



AMERICAN ASSOCIATION OF WILDLIFE VETERINARIANS

SPRING 2004

Approximately 100 of our 2003 AAWV members have not paid their dues for 2004. If you are one of these, please renew.

MESSAGE FROM PRESIDENT JESSUP

“Be careful what you wish for
—you may get it.”

The humor, truth and irony behind this saying becomes more and more clear to me every day. It's found in various forms in Greek mythology (Midas), fables and fairy tales, and many great modern writings. I have seen it at work in various forms in the wildlife veterinary profession and I would like to discuss this a bit and tell a few stories.

In the late 1970s a dominant viewpoint within the wildlife management profession was that “Disease is just another form of compensatory loss and not of significance to wildlife populations”. That viewpoint is still alive, but so many examples of diseases impacting wildlife populations in a shrinking world and totally altering basic management programs like hunting and fishing can be found today that only the most unobservant or those lost in the ivory tower of theory still cling to it. But, I will have to admit that as a young wildlife veterinarian this attitude so stuck in my craw that I frequently found myself wishing for a really nasty little wildlife disease outbreak to come along and show the doubters that wildlife disease (and veterinarians) do matter.

Continued page 2

MERGER PERSPECTIVES

The winter 2004 AAWV newsletter contained a 6-page report from the Ad Hoc Strategic Affiliations Committee that reviewed AAWV objectives, described the current status of AAWV affiliations, and identified seven possible future strategic affiliation options. The committee recommended the AAWV membership consider options 1 (no significant change) and 6 (merge with AAZV) and have the opportunity to vote by ballot on the preferred course. At the request of the AAWV president, the following position statements have been written.

In Support of Option 1

Remain an Independent Organization

Walt Cook, Thierry Work, and Todd Cornish

For the past 3 years, meetings of the AAWV have been dominated by discussions concerning a potential merger with the American Association of Zoo Veterinarians (AAZV), and what is the definition of a wildlife veterinarian. The AAWV seems to have lost a sense of direction and purpose in these discussions, and herein we propose a return to the original objectives of the AAWV, with continuing efforts directed at growth, stabilization, and an increased voice for the association.

Critical objectives of the AAWV focus on wildlife as populations and include attention to assessing impacts of wildlife health on ecosystems and conservation. This contrasts with general philosophies and practices of the AAZV where the emphasis is on captive propagation and individual animal health. Clearly, there is no distinct line in the sand. Members of AAZV are doing excellent work on free-ranging

Continued page 4

In Support of Option 6

Merge to Form American Association of Zoo and Wildlife Veterinarians

Kirsten Gilardi, Ben Gonzales, Sonia Hernandez-Divers, Terry Kreeger, Julie Langenberg and Michael Ziccardi

A proposed merger of the AAWV and the AAZV into a combined new organization called the American Association of Zoo and Wildlife Veterinarians has proven to be challenging for many AAWV members to envision and embrace, even for those who have generally favored the idea of a merger from the outset. Much of the debate then and now has focused on the differences between the mission of the wildlife veterinarian versus that of the zoological veterinarian. While acknowledging that some differences exist, let us consider the many interests that wildlife veterinarians share with zoo veterinarians.

Much of our knowledge concerning the pathophysiology and transmission of diseases such as pasteurellosis in bighorn sheep, brucellosis in elk, and chronic wasting disease in cervids originated

Continued page 5

CONTENTS

- 2 Upcoming Meetings
- 5 A Closer Look at 5 Veterinarians and Their Careers
- 8 Jobs, Internships and Advanced Training Opportunities
- 9 National Wildlife Disease Surveillance and Emergency Response System
- 10 Wildlife Disease News

I first got my wish when pneumonia swept through a herd of California bighorn sheep at the Lava Beds National Monument in 1979 following contact with domestic sheep around a water-hole. The entire herd, the pride of Northern California and 1 state and 3 federal agencies was lost. I must digress by observing that it is depressing that 25 years and about a dozen bighorn dieoffs resulting from contact with sheep or goats later, some woolgrower advocates still want to argue against keeping bighorn and domestic sheep and goats separate. Pastuerella pneumonias along with scabies, sore mouth and viral pneumonias in bighorn lambs kept me busy and reasonably appreciated for several years.

About that same time I became more and more involved in "footrot" dieoffs in mule and black-tailed deer. We eventually connected some of these to the bluetongue and epizootic hemorrhagic disease orbiviruses (but missed adenovirus). I felt proud of the increasing recognition for the work we were doing and not just a little cocky at showing up the old biologists. These same diseases had a decade earlier helped build the Southeastern Cooperative Wildlife Disease Study (SCWDS) and I'd be willing to bet Frank Hayes had secretly shared my dark wishes. Maybe it was about then, about the time I necropsied my hundredth dead deer or my twentieth or thirtieth dead bighorn that I began to wonder whether wishing for a nasty little wildlife disease outbreak was such a good idea. Vic Nettles has a wonderful story that only a southerner can do justice to about Frank comparing SCWDS to Dr. Frankenstein's creation, a classic example of "Be careful what you wish for..."

Today, looking at the CWD situation I have to wonder whether Mike Miller might have once shared my dark wish, and in looking at TB in Michigan perhaps Steve Schmitt too. Could Julie Langenburg's dreams have had more than cranes in them?

Did Walt Cook make a wish on a dark star last year?



If any of them did share my dark wish, I sure bet they regret it now! And how about all those agriculture veterinarians and deer and elk farmers who lobbied

so hard for "captive wildlife" status for an industry that is now costing millions of dollars for indemnification? Be careful what you wish for, you may get it.

All kidding aside, if you are in a position of authority and responsibility as a wildlife veterinarian when your dark wish (or fate, bad luck or whatever) does come through you can't duck it, it's your hour to sink or swim. As we see what seems to be an onslaught of significant wildlife health crises (West Nile, avian influenza, SARS, Ebola, as well as the above examples and others) we should recognize that whatever caused it, we are in a position to do something about it, and it could increase recognition and appreciation for what we do. Many of us may spend the rest of our professional lives dealing with emerging wildlife diseases as well as trying to figure out how to prevent these modern plagues. This same cautionary tale applies to serious animal welfare issues involving wildlife as well as the recognized need to provide wildlife with clinical treatment and care. In the end we may also find ourselves caught up in trying to see that there is equity in the

way wildlife and wildlife veterinarians are treated (If CWD is so scary, why is everyone so casual about scrapie, the disease it most resembles? or, If publicly funded schools of veterinary medicine can fund residencies for pet practice and exotic animals, why not for the wildlife that belong to the taxpayers?). And so you may find yourself working for changes and improvements in political and funding priorities and social policies that reflect conservation values. When you find yourself in that situation you will have peeled away some of the layers of your "day job" to expose some of your core values, it's in your blood, there is no going back, you are a wildlife veterinarian and you will probably die one.

