

## SUPPLEMENT TO THE JOURNAL OF WILDLIFE DISEASES

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Wildlife Diseases Newsletter

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Business office:

1-800-627-0629, ext 221

sstarr@allenpress.com

**Pauline Nol, Editor**

USDS/APHIS, National Wildlife Research Center,  
4101 Laporte

Fort Collins, CO USA 80521

Telephone: 970-266-6126

E-mail: pauline.nol@aphis.usda.gov

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

### **PRESIDENT'S CORNER**

*New visions and challenges for WDA.* In Saskatoon, on the open plains of Canada, in August this year, the 52<sup>nd</sup> Annual Meeting of WDA was held. If you were fortunate to attend you probably agree with me that this year's meeting (as always!) was a most successful and enjoyable conference, perfectly organized by Ted Leighton, Gary Wobeser and others from the University of Saskatchewan. More than 200 registrants had the pleasure of taking part in good scientific presentations, a fantastic hotel, a well-arranged picnic with beautiful Indian dances and, also as always, good friendship and contacts with colleagues from all over the world. Thank you Ted and Others. You did a great job!

The Saskatoon meeting was not only a fantastic meeting with a good scientific program. Other important things happened too. Paul Barrows stepped down as president – Thank you Paul for all the excellent work you have done for WDA. You made it very easy for me both as vice-president and as incoming president. I am most honoured being elected president of WDA and must thank you all for the confidence you have shown me. I will try to do my best during these two forthcoming years. I will be the first non-North American president, living 4000 kilometres away from North America. However, this might very well reflect modern times and where WDA is heading - We are becoming more international!

It is nowadays easy to quickly communicate over the E-mail. Phoning all over the world is also easy and even getting cheaper. More and more attendants at the annual meeting come from outside North America. The number of international papers in JWD is also rising. There are also an increasing number of sections and more meetings are held in the name of WDA. So where the president and other officers of WDA live or work may not be as important for our organization in the future. The important thing is that we work together to achieve the goals of WDA.

Another and more important decision for WDA was also taken in Saskatoon. Council decided to hire Ed Addison from Ontario, Canada as executive manager of WDA. Ed has a longstanding record with WDA and has served in many positions. Ed knows the organization very well and is the perfect man for the job. Welcome Ed!

Ed's work will include promoting WDA by acting as a liaison between the WDA and our business office. It will also include providing information and acting as an administrative linkage between officers, council members, section chairs and committees, as well as providing assistance to local hosts in meeting arrangements and helping plan international meetings and joint meetings with other societies. An executive manager working for WDA will substantially increase our possibilities as a professional organization within the field of wildlife and wildlife diseases. With this position it will also be easier for us to serve all members better and make our organisation more professional.

*Torsten Mörner-President*

## **WDA ACTIVITIES**

**52<sup>nd</sup> Annual Meeting of the Wildlife Disease Association. August 11-14, 2003; Saskatoon, Saskatchewan, Canada.** A wonderful time was had by all in Saskatoon (See President's Corner above)! The annual meeting saw many excellent papers and was hosted by an exceptional Canadian team. Highlights of the week included a picnic at Wanuskewin Heritage Park, a cultural center on an area of land where, for 6,000 years, Indian tribes of the Northern Plains hunted and over-wintered. On banquet night, Dr. Billy Karesh, as this year's AAWV cutting-edge speaker, offered the group a global perspective on the human-wildlife interface as it pertains to disease, in a both thought-provoking and poignant presentation. Dr. Karesh concluded his talk by honoring those colleagues the WDA has lost in the past year, paying special tribute to Dr. Annelisa Kilbourn (See Member News below).

Great honors that evening were also bestowed upon Dr. Bill Samuel, presented with this year's Distinguished Service Award (See Below) and the Emeritus Award was presented to Dr. Tom Yuill, who retired in February 2003 (See JWD Supplement April, 2003). Please see Student Activities below to find out who won the 2003 student awards and scholarships.

The city of Saskatoon and its environs offered many opportunities to immerse oneself in diverse cultural activities, ranging from Wanuskewin, to the city's annual Fringe Festival, with its variety of music and theater. However, the most remarkable example of fine artistic expression to be witnessed by the WDA community that week can be attributed to its very own Dr. Tom Thorne. Dr. Thorne dazzled us all at the banquet Wednesday night with his vision of haute couture, and was swiftly and justly rewarded with this year's esteemed Duck Award (See Figure at own risk!). The following is a poem by Dr. Terry Kreeger, who was clearly moved by the experience.

### ***Crossdressers in Disguise***

*(To be sung to the tune of "Ghost Riders in the Sky"):*

*An old cowboy went drinkin' one night in Saskatoon.  
He stepped up to the cash bar to buy a beer or two.*

*When all at once, the doors opened and folks burst into cheer.  
And the vision there before him pierced his heart with fear.*

*Yippee yi yay, yippee yi yo  
Cross dressers in disguise*

*In cowboy boots and necktie, a blue dress Thorne did wear.  
The old cowboy gulped his beer and tried hard not to stare.*

*Said Thorne, cowboy mend your ways or like me you must dress.  
Cruising the banquet endlessly, wishin' you had breasts.*

*Yippee yi yay, yippee yi yo  
Cross dressers in disguise*

*The bidding started slowly, to that we all agree.  
Thorne stepped and said for Beth, I must have that filigree.*

*But the tables turned on Thorne and things went horribly wrong.  
Shrugged Thorne, this dress ain't so bad, Colin could have bought the thong!*

*Yippee yi yay, yippee yi yo*  
*Cross dressers in disguise*  
*Cross dressers in disguise*



Dr. Tom Thorne escorted by Dr. Tom Yuill (left), recipient of the Emeritus Award and Dr. Bill Samuel (right), recipient of the Distinguished Service Award.



Dr. Paul Barrows presents Dr. Bill Samuel with the Distinguished Service Award.

