



AMERICAN ASSOCIATION OF WILDLIFE VETERINARIANS

SPRING 2007

President's Corner

5-YEAR PLAN READY FOR REVIEW



Kirsten Gilardi

I am going to keep this short and sweet, because I'd rather you spend the precious little time you have between this very moment and your next immobilization, appointment, lecture, experiment, surgery, site visit, meeting, or *meal* to carefully review the proposed Five-Year Strategic Plan for the American Association of Wildlife Veterinarians 2007 - 2012 (see pages 5-7).

All AAWV Officers and Advisory Council members, and several of your fellow members who volunteered their service on the ad hoc Communications and Policy Strategies Committees this year, have put in their two cents on this document – and two cents is about all we should have, given that we comprise only 10% of the total membership..... We want to hear from the rest of you!

The comments and ideas shared in your responses to the 2006 AAWV Membership Survey were the driver behind the goals and plans laid out in this Draft Strategic Plan. The Five-Year Plan we approve and adopt at our October 2007 meeting will be the blueprint for AAWV actions and operations for the next several years. It is therefore really important that you share your thumbs up or your thumbed noses on each and every idea, to guarantee that this organization best represents and serves you as a wildlife veterinarian. The plan needs to reflect your wishes and needs to make broad participation possible, so that individual members can be directly involved and can directly benefit from belonging to this organization. MEMBERS' COMMENTS ON THE FINAL DRAFT OF THE STRATEGIC PLAN ARE REQUESTED and shall be carefully and thoughtfully considered in finalizing the Strategic Plan for formal adoption by the membership at our October 2007 annual business meeting. The comment period will remain open until 5 pm Friday August 17, 2007; comments may be submitted by email or regular mail to:

(Continued, page 2)

NEW GLOBAL VETERINARY ASSOCIATION ADDRESSES AQUATIC ISSUES

AquaVetMed (edited), March 2007

Emerging from the needs of a large number of veterinarians already involved in aquatic animal medicine, a new veterinary organization has been formed. Initially doing business under the name Aquatic Veterinary Association (AqVA), the need for the organization is compounded by the demands from companion aquatic animal owners, industries such as aquaculture, and governments, for veterinary assistance in aquatic animal health and welfare, public health and seafood safety.

“Formalizing organized aquatic veterinary medicine under an incorporated and registered non-profit professional association will also elevate aquatic veterinary medicine from a niche area of veterinary practice to a well recognized discipline within the profession. We hope this organization will cater to the needs of an estimated 5,000-10,000 aquatic veterinarians world-wide, and those who seek their expertise,” said interim President Dr. Peter Merrill. “We are endeavoring to cater to the professional needs of all veterinarians and veterinary surgeons throughout the world who are involved with all disciplines of veterinary medicine and all aquatic species,” added interim Secretary Dr. Chris Walster.

After receiving input from aquatic veterinarians in the UK, France, Germany, USA, Canada, Australia, New Zealand and other countries, a group of 6 interim directors stepped forward to consolidate the input into formalized preliminary bylaws and structure for the association. These and other official documents will be ratified by the founding members at the first Annual General Meeting in July 2007 (see Upcoming Meetings, page 2).

With outbreaks of disease in the fastest growing global sector of animal production and animal ownership –aquatic animals– the demand for veterinarians involved with traditional farmed finfish, crustaceans and molluscs has grown dramatically over the past decade. Three of the five recent animal disease National Emergency Declarations in the US have been for aquatic animal diseases. The problems in Canada,

(Continued, last page)

(President's Message—from page 1)

Kirsten Gilardi, DVM
President, American Association of Wildlife Veterinarians
c/o Wildlife Health Center
UC Davis School of Veterinary Medicine
One Shields Ave.
Davis, CA 95616
kvgilardi@ucdavis.edu

We're looking ahead to a busy few months between now and our Annual Business Meeting (in conjunction with the AAZV meeting) in Knoxville, TN October 20–27, 2007: finalizing our strategic plan; chairing special sessions and sponsoring a Cutting Edge speaker at the Wildlife Disease Association meeting in Estes Park, CO in August; an AAWV Members meeting to be held in conjunction with the WDA meeting; and elections for new officers for 2007–2009, to name just a few activities. Looking forward to seeing as many of you as possible in either Colorado or Tennessee.

Call for Nominations for AAWV Officers

AAWV will hold elections for all officer positions in the Summer/Fall of 2007. AAWV members are invited to make nominations of candidates for Treasurer, Secretary, Vice-president and President. Please write or e-mail Dr. Dave Jessup (djessup@ospr.dfg.ca.gov) before June 30, 2007. Nominations should be made with the knowledge and consent of the nominated. Under our constitution the current officers may run for the next highest office if they so desire.