I will leave this rambling on that bright note and update you on a few AAWV business items. AAWV will be sponsoring two sessions of speakers at the upcoming joint meetings with AAZV and WDA in late August (see AAWV, WDA and AAZV websites). Our sessions are on "Wildlife/Livestock Disease Interface" which is being chaired by Jack Mortensen and "In-situ Conservation: What Works and What Doesn't" jointly chaired by Richard and Michael Kock.

Continued next page

UPCOMING MEETINGS

Apr 29–May 1 The Eastern Cougar Conference, Morgantown, West Virginia. This meeting is jointly sponsored by the Eastern Cougar Foundation and the American Ecological Research Institute. For more information please contact Helen McGinnis (helenmcginnis@meer.net) or Jay Tischendorf, DVM (Jay_Tischendorf@Merck.com).

Jul 24–28 American Veterinary Medical Association's 141st Annual Meeting, Philadelphia, Pennsylvania: www.avma.org/convention/default.asp.

Jul 30–Aug 2 Annual Meeting of the Society for Conservation Biology Center for Environmental Research and Conservation, Columbia University, New York, New York: <http://conbio.net>.

Aug 29–Sep 2 Joint meeting of the American Association of Wildlife Veterinarians, the American Association of Zoo Veterinarians, and the Wildlife Disease Association, San Diego, California: <http://137.227.245.195/>

Sep 18–22 The Wildlife Society's 11th Annual Conference, Calgary, Alberta, Canada: www.wildlife.org.

Dr. Rick Ostfeld rather than Dr. Eric Chivian will be the AAWV "Cutting Edge" speaker. A disease ecologist by training, Rick is well known for his work on the ecology of Lyme disease in the northeastern United States and is now working on carnivore disease ecology issues.

We are working with AAZV, IAAAM and other organizations on a review of euthanasia in all species of captive and free-living wildlife. Dave Miller is heading up this effort which should result in a comprehensive document that will be provided to AVMA to help inform their policy on euthanasia and in a publication in *Journal of Zoo and Wildlife Medicine*. I have asked Mark Drew to represent AAWV interests in this project.

In this issue you will find several short biographical articles on wildlife veterinarians across the USA. They are all working on different species and issues, in different ecosystems and for different employers. Their lives and work show both our diversity and our strength; the diversity of backgrounds and challenges, and the strength and character of our colleagues. We have good reason to have pride in who we are and what we do.

I would also encourage you to read the brief article by Tom Deliberto in this issue on a USDA initiative in the wildlife health arena. There is the eventual potential for as many as 100 new jobs and wouldn't it be great if USDA could be convinced that these jobs should be reclassified such that they are more appropriate for wildlife veterinarians? Write your Congress person and call your USDA Area Veterinarian in Charge (AVIC). Please point out that wildlife veterinarians (as opposed to technicians), and/or other wildlife health professionals with at least MS or PhD level education, could be

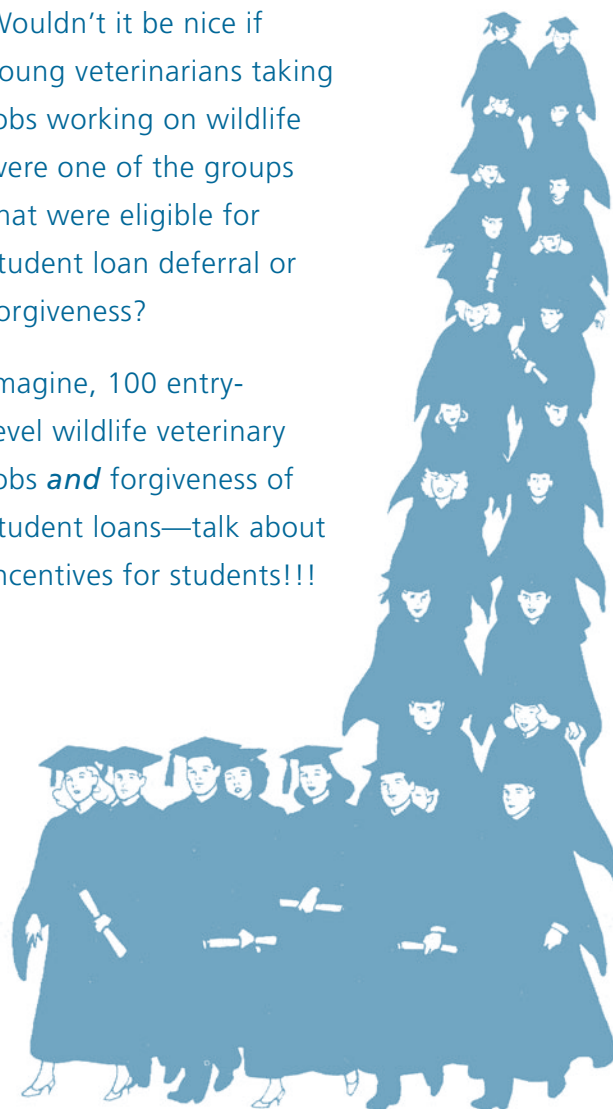
much more helpful to States in responding to the challenges of CWD, TB, AI and brucellosis, as well as bioterrorism threats and foreign animal diseases. AAWV's leadership will be exploring what we can do to encourage movement in this direction.

The details of another piece of federal legislation, the National Veterinary Service Act, are being developed as it wends its way toward the appropriations process. This act would allow student loan forgiveness or deferral for veterinarians practicing in underserved and underpaid areas. Wouldn't it be nice if young veterinarians taking jobs working on wildlife (which do belong to the people after all) were one of the groups that were eligible for student loan deferral or forgiveness? Imagine, 100 entry-level wildlife veterinary jobs and forgiveness of student loans, talk about incentives for students!!! Talk about a way to grow and develop wildlife veterinary medicine!!!

I hope you have all read your January AAWV newsletter by now and that you are thinking about and discussing the Strategic Affiliations report. I hope you will also read the two articles in this newsletter, each of which support one of the two future affiliation options identified in that report. This summer AAWV members will have the opportunity to determine our future affiliations. This will be the most important decision our organization has made in its 25-year history. Please be informed, thoughtful and please, please participate. And to those of you who have strong feelings about AAWV's future and are sure what the right path will be, I will close by saying, "Be careful what you wish for, you may get it." And if or when you do, you will be expected to step forward, take responsibility and sink or swim.

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Imagine, 100 entry-level wildlife veterinary jobs *and* forgiveness of student loans—talk about incentives for students!!!



wildlife conservation issues, and members of AAWV are likewise doing exemplary work on captive animals. This common ground would seem to argue for a merger between AAZV and AAWV, the rationale being that a larger combined organization (AAWV/AAZV) would allow for a stronger voice in wildlife health issues and increased chances for a seat in the AVMA House of Delegates.

