcher arranged a meeting with the administrators of Veterinary Services, APHIS, USDA, and the specific General Counsel attorneys who work with APHIS on legal questions. He was advised by the USDA that “based on animal quarantine laws dating back to the early 1880s and modified and amended by subsequent statutes enacted since then, APHIS has authority over wildlife infected with or that are carriers or vectors of a disease contagious to livestock or poultry.” Dr. Melcher explained that in the case of infected wildlife in a National Park or Wildlife Refuge, APHIS would seek the concurrence of the United States Department of the Interior before exercising their authority. If wildlife are outside of National Parks or Wildlife Refuges, APHIS regulations are administered in cooperation with the state or states involved when the wildlife disease threatens livestock or poultry. Several diseases were mentioned as examples, viz., brucellosis in Yellowstone bison and elk, tuberculosis in Michigan deer, rabies in the Northeast, West Nile virus in birds, and chronic wasting disease in deer and elk. Dr. Melcher predicted APHIS will have “more and more headaches with diseased wildlife” and indicated that the AVMA was “lobbying hard for the necessary funding to meet these problems.”

Although APHIS has authority to deal with wildlife that are diseased or are disease carriers, they do not regard their authority as autonomous but rather as a concurrent responsibility with other agencies. APHIS's approach has been to deal with disease scenarios involving wildlife through seeking consensus

with other affected agencies, including state and federal wildlife management agencies. Their goal has been to develop cooperative programs acceptable to all groups involved in agriculture, public health, and wildlife conservation. Dealing with diseases in free-ranging wildlife populations is inherently difficult, and the likelihood of success by any single agency would be remote because both veterinary and biological capabilities must be applied to the task. Multiple state and federal wildlife resource and animal health agencies must bring their individual expertise to these complex situations, rely on each other, and cooperate extensively to have a chance at success.

—*Vic Nettles, retired Director of SCWDS, SCWDS Briefs, Vol. 16(3).*

Survey of Potential Impacts of Pesticides for Mosquito Control of West Nile Virus. On December 22, 2000, the New York City Health Department announced that it published a “final scoping” document outlining plans to determine the potential impact from the use of pesticides to control mosquitoes carrying West Nile virus or other mosquito-borne diseases. The document, which has been posted on the Health Department’s Web site (<http://www.ci.nyc.ny.us/html/doh/pdf/wnv/finals.pdf>), will be used to develop a Draft Environmental Impact Statement (DEIS). It outlines proposed actions, potential environmental issues of concern, and proposed analysis methods to address the potential environmental impacts of mosquito control activities. New York City Health Commissioner Neal L. Cohen, M.D., said, “For the past two summers, the City has taken State and Federal approved actions to limit the spread of West Nile virus by using EPA approved pesticides for mosquito control. The City is currently undertaking a comprehensive review of the potential environmental impact of these pesticides. This review involves public comment as well as a scientific review and analysis of available information. While this effort has not been done in other parts of the country where spraying for mosquito control is done routinely, the City seeks to systematically assess the potential impact of pesticides on public health and natural resources. As part of this review process, alternatives to pesticide use will be explored, as will measures that could mitigate the adverse impacts of pesticide applications. While we are committed to reducing the possibility of illnesses associated with West Nile virus, our goal is to address public concerns about the use of pesticides used for mosquito control and to minimize the risk of adverse reactions to pesticides,” Dr. Cohen concluded.

It is expected that a DEIS will be completed by March 2001. A public response period and hearings in each borough will then take place. A Final Environmental Impact Statement is expected to be published in June 2001. The EIS is an integral component of the Health Department’s plans to implement a comprehensive surveillance and control plan for West Nile virus in 2001. The “final scoping document” published in December, includes comments from public hearings held this summer.

Extracted from ProMed; December, 2000.

Possible Exacerbation of Hantavirus Infection in Mice by Off-Road Vehicles. A little off-road recreation may result in more rodents carrying the hantavirus, Sin Nombre virus, according to University of Utah researchers. The scientists found 30 percent of the deer mice near the Bureau of Land Management’s Little Sahara Recreation Area are infected with Sin Nombre virus. Little Sahara is located 40 miles southwest of Provo. The researchers hypothesize that the high infection rate, which is 3 times that of similar habitats in the Great Basin area, is a result of heavy ORV use in the area. Dr. Denise Dearing, who led the research team, suggests that the abundance of dirt roads in the recreation area create “habitat islands” that force deer mice and wood rats into smaller pockets of vegetation. In tight quarters, the mice fight more readily, passing the disease through saliva and blood. Researchers have not determined if the increased prevalence of [Sin Nombre virus] will result in more humans contracting the disease, but Dearing believes it is probable. “You’ve got more deer mice with hantavirus infection, so humans have an increased risk of contact with infected deer mice,” she said. The infection level found in the recreation area mirrors that of the Four Corners area in 1993, the location of the first widely reported Sin Nombre virus outbreak. From the first recorded case 8 years ago to 7 Dec 2000, the United States has reported 277 cases of hantavirus pulmonary syndrome, more than 100 resulting in death. Utah has reported 14 cases during the period. Dearing believes that it will be necessary to establish a balance between ORV use and protected land. “When habitats get seriously degraded, they should be given a rest and a chance to recover,” she said.