IVIS Offers Free Veterinary Informational Resources

The International Veterinary Information Service (IVIS) is a not-for-profit organization created to provide clinically relevant, up-to-date information to veterinary practitioners, veterinary students, academic clinicians and researchers in the animal health care sector worldwide via the Internet. IVIS publications aspire to the same high quality standards as academic textbooks. Editors of e-books are carefully selected and all publications are original contributions written specifically for the IVIS website by contributing authors and reviewed by the editor(s) of the book.

The IVIS website (www.ivis.org) offers free access to fully illustrated veterinary textbooks and proceedings of veterinary meetings. Although primarily geared toward clinical domestic animal veterinary medicine, IVIS texts and proceedings include those of general or particular interest to zoological and wildlife veterinarians. To register go to www.ivis.org; comments or questions can be sent to info@ivis.org.

UPCOMING MEETINGS IN 2007

- Jun 18-22* 32nd Eastern Fish Health Workshop. Gettysburg, Pennsylvania. Includes special sessions on fish surgery and anesthesia, coral diseases, fisheries managers' perspectives, and many others. For more info, contact rcipriano@usgs.gov.
- Jul 1-5* The 21st annual meeting of the Society for Conservation Biology. Port Elizabeth, South Africa. For more information go to www.nmmu.ac.za/scb/callpapo.htm or visit the meeting website at www.conbio.org/2007. Deadline for abstracts is January 8 2007.
- Jul 14-18* 144th Annual Convention of the American Veterinary Medical Association. Washington D.C. For more info go to <http://avmaconvention.org/>
- Jul 18* The 1st Annual General Meeting of the Aquatic Veterinary Association. Washington, D. C. For more info go to www.aqvma.org
- Aug 12-14* The International Conference on Diseases in Nature Communicable to Man (INCDNCM). Madison, Wisconsin. For more info go to <http://www.union.wisc.edu/INCDNCM/index.html>
- Aug 12-17* Wildlife Disease Association Conference. Estes Park, Colorado. For more info go to www.wildlifedisease.org/meetings.htm
- Sep 22-26* 14th Annual Conference of The Wildlife Society. Tucson, Arizona. For more info see www.wildlife.org/conference/index.cfm?tname=upcomingconf
- Oct 18-24* 111th Annual Meeting of the United States Animal Health Association. Reno, Nevada. For more info see www.usaha.org/meetings/2007/index.shtml
- Oct 20-25* AAWV/AAZV Joint Conference. Knoxville, Tennessee. Deadline for abstracts is February 16th, 2007. For more info go to www.aawv.net/meetings.html.

Your 2007 Dues Support the AAWV

We are a lean and mean machine. Everything we do as an organization dedicated to wildlife veterinary medicine — production of our quarterly newsletter, representation of our profession at meetings and forums, notices to members about job opportunities, sponsorship of symposia and speakers at conferences, and more — we accomplish with approximately \$10,000 from membership dues. If you have not done so, fill out the form sent in the Fall 2006 newsletter or download one from our website, www.aawv.net/membership.html.

AAWV VOICES SUPPORT FOR FDA RULING ON MOVEMENT AND TRADE IN WILDLIFE SPECIES

In 2003, in response to an outbreak of monkeypox virus the origins of which were traced to several species of rodents imported into the US from Africa, the federal Food and Drug Administration (FDA) instituted an Interim Final Rule restricting capture, trade, movement and release of various domestic and exotic rodent species. Earlier this year, after reviewing updated scientific literature, the FDA reopened a public comment period on the Rule. Representing the AAWV, President Kirsten Gilardi sent the following comment in support of the Rule in March 2007:

To: US Dept of Health and Human Services Food and Drug Administration

From: American Association of Wildlife Veterinarians

Re. COMMENT: 21 CFR Parts 16 and 1240, Control of Communicable Diseases; Restrictions on African Rodents, Prairie Dogs, and Certain Other Animals [Docket No2003N-0400; RIN 0910-ZA21]

The American Association of Wildlife Veterinarians (AAWV) is a 220+ member organization representing veterinarians from the United States and Canada who work with free-ranging wildlife. Many of our members are responsible for protecting and promoting the health of free-ranging wildlife populations as state or provincial wildlife veterinarians, or are practitioners who work with non-traditional pet species (e.g. birds, reptiles, and rodents). As well, many of our members conduct research on important and/or emerging diseases of wildlife in North America.

On behalf of these members, we wish to go on record in strong support of the continuance of current restrictions on the import, capture, transport, sale, barter, exchange, distribution, and release of African rodents, prairie dogs, and certain other animals in order to prevent the spread of monkeypox and other infectious diseases (as codified by the CDC in 42 CFR 71.56 and by the FDA in 21 CFR 1240.63). The body of scientific knowledge gained since this Interim Final Rule was first published in 2003 serves to greatly strengthen the argument for these restrictions; to relax restrictions will increase the risk for further outbreaks of foreign diseases like monkeypox.