**Dr. Bill Samuel receives 2003 Distinguished Service Award.** The WDA is pleased to announce that Dr. William M. Samuel of the Department of Biological Sciences of the University of Alberta was presented with the 2003 Wildlife Disease Association's Distinguished Service Award (See Figure). Dr. Samuel has been a member of WDA for about 30 years. He was an elected Council member during the 1970's and 1980's, he hosted the WDA's annual meeting held in Edmonton in 1985 and served as WDA Vice President from 1999-2001. Perhaps just as importantly, he attended most of WDA Council's meetings during the 1980's and 1990's out of interest in and concern for the organization. For many years Dr. Samuel chaired the Student Awards and coordinated student competitions. He had a major influence on the development of the WDA Student Scholarship Award and his compassion and encouragement has been felt by hundreds of students. Most recently Dr. Samuel devoted several years to the co-editing of the new edition of *Parasitic Diseases of Wild Mammals*, a huge contribution to WDA and its members and perhaps one of the crowning achievements of his career. Dr. Samuel's passion for WDA and his love of its people over three decades has been wonderful to behold. He is very deserving of WDA's highest award. Congratulations, Dr. Samuel!!

**53<sup>rd</sup> Annual Meeting of the Wildlife Disease Association. August 27 –September 2, 2004, San Diego, CA.** 53<sup>rd</sup> Annual Meeting of the Wildlife Disease Association will be held jointly with the American Association of Zoo Veterinarians in San Diego California. See coming issues for details.

**Call for Nominations!!** The WDA Nominations Committee needs your help in obtaining nominations for three offices this year. They are Student Representative and two seats on Council. Please send

your nominations for these offices to Scott Wright at [swright@usgs.gov](mailto:swright@usgs.gov) or 6006 Schroeder Road, Madison, WI 53711 or FAX at 608-270-2415. Please do not send a resume or CV for the nominee as we have a questionnaire for them to complete. Please send your nominees to me as soon as you can or by December 1, 2003.



Dr. Thierry Work presents Ms. Yeen Teen Hwang with the Terry Amundsen Student Presentation Award.

## **WDA STUDENT ACTIVITIES**

**2003 STUDENT AWARDS!** As usual, this year's student awards attracted many talented individuals, hence the competition was fierce. Dr. Andrea Varela from University of Georgia was the recipient of this year's Scholarship award. Dr. Varela is investigating the infection dynamics of the tick-borne organism, *Ehrlichia chaffeensis*, causative agent of human monocytic ehrlichiosis, in the primary reservoir host, white-tailed deer, and the tick vector, *Amblyomma americanum*. Dr. Cynthia Tate from the University of Georgia won the Graduate Student Research Recognition Award. She is experimentally evaluating the susceptibility of white-tailed deer to *Anaplasma (Ehrlichia) phagocytophilum*, the causative agent of human granulocytic anaplasmosis. Of thirteen students who participated in the Terry Amundsen Student Presentation Competition, Ms. Yeen Teen Hwang (See Figure) from University of Saskatchewan won this award. She is examining the population dynamics of rabies and striped skunks and seeing if rabies could be acting as a population regulator.

Congratulations everyone!

*-Submitted by Thierry Work*

**ATTENTION MENTORS AND ADVISORS!** Please encourage your students to participate in next year's student activities! The deadline for scholarships is **APRIL 15, 2004**. It's never too early to start preparing. San Diego 2004 is just around the corner! Please see brief descriptions of scholarship and award opportunities below. Specific instructions will be available in upcoming issues of the Supplement.

***Wildlife Disease Graduate Student Research Recognition Award DEADLINE: April 15, 2004.*** 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 funds 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.

***Wildlife Disease Association Scholarship DEADLINE: April 15, 2004.*** This scholarship acknowledges outstanding academic and research accomplishment, commitment, and potential in pursuit of new knowledge in wildlife disease or health. The scholarship 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.

***Terry Amundsen Student Presentation Award DEADLINE: WDA MEETING, 2004.*** This award acknowledges outstanding oral presentation of research findings. To be considered, the student must give an oral presentation (13-15 min) of his/her topic of choice to the WDA meeting participants in a special session. 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:

## **MEMBER NEWS IN MEMORIAM**

**Dr. Annelisa Kilbourn.** On November 2, 2002, WCS Field Veterinarian Dr. Annelisa M. Kilbourn was tragically lost while working in Central Africa. Even at the young age of 35, Dr. Kilbourn had already achieved what most people only dream of accomplishing. She was a gifted artist, trained as a pilot, achieved a black belt in Tai Kwon Do, and spoke seven languages fluently. As a veterinarian, she had cared for animals in Africa, Asia, and the Americas. Through her exceptional work ethic, unwavering dedication and unparalleled fullness of spirit, Annelisa helped to save imperiled populations of wildlife across the world. In Malaysia, she conducted the first research on the health of free ranging orangutans and later assisted the government in translocating orangutans and elephants to safe havens. In Central Africa, she worked tirelessly to expand WCS's Gorilla Health Program to protect the both the health of humans and wildlife throughout the region.

Through Annelisa's unwavering quest to protect the world's most vulnerable wildlife she had also vastly enriched the lives of the people around her. She lived fully by the principles of inclusion and sharing, truly believing that she could make more of a difference in the lives of both people and animals by teaching others the skills and knowledge of health and conservation. She made a special point of focusing on people and regions where a lack of scientific education had left many in the dark. In the months prior to her death, Annelisa circled the globe, building working relationships with local people, researchers, park managers and government officials all in the name of conservation. Annelisa was home no matter where she was on earth, she took responsibility as a good citizen of the world, and she participated actively as a member of the community of beings that share this planet.

In June of 2003, Dr. Kilbourn, was selected posthumously as one of eight individuals and organizations to be placed on the United Nations Environment Program's *Global Roll of Honor* for her contributions towards preserving the environment. In this honor she will join the ranks of distinguished scientists and environmentalists such as Jacque Cousteau and Jane Goodall and we think she marks the first person in this group to represent the world's wildlife health professionals.