Dr. Denise Dearing, biology student Rachel Mackelprang and Stephen St. Jeor, a virologist at the University of Nevada–Reno, were trying to quantify the prevalence of hantavirus infection in wood rats when the issue of ORV use in the area surfaced as a corollary issue. Dearing discovered 3 years ago during a separate study in the recreation area that wood rats also carry the disease. She set 3 traps at 40 separate wood middens, baited with the wood rats’ favorite nesting materials—cotton, oats and peanut butter. She caught, not only wood rats, but deer mice, pinyon mice, kangaroo rats, pocket mice and sagebrush voles. While some wood rats had the virus, the prevalence in deer mice far surpassed that of the other rodents. During trips to the recreation area, students had questioned how ORV use in the area might be affecting the mice. Dearing didn’t take the inquiries too seriously until one student brought in an aerial photo of the study site that showed the land spattered with dirt roads.

Dearing compared the tentative hypothesis against previous research. She found studies indicating that mowed fields or roads force mice into concentrated areas where they are more susceptible to infections. She also found a previous study conducted by the Centers for Disease Control and Prevention that found only 11 percent of deer mice had hantavirus infection in 4 other Great Basin sites with similar habitat but without the concentrated ORV use. A full account of this new study will appear in the May-June issue of the journal "Emerging Infectious Diseases," published by the CDC. [A letter to the Editor of "Emerging Infectious Diseases," containing a more detailed account of this report, is available on the web and can be accessed at <http://www.cdc.gov/ncidod/eid/vol7no3/mackelprang.letter.htm>]

—Adapted from *ProMed February, 2001.*

NATIONAL WILDLIFE HEALTH CENTER'S QUARTERLY MORTALITY REPORT

Atlantic Brant in New Jersey

Atlantic brant are small dark geese that breed in the arctic and winter primarily along the New Jersey coast. Approximately 95,000 brant were recently counted during the midwinter population surveys of coastal New Jersey. Brant mortality was first noted in early November when sick and dead birds were found on a shallow freshwater impoundment on the U.S. Fish and Wildlife Service Edwin B. Forsythe National Wildlife Refuge. Sick birds were isolated away from the flock and sat hunched up with their wings out and heads hanging down to one side. Birds had difficulty flying or swimming and most died shortly after capture; both adults and juveniles were affected. Affected birds were primarily found on the refuge although some carcasses were found up to 15 miles away. By early December mortality had ended and approximately 700 carcasses were collected. Although a variety of avian species were present on the freshwater impoundment, brant appear to be the only species affected. There were no observed fish kills or unusual mammal morbidity or mortality.

Carcasses submitted to NWHC and the New Jersey Division of Fish and Wildlife were generally in good body condition with clear viscous fluid noted in the mouth and nostrils of some birds as well as pulmonary edema and dark, red, wet lungs. Some birds had hemorrhages in the skin and breast muscles as well as on the surfaces of the heart, proventriculus, gizzard and colon. Bacterial and viral isolation and detection attempts by a variety of methods including electron microscopy have not revealed the etiologic agent. Specifically, special cultures and tests for West Nile virus, duck plague, Newcastle disease and avian influenza have been negative. Brain acetylcholinesterase activity has been within normal limits and tests for botulinum toxins and rodenticides were negative. The cause of the mortality is undetermined. Hunters were advised to avoid shooting or eating brant.

Avian Vacuolar Myelinopathy

Avian Vacuolar Myelinopathy (AVM) is a neurologic disease first detected in bald eagles in Arkansas in 1994. It has now been confirmed in American coots and other species on 10 lakes in 4 southern states. This fall, a number of bald eagles died on J. Strom Thurmond Lake (a.k.a. Clark's Hill Lake) on the Georgia-South Carolina border; AVM mortality was first documented on this lake in 1998. The Southeastern Cooperative Wildlife Disease Study (SCWDS) in Athens, Georgia, confirmed AVM in 8 of 13 eagles submitted from the Lake (5 eagles unsuitable for examination) as well as coots, 2 Canada geese, a great horned owl and a killdeer. This is the greatest number of bald eagles affected with AVM outside of De Gray Lake in Arkansas. It is also the first confirmation of AVM in Canada geese, great horned owl, and killdeer. Disease specialists from the National Wildlife Health Center and SCWDS visited the lake in late November and continued to monitor the site and work with the states.

Through monitoring and surveillance activities, SCWDS confirmed AVM this year in coots at known AVM sites including Lake Juliette, Georgia; 2 lakes near Aiken, South Carolina; De Gray Lake, Arkansas and in a Canada goose on Lake Murray, South Carolina. In early November, a high percentage of the several thousand coots on Woodlake, North Carolina appeared to be exhibiting clinical signs consistent with AVM. AVM research projects are underway including a sentinel bird study, feeding trials, vegetation and water analysis and mammal and fish sampling.