Furthermore, in addition to our concerns that trade in wildlife increases the risk of transmission of infectious diseases, including exotic and emerging pathogens, to domestic animals, wildlife populations, and people, the AAWV also maintains a strong position on ownership of wildlife as pets. Specifically, the AAWV is of the strong opinion that:

Veterinarians have a responsibility to consider the health of the environment as well as that of their patients and should be aware of which species are appropriate and legal as pets in their area of practice.

Native wildlife in North America is a public trust resource and should not be in private ownership, unless specifically permitted by the appropriate state and federal wildlife agencies.

It should be recognized that certain species if introduced into wildlife habitat could be invasive and detrimental to native fish and wildlife populations, and/or may serve as vectors of disease, and should not be kept as pets.

Some species of wild animals in the pet trade are taken from the wild illegally or harvested in unsustainable or inhumane ways. Owners should be educated and encouraged to avoid keeping species that are commonly subject of illegal importation and sale.

The AAWV urges the Food and Drug Administration to maintain its restrictions on the trade in African rodents, prairie dogs and certain other animals (as listed in the interim Final Rule) to protect people, pets and wildlife from foreign diseases and discourage the keeping of such species as pets.

Thank you for the opportunity to comment on this interim Final Rule.

Sincerely,

Dr. Kirsten Gilardi, DVM, Dipl. ACZM
President, American Association of Wildlife Veterinarians.

Strategic Plan Background

The American Association of Wildlife Veterinarians was formed in 1979 by a small group of veterinarians with a common interest in free-ranging wildlife. Initially most members worked for government wildlife management agencies. The field of wildlife medicine has greatly expanded since then, and now AAWV members work at academic institutions, in domestic animal private practice, and at zoos and aquaria in addition to state/provincial and federal agencies, where they engage in wildlife health research, clinical medicine, teaching, disease surveillance, regulatory work, and administration. Over its existence, the AAWV has taken a role in shaping and resolving a number of important issues including: access to pharmaceuticals for immobilization and treatment of wildlife; wildlife disease diagnosis, treatment and management, including several federal program diseases; emergence of diseases with domestic animal and human health implications; incorporation of veterinary perspectives into wildlife conservation efforts; and various wildlife welfare and humane issues.

The AAWV is comprised of 261 members (as of 2006), and achieves its mission through the following structural and programmatic elements:

- » Elected officers
- » An appointed Advisory Council
- » Members (veterinarians and non-veterinarians, including students)
- » Quarterly newsletters, put together by a volunteer Newsletter Editor
- » A website, created and maintained by a volunteer Website Editor
- » Email communications to members, sent by the Secretary
- » Annual Business Meetings
- » Organizational representation in the WDA, AAZV, AVMA and USAHA
- » Sponsorship of sessions and symposia at conferences
- » A process for recognition of student chapters of the AAWV

In 2004, a significant portion of the AAWV membership voted in support of a proposal to merge with the AAZV to form a new, larger organization -- an indication that many members were interested in seeing the AAWV fundamentally change from what it had always been. The results of the 2004 election prompted the AAWV to conduct a first-ever Membership Survey in 2006 to determine what members value in the organization, and chart a course for the future. Key findings of the survey included the fact that the primary reasons for members joining the AAWV related to their desire to stay current on wildlife health issues, connect with others in our field, and be educated. Members also felt that belonging to the organization was important to their identities as wildlife veterinarians. Members highly valued the newsletter, our

sponsorship of symposia and conference sessions, and our representation in other organizations (e.g. WDA, USAHA, and AVMA). Members felt they would be better served by more communication opportunities among members and outside the organization, and more international and student membership. They also felt that visibility of the organization could be improved. Members also felt that an increase in our influence on wildlife health and wildlife veterinary medicine policy and issues at the national level is an important avenue for growth of the organization.

Purpose of Strategic Plan

The purpose of this Five-Year Strategic Plan for the American Association of Wildlife Veterinarians is to chart a course for the organization that will allow it to exceed the expectations of members by adding significant value to individual membership and by raising the profile of organized wildlife veterinary medicine at the national level. Herein we set goals and describe the necessary steps to achieving these goals between 2007 and 2012.