*-Submitted by Billy Karesh*

## **BOOK REVIEW**

**An Impossible Dream**, Edited by Ian Parker and Stan Bleazard, Librario Publishing Ltd., ISBN 1-904440-20-7, 2001

*We dedicate this book to a Pleistocene Africa, which we so enjoyed and sought to preserve, but which is gone. It was an impossible dream.*

This book tells the story of the Kenya game department, more or less from its inception early in the 20<sup>th</sup> century, to the time, shortly after Kenyan independence in 1963, by which most expatriate wardens left the service for a variety of reasons. The above frontispiece inscription tells the reader that she or he is in for no easy journey through a Bambified look at wild animals. The gathered stories, much more complete than the sum of their parts, provides a history as lived by the people making it,

not as told by a dry academic.

Seventeen ex-wardens have written short chapters, and the stories of several others are put together by one or other of the editors. Among these are legendary figures such as George Adamson, Bill Woodley and David Sheldrick and from even earlier times Frederick Jackson who is generally credited as being the founder of the Kenya Game Department. Inevitably, with such an approach, the writing is uneven, some of it lyrical and flowing, some dry and pedantic. The editors have done their best to overcome these differences and the reader should have no problem with this minor wrinkle. They have also managed to edit out duplication and redundancies to a large degree. By the time I had reached the final chapter I had formed a clear picture of those times, and that place.

There are several accounts of animal capture that will interest wildlife and zoo professionals. How many of today's scientists knew that the first person to seriously dart rhinos in Kenya was known as "Carter the Darter". He used a crossbow designed appropriately by a man named Archer. The first early efforts at darting, with "Red" Palmer in the party, and the use of the Harthorn cocktail are described. The latter story is Ian Parker's personal account of a story of him that I told almost 30 years ago at a Wildlife Disease Association meeting in Fort Collins. He, desperately thirsty, had made the mistake of drinking from a bottle that had been used as the source of distilled water for topping up immobilizing darts. The effect of many previous insertions of needles from a variety of syringes containing different potent mind-altering chemicals is obviously seared in Parker's memory.

Just as fascinating are accounts of the translocation of Hirola, or Hunter's antelope (*Damaliscus hunteri*) across the Tana River into Tsavo National Park. After prolonged chases and trucking it was these animals that became the subject of the first description in the scientific literature of muscular dystrophy or what is now generally called capture myopathy<sup>1</sup>. Equally interesting is the account of the capture and translocation of roan antelope (*Hippotragus equinus*) from settlement areas. These animals, caught after drive trapping and boma acclimatization, did not fare well at their destinations. With the benefit of experience and hindsight one can see how we have learned about all the complex issues that are interwoven when translocation occurs (not that we always get it right).

Another important thread is the "blind eye" attitude of some of the wardens to subsistence hunting and the erosion, some would say destruction, of the culture of traditional hunting cultures. In particular the *Wata* or *Waliangulu*, famed both as elephant hunters and for the incredible power of their bows, which few others could draw, are given due credit.

The pandemics of rinderpest and canine distemper that swept through Africa in the last few years of the 19<sup>th</sup> century killed millions of wild animals and created permanent changes in human culture. The wild animals rebounded from those diseases, but have not withstood the steady drip drip, at times more a cascade, of human population expansion and human greed, anything like as well.

If I were ever to prepare an anthology of humour the last of three short chapters by Peter Jenkins, written less than two months before his death from cancer in September 2001, would be a shoo-in. It describes an encounter between a truck and a thoroughly enraged bull rhino. In boxing parlance, while the winner did not achieve a knock-out the rhino won every round. Another rhino encounter tells as much about rhino as it does about the type of young men that took on the jobs available, for almost no money, and for which they had to supply their own vehicles. In this case a rhino whose horn had jammed in a truck bed promptly had a bottle of beer poured down its throat before it freed itself!

For Africophiles this book will be an important addition to the library. For those with an interest in Africa's wildlife, especially the wildlife of Kenya, which must presumably mean at least 90% of the readership of this journal, the book provides an insight that will at times amuse, at times distress, but always provide a background that will help put many things in context.

1. Jarrett W.H.F., Jennings F.W., Murray M. and A.M. Harthorn. 1964. Muscular Dystrophy in wild Hunter's Antelope. East African Wildlife Journal. 2:158-159.

## HAPPENINGS IN THE FIELD

**Outbreak of facial tumours in Tasmanian devils.** An epidemic of progressive and apparently transmissible neoplasia has been recorded in Tasmanian devils (*Sarcophilus harrissi*) in the wild since 1997 and has been especially apparent in the past 2 to 3 years. The tumours typically occur first in the mouth and facial areas, leading to speculation that the putative viral agent is spread directly by biting. Devils lead an aggressive lifestyle and fighting is common and savage, particularly among adult males in whom the disease incidence is the highest. Tumours are most commonly lymphomas or anaplastic round cell tumours, but considerable variation exists, hence the preference for the term "facial tumours" over more specifically descriptive terms. The disease is not limited to facial tumours, however, but is genuinely systemic. Draining lymph nodes and bone marrow are typically infiltrated with a clonal population of round cells with a high cytoplasmic/nuclear ratio and often a plasmacytoid appearance. Lymphocytes with a moderate or high mitotic index are commonly seen infiltrating other organs such as the liver, causing the appearance of hepatitis. Round cell tumours similar to those on the face occur later in other parts of the body. Other odd tumours seem to occur in association with this syndrome also, although there is no direct evidence that this is more than coincidence. In addition to facial tumours, one recent case had a functional adrenocortical tumour producing symptoms of Cushing's disease (overproduction of cortisone), whilst older reports describe examples of other seemingly unrelated neoplasms occurring in association with facial tumours in Tasmanian devils. First observed in the north east of the state, the disease has now been seen in many districts further south and west. Field studies have confirmed that it spread southward along the Freycinet Peninsular at a rate of 10--15 km/year, and westward about halfway across the state. In some areas, mortality rates have been as high as 80 to 90 per cent, with very few animals left over 12 months old. Animals of all ages and both sexes are affected with a greater incidence in adult males. Younger animals tend not to be affected so much, either due to reasons of susceptibility or because they tend not to fight, or possibly due to a lengthy incubation period for the disease. Devils might live up to 5 or 6 months or more following the development of clinical disease, but death seems to be the inevitable outcome. There is very little evidence of animals recovering from this disease. Death tends ultimately to result from starvation, as facial tumours invade and destroy facial bones and dental arcades, leaving hideously ulcerated and infected lesions on the face and in the mouth. Pathologists at the Animal Health Laboratory of the Tasmanian Department of Primary Industries, Water and Environment (DPIWE) have proposed a retroviral aetiology for this disease on the basis of a number of similarities with retroviral disease in other animals. The archetypal virus of the type-C group of cancer-causing retroviruses is feline leukemia virus (FeLV) that causes a range of syndromes in cats, including solid tumours of the lymphoma variety, leukemia of various types, and/or a chronic immunodeficiency syndrome over the longer term. Transmission is believed to be direct, mostly via fighting amongst male cats, which gives the disease a much greater incidence in adult males. Avian type-C retroviruses cause solid lymphomas or other round cell tumours of birds, and can also cause leukemic conditions.

