AMERICAN ASSOCIATION OF WILDLIFE VETERINARIANS

SUMMER 2005

Is disease an important mortality factor for Pacific Herring?

By Paul Hershberger

Marine pelagic forage fishes, including sardines, anchovies, and herring, undergo large oscillations in population abundance. Although over-fishing can have a dramatic impact in reducing population size, this anthropogenic perturbation cannot fully account for all population declines because natural oscillations in marine pelagic fish biomasses occurred prior to the onset of commercial fishing.

Among the herring metapopulation in Puget Sound / Straight of Georgia, the mean estimated annual mortality, exclusive of commercial fishing, increased from 20% in the late 1970's and early 1980's to 64-87% during 1996-1999. This natural mortality affects primarily the older age cohorts and resulted in recent decreased median ages of adult herring from age 4-6 cohorts to age 2-3 cohorts that die prior to iteroparous spawning. Surveys of wild herring from the region indicate that the protozoan parasite Ichthyophonus sp., is currently ubiquitous among Pacific herring populations in Washington and British Columbia, and prevalence of infection increase directly with herring age, from 12% among juveniles to 58% among the underrepresented age 6+ cohorts. Ichthyophonus can be highly pathogenic to immunologically naïve Pacific herring, causing 80% mortality 2 mo. after exposure in the laboratory. Current laboratory-based studies are underway to determine whether natural Ichthyophonus infections are terminal for the host, and whether these infections account for the decreasing median age of wild Pacific herring populations in recent years.

The herring metapopulation in Washington State can be divided into eighteen sympatric sub-populations that maintain temporal and geographical separation in their spawning patterns; each subpopulation is managed as a distinct stock. Although most herring stocks are currently classified as "healthy" or "moderately healthy", the biomass of spawning herring at Cherry Point declined from 13,606 metric tons (mt) in 1973 to a record low 733 mt in 2000 and this stock is currently classified as "critical." Among newly hatched herring larvae in Washington State, those from Cherry Point consistently demonstrate abnormalities indicative of distress, including low weights and lengths at hatch, increased prevalence of skeletal abnormalities, and shorter survival times in food-deprivation studies. Ongoing studies are addressing whether the elevated adult

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Great challenges are also great opportunities

David A. Jessup, AAWV President

Chronic Wasting Disease has jumped across the country and broken out in New York. Reducing TB, Johne's and brucellosis infection rates in non-domestic ungulates is proving quite difficult. West Nile virus is very pathogenic for sage grouse and northern boreal raptor species and may exacerbate their decline or cause local extinctions. As human populations increase, pollution in various forms is getting worse, not better, global warming is advancing with no concerted plans to stop it. Wildlife veterinary jobs are hard to find, maybe don't pay as well as some other veterinary jobs, and do not have as many opportunities for advancement. With all the bad news about wildlife veterinary medicine and related conservation issues it's tempting want to throw in the towel, run and hide, retire early or become bitter. But, as Super Chicken used to say on the Saturday morning cartoons, "You knew the job was dangerous when you took it, Fred."

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Wildlife veterinary medicine is indeed difficult to get into, and once in, it can be challenging and frustrating work. But, who told you it was going to be easy? If it wasn't challenging would it be worth your time, would it be as worth dedicating your life to? With great challenges often come great opportunities. I doubt Steve Schmitt would have chosen to get a new lab by having a TB outbreak in Michigan, but one lead to the other. In the 1950-60's, frequent epidemics of hemorrhagic diseases in deer lead to the founding of the Southeastern Cooperative Wildlife Disease Study (SCWDS). The Lake Andes duck viral enteritis (DVE) outbreak, the spread of avian cholera out of California in the 1970's, and big botulism losses lead to the founding of National Wildlife Health Center (NWHC). The plight of Florida panthers and manatees, California sea otters and condors mean jobs for wildlife veterinarians, and meaningful conservation work. And as we've said before, CWD can alternatively be seen as the wildlife veterinary full employment act. It is lemonade out of lemons for those who can solve problems and rise to the challenge.

"As you change the way you look at things, the things you are looking at change." As simplistic as that may sound, it is true. Your attitude and perspective makes a huge amount of difference. For example, you can either see yourself as living in a remote area cut off from civilization (Barrow, AK.; Sybille, WY.; the Navaho reservation; Bozeman, MT.; Athens, GA-sorry guys, I couldn't resist) or you can see yourself privileged to live outside a big city and the pressure of an office. Having had to fight for parking and wear shirt and tie, I for one really, really appreciate being able to come to work in flip flops and a T-shirt most days. It saves a lot on the clothes and dry cleaning bills too. Harvesting some of natures bounty, growing, hunting or fishing your own food can be fun, healthful (good food and exercise) and economical and it also helps your perspective. "It isn't how much you money you make, its how much you get to keep."

How much is it worth to work with monk seals on an atoll in the Pacific, look down the spine of the Sierra Nevada at sunset, walk in the Painted Desert, the backwoods of Tennessee, or the Big Two Hearted River county of Michigan's upper peninsula, go out on Lake Okeechobee at dawn, or hear lions and hyena at night in the Zambezi valley? What's it worth to know more about the biology, ecology, beauty and the importance of these places than 98% of your high school buddies? What's it worth to be able to share your love of life and God's creatures with a son, daughter or significant other? It may seem trite to say that these things don't have a price, but in fact, they don't. There are tangible benefits of being a wildlife veterinarian whether or not you get paid for them.