Mission of the AAWV

- » To enhance the contribution of veterinary medicine to the health, conservation, management and welfare of wildlife.
- » To encourage and promote a philosophy of animal population management and preventive medicine as it relates to free-ranging species.
- » To encourage an increased emphasis in colleges of veterinary medicine relative to conservation, management and preventive medicine in free-ranging species.
- » To encourage the recognition of disease syndromes in their broadest sense as potentially influenced by habitat successions, alterations, and pollution.
- » To educate and gain rapport with governmental agencies and wildlife resource interest groups about the importance of wildlife preventive medicine and disease in relation to the wildlife resource and domestic species.
- » To educate and inform governmental agencies and wildlife resource interest groups of support and educational services which may be provided by wildlife veterinarians.
- » To promote and encourage the utilization of veterinarians in the field of wildlife resource management, conservation, health, service and research.
- » To encourage cooperative efforts among conservation and resource management professionals and wildlife veterinarians.
- » To stress the importance of the interrelationships of humans, domestic animals, and wildlife as reservoirs of disease.
- » To help establish and work for continuing education programs for wildlife veterinarians.

AAWV Strategic Plan For 2007–2012

Goal #1: Increase the level at which wildlife veterinary medicine is informing wildlife health and conservation policy, particularly at the national level.

More than ever before, the role that free-ranging wildlife plays in the occurrence and emergence of disease in domestic animal and human populations is being recognized by the public and by agencies charged with protecting the public's health and the health of the world's food supply. The threat of bioterrorism serves to draw even greater attention to the important role that government has in ensuring protection and health of humans. Actions to safeguard health must not sacrifice ecosystem integrity; the need to balance the needs of humans with robust and sustainable wildlife populations cannot be overstated. Therefore, it is imperative that the AAWV provides ever more expert wildlife veterinary medicine information, and develops, records, and distributes the opinion of the organization, so that the best possible information and most thoughtful opinion is guiding decision-makers, especially at the national level.

In the next five years, the AAWV will increase the degree to which wildlife veterinary medicine is informing health and conservation policy by:

- » Establishing a new standing Policy Working Group that will consist of Advisory Council members and officers, to assist the organization with identifying and prioritizing wildlife health and conservation policy issues of concern to the membership.
- » Developing and distributing position statements, including presidential letters, in an expeditious manner to quickly respond to issues as they arise.
- » Recording the organization's opinions, intentions, and calls to action on critical issues by adopting Resolutions that reflect the will of the membership.
- » Amending, rescinding, and retiring past position statements and resolutions to maintain relevancy and currency.
- » Making AAWV positions readily accessible to the general public through a designated section on our website.
- » Allocating up to 10% of the annual budget to support the organization's role in informing policy: funds may be used to facilitate the attendance of AAWV officers or designees at critical meetings to share AAWV expertise and convey AAWV positions, or to communicate AAWV knowledge and positions through presentations, production of outreach materials, or other modalities.
- » In cooperation with the American Association of Zoo Veterinarians, gain a seat in the AVMA House of Delegates.

Suggested steps to achieving the aforementioned activities are spelled out in the AAWV Report of the Ad Hoc Policy Committee, February 2007, appended to this Plan (Appendix 1); it will be the responsibility of the Board of Governors to determine how best to effect these goals.

Goal #2: Grow the organization

Simply put, the larger the organization, the greater its resources – human and financial – and therefore the better will be the organization's ability to realize its mission. More members increase the pool from which we can draw expertise and volunteers, and help us become better aware of common issues of concern. Since annual dues comprise our primary revenue stream, a larger membership will translate into more funds from which the organization can operate and implement new and better activities. The majority of AAWV members responding to our 2006 survey cited increasing membership as a moderate to high priority for growth of the organization's capacity. However, growth should not come at the expense of the unquantifiable yet tangible benefit of membership in the AAWV: a sense of community and camaraderie.

In the next five years, the AAWV will grow by:

- » Encouraging timely and full renewal of membership every year.
- » Implementing more effective processes for gaining new members through production of a membership brochure and broad distribution of this brochure at conferences.
- » Promoting international membership in the AAWV by inviting members of overseas wildlife veterinary organizations, particularly in Canada and Mexico, to join the AAWV; this shall include the consideration of incentives for international membership.
- » Growing non-veterinarian membership in the AAWV by inviting members of such closely-allied organizations as the Wildlife Disease Association, The Wildlife Society, the Society for Conservation Biology, etc., to join the AAWV.
- » Sending an introduction to the AAWV to veterinary schools each Fall for distribution by the schools' administrations, describing the organization and its benefits to members, and encouraging students with an interest in free-ranging wildlife to take advantage of affordable student dues rates.
- » Supporting the formation and recognition of student chapters of the AAWV.
- » Promoting concurrent membership in the AVMA among AAWV members to facilitate meeting eligibility requirements for a seat (with the AAZV) in the AVMA House of Delegates.

While it shall be the responsibility of the Board of Governors to determine how best to effect these goals, it is important that the lion's share of this work not fall on the shoulders of the officers (in particular the Secretary), but rather be taken on by volunteers, with full support and oversight of the Board of Governors.