We would argue that the AAWV already has the opportunity to have a strong voice on wildlife health issues, and that we are already part of a large organization, the Wildlife Disease Association (WDA), whose focus is the impact of wildlife health on wildlife populations and conservation. The AAWV currently is the only special interest group in the WDA to have its own section. Other professions within the WDA (e.g., parasitologists, pathologists, epidemiologists, etc.) may have the opportunity to form official sections, but have not pursued this option. Given our unique status as a section of the WDA, we should be focusing on issues that are of interest to the WDA, an organization composed of biologists, veterinarians, wildlife managers, and researchers who have an interest in elucidating ecology of wildlife diseases and assisting managers to address wildlife health issues. The AAWV is particularly concerned with disease prevention and management as a way to increase population health, which nicely complements the objectives of the WDA. Given the AAZV's disproportionate size in comparison to AAWV, and the difference in focus between the two organizations, a merger may dilute the voice of those actively engaged in wildlife population health and may jeopardize the existing mutually beneficial relationship between the AAWV and the WDA.

What the AAWV needs is a renewed focus on our objectives and on matters of interest to the WDA, wildlife managers, and the wildlife conservation community. A precedent exists for this. For example, AAWV members have played critical roles on such issues as feral cats and their impact on wildlife and livestock wildlife disease interactions (e.g. brucellosis/tuberculosis). Likewise, AAWV members are respected voices in national and international forums such as the US Animal Health Association (USAHA), The Wildlife Society (TWS), and the International Association of Fish and Wildlife Agencies (IAFWA). We now need to build upon this record and see how we can leverage our expertise to assist WDA and other conservation agencies to address existing and emerging wildlife health issues. Pro-active steps we can take to better define our purpose include:

1. First, do no harm: Whatever course of AAWV takes, we must ensure that our constructive and collaborative relations with WDA remain intact. Because we are so closely allied with WDA (in terms of mission and organization) we should strive to make any activities and decisions mutually supportive.
2. Solidify the foundation. AAWV needs to become more stable, and one way to do this is to formalize our processes. Some ideas would include:
 - a. Replacing the Advisory Board with a Council that go through the nominations and election process and serve staggered 2 or 3-year terms so that there is continuity between council members across Presidential terms. This would provide a larger pool of folks educated and engaged in the workings of the association.
 - b. Form official committees (e.g., Nominations, Membership and Promotions, Awards, Meetings and Speakers, Student Affairs, Budget and Finances, Newsletter and Publications,

Resolutions and Position Statements, and Education) with terms that provide continuity between Presidential terms, and with replacement members chosen by the President in office. This would be a great way to officially engage at least 30 to 40 + people, and to get new members and students directly involved.

- c. Find a permanent or semi-permanent administrative home for the AAWV. An executive director would certainly help, but would probably necessitate higher membership fees. We also need a home for the newsletter and web page, treasury, membership records, constitution, correspondence and historical documents. Initiatives a and b above would begin the process to identify resources required for solidifying the home of AAWV.
3. Sell the mission. AAWV needs to have more outreach to wildlife conservation agencies and animal health organizations regarding the value that wildlife veterinarians bring to the table (and to solving their problems). Several venues exist to do this, and with a bit of creative thinking, the membership can think of ways to make ourselves heard in the conservation community. Continuing AAWV's independent voice with USAHA is a fine example. Regular representation at important meetings such as IAFWA, TWS, AVMA, AAZV, and International Association of Aquatic Animal medicine (IAAM) also should be considered. (e.g., booths with specific examples of how wildlife veterinary medicine has resolved or addressed particular health or conservation issues). AAWV also should strive to influence decisions where issues related to wildlife health are made by influential organizations such as AVMA, AAZV, or Humane Society of the United States (HSUS). We also need to consider expanding our vision beyond classical terrestrial ecosystems and consider that there are conservation and wildlife health needs for marine ecosystems. Diversification can only help us in attracting new members and broadening our perspectives.
4. Plan for the future. Members of the AAWV need to be engaged in recruiting, developing, and training new wildlife veterinarians because they are the future of the profession and the organization. We need to attract veterinary students and graduates to the association and involve them in ways that encourage lifelong and active participation. We might set up a mentoring or speaker program making use of AAWV members around the country that could devote time to speaking at their nearest veterinary or wildlife biology/conservation school, to discuss AAWV, wildlife veterinarians, and careers. The AAWV also needs to play a pivotal role in influencing the curricula of academic institutions interested in developing wildlife health education programs. Assisting such institutions with development of training programs could be the first and primary objective of a newly formed Education Committee.

The AAWV, in partnership with the WDA, is well positioned to promote many wildlife health issues. The AAWV also must work together with other organizations, such as the AAZV, to address issues of mutual concerns. However, we must not lose sight of our core mission (wildlife health and conservation) and our clients (wildlife resource and conservation organizations).

from the study of these diseases in captive wildlife. Many protocols for the use of the ultrapotent opioids and other chemical restraint agents were initially developed in the controlled environment of zoos and captive wildlife facilities and then tested in the field. Ultrasound techniques used for pregnancy and body condition determination in free-ranging ungulates were first adapted to wildlife in captive facilities. Captive breeding programs have in some cases resulted in the successful restoration of critically endangered species to the wild. Many AAWV members have been or are currently involved in the captive husbandry of wildlife. Conversely, there is an evolving trend for zoological institutions to provide support to wildlife biologists, and for zoo veterinarians to engage in free-ranging wildlife research and in situ conservation efforts.

Lines of distinction between free-ranging wildlife and captive wildlife veterinarians are blurry at best. It is time to acknowledge our shared expertise, methods of practice, and ultimate goals to improve and enhance the health of wildlife, and to individually and mutually benefit from the synthesis of these commonalities, by forming a joint organization.

History indicates that without a strong home base, (previously the Southeast Cooperative Wildlife Disease Study and currently the UC Davis Wildlife Health Center), the AAWV runs the risk of failing as an organization. The AAZV has a strong, well-developed infrastructure (an executive director, a membership listserve, an annual forum, a scientific journal, and a number of standing committees that address professional, organizational and political needs) which will provide a merged organization with permanent support. Moreover, the AAZV has always embraced issues of free-ranging wildlife health and medicine, and in recent years has become increasingly involved and focused on free-ranging wildlife medicine and the role of veterinarians in conservation efforts. With or without the AAWV, the AAZV has identified expanding its scope to embrace free-ranging wildlife medicine as a major goal in the next five years. They welcome the opportunity to achieve this goal by joining with our organization. The fact that their executive board is wholeheartedly in support of a merger with our organization should be looked upon as a testament to their respect for our organization, and of their recognition that a merger benefits their organization as well.