About 15 years ago, on a bighorn sheep capture and relocation effort, one of our guests was a physician, an anesthesiologist. In the evening we got to comparing notes. We had both graduated from Seattle high schools in 1967 and had gone on to the University of Washington. We had both been pre-med and had taken the same killer freshman chemistry and basic biology, and sophomore organic chemistry "weed out" courses populated primarily by science, pre-med, pre-dent, and pharmacy majors. We had both competed for slots in major medical schools under the pressure of the Vietnam War and the draft lottery. He had gone on to medical school, residency, and a specialty as a gas passer. In love with the outdoors and wildlife as the result of zoology field studies, I had turned down my acceptance to a med school in the Midwest and started down the road toward veterinary school. Having started at almost the same place at the same time, our paths had diverged and he was a physician and I a wildlife veterinarian. The he said, "Man, you really made the right choice, you have a great life and terrific work to do". I replied "Yeah, but you don't get my paycheck." He smiled, "But it's all spent at the end of the year isn't it. I probably have a little fancier house and car than you, a few more toys, and I probably pay the IRS and my ex-wife more. I do the same 3 or 4 procedures over day after day, and the bean counters tell me what meds I can give my patients. I feel like a prisoner in my own life." How much is your freedom and self respect worth?

Perhaps another way to satisfaction is to maintain a sense of non-attachment to routine outcomes as is taught in the Hindu, Taoist and Buddhist traditions. Recently I read the biography of Alan Watts and "Siddhartha" by Herman Hesse and saw again the value of being in the present, of not always struggling and thrashing against life, of not battling every current and eddy, of going with the flow. You could also see this in the prayer "Dear Lord, give me the patience to accept the things I can not change, the strength to change the things I can, and the wisdom to know the difference." These attitudes can keep you sane, optimistic and joyous as a conservation and wildlife advocate, and may even make you more effective.

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Continued from page 2, **President's Message**

The AAWV is working on improving the availability of jobs and training at the national level and all your accomplishments are the best arguments we have for better pay and advancement. Your work is important and gaining recognition daily. In closing let me ask you all to carefully consider your lives and careers as veterinarians who care about wildlife, what is important in life, and also consider where you want to see AAWV go. You have before you in this Newsletter a summary of the proposed changes in our Constitution and Bylaws and a slate of candidates who will be your elected leaders for the next few years. Please read and consider this and please, please vote.

David A. Jessup, DVM, MPVM, Dipl. ACZM

Wildlife Vets Offered Seat at the Table

By Billy Karesh

The Species Survival Commission of the World Conservation Union (IUCN) has invited the Veterinary Specialist Group (VSG) to take a position on its steering committee. This is the first time in the VSG's 30-year history that the group has been asked to sit on the SSC steering committee. Clearly, the health of wildlife is increasingly being recognized as an important factor in achieving effective conservation outcomes. Dr.Holly Dublin, who was elected last November as the new SSC chair, has invited the VSG to participate more directly in SSC guidance.

The SSC's network includes over 8000 scientists, field researchers and government officials from almost every country of the world. The SSC's role in IUCN is to scientifically assess and understand the dynamics of the accelerated loss of biodiversity. The SSC identifies trends, detects key threats, and provides recommendations for conservation policy and action, both within IUCN and beyond. Dr. Richard Kock, co-chair of the VSG, will be representing the group on the 18-member SSC steering committee.

Continued from page 1, **Herring Mortality**

mortalities selectively affect the Cherry Point stock by reducing the median age below that of complete sexual maturity. For example, if Cherry Point herring are not completely sexually mature at age 2-3, then fertilization of gametes from the immature adult donors may result in elevated levels of observed developmental abnormalities in larvae. This hypothesis is supported by temporally delayed spawn timing at Cherry Point (May), which is later than that of all other herring spawning populations in Washington (predominantly January-March) and similar to the spawn timing of Pacific herring populations in Alaska, which generally mature at age 3-5. Furthermore, recent DNA microsatellite studies indicate that herring from Cherry Point are genetically distinct from those of other spawning populations in Washington.

Additional studies are currently underway to understand ecological effects of endemic pathogens to early life history stages of Pacific herring. Recent studies indicate that confinement of wild, juvenile herring into laboratory tanks results in progression of three pathogenic diseases, including viral hemorrhagic septicemia (VHS), viral erythrocytic necrosis (VEN), and ichthyophoniasis; however, timing and epidemiology of the three diseases differs. A VHS epidemic occurs first, characterized by initially low disease prevalence that increases quickly with confinement time, peaking at 93 – 98 % after confinement for 6 d, then decreasing to negligible levels after 20 d. The VHS peak is followed by a VEN epidemic that, within 12 d of confinement, progresses from undetectable levels to 100% infection prevalence with >90% of erythrocytes demonstrating viral inclusions. The VEN epidemic persists for at least two months and is characterized by severe blood dyscrasias including dramatic reduction in hematocrit and replacement of mature erythrocytes with circulating erythroblasts and ghost cells. All fish with natural Ichthyophonus infections die within the first 3 weeks after confinement, likely as a result of the multiple stressors associated with capture, transport, confinement, and progression of concomitant viral diseases. Additional studies indicate that larval herring are susceptible to VHSV; furthermore, the herring larvae are immunocompetent and when larval survivors to VHSV challenges are reared through metamorphosis, the resulting juveniles are refractory to subsequent challenge with VHSV. Future work is needed to better predict when populations of wild fish are susceptible to epidemics by endemic pathogens.