(Continued, Page 6)

Goal #3: Create a more powerful organization by connecting members through new and improved avenues of communication.

The premise that the whole is (can be) greater than the sum of its parts underlies the strength and success of any member-based organization. Currently, the vast majority of AAWV members feel only somewhat connected with their fellow members, and they share a general sense that the value of the organization for them as members would improve if they felt a greater sense of community. Furthermore, all activities of the organization would be better served by a more close-knit membership that is current on issues facing the organization and community, and is better aware of needs for member participation and input. Increasing communication will enhance contribution to the organization, making it more effective and powerful.

In the next five years, the AAWV will enhance its connectivity by:

- » Establishing an electronic members' database that provides contact information and member profiles, so that members can connect with each other over common locales, areas of expertise, objectives or issues.
- » Creating an on-line members-only forum (electronic "bulletin board") that would facilitate the kind of information-gathering and problem-solving activity that benefits all members.
- » Transitioning the membership towards all-electronic communications over time by distributing the quarterly newsletter electronically as well as via regular mail. This will also result in significant cost-savings for the organization over time as more and more members opt for electronically mailed newsletters.
- » Promoting a sense of community by increasing member contributions to the newsletter, including featuring member profiles in the newsletter and on the website.

Suggested steps to achieving the aforementioned activities are spelled out in the AAWV Ad Hoc Policy Committee on Communications Strategies, March 2007, appended to this Plan (Appendix 2); it will be the responsibility of the Board of Governors to determine how best to effect these goals, including solicitation of volunteers and/or establishment of ad hoc or new standing committees.

Goal #4: Promote the AAWV as the leading professional organization for wildlife veterinary medicine in the United States and abroad.

Achieving Goals 1-3 is predicated on the AAWV's current reputation as the only professional organization in the United States focused on wildlife veterinary medicine. If the AAWV succeeds in positioning, communicating and growing the organization in the ways described above, then it will very quickly be recognized as the leading, premiere association of wildlife veterinary medical professionals. Our veterinary colleagues and the general public will expect the AAWV to be visible, dynamic, and active. In order to further brand the AAWV and cement its reputation, it will be important to engage in more, and new, public outreach methods and activities.

In the next five years, the AAWV's visibility will increase by:

- » Maintaining its website as current, dynamic, and as a go-to site for information on issues of importance and concern in wildlife veterinary medicine.
- » Ensuring a presence at professional meetings (e.g. AVMA, Wildlife Disease Association, American Association of Zoo Veterinarians, US Animal Health Association, Association of Fish and Wildlife Agencies, North American Veterinary Conference, Student AVMA, Society for Conservation Biology, and The Wildlife Society) through participation of officers and members, and through set up of the AAWV tabletop display.
- » Broad distribution of AAWV brochures and logo-branded items (e.g. shirts, hats, etc).
- » Writing and distributing media advisories about AAWV accomplishments to key publications, including the Journal of the American Veterinary Medical Association, state VMA journals as appropriate, and/or to hometown newspapers of AAWV members for whom special accolades are appropriate (e.g. awards, appointments to positions, etc).

Again, while it shall be the responsibility of the Board of Governors to determine how best to realize these objectives, success will depend upon the volunteer efforts of members.

Measuring Our Success

In the next five years, by 2012, we anticipate:

- » Producing 15 new presidential letters, position statements and/or resolutions on critical issues of concern for wildlife veterinary medicine that contribute to decision-making regarding the health of wildlife, humans and ecosystems.
- » Decidedly improving members' sense of community in the organization as evidenced by at least 50% of members surveyed citing satisfaction with the degree to which they feel connected with one another and with the AAWV.
- » Increasing our membership by 10% over the next five years, with veterinary students and international colleagues comprising at least 10% of our total membership.
- » Significantly raising the profile of the organization, as evidenced by a doubling in the annual hits on the AAWV website, displaying at a minimum of 4 conferences each year, and appearing in the print or broadcast media at least 4 times per year.

PUBLICATIONS OF INTEREST

[Editor's note: articles and abstracts appearing in this section of the newsletter are synopses of journal publications considered to be of special interest to AAWV members. All synopses have been approved by the authors and publishers for use in the AAWV newsletter. For full text, please refer to the cited source material.]

Movements of Birds and Avian Influenza from Asia into Alaska

Winker, K., et al.
Emerging Infectious Diseases. 2007.
13:4, pp 547-552.