Wildlife veterinarians are underrepresented within the larger veterinary community. With just a few exceptions, governmental bodies are not aware of the scientific expertise that wildlife and zoo veterinarians provide. If we want a “place at the table”, and if we want to benefit from more opportunities for funding and to educate governmental and non-governmental organizations about diseases of free-ranging wildlife and the role that veterinarians have to play in conservation efforts, we need to be united and well organized. The larger “mainstream” associations such as the American Veterinary Medical Association are setting the standard for issues impacting wildlife, such as drug use in minor species, euthanasia guidelines, and management of feral cat colonies. There is a greater opportunity to achieve a delegate position on the AVMA House of Delegates as a merged organization. With even one seat, wildlife issues will at least be heard by the other delegates. We also have a better chance of attracting veterinary students to our profession. Many students are steered by their mentors towards joining either the AAZV or the WDA, because of the benefits these two organizations offer their student members. When forced to choose

between the three organizations, the AAWV is third on many of these students’ lists.

One objection that has been voiced against the merger is that we as wildlife veterinarians will lose our identity and that our voice will be diminished in the larger organization. We underestimate ourselves. Can we instead broaden the perspectives of our zoo colleagues and encourage the current trend for zoos to contribute more to the conservation of free-ranging wildlife? Outside of chronic wasting disease and some endangered species programs, how often are free-ranging wildlife programs funded for hundreds of thousands or millions of dollars? Construction projects for zoo exhibits are commonly funded for one to ten million dollars in the larger prosperous zoological institutions; allocation of just 5% of these funds for related field projects would make a huge difference for wildlife conservation programs and wildlife veterinary medicine. Isn’t it possible that free-ranging wildlife medicine could benefit in this manner from a merger?

Many of us have concerns about the potential for losing influence with USAHA, or with state and federal government agencies, about diminishing our valued relationship with the WDA, or otherwise losing our unique role in the conservation of our natural resources. However, is it not just as likely that our influence with these organizations as wildlife veterinarians could grow as a result of the formation of a new, merged organization? The merger process as proposed by the ad hoc AAWV Strategic Affiliations Committee provides a structure for a phased-in unification of the two organizations over four years. We can test the hypothesis that this is a merger of two equal organizations by monitoring whether our interests as wildlife veterinarians are maintained in the bigger organization as the merger progresses. We also have the option of pulling out of the merger if that hypothesis proves false.

A precedent has already been set by our European and Canadian colleagues. They formed the European Association of Zoo and Wildlife Veterinarians and the Canadian Association of Zoo and Wildlife Veterinarians years ago. Their groups are comprised of both practitioners and researchers who work on both captive and free-ranging wildlife, and they enjoy a close and mutually-rewarding commonality of purpose within their organization. Our unified Canadian colleagues face very similar biological, political and social issues and they appear to have received more recognition from their governments and decision-making bodies as a result of their unity. Moreover, an as-yet overlooked benefit to wildlife veterinarians of a merger with the AAZV is the tremendous opportunity it will present us to increase contact with our colleagues overseas, as the AAZV has a very active and growing international membership which would henceforth be an active and growing membership in the merged organization.

After weighing the pros and cons of merging with the AAZV to form a new organization, we believe the benefits outweigh potential costs. We could become a much more powerful, well-supported, professional organization that serves as a more dynamic venue for professional discourse, and as a much stronger, more visible and respected platform from which to galvanize support and recognition for the role of veterinarians in achieving improvements in the health of all wildlife and in enhancing the sustainability of robust wildlife populations around the world.

A CLOSER LOOK AT 5 WILDLIFE VETERINARIANS AND THEIR CAREERS

There is no one path to becoming a wildlife veterinarian. In addition to having different backgrounds, wildlife veterinarians also work on numerous different species, under different conditions and for different organizations or agencies. To highlight this, we thought it would be interesting for members to read brief biographies about 5 AAWV members, all of whom have different backgrounds and work in different aspects of wildlife medicine. Clearly, one thing these wildlife veterinarians have in common is commitment to and a love for their work.

FLO TSENG

Private Practice to Wildlife Rehabilitation to Teaching and Conservation

Flo Tseng came to the field of wildlife medicine via a fairly circuitous route. After graduating from Cornell with her D.V.M. in 1981, she worked in a series of small and exotic animal private practices in upstate New York. During that time, she maintained a wildlife rehabilitation license and was active in providing care to native wildlife species. By 1990, she decided to concentrate on wildlife medicine full time and began an internship at the Wildlife Center of Virginia. This allowed her to gain experience in providing medical and surgical care to a large number of different native reptile, avian and mammalian wildlife species. Flo then moved to the West Coast and became the first staff veterinarian at the Progressive Animal Welfare Society (PAWS) Wildlife Center in Lynnwood, Washington. This large clinic cares for over 5,000 animals a year including black bear cubs, cougar, and bald eagles. While there, a major oil spill (*Tenyo Mara*) occurred along the Northwest Pacific coast and Flo worked closely with the response team from International Bird Rescue Research Center (IBRRC) caring for the hundreds of oiled birds. In 1996, she moved to the

San Francisco Bay area and became staff veterinarian and research

director at IBRRC which focuses on seabirds and waterfowl. Flo was very central to veterinary response efforts in California during a period of many significant oil spills and die-offs, and also worked within the United States, and in different international locations. In addition, Flo worked closely with veterinarians from the UC Davis Wildlife Health Center and California Fish and Game in the development of the Oiled Wildlife Care Network (OWCN). She organized state-wide trainings for volunteers and continues to serve on the Scientific Advisory Committee for OWCN. She accepted her present position as an assistant professor in wildlife medicine at Tufts University School of Veterinary Medicine in North Grafton, MA in 2000. As the single mother of a five year old, she has a very busy life, but enjoys teaching veterinary students the basics of wildlife medicine through her work at Tufts Wildlife Center. Flo maintains her interest in seabird medicine as the principal investigator in SEANET, the Seabird Ecological Assessment Network. SEANET is a large-scale cooperative project focused on accumulating historical data on seabird populations and mortality events, working with citizen scientists on beached bird surveys from Atlantic Canada to Delaware Bay, and using Tufts students to perform necropsies to gain information on cause of death. Flo feels that the work she now does in mentoring veterinary students for careers in wildlife and conservation medicine is her most important accomplishment to date.

KATHY QUIGLEY

Lions, Tigers and Bears: The Patients of a Wildlife Veterinarian

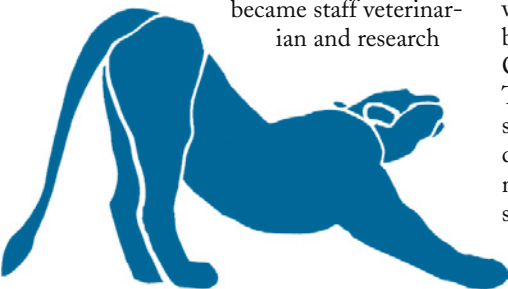
In 1991, Kathy Quigley left her private veterinary practice and began working with wild carnivores for the Hornocker Wildlife Institute which has since merged with the Wildlife Conservation Society (WCS). As a WCS veterinarian she oversees studies of wolverines and cougars from her home base in Montana and throughout the winter months she divides her time between assisting field crews in cougar capture and handling, and performing radio-implant surgeries on wolverines throughout the Greater Yellowstone ecosystem. Kathy provides veterinary oversight for many other field studies including those on Siberian tigers, Amur leopards, Asiatic black bears, and brown bears in the Russian Far East (RFE).