Common Eiders at Cape Cod National Seashore

From mid to late October, 20-30 common eiders may have washed ashore at the Cape Cod National Seashore in Massachusetts. Approximately 5,000 eider were rafting in the vicinity. Specimens submitted to NWHC were emaciated and acanthocephalan parasites were present in the intestine. The cause of the emaciation was not determined.

American Coot Mortality in Wisconsin

Leyogonimus and *Sphaeridiotrema* parasites were again the cause of mortality in American coot and waterfowl on Shawano Lake northwest of Green Bay, Wisconsin. A total of 3165 coots, 109 scaup and 20 mallard, ruddy and ring-necked ducks were collected on the lake from late September through mid November. *Leyogonimus* parasites are primarily found in the coots and *Sphaeridiotrema* in the waterfowl. A third parasite, *Cyathocotyle* has been found in both the coots and waterfowl. The NWHC parasitology department is collaborating with University of Wisconsin-Stevens Point to determine the life cycle of the *Leyogonimus* parasite and the epidemiology of the die-off.

Quarterly Wildlife Mortality Report October 2000 to December 2000

State	Location	Dates	Species	Mortality	Diagnosis	Reported by
PA	McKean, Warren, Vernango, and Crawford Counties	05/01/00-07/31/00	Little Brown Bat	50 (e)	Open	NW, PA
AL	Baldwin Co., Gulf Shores	07/01/00-12/30/00	Northern Gannet Unidentified Pelican Common Loon Double-crested Cormorant Unidentified Gull	100 (e)	Open	NW
AR	Clark Co., De Gray Lake	11/27/00-ongoing	American Coot	5 (e)	Avian vacuolar myelinopathy	SC
AZ	Santa Cruz Co., Tumacacori Nat'l Historic Park	10/22/00-10/23/00	Violet-green Swallow	60	Emaciation: Starvation suspect	NW, FL
CA	Alemeda Co., Brooks Is.	08/14/00-08/26/00	Western Gull Caspian Tern	50 (e)	Emaciation	NW
CA	Sacramento NWR Complex	09/26/00-10/13/00	American Coot Gadwall Duck Northern Shoveler Ring-necked Duck	40 (e)	Botulism type C, Botulism suspect	NW
CA	Sacramento NWR Complex	11/01/00-ongoing	Ross' Goose White-fronted Goose American Coot Snow Goose	300 (e)	Avian cholera, Lead poisoning	NW
CA	San Joaquin River NWR	12/07/00-ongoing	Northern Shoveler Ruddy Duck Northern Shoveler Canada (Aleutian) Goose	200	Avian cholera	NW
GA	Burke County	09/27/00-10/05/00	Red Bat Brown Thrasher Red-eyed Vireo Unidentified Passerine	30 (e)	Trauma: Tower strike	SC
GA	Burke County	12/24/00-12/24/00	Bald Eagle	1	Toxicosis: Rodenticide	SC
GA	Floyd Co., Rome	10/14/00-10/17/00	Rock Dove	8	Toxicosis: Avitrol	SC
GA	Forsyth Co., Lake Lanier	07/26/00-07/26/00	Common Grackle	24	Trauma	SC
GA	Lincoln Co., J. Strom Thurmond Lake; Monroe Co., Lake Juliette	11/13/00-ongoing	American Coot Bald Eagle Canada Goose Killdeer	125 (e)	Avian vacuolar myelinopathy	SC, NW
GA	Taliaferro Co., Alexander H. Stephens State Park	09/24/00-09/26/00	Hybrid Mallard Duck Pekin Duck	3	Botulism type C	NW, SC
IA	Scott Co., Davenport, Nahant Marsh	03/16/00-04/04/00	Canada Goose	2	Lead poisoning	NW