Asian-origin avian influenza (AI) viruses are spread in part by migratory birds. In Alaska, diverse avian hosts from Asia and the Americas overlap in a region of intercontinental avifaunal mixing. This region is hypothesized to be a zone of Asia-to-America virus transfer because birds there can mingle in waters contaminated by wild-bird-origin AI viruses. Our 7 years of AI virus surveillance among waterfowl and shorebirds in this region (1998–2004; 8,254 samples) showed remarkably low infection rates (0.06%). Our findings suggest an Arctic effect on viral ecology, caused perhaps by low ecosystem productivity and low host densities relative to available water. Combined with a synthesis of avian diversity and abundance, intercontinental host movements, and genetic analyses, our results suggest that the risk and probably the frequency of intercontinental virus transfer in this region are relatively low.

Harvesting can Increase Severity of Wildlife Disease Epidemics

Choisy, M. and P. Rohani.
Proc Biol Sci. 2006.
273:1597, pp 2025-34.

Theoretical studies of wildlife population dynamics have proved insightful for sustainable management, where the principal aim is to maximize short-term yield, without risking population extinction. Surprisingly, infectious diseases have not been accounted for in harvest models, which is a major oversight because the consequences of parasites for host population dynamics are well-established. Here, we present a simple general model for a host species subject to density dependent reproduction and seasonal demography. We assume this host species is subject to infection by a strongly immunizing, directly transmitted pathogen. In this context, we show that the interaction between density dependent effects and harvesting can substantially increase both disease prevalence and the absolute number of infectious individuals. This effect clearly increases the risk of cross-species disease transmission into domestic and livestock populations. In addition, if the disease is associated with a risk of mortality, then the synergistic interaction between hunting and disease-induced death can increase the probability of host population extinction.

AVMA Animal Welfare Committee Changing of the Guard

Dr. Tim Reichard, DVM, completed a six-year stint as the AAWV and AAZV's joint representative on the AVMA Animal Welfare Committee. We are indebted to you Tim for your time and energy in serving on this important committee on behalf of the AAWV: a huge thanks from all of us.

To fill Tim's seat, Dr. Dave Miller, DVM, Dipl. ACZM, Colorado State University, graciously allowed us to nominate him as our new representative on the Animal Welfare Committee: thank you Dave! We look forward to contributing to AVMA discussions and decisions regarding the welfare of captive and free-ranging non-domestic animals through Dave's efforts.

Upcoming AAWV Meetings

Don't forget! The AAWV is having its annual conference in conjunction with the AAZV conference in Knoxville, Tennessee, October 2007. We will also be having a members meeting and sponsoring special sessions on New Field Anesthesia Techniques and Wildlife Disease Informatics at the WDA conference in August, at Estes Park, CO. Don't miss these great opportunities to share your work and find out what your colleagues are up to!

Another Down Under Icon Under Attack

ProMed and other on-line sources (edited), April 2007

If the lethal Tasmanian Devil Facial Tumor epizootic isn't a big enough blow for Australia's unique and spectacular wildlife, now Australia's most iconic creature, the duck-billed platypus, is facing its own demon. Generally a very robust and healthy creature, in its natural environment the platypus has virtually no predators and the greatest threat to its health is usually tick infestations. But in Tasmania, one of its principal habitats due to the abundance of waterways found there, the platypus is under threat from a fungal disease. Approximately 35% of the population is believed to have been wiped out in the north of the island state, and there are reports that the disease has now spread to southern areas.

The ulcerative mycosis, caused by *Mucor amphibiorum*, presents as cutaneous ulcers generally on the platypus's tail or hips, growing up to 10 cm in diameter. Death is usually caused by secondary bacterial infections or from depletion of body fat, most of which is stored in the tail. The wounds also prevent the platypus from keeping warm in cold water.

It is not known how the disease is transmitted, but has been proposed to occur via cutaneous and/or respiratory routes. Hypotheses include entry via wounds from fighting, contamination of the platypus's mud burrows with fungal spores, and entry through superficial skin wounds such as those caused by tick attachment. Tick infestation is common in the platypus; in some regions, platypuses can be found with well over a hundred ticks attached, usually around the hips and the base of the tail.

Mucor amphibiorum has long been identified in northern and eastern Australia (Queensland, northern New South Wales and parts of the Northern Territory). In these areas it affects native amphibians, particularly Queensland's green tree frogs, and has also been found in cane toads. However, no platypuses in these areas are affected by the fungus. (Interestingly, unlike many of their mainland counterparts Tasmanian frogs seem to be resistant to *M. amphibiorum*.) It is unclear why Tasmanian platypuses get the disease while those on the mainland don't, but it is suspected that the fungus was just recently introduced into Tasmania where the immunologically naïve platypus populations have not developed any resistance. "Platypuses on the mainland have evolved with the fungus, and so they're immune," said Niall Stewart, a research fellow at the University of Tasmania. "But the poor platypuses here haven't seen it before." Stewart believes that infected frogs may have carried the fungus into Tasmania in bunches of Queensland bananas, and that the fungus may subsequently be spread into new areas of Tasmania in mud on hikers' boots or on 4x4 vehicles. Stewart, who has carried out extensive field work, believes that roughly 35% are falling victim to the disease in the affected areas. Surveys at various sites in Tasmania have found a prevalence of 33-66%. Mortality due to mucormycosis is also thought to be high in populations at infected sites; however, uncertainty exists, as dead platypus are seldom recovered in a condition that allows the cause of death to be determined with confidence.