Through collaborations with partner organizations and colleagues, she conducts capture and immobilization training workshops for field personnel, a critical component for creating and maintaining highly skilled competent field capture teams. These include numerous intensive “hands-on” immobilization and animal handling workshops in the RFE. This is part of a larger effort to train Russian tiger protection personnel to handle tiger-human conflict situations in a manner that is beneficial for both tigers and humans.

In addition, she often travels to Russia with her work on Siberian tiger and Amur leopard populations. She is committed to helping secure a safe future for these animals. The human-wildlife interface has created increasing levels of threat for wildlife in this region. Economic unrest in Russia has led to increased illegal hunting in tiger habitat, and a subsequent increase in opportunistic poaching of tigers for the Asian medicine market. Continuing human encroachment into areas not previously occupied by people has resulted in further threats to cats such as wounded tigers, unable to hunt effectively, wandering into towns to present a threat to livestock and humans.

Kathy has built on the field programs in place in Russia to investigate disease threats in wildlife populations. Viral diseases such as canine distemper, endemic in local domestic animal populations throughout the RFE, threaten tigers and other carnivores that prey on and interact with these animals. To address these problems Kathy works closely with faculty at the regional veterinary teaching hospital in Ussurisk, Russia, creating a wildlife health curriculum which will include study of disease transmission and risk, wild animal health, wildlife capture and handling, and numerous other subjects.

“My job is interesting and rewarding,” says Kathy. “Working in wildlife has been a life-changing experience, and I feel humbled by the opportunity that I am able to contribute, in a small way, to the health and security of their future.”



JOE GAYDOS

Marine Wildlife and Marine Ecosystems

Joe Gaydos is a wildlife veterinarian for the UC Davis Wildlife Health Center's SeaDoc Program in Washington state. After graduating from veterinary school at the University of Pennsylvania, he worked for the Philadelphia Zoological Society for a year at a small game park in Zimbabwe where he worked primarily on captive wildlife. He then spent 3½ years as a mixed-animal veterinarian in West Virginia, before getting wildlife disease training at the Southeastern Cooperative Wildlife Disease Study (SCWDS) in Athens, Georgia. Joe worked at SCWDS as a wildlife disease diagnostician and completed a PhD in Medical Microbiology. It was his SCWDS education that Joe feels really prepared him to work on wildlife diseases at the population level.

After completing his PhD, Joe made a career jump from working on primarily terrestrial wildlife to primarily marine wildlife. This carried with it a steep, but exciting learning curve that required more training in

marine ecology, natural history of marine wildlife, SCUBA, boatmanship, and biopolitics of marine wildlife. "The trip has been a fun one," Joe assures, and has resulted in many opportunities to work on different aspects of marine wildlife and marine ecosystem health. In the realm of single species, he has completed a project examining the impact of disease on the decline of a small resident killer whale population, investigated diseases of local marine-foraging river otters, harbor seals, and porpoise, and helped investigate the role of mid-frequency Navy sonar on harbor porpoise strandings. On an ecosystem health level, Gaydos has spearheaded investigation into the cause of regional seagrass die-offs which have major ecosystem-level impacts, as well as helping to lead regional efforts to determine how marine protected areas might best be used as an ecosystem management tool to recover and protect a suite of threatened and endangered species.

MARK CUNNINGHAM

Florida Panther Problems Keep Wildlife Veterinarians Busy

Mark Cunningham is a wildlife veterinarian for the Florida Fish and Wildlife Conservation Commission. Before and during vet school he worked as a veterinary assistant and biologist for the Commission. Mark graduated from the University of Florida (UF), College of Veterinary Medicine in 1998 and is currently completing a Master's degree in Wildlife Conservation and Ecology at UF. His work with the Commission is quite diverse and ranges from advising on controlled drug issues, to assisting with chronic wasting disease testing, to providing emergency veterinary care for Florida panthers. Currently one of our more important challenges is investigating and controlling an outbreak of feline leukemia virus in free-ranging Florida panthers. This outbreak was detected through routine monitoring of captured panthers and appears to cause fulminant FeLV and mortality in a significant number of infected animals. After testing in captive

panthers efforts are now underway to use vaccination to limit the potential for FeLV to cause more mortalities in this highly endangered species. Mark will present findings at the WDA and AAZV meeting in San Diego. They are gearing up to establish similar monitoring protocols for a number of diseases (especially foreign animal diseases) in a variety of indicator species. Mark says "One wildlife veterinarian for the Commission is about 50 too few – so a primary focus for my position is maximizing our wildlife disease surveillance and data collection by taking advantage of the expertise and skills of field biologists (as well as coordinating with others handling wildlife including wildlife rehabilitators). I also depend tremendously on the expertise of other veterinarians, biologists, and scientists for everything from surgical procedures to advise on wildlife disease issues". Mark's job is a part of a much larger conservation medicine team.

SCOTT BENDER

Navajo Nation Veterinarian

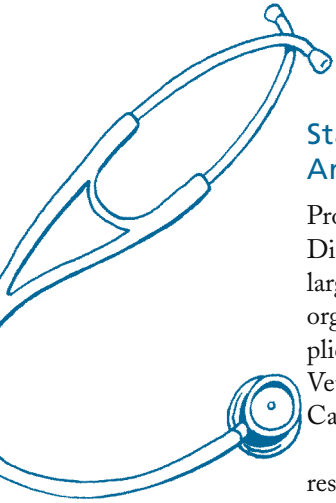
Scott Bender has been the wildlife and zoo veterinarian for the Navajo Nation for the last eight years. His practice spans more than 18 million acres in the Four Corners region of Arizona, New Mexico, Colorado and Utah. He has worked on wildlife health and management projects with the Arizona Fish and Game, New Mexico Fish and Game, California Fish and Game, Idaho Fish and Game, US Fish and Wildlife Service, Washington State Fish and Wildlife, and the Navajo Nation Fish and Wildlife departments.

Scott has three bachelor's degrees (animal science /with range management, veterinary science, and biochemistry/biophysics) and attended veterinary school at Washington State University and Oregon State University in the WOI program. He also did veterinary internships at Seaworld of San Diego and the US Fish and Wildlife Service's National Wildlife Forensic Laboratory and received specialized training in wildlife at the University of California-Davis, PEW Wildlife Health Program (wildlife population and environmental medicine), Washington State University-College of Veterinary Medicine/ Washington State Department of Fish and Wildlife's Sullivan Lake Rocky Mountain Bighorn Sheep Study, and Louisiana State University/Texas A & M College of Veterinary Medicine's "Aquamed" training program.