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AAWV ELECTIONS - SUMMER 2005

On page 11 of this newsletter is a ballot for all active AAWV members to choose next year's officers and to vote for or against proposed changes in the AAWV Constitution and Bylaws. Below is a list of the proposed changes as well as candidate biographies.

Changes in Constitution and Bylaws

Please refer to the January 2005 AAWV newsletter for the full text of the changes proposed. They should also be available on the AAWV website. In general these changes are proposed to:

1) strengthen the role of the Board of Governors and eliminate the use of two names (Board of Governors in the Constitution and Executive Board in the Bylaws) for the same body,
2) better define the jobs and responsibilities of the officers,
3) reflect changes previously made 5 or so years ago bifurcating the secretary and treasurer positions,
4) recognize the role of the newsletter and website editors and add them to AAWV Council,
5) provide a means to replace or remove officers if necessary,
6) make possible the future hiring of an Executive Manager and encourage the establishment of a more permanent headquarters,
7) implement changes in electoral procedures for officers approved by vote a year ago,
8) move to voting by ballot mailed to all members instead of by voice or show of hands at the annual meetings, and
9) raise more revenue via dues. Please see January 2005 newsletter for further explanation of this item.

Candidates for Officer Positions

President Candidate Kirsten Gilardi

Kirsten Gilardi is the Assistant Director of the Wildlife Health Center - Marine programs; Executive Director of the SeaDoc Society; and an Associate Clinical Professor in the Department of Medicine and Epidemiology at the UC Davis School of Veterinary Medicine.

Past positions: Veterinary Resident and Clinical Fellow, California Regional Primate Research Center (1993-1996).

Education: BA (Biology) 1987 from UC Santa Cruz; DVM 1993 from UC Davis; Board Certification (2001), American College of Zoological Medicine

AAWV History: Member 1990 - present; Secretary 2001 - 2003 (Interim Secretary 2000-2001); Vice-President 2003 - present; Chairperson, ad hoc Strategic Affiliations Committee, 2002-2004.

Statement: I am seeking the office of President of the American Association of Wildlife Veterinarians to provide leadership and continue efforts to strengthen and grow the organization, position it for long-term success, and expand the services and resources it provides its members and its affiliates. I look forward to the challenge of serving this unique professional organization, and to working with fellow officers and members to advance our mission.

Vice President Candidates Jonathan Sleeman and Mike Ziccardi

Jonathan Sleeman is a Wildlife Veterinarian for the Commonwealth of Virginia, Department of Game and Inland Fisheries. He conducts wildlife disease surveillance and outbreak investigation and develops recommendations for policy related to wildlife diseases. Also, he designs and implements wildlife health research projects and immobilizes wildlife and provides other technical assistance to biologists. Additionally he serves as the State Wildlife Emergency Disease Officer under the USDA Animal Emergency Response Organization, provides information and training to agency personnel and the public, and is an adjunct professor at Virginia Maryland Regional College of Veterinary Medicine and University of Tennessee College of Veterinary Medicine.

Past positions: Director, Mountain Gorilla Veterinary Center (1995-1997); Instructor, Colorado State University (1997-2000); Director of Veterinary Services, Wildlife Center of Virginia (2001-2005).

Education: MA (Zoology: 1989); VetMB (1992); Residency in Zoological Medicine (1993-1995), DVM Equivalency (2001); Dipl. ACZM (2002); RCVS Recognized Specialist (2003).

AAWV History: President's Advisory Council (2003-Present)

Statement: With the increasing threat of wildlife diseases to natural resources, human health and the economy, the AAWV will continue to increase in prominence and importance. I would promote an agenda that maintains the AAWV as a strong, viable independent organization with strategic alliances with other wildlife health bodies. I would work to promote the consensus of the AAWV in relevant policy decision-making. I would also work vigorously to increase membership, formal training opportunities for wildlife veterinarians and funds for applied wildlife disease research. I have been lucky to have a varied career. Consequently, I believe I can represent the viewpoints of the diverse membership including practitioners, academicians, and government veterinarians as well as international members.

Michael Ziccardi is a Senior Wildlife Veterinarian and Director of the Oiled Wildlife Care Network, Wildlife Health Center, University of California, Davis. The Oiled Wildlife Care Network is a collaborative program between California Department of Fish and Game and UC Davis designed to provide the best achievable care to oiled wildlife. Mike also is an adjunct Professor of Wildlife Health at UC Davis where he is responsible for instruction and research in wildlife and ecosystem health.