But the most interesting is a novel type-C retrovirus recently isolated from koalas (KoRV), another Australian marsupial, which is also associated with a syndrome including solid tumours of the lymphoma variety and leukemia (Hanger, et al. *Journal of Virology* 2000; :4264-4272). When KoRV was first isolated it was tempting to speculate that FeLV might have made the evolutionary jump across the species barrier into koalas, given the extent of the problem of feral cat proliferation in the Australian bush. However, the work of Hanger et al at the University of Queensland found no genetic relationship between KoRV and FeLV.

Other possible aetiologies include a herpesvirus and a non-viral aetiology. The one glaring flaw with the retrovirus hypothesis is that there is no precedent for the appearance of tumours at the initial site of infection, and it is somewhat inconsistent with the biology of retroviruses unless an

acutely-transforming oncogene were involved, which would be extremely unusual. Cats also transmit FeLV by biting for example, but tumours occur at unrelated sites after many months following systemic proliferation of the virus.

The veterinary and pathology group at DPIWE have established a minor research project consisting of a group of scientists and field workers keen to participate in working up the Tasmanian devil facial tumour syndrome and its aetiology, but the major limitation is the difficulty of obtaining research funding. Although still in the early stages of defining the disease, more extensive research will be required and external funds are being sought to assist in characterising this apparently devastating disease of our Tasmanian icon species. At this early stage we are focusing on attempts to obtain some virus either directly from plasma of infected animals by ultra-centrifugation, or indirectly from cell culture of peripheral blood monocytes from infected animals, as achieved by Hanger et al with respect to the koala retrovirus.

My thanks to Jon Hanger for his assistance with methods and advice on how to proceed, and for his offer to help out with some limited molecular analysis. Tissue samples have also been sent to an electron microscopy expert, Dr Alex Hyatt at the Australian Animal Health Laboratory in Geelong, who has generously offered his services gratis to search the tissues for virus particles.

-Brad Chadwick, Veterinary Pathologist, Animal Health Laboratory, Department of Primary Industries, Water and Environment, Tasmania, Australia, Brad.Chadwick@dpiwe.tas.gov.au

-Adapted from *ProMED-AHEAD August 13, 2003, Volume 2003, Number 153*

## **National Wildlife Health Center Quarterly Mortality Report**

***Trematode-related mortality at Upper Mississippi River National Wildlife Refuge.*** Beginning in early April, lesser scaup and American coots were found dead and dying at Pool 7 (Lake Onalaska) of the upper Mississippi River. Mortality continued into early May. Total mortality on Lake Onalaska was estimated at 700 birds. Lesser scaup (570) and coots (125) were the species most affected, along with several buffleheads. One or both of two species of trematodes, *Sphaeridiotrema globulus* and *Cyathocotyle bushiensis*, were found in each bird examined. Crews conducted periodic monitoring trips on Pools 7 and 8 and found/collected an estimated 15-25% of the total number of sick/dead birds. Avian predators and scavengers, such as bald eagles, crows, and gulls, consumed many birds. Mortality caused by the same species of trematodes was reported in the same area during the Fall 2002 migration.

***Additional mortality at Cade's Cove, Great Smoky Mountains National Park, Tennessee.*** A sewage treatment plant at Cade's Cove was the site of snapping turtle and American toad mortality in the winter and early spring of 2003. A third mortality event, involving several thousand unidentified amphibian larvae and several adult red-spotted newts occurred over several days in late May. Causes of the mortalities have not been determined, but investigations are continuing.

***Cedar Waxwing Mortality in South Dakota.*** In late May 2003 personnel of the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish, and Parks were contacted about Cedar Waxwing mortalities at several widely scattered locations in eastern South Dakota. A similar pattern of mortality in Cedar Waxwings had occurred in the area in 2002. Sick birds showed weakness, stupor, respiratory distress and sudden death. The observers noted a correlation between bird deaths and certain species of budding and flowering ornamental shrubs reported to contain high levels of cyanogenic glycosides. Necropsies at the South Dakota State Veterinary Diagnostic Lab (SDVDL) and at the NWHC found all birds were in fair to excellent body condition without evidence of infectious disease. Analysis of tissues from the birds by NWHC found elevated, but not toxic levels of cyanide. Unfortunately the tissues had not been collected and preserved in a manner consistent with

preservation of cyanide. Analysis by SDVDL of GI content from dead birds and plant samples collected at die-off sites showed high levels of cyanide. Plans are being formulated for the collection and submission of dead birds and nearby plant material using cyanide protocols in 2004.