After completing his training he worked at the Atlantic Veterinary College as a large animal medicine and surgery clinician where he also served as the Assistant Instructor of Wildlife Medicine where he was the clinical veterinarian for wildlife medicine and marine mammal rehabilitation.

While working for the Navajo Nation Department of Fish and Wildlife Scott has worked on desert bighorn sheep health evaluations, and relocations, Rocky Mountain elk relocations, development of preventative health and Chronic Wasting Surveillance recommendations for both the free-ranging wildlife, and disease surveillance for fish populations. The duties for the department has also included forensic investigation of suspected poaching cases, injured wildlife evaluation for potential rehabilitation, investigation of wildlife poisonings/toxicology, disease outbreaks. He is currently working with the Arizona Department Fish and Game to investigate diagnostic tests for Chronic Wasting Disease.

His work at the Navajo Nation Zoo has primarily been general and geriatric type care of captive animals, concentrating on the preventative medicine and health screening aspect. It has also included genetic identification, surgeries, data collection for university wildlife research projects, assisting the Mexican Gray Wolf program, and even working with the Arizona Department of Fish and Game to acquire two new cougars for the zoo.



Staff Veterinarian— Animal Care Director

Project Wildlife, located in San Diego, CA, one of the nation's largest wildlife rehabilitation organizations, is accepting applications for a full time Staff Veterinarian/Director of Animal Care.

The person hired will be responsible for wildlife care plus supervision of animal care staff and assisting of volunteers. Responsibilities include: Animal care: triage, treatment, diagnostics, surgery, recovery, euthanasia; Supervise and train asst. managers in medical/diagnostic/treatment skills; Oversee training of volunteer apprenticeship program; Order medications and supplies; Maintain close liaison with administrative staff; Communicate with/assist/advise animal team members on care/treatment; Assist with and approve animal team protocols; Provide overall guidance on animal care issues.

Qualified candidates must have a veterinary degree from an accredited institution; five years veterinary experience preferred; advanced training in zoo or wildlife medicine is desirable; supervisory experience is advantageous. Candidates must have a California veterinary license or be qualified to take the state examination. Employment is contingent on obtaining a California veterinary license.

Please submit CV and at least three professional references to: Executive Director, Project Wildlife, P. O. Box 80696, San Diego, CA 92138-0690. The closing date for this position is May 21, 2004. For more information visit www.projectwildlife.org.

ACZM Ultra-Short Course, August 28, 2004

The American College of Zoological Medicine will offer a one-day examination prep course on Saturday, August 28, 2004 in conjunction with the 2004 joint annual meeting of the American Association of Zoo Veterinarians, the Wildlife Disease Association, and the American Association of Wildlife Veterinarians, in San Diego, California. The purpose of the course is to introduce participants to the ACZM board certification examination. Information will be presented on requirements and strategies for credentialing, studying and taking the examination, and didactic lectures will be given on topics covered in the examination (diseases of waterfowl, carnivores, and emerging diseases and zoonoses of wildlife). Registration is \$125 if received by 5 pm August 2, 2004, \$150 if received after August 2, including the day of the course. Minimum enrollment: 10. Maximum enrollment: 25. Enrollment determined on a first-come, first-served basis. More information and registration forms will be included with conference registration materials, and are available on the ACZM website (www.aczm.net). Send your registration form and a check (in US dollars, payable to ACZM) to: ACZM Education Committee, c/o Kirsten Gilardi, Wildlife Health Center, UC Davis School of Veterinary Medicine, 1 Shields Ave, Davis, CA 95616. Questions may be directed to kvgilardi@ucdavis.edu.

Zoo Medicine Short Course, June 12-17, 2004

The American College of Zoological Medicine and University of Wisconsin will hold the annual zoological medicine short course at the UW School of Veterinary Medicine, June 12-17, 2004. The week-long didactic course provides intensive in-depth information on important current issues in zoological medicine. The course is designed to help prepare participants to take ACZM boards and includes discussions on study and test strategies as well as a limited number of practice exams (essay, multiple choice, practical, and slide identifications). Areas of emphasis include taxonomy, megavertebrates, wildlife-hoofstock, fish and mycobacterial diseases.

The course is limited to 25 participants. Registration is \$575 for the 6-day course and must be received by May 1, 2004, but early registration is extremely helpful. Make checks payable to University of Wisconsin School of Veterinary Medicine. Send completed registrations to Joanne Paul-Murphy DVM, School of Veterinary Medicine, 2015 Linden Drive, University of Wisconsin, Madison, WI 53706. Campus lodging for participants is available within walking distance to the School of Veterinary Medicine. For further information, contact Dr. Paul-Murphy (608) 265-2608; FAX (608) 263-7930; jpmurphy@svm.vetmed.wisc.edu, or visit www.aczm.org (calendar events).

NATIONAL WILDLIFE DISEASE SURVEILLANCE AND EMERGENCY RESPONSE SYSTEM

by Tom DeLiberto

It is widely recognized that countries conducting disease surveillance in wildlife populations are more likely to understand the epidemiology of specific infectious diseases and zoonotic infections and, therefore, are better prepared to protect wildlife, domestic animals and humans. Regular monitoring programs in wildlife are becoming an increasingly important part of national disease eradication programs. Consequently, active surveillance for known diseases of economic or public health importance among wildlife is particularly beneficial to the national interest. The World Organization for Animal Health encourages all countries to develop and maintain wildlife disease surveillance systems, which complement and support domestic animal disease programs.

The goal of APHIS Wildlife Services' (WS) involvement in disease monitoring is to develop and implement a National Wildlife Disease Surveillance and Emergency Response System (SERS), for the purpose of safeguarding American agriculture, human health and safety and wildlife populations. The SERS is being designed to provide an infrastructure capable of assisting state, federal and tribal agencies with wildlife disease concerns. This system is being implemented by using existing resources within APHIS, building new resources to meet increased needs and building coalitions between other federal, state, tribal and non-governmental organizations with responsibilities or interests in managing diseases. These groups include, but are not limited to, USDA Veterinary Services (VS), USGS Biological Resources Division, Centers for Disease Control, state and tribal natural resources, agriculture, and health departments, Southeast Cooperative Wildlife Disease Study, American Association of Wildlife Veterinarians and university and industry partners. Such coalitions will be critical to the successful implementation of a national SERS for wildlife.

When integrated with existing national animal health surveillance infrastructures, monitoring and surveillance programs in wildlife provide an important component in securing animal health, animal-based export trade and safeguarding public health. Supplementing these programs with a nationally coordinated wildlife disease surveillance system will assist existing programs with the collection of samples, facilitate information exchange among the programs, ensure agents of national biosecurity concern are adequately sampled and provide additional laboratory infrastructure that would be available for assisting other agencies in disease diagnosis during emergency outbreaks.