Quarterly Wildlife Mortality Report
October 2000 to December 2000
Continued

State	Location	Dates	Species	Mortality	Diagnosis	Reported by
IL	Union Co. Refuge	12/26/01-01/08/01	Canada Goose Mallard Duck American Wigeon Northern Pintail Northern Shoveler	600 (e)	Avian cholera	IL
MA	Cape Cod Nat'l Seashore	10/19/00-11/01/00	Common Eider	30	Emaciation, Parasitism: Acanthocephaliasis	NW
MI	Monroe Co., West Sister Is.	10/12/00-10/15/00	Double-crested Cormorant	7	Open	NW
MO	Otter Slough WMA	12/13/00-01/10/01	Mallard Duck	60 (e)	Open	NW
NC	Moore Co., Woodlake	11/04/00-ongoing	American Coot	125 (e)	Avian vacuolar myelinopathy	NW
NC	Onslow Co.	05/23/00-08/23/00	Canada Goose Barking Tree Frog Southern Leopard Frog	9 (e)	Fungal infection: Chytrid	NW
ND	McIntosh Co., Kulm WMD	07/26/00-09/06/00	Gadwall Duck Mallard Duck American Coot Northern Pintail Blue-winged Teal	1,768	Botulism type C	NW
NJ	Edwin B. Forsythe NWR	11/09/00-ongoing	Atlantic Brant	700 (e)	Open	NW, NJ
OH	Medina Co., Medina	10/15/00-10/15/00	Mallard Duck	10	Toxicosis: Organophosphate suspect	NW
OR	Ankeny NWR	10/23/00-11/01/00	Canada (Cackling) Goose	100 (e)	Aspergillosis	NW
SC	Richland Co., Lake Murray; McCormick Co., J. Strom Thurmond Lake; Barnwell Co., Savannah River Ponds	11/13/00-ongoing	Canada Goose Great-horned Owl American Coot	25 (e)	Avian vacuolar myelinopathy	NW, SC
TX	San Bernard NWR	11/20/00-12/01/00	Snow Goose	75 (e)	Open	NW
VA	Henrico Co., Richmond	05/15/00-06/20/00	Mourning Dove	15 (e)	Parasitism: Trichomoniasis	SC
WI	Brown Co., Green Bay	11/15/00-11/30/00	Canada Goose Richardson's Goose	177	Lead poisoning	WI
WI	Shawano Co., Shawano Lake	09/26/00-11/15/00	American Coot Unidentified Scaup Mallard Duck Ruddy Duck Ring-necked Duck	3,299	Parasitism: <i>Leyogonimus</i> sp., <i>Sphaeridiotrema</i> sp., <i>Cyathocotyle bushiensis</i>	NW
WV	Berkeley Co.	06/11/00-06/11/00	Common Grackle	5	Toxicosis: Parathion	SC
WV	Nicholas Co., Summersville	07/01/00-10/05/00	Mourning Dove	15 (e)	Parasitism: Trichomoniasis	SC
Updates/Corrections:						
CA	Sonny Bono Salton Sea NWR	05/22/00-11/22/00	Brown Pelican American White Pelican	900 (e) 600*(e)	Botulism type C	NW
NY	NJ, MD, MA, RI, CT, PA, NH, VT, DE, VA, NC	05/20/00-10/18/00	American Crow Blue Jay Fish Crow	5000 (e)	West Nile virus	NW, NY, AS
WI	Columbia Co., Portage	06/12/97-06/28/97	Unidentified Frog	18	Viral infection: Iridovirus	NW
WY	Mortensen NWR; Carbon Co., Nat'l Fish Hatchery	09/08/00-09/08/00	Wyoming Toad	3	Fungal infection: Chytrid	NW

e = estimate, * = morbidity not mortality

All participating State Health Departments (AS), Illinois State Diagnostic Lab (IL), National Wildlife Health Center

(NW), New Jersey Department of Fish & Wildlife (NJ), New York State Department of Environmental Contaminants (NY), Pennsylvania Department of Agriculture (PA), Southeastern Cooperative Wildlife Disease Study (SC), US Fish & Wildlife Service Forensics Lab (FL), Wisconsin Department of Natural Resources (WI).

Written and compiled by Kim Miller, Kathryn Converse, Linda Glaser and Audra Schrader, NWHC. The Quarterly Wildlife Mortality Report is also available on the Internet at <http://www.nwhc.usgs.gov>. To report mortality or if you would like specific information on these mortalities, contact one of the following NWHC staff: Eastern US—Kathryn Converse, Western 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 AUSTRALASIA

WDA Australasia! The annual conference, held in December in New Zealand, was, as Lee Skerratt said, “the best ever” (and who could argue with a vodka skulling ex-president!). Pdraig Duignan and colleagues did an exceptional job arranging the venue, presentations and assorted apres conference activities. Of particular interest were the presentations on New Zealand’s conservation projects. We were fortunate enough to visit Tiritiri Matangi Island, an island that once grazed cattle but has now been depopulated of all livestock and pests, and been replanted and repopulated with native flora and fauna. New Zealand has a number of these islands that have been restored to their former state and act as sanctuaries for the native fauna. Of late, they have begun to pioneer the concept of mainland sanctuaries and we visited one such place at Trounson. It has been subjected to an intense baiting program to control rats, brush-tail possums and other introduced nasties. The kiwis have responded favourably and are making a strong comeback. It was refreshing to see such a proactive and dedicated stance being taken towards the control of feral pests with the associated positive results.

The scientific program was excellent with many fine papers. Lee Skerratt received the post graduate student prize for his mangy wombat work and Mana Stratton received the undergraduate prize for her study on pathogenic organisms in New Zealand fur seals.

It was good to see a strong Australian contingent making the trip across the Tasman and even better to see a good student turnout. Hopefully the conference will help to develop closer ties between the two countries, something that should be further enhanced by having future newsletters emerge from New Zealand. (See list of titles and presenters at the end of the Supplement.)

—Abstracted from the *Australasian Section Newsletter*, January 2001.

[Editor’s Note: Many thanks to Peter Holz, who has “retired” from his position as Australasian Newsletter Editor (and become that Section’s Chairperson)! And welcome to Pdraig Duignan, incoming Australasian Newsletter Editor.]