Past positions: Wildlife Epidemiologist, Lincoln Park Zoo; Associate Wildlife Veterinarian, Wildlife Health Center, UC Davis

Education: BA (Aquatic Biology) 1989, DVM (Wildlife Emphasis) 1993, MPVM 1994, PhD (Epidemiology) 2001

AAWV History: Member 1991 - present, Newsletter Editor 1999-2003, Treasurer 2004 - present

Statement: I am running for Vice President of AAWV because I am interested in helping to continue to promote and expand our organization's voice and impact on issues dealing with free-ranging wildlife.

Treasurer Candidate Colin M. Gillin

Colin M. Gillin is the State Wildlife Veterinarian with the Oregon Department of Fish and Wildlife where he coordinates and directs the statewide program for wildlife health and disease management and control, and investigates mortality events involving game and non-game species. He also formulates and promulgates policies, procedures, and regulations and coordinates ODFW agency response to disease issues and outbreaks. Colin has adjunct faculty appointments at Tufts University, Cummings School of Veterinary Medicine, and Oregon State University School of Veterinary Medicine and is a Veterinary Medical Officer for Veterinary Medical Assistance Team (VMAT5/FEMA).

Past positions: Research Assistant Professor, Tufts University School of Veterinary Medicine; Grizzly Bear Biologist & Supervisor of Biological Services, Wyoming Game and Fish Department.

Education: BS (Wildlife Conservation and Management) 1981, MS (Zoology and Physiology) 1989, University of Wyoming; DVM 1998, Tufts University School of Veterinary Medicine; Post-doctoral appointment in Conservation Medicine (TUSVM) 1998-2000; Wildlife Society – Certified Wildlife Biologist 2000; National and Oregon Veterinary Emergency Response Team (USDA/Oregon Department of Ag); State Wildlife Liaison Officer (USDA/SCWDS).

AAWV History: Member since 1994; Served as the website editor since 2003.

Statement: I am running for the treasurer position for AAWV after I was informed by Bill Lance that it was time to get some new young blood into the officer ranks particularly with old farts like Jessup running the show. I couldn't come up with an argument quick enough for not running and with Lance's salesmanship……..the rest is history.

Secretary Candidates Mark Cunningham and Kathy Quigley

Mark W. Cunningham is a Wildlife Veterinarian with the Florida Fish and Wildlife Conservation Commission. Specifically, he is the Florida panther veterinarian and is responsible for immobilization, sampling, emergency treatment, necropsy, and disease investigation in Florida panthers. His other job responsibilities include investigation of wildlife mortality events and chronic wasting disease surveillance. Mark has an adjunct appointment at the University of Florida, College of Veterinary Medicine.

Past positions: Florida Fish and Wildlife Conservation Commission/University of Florida, College of Veterinary Medicine. Florida black bear health, disease, and genetics investigations.

Education: BS (Biology), Florida State University, 1991; DVM, University of Florida 1998; Master of Science, University of Florida, expected August 2005.

AAWV History: Member since 1996.

Statement: I have bounced very few (if any) checks this month.

Kathy Quigley is a field veterinarian with the Wildlife Conservation Society. Specifically, she has been a veterinarian for Siberian tiger project in Russian Far East for the past 14 years. Her responsibilities include veterinary oversight for all aspects of the radio-telemetry field study, and collaboration with Russian government officials, regional veterinary teaching hospital, and regional veterinarians, teaching wildlife health and animal immobilization to field personnel, Russian veterinarians, and tiger protection personnel. She also is a veterinarian supporting cougar studies in Yellowstone and Teton National Parks, and a Wolverine Ecology Study in the Greater Yellowstone Ecosystem.

Past Positions: Field veterinarian for the Hornocker Wildlife Institute, overseeing all veterinary aspects of studies in the northwest including Human/Bear interactions in Yosemite and Teton National Parks, a Swift Fox Ecology and pup mortality study in Southern Colorado, a Cougar Ecology Study in the Frank Church River of No Return Wilderness, an Amur Leopard Ecology Study in the Russian Far East, and a Black Bear Ecology study in New Mexico. In addition I worked in partnership with the Omaha Zoo training all field personnel in capture and handling techniques.

Education: DVM Degree from Washington State University – 1983.

Statement: I am running for office because I feel that, as a field veterinarian, the dimension I can add to the organization would be beneficial.

TB in Wild Boars in Spain

Source: ProMED (edited)

Recent observations in Spain showed that bovine and caprine tuberculosis circulate in local wildlife populations and that 6 out of 11 spoligotypes isolated were similar to types described in human cases. *Mycobacterium bovis* and *M. caprae* have both been isolated in fenced hunting estates, from cervids and wild boars that have not had contact with domestic livestock for at least 2 decades, strongly suggesting that the bacteria are able to survive in these populations. Consequently, wildlife is being considered in the epidemiology and control of tuberculosis and the Environmental Council will advance the wild boar hunting season in Els Ports national hunting reserve to try and reduce the wild boar population and stop dissemination of tuberculosis, which was initially detected at the end of 2004.