The successful implementation of SERS will depend on the cooperation of many governmental and nongovernmental entities to 1) identify populations of animals and diseases of concern, 2) determine methods for monitoring diseases, 3) obtain samples for diagnostic analyses, 4) identify laboratories capable of conducting specific diagnostics and 5) to evaluate and report results in timely manner. Given that the strength of WS is its professionally trained workforce of wildlife biologists and researchers, our efforts are focusing on the biological aspects of a SERS (the first 3 activities) rather than the veterinary activities of diagnostics and epidemiology. However, full implementation of this plan will require WS

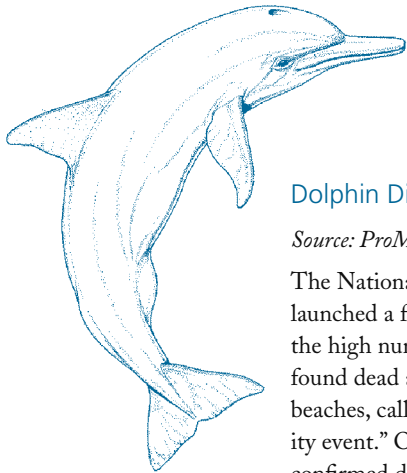
personnel to build partnerships with the other agencies and groups and to support wildlife disease research programs at the National Wildlife Research Center (NWRC), Agricultural Research Service, NWHC and universities.

My role as National Wildlife Disease Coordinator is to develop and implement the SERS for WS. When designing the program, I primarily concentrated on creating positions that would assist our cooperators with the collection of biological samples for disease surveillance goals and conducting disease control programs. To achieve these objectives, I realized that we needed a staff of wildlife biologists who were experienced in wildlife capture and handling, and who would apply those skills in a variety of situations ranging from long-term surveillance activities to emergency disease outbreaks. Specifically, these wildlife disease biologists will:

- Be responsible for collecting, preserving and shipping biological samples from a variety of animal species according to established protocols and guidelines.
- Serve as liaisons in their state(s) of responsibility among WS, VS, state departments of health, agriculture and natural resources and other state, tribal and federal agencies concerned with wildlife disease issues.
- Participate in WS disease control activities, and seek out opportunities to provide assistance to state, tribal and other federal agencies in accomplishing their disease control objectives.
- Be required to quickly respond to disease outbreaks and other emergencies requiring WS participation.

Although I coordinate the activities of these wildlife disease biologists from a national perspective, each is assigned to WS field office and is primarily responsible for assisting state and local cooperators with their wildlife disease issues. Therefore, the SERS addresses disease issues of local concern, but provides the flexibility for mobilizing the wildlife disease biologists to the location of disease outbreaks.

While our ultimate goal is to create 100 wildlife disease biologist positions, current funding levels only permitted us to hire an initial group of 23 in fiscal year 2003. As the program develops, additional biologists will be added to increase WS' capabilities to conduct SERS activities. For the 23 positions, WS received over 450 applicants. Only four veterinarians with wildlife experience applied and two were offered positions but both declined. In fiscal year 2005 we will be seeking to hire an additional 20 wildlife disease biologists, and one or two assistant coordinators and hope to attract more veterinary applicants. We are also expanding our research capabilities at the NWRC to address wildlife disease concerns. Currently, we have research projects addressing rabies, bovine tuberculosis, chronic wasting disease, West Nile virus, avian influenza and other diseases. Recently, we hired a wildlife veterinarian in this program and will be advertising for a research epidemiologist this year. For more information about this program, contact Tom at thomas.j.deliberto@aphis.usda.gov.



Dolphin Die-off in Florida

Source: *ProMed (edited)*

The National Marine Fisheries Service launched a federal investigation into the high number of dolphins recently found dead along Panhandle bays and beaches, calling it an “unusual mortality event.” Officials said the number of confirmed dead has reached 65.

The Fisheries Service is overseeing testing of the carcasses at a lab in St. Petersburg. Wendy Noke, a researcher with Hubbs-SeaWorld Research Institute in Orlando, said the dolphins appeared to be in good nutritional condition when they died, and the cause of death “appeared to be somewhat catastrophic.”

Preliminary test results indicate the deaths may have been caused by biotoxin released by naturally occurring algae. Dr. Jane Whaley, a veterinarian with the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service, said domoic acid had been found in water samples. Domoic acid has been blamed for several marine mammal deaths on the West Coast.

More Bovine Brucellosis in Wyoming

Source: *ProMed (edited)*

The state of Wyoming has identified a 2nd herd of cattle that has tested positive for brucellosis, an infectious bacterial disease that leads to spontaneous abortion in cattle. This will cause Wyoming to be designated a Class A state in the Brucellosis classification scheme.

The state is now under orders to restrict the movement of cattle and begin new testing. There are as many as 200 cases of brucellosis in the United States each year. Officials suspect the contamination in Wyoming may have come from wild elk.

Gilman International Conservation Field Veterinary Technician Program

Gilman International Conservation is undertaking a one-year pilot project to provide veterinary technician support and training to field conservation, veterinary, and research projects. Major support for this program is being provided by the Wildlife Conservation Network. Beginning in June 2004, this program will provide a trained veterinary technician to assist field biologists and veterinarians in conservation and research activities. They also will provide training to biologists, technicians, and others as needed. Field projects will be responsible for the technician’s travel costs and living expenses while on the project. Projects interested in such support are encouraged to apply. For more information, contact Scott Citino at scottc@wogilman.com.

Elk mortality in Wyoming

Source: *Walt Cook*

In February and March 2004, 304 elk southwest of Rawlins, Wyoming were found in sternal recumbency, alert and responsive, but unable to rise. Left alone, most cases progressed to death; several treatments were attempted, none with success. The majority of elk were euthanized. At necropsy these animals were in fair to good body condition; some elk had gross evidence of myopathy. Microscopically, there were degenerative lesions of varying duration, severity, and distribution, some with early mineralization and attempts at regeneration, and some associated with degenerating protozoal cysts (*Sarcocystis* sp.). During field investigations, large quantities of a ground lichen (*Xanthoparmelia chlorochroa*) were observed in the area and was found in the rumen contents of several elk. The lichen was fed to 3 captive elk and 2 developed similar signs and exhibited similar lesions upon necropsy. Lichen toxicosis is the presumed diagnosis at this point.

Avian Cholera in California

Source: *ProMed (edited)*

Volunteers pulled thousands of dead ducks from Clear Lake this week, hoping to prevent the spread of avian cholera to other waterfowl, including vulnerable flocks of great blue herons and white pelicans. As of Thursday, about 3500 ruddy ducks had died, along with a small number of mallards, egrets, grebes, and scaups, in the first recorded outbreak of the fast-moving disease in Lake County, California.