NEWS FROM EUROPE

Veterinary Forensics—A Practical Workshop. A one-day workshop on Veterinary and Comparative Forensic Medicine was held on Tuesday 21 November at St. Georges Hospital, London. Possibly the first of its kind, the Workshop attracted 24 participants—a mixture of veterinary surgeons and senior staff from the RSPCA, HM Customs, RSPB (Royal Society for the Protection of Birds) and other organisations.

The morning session consisted of lectures and discussion. After a welcome to St. Georges by Dr. Dick Shepherd, Head of the Hospitals Forensic Medicine Unit, Professor John Cooper started the day’s proceedings with a presentation entitled “An Introduction to Comparative Forensic Medicine.” He explained that the increase in litigation, insurance claims and allegations of malpractice in recent years had prompted much greater interest in animal forensics, and that the legal cases involved covered such matters as cause of death, conservation and welfare. Mrs. Margaret Cooper, a lawyer (solicitor, not in private practice) discussed “Animals and the Law” and stressed that, in order to provide effective evidence in forensic work with animals, it is necessary to have a good understanding of both the general legal structure in which evidence will be presented and of the law that provides the basis for a particular investigation. She illustrated her lecture with examples ranging from the Dangerous Wild Animals Act to CITES.

The second half of the morning concentrated on the theme of “Investigation and Enforcement.” Dr. Dick Shepherd described the medical approach, with particular attention to wounds, Mr. Chris Laurence, MRCVS (Chief Veterinary Officer, RSPCA) the veterinary approach, with reference to animal welfare cases, and Inspector Phil Cannings (Bedfordshire Police, Police Wildlife Liaison Officer) the investigator’s approach to forensic evidence in wildlife cases. A common theme to all presentations was the need to keep full records and to maintain a proper chain of custody.

During lunch, as at coffee and tea breaks, delegates were able to view literature—books, reprints and

standard protocols—and a wide array of equipment and specimens, the latter including bones for identification, some of them from previous investigations.

The afternoon session concentrated on practical work. Dr. Ashley Fegan-Earl (Forensic Pathologist, St. Georges) introduced a session on sample taking, record keeping and terminology with a lecture that depicted cases and methods of collecting specimens. Dr. Fegan-Earl emphasised the importance of using correct terms in reports and illustrated his point with examples relating to wounds and other lesions. This was followed by practical work in the Hospital—post-mortem examination of dead rabbits and birds of prey and sample collection.

The final hour of the day was spent in tours of the St. Georges Pathology and Forensic Museum, led by Dr. Fegan-Earl, concluding in a roundtable discussion. The latter was very fruitful, with much exchange of information and ideas. It was agreed that the day had been a success and that there was a need for the group to keep in touch and to meet again. Veterinary forensic medicine had come of age!

—Submitted by Mrs. Margaret Cooper

New Conditions? If you are investigating a disease or condition with an unknown or unreported aetiology, why not provide a short preliminary report and leave your contact details; perhaps someone else has investigated something similar. Two good examples are given below:

Necrotizing-ulcerative Balanoposthitis in Free-living European Bison (*Bison bonasus*) in Poland. S. Thiede, M. Krasinska and K. Frölich* (* Contact person: Institute for Zoo Biology and Wildlife Research, Alfred-Kowalke-Str. 17, D-10315 Berlin, froelich@izw-berlin.de, +49 30 5168 728)

The European bison (*Bison bonasus*) is an endangered species, about 3000 animals are left. The largest free-ranging population with 500–600 animals lives in the Bialowieza Primeval Forest at the border between Poland and Belarus. Since 1980 a chronic balanoposthitis has been observed in free-living European bison in the Bialowieza Primeval Forest. Necrotic and ulcerative lesions of the prepuce and penis of bison from 6 months to over 10 years of age were the most striking findings. However, aetiology and complete pathogenesis of the disease are still unclear. Since 1997, the IZW Berlin is working together with scientists from Poland, Austria and Germany on this problem. Gross lesions as well as microscopic findings were characteristic for necrobacillosis which occurs in many other species and locations. Masses of gram-negative filamentous or rod-shaped bacteria were found in large clusters that advanced towards healthy tissue. Electron microscopical examinations indicated that these organisms were identical to *Fusobacteria* spp. Spirochaetes were found to be associated with the fusobacteria. This balanoposthitis is similar to other diseases like digital dermatitis in cattle and periodontitis in humans, where a combination of spirochaetes from the genus *Treponema* and other obligate anaerobic bacteria, like *Fusobacteria* spp., are found. We assume that the spirochaetes play an important role for the pathogenesis of the disease. Little is known about the natural environment of *Treponema* spp. and about their virulence mechanisms. Therefore, it would be helpful to find more similar processes. In addition, gram-positive cocci are found in large clusters in early stages of the disease. On bacteriological examinations we could isolate some strains of *Corynebacteria* spp. with intensive urealytic activity. Until now, there is no idea of a primary infectious agent. All that has been found seems to be a secondary infection of the injured tissue. Perhaps genetics plays an important role. Because this population is founded by only one bull and two cows, the European bison in Bialowieza have gone through a genetical bottleneck.

We would be interested to hear from anyone who might be dealing with similar pathology or a similar mixed bacterial infection, including Spirochaetes and *Fusobacteria* spp.. Please contact K. Frölich at the address above.