## Quarterly Wildlife Mortality Report

April 2003 to June 2003

State	Location	Dates	Species	Mortality	Diagnosis	Reported by
AR	Ouachita County	05/05/03-ongoing	Mourning Dove	40 (e)	Ingluviitis	AR
FL	Santa Rosa County	05/01/03-05/15/03	Great Blue Heron	20 (e)	Trauma	NW
GA	Columbia County	01/01/03-02/07/03	Fox Coyote Yellow-rumped Warbler	5	Toxicosis: aldicarb suspect	SCW
GA	Gwinnett County	02/20/03-02/28/03	Cedar Waxwing	20 (e)	Trauma	SCW
GA	Madison County	06/01/03-06/07/03	Northern Cardinal Brown-headed Cowbird	8	Salmonellosis	SCW
ID	Ada County	06/26/03-06/27/03	Canada Goose	6	Toxicosis: diazinon	ID, NW
ID	Caribou County	06/27/03-06/28/03	Canada Goose	5	Open	NW
IL	Will County	06/01/03-07/01/03	Purple Martin	5 (e)	Open	NW
IN	LaGrange County	06/01/03-07/01/03	Purple Martin	10 (e)	Aspergillosis	NW
KS	Marshall County	06/30/03-07/26/03	Mourning Dove Black-capped Chickadee	13	Parasitism: trichomoniasis	NW
LA	St Tammany Parish	04/18/03-04/27/03	Southern Leopard Frog	500 (e)	Open	NW
MD	Harford County	01/01/02-ongoing	Bald Eagle Osprey	21	Electrocution	NW
MD	Wicomico County	04/01/97-ongoing	Red-eared Slider Turtle Painted Turtle	60 (e)	Osteodystroph	NW
MN	Agassiz NWR	06/26/03-07/10/03	American White Pelican	8 (e)	Trauma: Pouch Lacerations	NW
MS	Harrison County	01/15/03-03/27/03	Brown Pelican Unidentified Merganser Unidentified Gull	30	Open	NW
MT	Valley County	04/07/03-04/21/03	Red Crossbill	7 (e)	Salmonellosis suspect	Ψ
NC	Croatan National Forest	04/15/03-06/20/03	Red-cockaded Woodpecker	10	Trauma suspect	NW
ND	Stark County	05/05/03-05/10/03	Eared Grebe	25 (e)	Exposure: hypothermia	NW
NE	Kearney County	05/20/03-07/24/03	American Robin Unidentified Dove Cedar Waxwing	60 (e)	Open	NEB, NW
NV	Washoe County	05/27/03-06/15/03	Mourning Dove	6	Parasitism: trichomoniasis	NW
OH	Erie County	05/28/03-06/05/03	Double-crested Cormorant	100 (e)	Drowning suspect	NW
OK	Near Tishomingo NWR	04/15/03-05/15/03	House Sparrow Northern Cardinal Northern Mockingbird Mourning Dove	15 (e)	Salmonellosis	NW
SD	Charles Mix County	02/01/03-02/10/03	Mallard Canada Goose	23 (e)	Avian cholera	NW
SD	Brown County	05/25/03-06/11/03	Cedar Waxwing	200 (e)	Toxicosis: cyanide suspect	NW
TN	Chester County	02/04/03-04/02/03	Northern Cardinal House Sparrow	20 (e)	Salmonellosis	SCW
TN	Great Smoky Mountains NP	05/19/03-05/22/03	Eastern Red-spotted Newt Unidentified Amphibian Larvae	2000 (e)	Open	NW
TN	Shelby County	05/19/03-06/06/03	Purple Martin	60 (e)	Open	SCW

TX	Anahuac NWR	04/25/03-06/11/03	Mottled Duck	10 (e)	Open	NW
TX	Lubbock County	05/12/03-06/30/03	Unidentified Sparrow European Starling Mourning Dove American Robin Blue Jay	100 (e)	Starvation	NW
VA	Surry County	01/15/03-02/15/03	Brown Pelican	50 (e)	Drowning	NW, SCW
WI	Upper Mississippi NWR	04/03/03-05/09/03	Lesser Scaup American Coot Bufflehead	700 (e)	Parasitism: <i>Cyathocotyle bushiensis</i>	NW
WI	Winnebago County	04/05/03-05/30/03	American Coot Redhead Lesser Scaup	75 (e)	Parasitism: <i>Cyathocotyle bushiensis</i>	NW
WY	Sheridan County	03/01/03-05/20/03	Red Crossbill Pine Siskin	100	Salmonellosis	NW
WY	Sublette County	06/25/03-07/15/03	Violet-green Swallow Barn Swallow	100 (e)	Emaciation	NW
<b>Updates/Corrections</b>						
FL	St. Mark's National Wildlife Refuge	12/19/02-07/15/03	Southern Leopard Frog	200 (e)	Parasitism: Perkinsus-like Organism	NW
FL	Volusia, Orange, Brevard, Martin, Palm Beach and Broward Counties	03/08/03-04/15/03	Northern Gannet Unidentified Cormorant	2,500 (e)	Emaciation	FL, NW
OK	Tishomingo NWR	02/18/03-02/18/03	Unidentified Grackle European Starling Unidentified Junco	20	Open	NW
MS	Harrison County	03/19/03-06/01/03	Mississippi gopher Frog Southern Leopard Frog	1,000 (e)	Parasitism: Perkinsus-like Organism	NW
GA, AL, AR, CO, CT, DE, FL, IA, IL, IN, KS, KY, LA, MA, MI, MN, MO, MS, NC, ND, NE, NJ, NY, OH, PA, SC, SD, TN, TX, VA, WI, WV, WY		01/08/03-ongoing	Blue Jay American Crow Northern Cardinal Black-billed Magpie Common Grackle	1,900 (e)	Viral Infection: West Nile	NW, ST

(e) = estimate; \* = morbidity, not mortality;  $\Psi$  = no specimens received in laboratory setting

Arkansas Livestock and Poultry (AR), Southeastern Cooperative Wildlife Disease Study (SCW), Idaho Game and Fish (ID), USGS National Wildlife Health Center (NW), Florida Fish and Wildlife Commission (FL), Nebraska Game and Parks Commission (NEB), Various states diagnostic laboratories (ST). Written and compiled by Kathryn Converse/Rex Sohn - Western US, Grace McLaughlin – Eastern US, Christine Lemanski, NWHC. The Quarterly Wildlife Mortality Report is available at <http://www.nwhc.usgs.gov>. To report mortality or receive information about this report, contact the above NWHC staff, or for Hawaiian Islands contact Thierry Work. Phone: (608) 270-2400, FAX: (608) 270-2415 or e-mail: [kathy\\_converse@usgs.gov](mailto:kathy_converse@usgs.gov). USGS National Wildlife Health Center, 6006 Schroeder Road, Madison, WI 53711.