Potential risk factors for disease that have been considered include water quality and agent pathogenicity, though similar water

quality levels found at 2 affected sites and 3 unaffected study sites in a 1994 study suggest that water quality is not a significant risk factor. Conversely, studies conducted by Niall Stewart found that Tasmanian platypus-derived *M. amphibiorum* isolates were more pathogenic to cane toads than mainland frog-derived isolates, suggesting Tasmanian isolates may represent a significant risk factor through increased pathogenicity, perhaps by mutation from a less pathogenic mainland strain.

Where'd the Bees Go? Colony Collapsing Disorder in the United States

From ProMED (edited), Apr 2007

A protozoan that caused widespread loss of bee colonies in Europe and Asia may be playing a crucial role in the phenomenon known as Colony Collapse Disorder that is wiping out bees across the United States.

Historically, bee losses are not unusual. Weather, pesticide exposures, and infestations by pests such as the Varroa mite have wiped out significant numbers of colonies in the past, particularly in the 1960s and 1970s. But the current loss appears unprecedented; beekeepers in 28 states, Canada and Britain have reported large losses. In total, about a quarter of the estimated 2.4 million commercial colonies across the United States have been lost since autumn 2006, according to Jerry Hayes of the Florida Department of Agriculture and Consumer Services in Gainesville.

Researchers have been struggling for months to explain the disorder, and new findings provide the first solid evidence pointing to a potential cause. Work from several institutions has found the protozoan *Nosema ceranae* in dead bees from affected hives from around the country (along with two species of fungi and half a dozen viruses). In some samples, about 25 percent of the RNA recovered was from *Nosema ceranae*, leading researchers to speculate that that pathogen played a significant role in the death of those bees.

We still haven't ruled out other factors, such as pesticides or inadequate food resources following a drought," said entomologist Diana Cox-Foster of Pennsylvania State University. "There are lots of stresses that these bees are experiencing, and it may be a combination of factors that is responsible. *Nosema ceranae* is "one of many pathogens" in the bees, she said. "By itself, it is probably not the culprit ... but it may be one of the key players."

Among the viruses, members of the recently identified genus Iflavirus were found. It is not known whether these small, RNA-containing viruses, which infect the Varroa mite, are pathogenic to bees.

If *N. ceranae* does play a role in Colony Collapse Disorder, there may be some hope for beekeepers. A closely related apian parasite called *Nosema apis* can be controlled by the chemical Fumagillin, and there is some evidence that it will work on *N. ceranae* as well.

Besides producing honey, commercial beehives are used to pollinate one third of the country's agricultural crops, including apples, peaches, pears, nectarines, cherries, strawberries and pumpkins. 90 percent of California's almond crop is dependent on bees, and a loss of commercial hives could be devastating.

Wildlife Health Staff Specialist

Nevada Department of Wildlife

The successful incumbent will be tasked with developing and implementing surveillance programs for a wide range of diseases, including avian influenza, West Nile (emphasis on impacts to sage grouse), transmission of disease between livestock and big game, and potential nutritional deficiencies that affect bighorn sheep, mule deer, and pronghorn. S/he will have a veterinary degree, and preference will be shown to candidates with some experience in wildlife as well as large animal (livestock) veterinary medicine. Position is open until filled. For more info go to <http://nvapps.state.nv.us/NEATS/Recruiting/ViewAnnouncement.aep?Id=2898>

Professor, Exotic Pets and Zoological Medicine

Oklahoma State University

Duties include clinical service and teaching including oversight of the Veterinary Teaching Hospital Zoo, Exotic and Wildlife service, instruction in the didactic portion of the pre-clinical veterinary medical curriculum, and research. Position will remain open until filled. For more info contact Dr. Charles MacAllister, Department of Veterinary Clinical Sciences, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK 74078-2042, (405) 744-8472, FAX (405) 744-6265, email: cmacall@okstate.edu.