Literature: Jakob et al., J. Wildl. Dis. 2000, 36: 248–256; Kita et al., Med. Weter. 1990, 46: 474; Piusinski et al., Med. Weter 1997, 53: 596–600; Wolf et al., Tierärztl. Praxis 2000, 28: 218–224; Borchers et al., Arch. Virol. (submitted).

Pathology of eider ducks from the Dutch Wadden Sea in December 1999. In December 1999, there was unexplained high mortality of eider ducks (*Somateria mollissima*) in the Dutch Wadden Sea. Gross necropsies, supplemented by histologic, virologic, bacteriologic, and parasitologic analyses, were performed on 13 eiders. All birds were severely emaciated and had a multifocal enteritis caused by infection with the acanthocephalan parasite *Profillicollis botulus*. The abundance of this parasite varied from 20 to 1833 (average: 865). The primary cause of death may have been starvation, ie lack of adequate food, or *P. botulus* infection, although the latter was considered less likely. There was no evidence of other diseases, including those caused by viral or bacterial infections, as the primary cause of mortality in these eiders. Toxicologic analyses have yet to be performed to rule out a role for a toxin in the mortality of these eiders.

—Dr Thijs Kuiken, AZR, University of Rotterdam. E-mail kuiken@viro.azr.nl

New Editor! Hello, my name is Paul Duff. I became the new European Section “editor” when Seamus Kennedy retired from the position at the end of 2000. I would like to thank Seamus for showing me the ropes and helping me to take over, and for his conscientious work on the WDA Supplement over several

years. Seamus and I share Belfast city as a common contact point. The city is where Seamus now works and where I was born. After university qualifications in (first) zoology and (then) veterinary medicine, there followed some years in general practice before joining the UK Ministry of Agriculture Fisheries and Food (MAFF). I now work for an Executive agency of MAFF, the Veterinary Laboratories Agency, where my job involves investigation and diagnosis of animal disease with responsibilities for wildlife disease investigation and surveillance. Like many other readers of this Journal I am sure, a childhood all-pervading and multi-faceted interest in natural history has subsequently refused to stay a hobby and is a part of my work—I am pleased to say!

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 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 is May 20, 2001. 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* 0044 (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*

RECENT PUBLICATIONS

Postmortem Procedures for Wildlife Veterinarians and Field Biologists. Compiled by D.F. Keet, R.G. Bengis, and M. Woodford. Drs. Keet and Bengis are wildlife veterinarians at the Kruger National Park in South Africa. This booklet was prepared in cooperation with the Office International des Epizooties (OIE), Paris, FR, and Care for the Wild International (CFTWI) in the UK. It is available for purchase from the office of Care for the Wild International, 1 Ashfolds, Horsham Road, Ruspur, West Sussex RH12 4QX, UK at UKP£5 or US\$7.50, post free.

JOB ANNOUNCEMENT

Assistant Research Scientist. Applications are being accepted for an Assistant Research Scientist with the Southeastern Cooperative Wildlife Disease Study (SCWDS), College of Veterinary Medicine, The University of Georgia. This position will involve independent and collaborative research related to wildlife health as well as diagnostic microbiological support for existing service obligations. The researcher will be responsible for providing leadership, supervision, and training to both laboratory and field staff related to both research and service relating directly to wildlife health or to domestic animal or public health problems involving wildlife.

This is a non-tenured faculty position supported by outside contract funds that may be renewed on an annual basis. Consequently, renewal of appointment and advances in salary are dependent upon receipt

of contract funding. The Assistant Research Scientist is expected to increase existing extramural funding, thus primary and secondary involvement in obtaining additional funding support is an important factor in continuing this position.

The applicant must have a PhD degree in microbiology, experience and education relating to virology and wildlife biology, and proven success in publishing results from scientific studies and in obtaining extramural funding. Previous work experience in diagnostic microbiology and in field related research is important. Salary will range from \$40,000 to \$45,000 per year depending on qualifications, and the University of Georgia will provide benefits. Interested persons should send a CV and three letters of reference to Dr. John Fischer, Director, SCWDS, College of Veterinary Medicine, the University of Georgia, Athens, GA 30602-7387. Deadline for application is May 15, 2001. The University of Georgia is an equal opportunity/affirmative action institution.

TRAINING/EDUCATIONAL OPPORTUNITIES

Second European Wildlife and Zoo Animal Pathology Workshop. May 30–June 1, 2001; Berlin, Germany. The second workshop on the Pathology of Wildlife and Zoo Animals will be held at the IZW (Institute for Zoo Biology and Wildlife Research) Berlin, from Wednesday, May 30, to Friday, June 1, 2001. The IZW; the Department of Wildlife, National Veterinary Institute, Uppsala, Sweden; and the Center are organizing the Workshop for Fish and Wildlife Health, Berne, Switzerland. The workshop is intended for veterinary pathologists and for clinicians that are also involved in diagnostic pathology working with wildlife or zoo animals.