Duck Viral Enteritis in DC

Source: ProMED (edited)

The Smithsonian National Zoo in Washington D.C. has experienced an outbreak of duck viral enteritis in its collection ducks and wild ducks found in the park. Duck viral enteritis is an acute, highly contagious disease of ducks, geese, and swans of all ages, characterized by sudden death, high mortality (particularly among older ducks), and hemorrhages and necrosis in internal organs. Most of the 20 fatalities have been wild wood ducks. Gross lesions were initially vague or non-existent. Days later, birds began to show white spots in the liver and, occasionally, thickened Peyer's patches. Histologically, there was hepatic necrosis with intranuclear inclusion bodies in the hepatocytes. DVE was confirmed at the Cornell University Duck Research Laboratory by PCR. Zoo collection animals that have been affected include an Australian shelduck, a gadwall, a Bahama pintail, and a Barrow's goldeneye. The last fatality occurred on 27 May 2005.

New cases of CWD in NM

Source: ProMED (edited)

The recent finding of 2 mule deer that have tested positive for chronic wasting disease (CWD) brings the number of confirmed CWD cases in New Mexico to 11. The disease was first discovered in New Mexico in 2002, when the disease was confirmed in a deer found near the eastern foothills of the Organ Mountains. All 11 CWD-infected deer have been found in the same general area of southern New Mexico. The origin of the disease in New Mexico remains unknown. The carcasses of the infected deer will be incinerated, said Kerry Mower, the Department's lead wildlife disease biologist.

Mower said the most recent CWD-positive deer showed no obvious physical signs of having the disease. They were captured in April 2005 and tested as part of a 3-year-old research project studying deer population dynamics in southern New Mexico. More than 140 deer have been captured alive and tested for the study, in which researchers hope to find the cause of a 10-year decline in the area deer population. Study participants include the Department of Game and Fish, the U.S. Army at White Sands Missile Range and Fort Bliss, Bureau of Land Management, U.S. Geological Survey at New Mexico State University, and San Andres National Wildlife Refuge.

For more information about the status of CWD in New Mexico see http://www.wildlife.state.nm.us/conservation/disease/cwd/.

Highly Pathogenic H5N1 Influenza in Migratory Birds

Source: ProMED (edited)

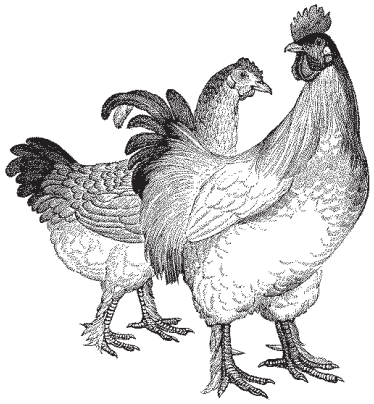
On 4 May 2005, a few birds were found dead in on "Bird Lake" in China and by the end of June more than a thousand birds were affected. This lake is one of the most important breeding locations for migratory birds that overwinter in Southeast Asia, Tibet and India. Several species were infected, including the bar-headed goose *Anser indicus*, great black-headed gull *Larus ichthyaetus* and brown-headed gull *Larus brunnicephalus*. Two key symptoms were noticed: abnormal neurological signs (tremor and opisthotonus) and diarrhea. Among the gross lesions, pancreatic necrosis was obvious and was confirmed by tissue section where extensive areas of lytic necrosis were seen, consistent with pathology observed in domestic geese and ducks infected with H5N1 AIV. Brain sections revealed glial cell infiltration, perivascular cuffing, and congestion in the blood vessels. Serological tests from one bar-headed goose and one brown-headed gull confirmed the presence of high-titer antibody against H5N1 AIV.

Several H5N1 viruses were isolated from the viscera, brain and the swabs of the oropharynx and cloaca of sick and dead birds. four of the isolates from different bird species were completely sequenced and appeared to be closely related. None of the GenBank sequence data for known H5N1 AIV genomes completely matched sequences, implying the viruses are reassortants. Five of the eight genomic segments were closely related to a Hong Kong 2004 isolate.

To test virulence, mice and chickens were infected with the BhGoose/QH/1/05 isolate. All 8 infected chickens died within 20 hours and 7 of 8 infected mice died within 72 hours, and the last died 96 hours post-infection. Earlier isolates taken from ducks in China were less virulent in mice and chickens. Researchers speculate that viruses might be emerging from reassortants originating in birds overwintering in Southeast Asia.

The occurrence of highly pathogenic H5N1 AIV infection in migrant waterfowl indicates that this virus has the potential to be a global threat: Lake Qinghaihu is a breeding center for migrant birds that congregate from Southeast Asia, Siberia, Australia and New Zealand.

Editor's note: at last count, wild bird mortality in the Niannaisuoma village, Quanji town, Gangcha county, Qinqhai province was at 519 birds and in addition to the species mentioned above, also included ruddy shelduck (*Tadorna ferruginea*) and great cormorant (*Phalacrocorax carbo*). Diagnosis were made at the National Avian Influenza Reference Laboratory (Harbin Veterinary Research Institute, Chinese Academy of Agricultural Sciences).