## WDA SECTION NEWS

### NEWS FROM EUROPE

#### *EWDA, European Wildlife Disease Association*

##### **Chairman's Corner**

If 2003 has been a quiet year for EWDA, 2004 is going to be much busier. In 2003 we managed to collect data for the 2002 annual report on wildlife disease in Europe for the OIE. We hope soon to release a short summary of the most significant events, in order to motivate all of you who contribute to this important activity. It would be very worthwhile to have a distribution list of WDA European members since the report, and perhaps other relevant documents, could be circulated via the Internet.

This leads to a question; what is an EWDA member? For all those who are registered as WDA members it is no problem, except perhaps of organisation. For Europeans, interested in wildlife diseases, but not registered, the question is still open, particularly for our colleagues in Eastern Europe for whom the price of application could be a problem. This will be discussed at the forthcoming EWDA meeting in 2004. This will be a catalyst for our activity in the coming year. It is a great pleasure for us to be invited by Dr. Torsten MORNER, current WDA President and former EWDA chair, to the meeting in Uppsala. Preparation for the meeting is already in progress and you will soon be given details, but even now you can visit our website <http://www.ewda.org> which will keep you up to date – please take a look.

Involvement of Europeans in WDA is increasing steadily, as seen by the proportion of European papers in the Journal of Wildlife Disease. It is also noticeable that there has been an increase in the number of Europeans in the WDA business sector. In addition to the job Paul Duff does in collecting information for the JWD Supplement, we are also pleased that we have a new bulletin editor in the person of Kai FROELICH who will mainly deal with contributions from Europe to the JWD. Last but not least, we have our new president and member of the Council at large, Dr Thijs KUIKEN. My hope is that the European contribution to world knowledge on wildlife disease will be significant and fruitful, but to actually make that happen is in your hands, so work hard, and - see you in Uppsala. -Marc ARTOIS, Chairman EWDA, ENVL, Unite Pathologie infectieuse, BP 83, 69280 Marcy l'Etoile, Tel/Fax (0)478 87 27 74. Tel cel 0675117 967. <http://www.vet-lyon.fr> [profl:m.artois@vet-lyon.fr](mailto:profl:m.artois@vet-lyon.fr); [priv.:marc.artois@club-internet.fr](mailto:priv.:marc.artois@club-internet.fr)

**Reports** Trichomoniasis is topical, with a report in April's *News from Europe* of significant mortality in Woodpigeons across large areas of England, now two more reports. Why is this little protozoan parasite so pathogenic for birds? Your thoughts please?

**Trichomoniasis in Tawny Owls (*Strix aluco*) from the South West of England.** Synopsis: A retrospective review of clinical records was performed on all the tawny owls (*Strix aluco*) admitted to a wildlife hospital in the South West of England during the five year period: 1998 to 2002. The numbers of owls presenting with evidence of oral trichomoniasis (canker) were recorded and these were compared with the incidence in barn owls (*Tyto alba*). Evidence of oral abscessation, and erosions in the roof of the oropharynx, were taken as evidence of trichomoniasis. Such lesions are fairly typical of the disease, which can be diagnosed from the presence of characteristic lesions and the demonstration of the organism in oral wet smears (1). The differential diagnoses for yellow caseous lesions of the oropharynx include trichomoniasis, capillariasis, candidiasis, pox and abscessation secondary to a penetrating injury (1 & 2) vitamin A deficiencies may also contribute to stomatitis (2).

The number of cases of oral trichomoniasis seen in tawny owls each year is recorded in Table 1. The incidence in barn owls for the same period is shown in Table 2. With the exception of 1999, oral trichomoniasis was seen in small numbers of tawny owls every year. The numbers never exceeded 1% of the adult admissions. In total, ten cases of oral trichomoniasis were seen in the 220 adult tawny

owls examined at the centre during the five-year period. No cases were seen in immature birds. By contrast, only a single case of oral trichomoniasis was seen in the 86 barn owls examined during the same period and this also involved an adult bird. All the affected birds presented clinically with weakness and starvation.

Almost all wild and domestic Columbiformes are latently infected with *Trichomonas gallinae* and should be considered carriers of infection (3). Trichomonads are not particularly host-specific and are capable of infecting and causing disease in a number of avian species (3). Goshawks, sparrowhawks and falcons are thought to be more vulnerable to trichomoniasis than other raptor species (3). The disease has been reported less frequently in owls than in diurnal raptors and this is generally considered to be due to the fact that columbids are not a major food item for most species of owls (1).

A high incidence of trichomoniasis was reported in barn owls in the western United States (1). In one English study, of the 180 barn owls examined post-mortem, over a ten-year period, trichomoniasis was only identified in a single bird (4). It would appear that this condition is more common in tawny owls than barn owls. This is probably due to the fact that tawny owls consume a wider range of prey than other medium sized owls in the UK (5). In addition to small rodents, which perhaps form the bulk of their diet, they will also take birds as big as adult mallards (5). Wood pigeons, feral pigeons and collared doves almost certainly are included in their diet and so would expose tawny owls to trichomoniasis. The pathogenicity of various strains of *T.gallinae* and the immune response of the individual owl are likely to play a role in susceptibility (6). Interestingly, all the owls with trichomoniasis identified in this study were adult birds, suggesting that they had not developed a protective immunity.

Table 1: Annual incidence of oral trichomoniasis (canker) in Tawny Owls admitted to a Wildlife Hospital in South West England.

	Numbers of Tawny Owls			Trichomoniasis (Canker)		
	Adults	Juveniles	Total	Number	% of Adults	% of Total
1998	37	26	63	3	0.08%	0.05%
1999	37	22	59	0	0	0
2000	51	25	76	2	0.04%	0.03%
2001	43	27	70	4	0.09%	0.06%
2002	52	18	70	1	0.02%	0.01%

Table 2: Annual incidence of oral trichomoniasis in Barn Owls admitted to a Wildlife Hospital in South West England.