Section 1 (May 30): Viral diseases in carnivores

Section 2 (May 31): Mycobacterial infections in zoo and wildlife animals

Section 3 (June 1): Noninfectious diseases and causes of death in zoo and wildlife animal species

Participation in the workshop is restricted to 40 people. For registration, please contact Dr. Kai Frolich, IZW, Postfach 601103, 10252 Berlin (FAX: ++49 30 512 6104) as soon as possible. Successful applicant will be sent details for payment. The fee of DM 300,00 covers registration, attendance at the workshop, and refreshments.

Envirovet Summer Institute 2001: An Intensive Course in Terrestrial and Aquatic Wildlife and Ecosystem Health; July 6 to 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 61802-4714. Telephone: 217-333-9360; Fax: 217-244-1652. E-mail: v-beasley@uiuc.edu

2001 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

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

Wildlife Capture Course, South Africa. Sessions of our Wildlife Capture Course for biologists will be presented in the Northern Province of South Africa during the months of May through September. This field-orientated course provides material and instruction specific to the needs of wildlife capture in Southern Africa. The course emphasizes professional and humane animal handling and covers practical techniques to maximize field success and human and animal safety. The course includes wildlife captures in free-ranging situations, a training manual, and a Certificate of Training.

The 9-day course fee is \$1500. The costs cover all activities (also accommodation and food) while on the course, but does not cover airfare. Participants will stay in chalets surrounded by Africa's big five. Necessary equipment and food will be provided.

For more information, email Andre Pienaar, Parawild Safaris at: Safari@parawild.co.za Mailing address: Andre Pienaar, Parawild Safaris, PO Box 4101, Nelspruit 1200, South Africa. Phone number from outside of South Africa: 27-82-468-7001. Website: www.parawild.co.za

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 Vogelneust, Taronga Zoo, PO Box 20, Mosman NSW 2088, Australia. Fax: 61 2 99784516; E-mail: lvogelneust@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. The location and program will allow government scientists, university researchers, conservationists and policy/decision makers to consider various aspects of wildlife and livestock management and diseases, including those that devastate both wildlife and livestock, issues of sustainability, and what types of approaches and programs make sense in the new millennium.

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.

For additional conference or membership information, please contact Wilbur Amand, VMD, Executive Director/AZV, 6 North Pennell Road, Media, PA 19063 USA. Telephone (610) 892-4812; FAX: (610) 892-4813. Email: aazv@aol.com

The Wildlife Society 8th Annual Conference. September 25–29, 2001; Reno, Nevada. The Plenary session is entitled “The Endangered Species Act—How do we make it work?” Other symposia include: remote photography in wildlife research and management, methods and applications for monitoring wildlife in National Parks, avian interactions with utility structures, restoration and maintenance of the sagebrush steppe ecosystem, understanding and conserving black-tailed prairie dogs, toxicologic effects of mining on wildlife species, and others. For information, please contact: The Wildlife Society, 5410 Grosvenor Lane, Bethesda, Maryland 20814 USA. Telephone: (301) 897-9770; Email: tws@wildlife.org. Web: www.wildlife.org

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 (July 2001, JWD Vol. 37, No. 3) is May 25, 2001.

Titles and Authors of Presentations from the December, 2000, Conference of the Australasian Section of the Wildlife Disease Association.

- (1) Aspergillosis in the hihi (*Notiomystis cincta*): Studies of the ecology of the organism in the nesting environment of hihi on Mokoia and Little Barrier Islands. *Maurice Alley, John Perrott, Brian Springett, Neil MacGregor, Doug Armstrong and Isabel Castro.*
- (2) An outbreak of salmonellosis (*S. typhimurium* DT160) in sparrows in New Zealand. *Maurice Alley, Joanne Connolly, Stan Fenwick, Megan Leyland, Megan Haycock, Graham Mackereth, Carolyn Nicol and Christine Reed.*
- (3) Rehabilitation and post-release monitoring of a North Island brown kiwi, *Apteryx australis mantelli*. *Deb Anthony, Elizabeth Lee, Jonathan Bray, & John McLennan.*
- (4) Aerial survey for Bryde's whales in the Hauraki Gulf & northern waters. *Alan Baker.*
- (5) Weta conservation. *Paul Barrett.*
- (6) Chytridiomycosis and frog declines. *Lee Berger, Rick Speare, Alex Hyatt & Gerry Marantelli.*
- (7) Is blood sampling of birds truly harmless? *Isabel Castro, Dianne H. Brunton, Deborah J. Anthony, and Sandra Anderson.*
- (8) Nothing in life is that easy! An historical review of hihi (stitchbird) conservation and research in New Zealand. *Isabel Castro.*
- (9) Blood cells of otariids: Characteristics of cell morphology based on light and electron microscopy. (Poster) *Phillip Clark, Pádraig Duignan, Wayne Boardman, & Ian Wilkinson.*
- (10) Platypus Pursuit. *Joanne H. Connolly.*
- (11) TB or not TB—the disease problems of possums in New Zealand. *Michèle M. Cooke.*