Domoic Acid spotted in Sea Lions

Source: ProMED (edited)

A bloom of toxic phytoplankton off Southern California threatens sea lions and other marine life that feed on sardines, anchovies and other small fish, authorities warn. "We could have a big die-off," says Dennis Kelly, chairman of the Marine Science Department at Orange Coast College in Costa Mesa. Dozens of pregnant sea lions suffering from domoic acid poisoning beached themselves in Southern California recently. Domoic acid is a neurotoxin in mammals causing brain damage, neurological dysfunction, and death in severe cases. A microscopic algae produces the toxin that causes brain damage in marine mammals, but does not appear to affect fish. Joe Cordaro, a wildlife biologist with the National Marine Fisheries Service, says it's too early to tell if a major die-off is imminent. He says water samples taken near Santa Catalina Island contain the algae that produces the acid, but added "it's not a widespread bloom right now."

News Brief: Simian foamy virus jumps to humans

Source: ProMED (edited)

Scientists have ident ified the 1st reported case in Asia of primate-to-human transmission of simian foamy virus (SFV), a retrovirus found in macaques and other primates that so far has not been shown to cause disease in humans. The transmission of the virus from a monkey to a human took place at a monkey temple in Bali, Indonesia, the researchers report in the July 2005 issue of the journal Emerging Infectious Diseases. Even though this particular virus jumping to humans may not prove dangerous, the scientists warn that the dense human and primate populations in Asia could lead to other primate-borne viruses jumping the species barrier and causing human disease.

"The issue of primate-to-human viral transmission has been studied extensively in Africa, largely because that is where HIV originated," explains Dr Lisa Jones-Engel, lead author of the study and a research scientist in the Division of International Programs at the Washington National Primate Research Center. "But there has not been much work on the topic in Asia, which has huge primate diversity and large human populations."

Jones-Engel and her co-authors also argue for more research on diverse contexts of human-primate contact. The vast majority of previous viral transmission research focused on bushmeat hunting and consumption, a practice in which local residents hunt monkeys for food, which is more commonly practiced in Africa.

HIV, the virus that causes AIDS in humans, is believed to have originated as simian immunodeficiency virus (SIV), and jumped the species barrier to humans when African bushmeat hunters came into contact with blood from infected animals. Though bushmeat hunting and consumption may be a significant factor in viral transmission in Africa, Jones-Engel says, people in Asia have many other contexts in which they come into contact with primates, including animal markets, primate pet ownership, urban performing primates, and zoos. In addition, monkeys are significant symbols in both Buddhism and Hinduism, and monkey temples, which are places of religious worship that have become refuges for populations of primates, are common throughout much of South and Southeast Asia. In these areas, protected macaque populations have thrived alongside dense human settlement for centuries.

On the island of Bali alone, there are more than 40 such temples, which are frequented by tourists from around the world. About 700 000 international tourists visit the island's 4 main monkey temples every year. Temple workers and people who live near the temples also have a great deal of contact with monkeys at the religious sites.

"In Asia, the amount of contact between humans and primates in temple settings dwarfs the contact due to bushmeat hunting," says Jones-Engel. For this study, the researchers tested blood samples from 82 people who work in or around a temple in Bali, as well as samples from macaques in the area. They found antibodies for simian foamy virus in the blood of one 47-year-old farmer who visited the temple every day. They confirmed the tests by performing a DNA analysis of the man's blood and found that the SFV strain he carried was the same strain found in the temple's macaques. The man denied owning a monkey as a pet, or hunting monkeys for food. He had been bitten once and scratched more than once by the temple's macaques.

Researchers still don't know the long-term effects of SFV on humans. There are about 40 known cases of people being infected through laboratory or zoo contact or through bushmeat hunting in Africa. There are no known cases of human disease yet.

However, Jones-Engel and her fellow researchers warn that there are other primate viruses known to be harmful that could jump the species barrier. They don't want people to be afraid of coming in contact with macaques or other primates, but they do urge people to be cautious and careful when interacting with monkeys. Feeding the animals, or even carrying food into a temple, can greatly increase the risk of a bite or scratch, which can lead to transmission of infection. Visitors occasionally engage in other risky behavior, such as touching animals or trying to hold baby monkeys. Limiting such behavior can reduce the risk of bites and scratches.

Limiting dangerous contact between primates and humans can have other benefits as well, such as reducing the transmission of human infections to monkeys. Human measles, for instance, can cause disease in monkeys and can even kill them. Other primate species have already seen significant population losses because of infection by human illnesses.

For more information see Jones-Engel et al. 2005. "Primate to human retroviral transmission in Asia." *Emerging Infectious Diseases* 11(7)

http://www.cdc.gov/ncidod/EID/vol11no07/04-0957.htm.

VT to protect state from CWD, but no captive game farming ban

Source: VT Agency of Agriculture and VT Fish and Wildlife Press Release (edited)

Vermont continues to take strides toward protecting its captive and wild deer population from Chronic Wasting Disease (CWD). These proactive efforts come after several captive and one wild deer in New York State were found with the disease, the first time that CWD has been identified east of the Mississippi. There have not been any reported cases of CWD in Vermont.

On April 7, shortly after the first positive test in New York, Vermont Governor James Douglas convened a CWD task force charged with protecting Vermont's deer herd through rules and regulations. The task force consists of representatives from the Agency of Agriculture, the Department of Fish and Wildlife, and the Department of Health.