	Numbers of Barn Owls			Trichomoniasis (Canker)		
	Adults	Juveniles	Total	Number	% of Adults	% of Total
1998	23	5	28	0	0%	0%
1999	16	2	18	0	0%	0%
2000	17	1	18	1	0.06%	0.06%
2001	20	1	21	0	0%	0%
2002	10	3	13	0	0%	0%

## References:

- (1) Pokras, M.A., Wheeldon, E.B. and Sedgwick, C.J. (1993) Trichomoniasis in owls: Report on a number of clinical cases and a survey of the literature. In *Raptor Biomedicine*. Eds. P.T. Redig, J.E. Cooper, J.D. Remple and D. Bruce Hunter. University of Minnesota Press, Minneapolis, USA. Pages 88-91.
- (2) Cooper, J.E. (2002) *Birds of Prey: Health and Disease*. Blackwell Science, Oxford, UK.
- (3) Heidenreich, M. (1997) *Birds of Prey: Medicine and Management*. Blackwell, Wissenschafts-Verlag, Oxford, UK.
- (4) Hardy, A.R., Hirons, G.J.M. and Stanley, P.I. (1981) The relationship of body weight, fat deposit and moult to the reproductive cycles in wild tawny owls and barn owls. In *Recent advances in the study of raptor disease*. Eds J.E. Cooper and A.G. Greenwood. Chiron Publications, Keighley, West Yorkshire, England.
- (5) Snow, D.W. & Perrins, C.M. (1998) *Birds of the Western Palaearctic*. Oxford University Press, Oxford, UK. Vol. pages 353-358.
- (6) Stabler, R.M. (1954) *Trichomonas gallinae*: a review. *Experimental Parasitology* **3**: 368-402.  
*Glen Cousquer BSc BVM&S CertZooMed MRCVS, RSPCA Wildlife Hospital, West Hatch, Taunton, TA3 5RT. UK*

Trichomonosis in a woodpigeon wintering roost, South west Spain Large numbers of woodpigeons (*Columba palumbus*) winter yearly in Southwestern Spain and Portugal, where they find abundant food such as acorns. In winter and spring 2001, approximately 2,600 woodpigeons died due to an outbreak of trichomonosis in one roost. Diagnosis of the disease was based on post mortem examination, isolation and identification of the parasite. The concentration of the woodpigeons at gamebird feeders due to the low amount of natural food available in this season may have contributed to the outbreak. Mortality ceased after treatment with dimetridazole. Due to the high mortality detected and the importance of the woodpigeon as a prey- and game-species in continental Europe, it is suggested that this parasitic disease should be monitored in forthcoming years.

-*Ursula Höfle, C. Gortazar, J. A. Ortíz & B. Knispel*. Instituto de Investigación en Recursos Cinegéticos (IREC, CSIC-UCLM), Ciudad Real, Spain. uhofle@irec.uclm.es

**Submission to European Section.** Material suitable for publication in News from Europe includes recent wildlife disease outbreaks and new diseases in Europe, short case and meeting reports; job and scholarship announcements. Members for whom English is a second language, will be accommodated as far as possible. The deadline for the next issue is November 2003.

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

## WDA SECTION CHAIRS AND CONTACT INFORMATION

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

**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 Marc Artois, ENVL, Unite Pathologie infectieuse, BP83, 69280 Marcy l'Etoile, France, Telephone: 33-487-87-27-74, email: m.artois@fvvet-lyon.fr

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

**Wildlife Veterinarian Section.** Dave Jessup, California Department of Fish and Game, 1451 Shaffer Rd., Santa Cruz, CA 95060, USA. Telephone: 831-469-1726, email: djessup@ospr.dfg.ca.gov.

## **JOB ANNOUNCEMENTS**

### **TRAINING/EDUCATIONAL OPPORTUNITIES**

**Post-doctoral training in zoo animal pathology.** The Smithsonian National Zoological Park, Washington, DC has an anticipated 3-year traineeship in pathology available July 1, 2004. The annual stipend is approximately \$26,650 plus some benefits. Time in training may be applied to ACVP eligibility. Training will emphasize gross and microscopic diagnoses of case material originating from the zoo's collection with opportunities to conduct pathologic investigations of diseases in a wide variety of zoo animals. The zoo has a strong program in clinical and comparative medicine. Members of the veterinary staff have affiliations with the Armed Forces Institute of Pathology and maintain academic appointments at Johns Hopkins and George Washington Universities, and the Uniformed Services University of the Health Sciences where participation in comparative pathology training and formal course work are available. Applicants must have a DVM or equivalent degree from an accredited veterinary college and should send academic transcripts, 3 letters of recommendation, and a resume with a short narrative of prior pathology experience and goals by December 30, 2003 to Ms. Nancy Huddy, Department of Pathology, Smithsonian National Zoological Park, 3001 Connecticut Ave. NW, Washington, DC 20008. This program is provided through the Friends of the National Zoo (FONZ) and is subject to funds availability; it is not a federal position. Equal Opportunity Employer.

**Training Available in Fish Diagnostics, Inspections, and Laboratory Methods.** The US Fish and Wildlife Service Fish Health Centers provide laboratory and field examination services to the National Fish Hatcheries. Our main emphasis is to assist the hatcheries in producing quality fish that will contribute to the enhancement and restoration of aquatic ecosystems. At the Olympia and Idaho Fish Health Centers, the work may involve travel to field sites to perform diagnostic examinations and collect samples that are then evaluated in our laboratories. Routine testing procedures include bacteriology (biochemical, ELISA, and PCR methods), virology (cell culture, serological, and PCR methods), parasitology (microscopic and PCR methods), histology, and clinical chemistry. Training may be arranged for one day or several weeks at one or both of these laboratories depending on the interests and availability of the individual. In general, most broodstock inspections are performed from September through November, juvenile inspections are performed from January through April, and wild fish surveys are conducted from March through September. Routine diagnostic examinations are performed year round and special projects are conducted as time and necessity permit. For more information, please contact Joy Evered DVM, at the Olympia Fish Health Center; email joy\_evered@fws.gov or Marilyn Blair DVM, at the Idaho Fish Health Center; email marilyn\_j\_blair@fws.gov.