- (12) Recent epidemiological studies on the prevalence of marine mammal morbilliviruses around the world. *Padraig Duignan*, Marie-Francoise van Bresse, Ole Nielsen, & Tom Barrett.
- (13) Mass Mortality: New Zealand Sea Lions, Auckland Islands, January–February 1998. (Poster). *Padraig Duignan*, Nick Gales, Simon Childerhouse, Nadine Gibbs, Maurice Alley, Stan Fenwick, Jane Hunter, Paul O’Toole, & Ian Garthwaite.
- (14) Concentrations of progesterone in the serum, milk and faeces of the female New Zealand sea lion (*Phocartos hookeri*) from the Auckland Islands. *Geoff Dutton*, *Padraig Duignan*, & Ian Wilkinson.
- (15) Atxoplasmosis in Indochinese white-rumped shamas (*Copsychus malabaricus interpositus*). *C.J. Harvey*, B.A. Rideout, R.E. Papendick, M.R. Sutherland-Smith, I.H. Stalis and C.H. Gardiner.
- (16) Effect of injection site on carbenicillin pharmacokinetics in the carpet python (*Morelia spilota*). *Peter Holz*.
- (17) Kokako conservation management—winning some battles, and feeling OK. *John Innes*.
- (18) Clinical features associated with a haemoparasite of North Island brown kiwi. *Richard Jakob-Hoff*, Caroline Twentyman & Bonnie Buchan.
- (19) Aspects of endangered species conservation in Mauritius. *Tim Lovegrove* & Anne Nieuwland.
- (20) Ecological restoration at Wenderholm Regional Park and results of the first bird release. *Tim Lovegrove*.
- (21) Studies on encephalomyocarditis virus (EMCV) In a zoological context. David McLelland, Robert Dixon, Peter Kirkland, & Karrie Rose.
- (22) The current state of the Kakapo Recovery Project. *Kate McInnes*.
- (23) Studies on hookworm in New Zealand otariid seals. *Kerri Morgan*, Richard J. de B. Norman, Padraig J. Duignan, Nadine Gibbs & Hugh Best.
- (24) The distribution of southern right whales in Southern Australia. *D. J. “Pin” Needham*.
- (25) Chytridiomycosis affecting wild non-native frogs in New Zealand. *Richard J. de B. Norman*, Phillip J. Bishop and Bruce Waldman.
- (26) Contingencies for response to wildlife in national (Tier 3) oil spill disasters in New Zealand (Poster). Richard J. de B. Norman, Debbie J. Anthony, Gareth W. Jones, Caroline M. Twentyman, Darroch Donald, Mana Stratton, Padraig J. Duignan, David Crawford.
- (27) Lymphosarcoma in a long-term captive estuarine crocodile, *C. porosus*. *Annabelle Olsson*.
- (28) A new papillomavirus of possums (*Trichosurus vulpecula*) associated with typical wart-like papillomas. (Poster). Matthew Perrott, Joanne Meers, G.E. Greening, S.E. Farmer, I.W. Lugton, & Colin Wilks.
- (29) Wildlife Conservation in New Zealand—the role of wildlife managers and veterinarians in restoring the dawn chorus. *Christine Reed*.
- (30) Restoring critically endangered bird populations of the Chatham Islands—current management and research progress. *Christine Reed* and Hilary Aikman.
- (31) Interactions between habitat modifications and the distribution and movement of venomous elapid snakes in Victoria. *D.H. (Ted) Rohr* & B.S. Malone.
- (32) Aspects of bird health on Fregate Island, Republic of the Seychelles. *David Schultz*.
- (33) Behaviour and dermal inflammation of common wombats (*Vombatus ursinus*) infected with *Sarcoptes scabiei* var. *wombati*. *Lee Skerratt*.
- (34) Wallabies on Kawau Island. *Kevin Stafford*-after dinner speaker.
- (35) Prevalence of potentially pathogenic bacteria in New Zealand sea lions. *Mana Stratton*, Padraig Duignan, John Lumsden, & Paul O’Toole.
- (36) One hundred years of pygmy sperm whale (*Kogia breviceps*) strandings in New Zealand: Distribution patterns based on age, sex and reproductive status. *Mana Stratton*, *Padraig Duignan*, Mike Tuohy, Malcolm Smith, Anton van Helden, Scott Baker, Stephanie Ploen, Gareth Jones & Alex Davies.
- (37) Characterisation of an adenovirus in brushtail possums (Poster). Darelle Thomson & Joanne Meers.
- (38) Conservation volunteering in South East Asia and the production of an Australasian wide conservation organisation. *Steve Unwin*.
- (39) Veterinary involvement in the regent honeyeater (*Xanthomyza phrygia*) recovery plan. *Larry Vogelnest* & Jocelyn Barker.
- (40) The role of nutrition in maintaining the health of captive adult macropods. *Michelle L. Ward*.
- (41) Cassowary restraint with less adrenalin. D A Westcott, and *Katie E. Reid*.
- (42) Developing an Australian Wildlife Health Centre or Network. *Pam Whiteley*.
- (43) Health programmes in aboriginal communities. *Jennifer Youl*.