On Monday, May 2, Governor Douglas signed into law legislation allowing the Vermont Agency of Agriculture to draft new rules for captive cervids in the state. The law provided that the rules are to be adopted in an expedited process due to the enormous threat posed by CWD.
Those rules will include:

* Mandatory registration and certification of captive cervids (deer, elk, etc.)
* A mandatory identification program for captive cervids
* Mandatory testing at slaughter for carcasses that are over 16 months in age
* A feed ban on ruminant protein fed to captive livestock, including deer
* Mandatory fencing for captive cervids
* Expanded authority for the Secretary of Agriculture governing captive cervids

The CWD work group has also been working on an emergency response plan should CWD be found in Vermont. This plan for captive herds is included in the new rules, while a plan for dealing with CWD in the wild population should be finalized in the coming weeks.

The group has also determined that a depopulation of captive herds is not necessary at this time. A moratorium on imports and a voluntary testing program have been in place since 2002, decreasing the likelihood that CWD has been introduced in captive herds. Nevertheless, experience in other states indicates that captive herds are more at risk of contracting CWD than wild deer. New York State has taken steps to depopulate both captive herds in the areas where CWD was discovered.

"The fact that we have had a moratorium on imports and a voluntary testing program in place since 2002 decreases the likelihood that CWD is present in our captive herds, but we must remain vigilant in our efforts because at present there is no way to test live animals," according to Agriculture Secretary Steve Kerr, a task force member. "At this time, science does not justify Vermont taking the kind of drastic measures that have been taken in other states with regard to captive herds. We believe the new rules will build upon those earlier efforts, and allow us to track animals and isolate cases of CWD should there be a problem."

Kerr also noted that shutting down captive cervid operations would have a negative impact on the state's agricultural economy.

"We are striving for a diversified agricultural landscape, and these deer and elk farms have real value, not only to their owners, but to their local economies," Kerr said. "We continue to meet with representatives of this important industry as we move forward to make sure that they understand the steps we are taking to respond to the threat posed by CWD. We need to do everything we can to prevent CWD from affecting our captive herds, and we recognize that it is critical that the captive herd owners be involved and work with us in those efforts."

White Pelican Mortality

Source: ProMED (edited)

The Fish and Wildlife Service is investigating the deaths of thousands of young white pelicans at the Chase Lake National Wildlife Refuge in central North Dakota, a year after thousands of adult birds abruptly left the refuge.

At least 8000 white pelican chicks may have died over the past 2 months, spokesman Ken Torkelson said. Severe storms or a disease outbreak may have caused the mass die-off at the rookery, said Marsha Sovada, a biologist at the U.S. Geological Survey's Northern Prairie Wildlife Research Center in Jamestown. "Because of weather and some apparent disease or disturbance of some sort, we've seen a reduction of birds," Sovada said.

The Fish and Wildlife Service said an inspection of the refuge last week indicated only about 500 chicks left from a nesting period that could have produced as many as 9000 of them. The check also showed all but about 2000 adults had left, from a population estimated at 18, 850 in late May 2005.

Officials had hoped the refuge would return to normal after nearly 30,000 adult pelicans took off in 2004, leaving their young behind. A check in late May indicated the pelicans were back, but officials still could not pinpoint what caused last year's exodus. Now, they have another mystery to solve.

The white pelican, one of the largest birds in North America, breeds only once a year, and males and females take turns caring for their young. The birds have a wingspan of nearly 10 feet and live about 25 years.

The white pelican colony at the 4385-acre Chase Lake National Wildlife Refuge north of Medina has been the largest in North America, peaking at 35 466 birds in 2000. The pelicans normally stay at the Chase Lake refuge through September, raising their young and feasting on

crawfish, small fish and foot-long salamanders from small ponds known as prairie potholes.

Samples have been sent to the National Wildlife Health Center in Madison, Wisconsin, to try to find out what killed the young birds at Chase Lake. Torkelson said that will take some time. "They have to rule out a lot of diseases before they can pin down the correct one," he said.

The chicks that remain at the refuge are more than a month old, still being cared for by adults, Torkelson said. "Typically, 2 hatch but only one survives," Torkelson said. The chicks remaining at the refuge appear to be healthy, Sovada said. Biologists have attached backpack transmitters to 8 pelicans at Chase Lake to monitor their movements when they leave the colony. Sovada said the pelicans fitted with tracking equipment are foraging in the area, but have not returned to the rookery at Chase Lake.

Sovada said large die-offs of pelican chicks have been reported this week at Medicine Lake National Wildlife Refuge in northeast Montana and at Waubay National Wildlife Refuge in northeast South Dakota. "I don't believe they are experiencing an exodus, but they are seeing significant deaths of pelican chicks," Sovada said. "It could have no relation to what's happening at Chase Lake." Pelican nesting colonies in Montana, South Dakota and Minnesota also have had high chick mortality rates in the past 3 years, Torkelson said. He believes some of the pelicans will be back next year at Chase Lake, but perhaps not in great numbers. "I'd be surprised if zero came back and I'd be surprised if 30 000 came back," Torkelson said. "I think it will be somewhere in between."