“The outbreak began 14 January 2004, when a flock of about 15,000 ruddy ducks were blown in by a winter storm, joining a flock of several thousand already at the lake,” said Allan Buckmann, a wildlife biologist with the state Department of Fish and Game. On 18 Jan, a game warden saw a dozen dead ducks floating on the lake. The following day, there were 130 more. At the epidemic’s peak, ducks were dying at the rate of 600 a day.

Avian cholera is caused by *Pasteurella multocida* and is an important cause of mortality in wild waterfowl. The bacterium often kills birds rapidly and die-offs usually are characterized by a sudden onset.



Avian influenza in wild birds

Source: *National Wildlife Health Center Wildlife Health Bulletin 04-01 (edited)*

A strain of avian influenza virus (H5N1) in Asia has recently killed or resulted in the depopulation of millions of domestic chickens. Human deaths due to H5N1 virus have also been reported. The potential spread of this virus is of international concern.

While it is common for wild birds, particularly waterbirds, to carry strains of avian influenza virus, there is little evidence that the new virulent H5N1 virus strain is affecting wild bird populations, or that wild birds are able to spread this Highly Pathogenic Avian Influenza (HPAI) virus. Thus far in 2004, there is a report that out of 6000 wild birds tested in Hong Kong, one peregrine falcon was positive for the H5N1 strain. It is not known how the bird became infected and reports are not clear if the bird actually died from the disease.

Currently there is no evidence that humans have been infected with the H5N1 influenza virus through contact with wild birds. All reported human infections have been associated with contact with domestic poultry. Historically, it was considered very unusual for avian influenza to directly infect humans. However, recent reports [Hong Kong (H5N1), 1997; Hong Kong/China (H9N2), 1999; Netherlands (H7N7), 2003; Asia (H5N1), 2003-2004] indicate that at least some people who have had contact with domestic poultry have become directly infected with virulent avian influenza virus. To date, these viruses have not acquired the capacity to effectively spread directly from human to human.

Historically, avian influenza viruses recovered from wild waterbirds have rarely caused disease. The only reported die-off was in common terns in South Africa in 1961 (Friend, 1999). Little is known about the potential impact the recent H5N1 avian influenza virus found in Asia may have on wild birds. There is a concern that a genetic shift in the virus may have occurred during replication in domestic poultry, making this avian influenza virus virulent to waterbirds.

In January 2004, ProMed (Archive No. 20040121.0243) reported that of the 6,000 wild birds tested during extensive surveillance and testing of wild birds (unspecified species) in Hong Kong only 1 dead peregrine falcon was positive for the H5N1 avian influenza virus. The falcon was found near two chicken farms and it is not known how it became infected. It is also not clear if the bird actually died from the disease. A 2002 report (www.oie.int/eng/info/hebdo/AIS_07.HTM#Sec0 and www.oie.int/eng/info/hebdo/AIS_35.HTM#Sec0) suggests that a strain of H5N1 killed non-domestic birds in parks and a zoological collection in Hong Kong, including waterfowl, greater flamingos, gray herons and egrets. There is no definite evidence that the 2003/2004 virulent H5N1 virus is affecting wild bird populations, or that wild birds are able to disseminate this new Highly Pathogenic Avian Influenza (HPAI) virus.



It's Your Newsletter!

Get Involved!

We encourage you to submit articles: letters to the editor about your perspectives on the merger or other items, articles for the wildlife disease news, helpful hints from the field, photos (contact design editor for specifics), whatever makes you passionate about being a wildlife vet!

Brucellosis in bighorn sheep

Source: *ProMed (edited)*

An accidental exposure to brucellosis caused the death of most of the bighorn sheep at a research facility in south eastern Wyoming, according to a researcher there. In addition, one wild bighorn in the Jackson area has shown possible signs of exposure to the disease, said Terry Kreeger, who works with wildlife diseases at Wyoming Game and Fish's State Diagnostic Laboratory near Cheyenne.

"This is the first report ever of brucellosis in (bighorn) sheep," Kreeger said, although it has been reported in domestic sheep. The disease causes painful flu-like symptoms in people, and in cattle, bison, and elk it causes spontaneous abortions. But it is not considered a fatal disease in those species. For bighorns, it could be more serious.

"We think they may die from it," Kreeger told the technical committee of the Greater Yellowstone Interagency Brucellosis Committee on Tuesday. He speculated that brucellosis might play some role in some the die-offs of bighorns around the Yellowstone National Park area. Live bighorns have been tested often for the disease, but dead ones haven't.

The research facility's bighorns were kept in a 350 acre pasture that shared a fence with elk from North West Wyoming that had been thought to be free of brucellosis. However, a unique strain of the disease erupted in one animal after it was impregnated as part of a research project. That animal then aborted along the shared fence line in March 2000, and the bighorns likely came into contact with the fetus, Kreeger said. Researchers later noticed one ram had badly swollen testicles, and the animal was killed. An investigation revealed abscesses and adhesions on those organs, a typical sign of brucellosis. The other bighorns in the enclosure were tested and all positive animals were killed, Kreeger said. One ram that was found dead suffered from the disease. Of about 2 dozen bighorns, only a handful survive today, he said. The possibly infected wild bighorn was discovered about 6 weeks ago and was one of 10 animals tested, Kreeger said.

AAWV MEMBERS ACTIVE WITH USAHA

By Dr. Mike Miller

A number of AAWV members are very active in the U.S. Animal Health Association (USAHA) Committee on Wildlife Diseases which met in October 2003 in San Diego, CA; at least 23 committee members and 54 guests participated. USAHA has considerable influence over national policy and programs related to animal health issues, and practicing wildlife veterinarians are encouraged to participate in these important annual meetings. The AAWV holds a seat on the USAHA Board of Directors and we have the opportunity to review resolutions and actions of the organization. The sitting President of AAWV exercises our vote.

Wildlife health professionals and representatives from a variety of agencies and institutions presented reports about ongoing and emerging wildlife health issues to USAHA and its members. These reports included overviews of recommended testing guidelines for bighorn sheep and wild turkeys intended for translocation; these were prepared on behalf of the Western Wildlife Health Committee of the Western Association of Fish and Wildlife Agencies to aid states in developing health screening protocols for translocations of these species, and are included in the written meeting proceedings available on their website.

Other presentations included an update on the spread of West Nile virus in the United States, a case report on an epidemic of hemorrhagic disease and its public repercussions in northern Idaho, an overview of progress toward managing brucellosis in elk and bison in the greater Yellowstone area, an update on progress being made in the management of an endemic focus of bovine tuberculosis in free-ranging white-tailed deer in Michigan, an update on regional and national plans related to managing chronic wasting disease in free-ranging cervids, and several reports reviewing activities related to CWD surveillance and management in parts of the United States. The committee also considered two resolutions, one related to CWD testing and another related to regulation of commercially imported wildlife to prevent introduction of exotic diseases; the latter was supported and forwarded to the USAHA Resolutions Committee. For details on upcoming meetings, visit the USAHA web site (www.usaha.org).

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

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