Post-Doctoral Fellowship/Research Associate

University of Calgary Faculty of Veterinary Medicine

The goal of this research project is to develop, validate, and apply innovative disease surveillance techniques to investigate the role of infectious and parasitic diseases in the population dynamics of caribou as a component of a multi-disciplinary project (see <http://www.rangifer.net/carma/>). The successful applicant will be in charge of: 1) evaluating the use of dried-blood-on-filter paper for disease surveillance in caribou; 2) working closely with hunters from remote Arctic communities to establish evaluate practical community-based sampling techniques for disease surveillance of caribou; 3) determining disease and parasite exposure/occurrence in select caribou herds

across Canada; and 4) determining risk factors for disease exposure and occurrence in the reference herds. She/he will also be expected to participate in teaching and mentorship of graduate and undergraduate students. The position will begin as soon as a suitable applicant is identified. For more info contact Dr. Susan Kutz, Faculty of Veterinary Medicine at skutz@ucalgary.ca, or call 1 403 210-3824.

Continuing Education

Care, Handling and Use of Aquatic Animals

Atlantic Veterinary College, Prince Edward Island, Canada
August 20–24, 2007

The course will be delivered with a combination of on-line, classroom and laboratory teaching. Topics include: regulation and ethics of experimental animal use, recognition of pain, distress and stress in fish, aquatic animal biology and husbandry, anesthesia and euthanasia, techniques in aquatic animal research, water quality and laboratory holding systems, health and disease of aquatic animals, and post mortem techniques. For details go to www.upei.ca/cai/fishcarecourse.htm

Shrimp Pathology Short Course

The University of Arizona
July 9–20, 2007

Lectures will cover: anatomy and histology, a wide variety of bacterial, viral, fungal, parasitic and other infectious diseases, nutritional diseases, toxic and environmental disease syndromes, diseases of unknown or uncertain etiologies, methods of disease prevention and/or treatment, and new diagnostic procedures. Lab sessions will cover: fixation procedures and histological techniques, normal and pathological histology and post-mortem change of principal organs and tissues, wet mount diagnostic procedures, molecular diagnostics, serological techniques, and bacteriological diagnostics. For more info contact Wanda McCormack at wcm@email.arizona.edu or FAX 520-621-4899.

For job listings in wildlife veterinary medicine visit www.AAWV.net/jobs.html

AqVA—from page 1)

the UK, Europe, and Australasia are similar, according to AqVA officers. National and international responses from governments and industries have opened up huge demands for aquatic veterinarians. National plans and programs, such as the US and Canadian government’s National Aquatic Animal Health Plans and Programs, Australia’s AQUAPLAN and AQUAVETPLAN, and European Union directives and regulations that are being developed and implemented, place a huge demand on an aquatic veterinary workforce. The World Animal Health Organization’s (OIE) codified standards and biosecurity initiatives for protecting aquatic animal industries require an organized aquatic veterinary approach.

“We are also seeing a similar demand for aquatic veterinarians in the private practice sector that deals with pet or ornamental aquatic animals owned by clients” said Dr. Julius Tepper, another of the organization’s interim Directors. A similar situation is being felt in the [public] aquarium industry, with marine mammal workers, and in wild managed fisheries and hatcheries, said interim Director Dr. Tim Miller-Morgan.

“The solution to demand for aquatic veterinarians in all spheres of practice and with all aquatic animals is in organized veterinary medicine, which requires the formation of an organization that represents aquatic veterinarians” said interim President Merrill. “If we structure this organization correctly, it will substantially contribute to all of veterinary medicine through strong liaisons with existing large and small veterinary organizations, as well as industries, governments and the public that have a need for our members’ expertise.”

The Mission of the Association is: “To serve the discipline of aquatic veterinary medicine in enhancing and advancing the science and art of aquatic veterinary medicine, aquatic animal health and welfare, public health, and seafood safety in support of the veterinary profession, aquatic animal industries and other stakeholders.” For more information AqVA, to provide input into its development, or to become a founding member, visit the organization’s website at www.AquaVets.org.

AAWV NEWSLETTER
IS PUBLISHED BY THE
AMERICAN ASSOCIATION OF
WILDLIFE VETERINARIANS

Founded in 1979, the AAWV is a national, non-profit organization of veterinarians interested in all aspects of wildlife health.

PRESIDENT

Kirsten Gilardi
kvgilardi@ucdavis.edu

VICE-PRESIDENT

Jonathan Sleeman
jonathan.sleeman@dgif.virginia.gov

SECRETARY

Mark Cunningham
mark.cunningham@fwc.state.fl.us

TREASURER

Colin Gillin
colin.m.gillin@state.or.us

EDITOR

Jordan Mencher
jmencher@u.washington.edu

LAYOUT & DESIGN

Nancy Ottum
nancyottum@mac.com

2	Upcoming Meetings
3	Trade in Wildlife Species Support
5-6	5-yr Strategic Plan
8	Wildlife Disease News
9	Opportunities for Jobs, Funding, Education

ADDRESS SERVICE REQUESTED
SPRING 2007
DAVIS, CA 95616 USA
University of California
One Shields Ave.
c/o Wildlife Health Center (ID #020C)