**Sr. Veterinary Student Preceptorship in Avian and Conservation Medicine.** A four to six-week preceptorship in Avian and Conservation Medicine is being offered to a senior-year veterinary student by the International Crane Foundation (ICF) in Baraboo, Wisconsin. The preceptor will train with the Veterinary Services Unit of the Conservation Services Department in all phases of the clinical practice, but have opportunities for interaction with the Crane Conservation Department to learn captive propagation, husbandry and management of this unique family of birds. The preceptor can expect to gain practical experience in crane capture, transport, anesthesia, preventive medicine, disease surveillance and the contribution of veterinary medicine to crane conservation including field project support and professional consultations. Preceptors are encouraged to complete and report on a research or laboratory project during their stay. Opportunities for visiting the University of Wisconsin School of Veterinary Medicine and the National Wildlife Health Center in Madison, WI will be made available to interested preceptors. No stipend is available for this position; however, on-site housing in the ICF Guesthouse will be provided depending on availability at the time the preceptorship is scheduled. Applicants should send a cover letter, curriculum vitae or resume and one letter of recommendation from a faculty member of their home institution to: Barry Hartup, Director of Veterinary Services, International Crane Foundation, E-11376 Shady Lane Road, Baraboo, WI 53913, email hartup@savingcranes.org. Please view our website at [www.savingcranes.org](http://www.savingcranes.org).

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

## **PUBLISHING OPPORTUNITIES**

**Veterinary Clinical Pathology** invites the submission of high quality research articles, research communications and reviews on all aspects of veterinary clinical pathology and clinicopathologic mechanisms of disease. The journal features PubMed/MEDLINE indexing, no submission fees or page charges (minimal charges for color plates), rapid turnaround time, and e-mail manuscript submission (send to: [asvcp@vetclinpathjournal.org](mailto:asvcp@vetclinpathjournal.org)). See online instructions for authors at <http://www.vetclinpathjournal.org/authorinfo.html>. You also are invited to visit the Veterinary Clinical Pathology website at <http://www.vetclinpathjournal.org> for browsable archives. For articles on aquatic, exotic, and wildlife see <http://www.vetclinpathjournal.org/archive/exotic&wildlife.html>. For a table of Contents see <http://www.vetclinpathjournal.org/currentissue.html>. To receive an e-mail table of contents for each issue, please send a request to [asvcp@vetclinpathjournal.org](mailto:asvcp@vetclinpathjournal.org).

*Mary Christopher, DVM, PhD, Dipl ACVP, Dipl ECVCP*

*Karen Young, VMD, PhD*

*Co-Editors-in-Chief*

## **MEETING ANNOUNCEMENTS**

**3<sup>rd</sup> International Wildlife Management Congress-December 1-5, 2003; Christchurch, New Zealand.** The Wildlife Society will hold its 3<sup>rd</sup> International Wildlife Management Conference in Christchurch, New Zealand in conjunction with the 16<sup>th</sup> Australasian Wildlife Management Society Conference. The Program Committee invites submission of abstracts for presentation in open sessions

in the following general areas of wildlife management: Wildlife Conservation, Wildlife Utilization, Management of Over-Abundant Wildlife, Wildlife Health and Diseases, Wildlife Toxicology, Contrasting Wildlife Management Systems, Wildlife Population Management and Dynamics, New Technology in Wildlife Management, Management of Wildlife by Indigenous People, Landscape Issues and Wildlife Management, and Wildlife-Bases Tourism. Deadline for abstract submission is February 28, 2003. Abstract guidelines may be viewed at [www.conference.canterbury.ac.nz/wildlife2003](http://www.conference.canterbury.ac.nz/wildlife2003).

**NZVA Wildlife Society Conference**, Dec 4<sup>th</sup> to 7<sup>th</sup> 2003, Stewart Island, NZ. Details to be published in the next issue of Kokako or may be obtained by contacting Katie Hicks, convenor, at [katie\\_vet@hotmail.com](mailto:katie_vet@hotmail.com)

**Biennial Conference on the Biology of Marine Mammals**, December 2003, Greensborough, N. Carolina. See Marine Mammal Society web site.

**Sixth Conference of the European section of WDA.** The European section of the Wildlife Disease Association will hold its sixth conference in Uppsala, Sweden in September 2004. The theme of the conference will be "Disease interactions between predators and prey animals". For further information please contact Dolores Gavier-Widén ([Dolores.Gavier-Widen@sva.se](mailto:Dolores.Gavier-Widen@sva.se)) or Torsten Mörner ([Torsten.Morner@sva.se](mailto:Torsten.Morner@sva.se)), Department of Wildlife, National Veterinary Institute, SE 751 89 Uppsala, Sweden, FAX: + 46 18 30 91 62.

**The 5th World Congress of Herpetology** will be held in Cape Town, South Africa, in November 2005. More information at: <http://www.adobe.com/products/acrobat/readstep2.html>. If for some reason you can't open the file then visit the Herpetological Association of Africa site ([www.wits.ac.za/haa](http://www.wits.ac.za/haa)). It has a link to where you can down-load the file and will also be updating information on the conference as it becomes available. We will also be setting up links to all of the above on the SRARNZ website soon (<http://www.vuw.ac.nz/srarnz/>).

**Note from the Editor:**

Please make note that my contact address has changed as of November 3, 2003. Send any items such as reports, meeting announcements, diagnostic riddles, position and grant announcements, or anything else deemed appropriate for the Supplement to the Journal of Wildlife Diseases, to Pauline Nol at USDS/APHIS, National Wildlife Research Center, 4101 Laporte, Fort Collins, CO 80521, e-mail: [pauline.nol@aphis.usda.gov](mailto:pauline.nol@aphis.usda.gov). Files in WordPerfect or Microsoft Word sent electronically or via disk are preferred, though submissions in any form are welcome!! The deadline for submission of articles for the next issue (January 2003, JWD Vol. 40, No. 1) is December 1, 2003.