UPCOMING MEETINGS 2005–6

2005

Aug 23–25	2005First International Conference on Health and Biodiversity, Galway, Ireland; for more information see: http://www.cohab2005.com/programme.htm
Sep 25–29	12th Annual Conference of The Wildlife Society, Madison, Wisconsin; for more information see http://www.wildlife.org/
Sep 29–Oct 1	Short Course on Public Policy: politics, facts, beliefs & animal health; Davis, California. This course is designed for professionals working in animal related fields who want an introduction to the implementation of animal health public policy. It will discuss how animal health policy is shaped, enacted, and influenced. The course consists of lecture, small group discussions, and a field trip to the State Capitol Legislative Offices. For more information see: www.vetmed.ucdavis.edu/ce
Oct 15	The American College of Zoological Medicine Ultra-short Course. This 1-day ultra-short course will be given in conjunction with the American Association of Zoo Veterinarians Annual Conference. The ultra-short course is divided into two main sections. The first section is meant to introduce to the attendee to the ACZM, reasons for becoming a Diplomate of the American College of Zoological Medicine, how to become eligible to take the ACZM examination, and provide study and test-taking strategy, including a short mock exam. The second section consists of lectures intended to cover specific topics in-depth. The lecture topics to be covered at this year's ultra short-course will be posted in the AAZV registration materials; The cost of this course will be approximately $120. To register for this course, please see the AAZV registration materials at www.aazv.org
Oct 16–21	Annual Meeting of the American Association of Zoo Veterinarians hosted by the Henry Doorly Zoo, Omaha, Nebraska. Note that this meeting includes an AAWV-sponsored cutting edge speaker (Dr. Mike Osterholm, avian influenza and other gloabal health threats); two joint AAWV/ AAZV sessions (Emerging and Zoonotic Diseases of Captive and Free-ranging wildlife and Guidelines for veterinarians working abroad and reports from the field); as well as an AAWV session entitled remote imaging and sensing technologies. For more information see: http://www.aazv.org/meetings.htm
Nov 3–10	109th Annual Meeting of the United States Animal Health Association. Hershey Pennyslvania. For more information see: http://www.usaha.org
Nov 5–6	14th Annual Mid-Western Exotic Animal Medicine Conference, Manhatten Kansas; for more information contact: Info: Dr. James W. Carpenter, College of Veterinary Medicine, Kansas State University, Manhattan, KS 66506, USA. Tel: (785) 532-5690; FAX: (785) 532-4309; e-mail: carpentr@vet.ksu.edu
Nov 24–28	The 27th meeting of the International Waterbird Society to be held in Tainan, Taiwan. The theme of this meeting is "Avian Disease and Bird Migration" in Tainan, Taiwan. For more information see: www.waterbirds2005.org. Please note that in association with this meeting, there will be a special symposium entitled "Diseases of Wild Birds in East Asia: Conservation Implications in a Real World," which will be held on November 26. If you are interested in presenting a paper at the Symposium, abstracts are due by September 1, 2005.

2006

Mar 19	The International Conference on Emerging Infectious Diseases, Marriot Marquis, Atlanta Georgia. Electronic Abstract submissions are due no later than November 18, 2005. For more information see: http://www.iceid.org/default.asp

Wildlife Disease Specialist

Sustainable Resource Development, Edmonton, Alberta

Would you enjoy the opportunity to assist in Alberta's wildlife disease program by providing improved service and response to such disease issues as the West Nile Virus and Chronic Wasting Disease? The province of Alberta and Sustainable Resource Development are leaders in integrated wildlife disease/wildlife health management, and we are looking for someone to play a pivotal role in maintaining such standards and programs, and that someone may be you!

Reporting to the Provincial Wildlife Disease Specialist within the Wildlife Management Branch, you will be responsible for aspects of wildlife disease testing, diagnostics, data collection, organization, records, analysis, reporting, and research. Your background and training in wildlife diseases and wildlife parasitology, and knowledge of basic disease diagnostics, will assist you in carrying out important functions of this project position. In this role, your duties and responsibilities may also include:

- Design and implementation of credible methods for data collection, diagnosis, and analysis
- Development of provincial Class Protocols to guide the proper handling of wildlife in Alberta
- Design and implementation of provincial health monitoring programs for specific species
- Independent and applied research on a range of disease management concerns

Your proficiency in all aspects of communication, and your advanced knowledge of ecological principles, will assist you in designing and undertaking credible scientific investigations and translating the results to diverse groups of stakeholders. You will operate with a high degree of independence in analyzing data and conducting research, and your experience in specialized aspects of laboratory diagnostic work will be of a great advantage to you. Attention to detail, strong organization skills and solid problem solving abilities are also critical in this role.

Qualifications

A Masters Degree in Biology or a related discipline from a recognized university, plus several years related experience. A Doctor of Veterinary Medicine degree or PhD would be preferred. Specialization in wildlife parasites and diseases is required. Familiarity with risk assessment procedures and animal care concerns is preferred. Equivalencies may be considered. Candidates with lesser qualifications may be considered at a lower classification level and salary. This competition may be used to fill future vacancies. A valid Class 5 Driver's License is required. Final candidates for this position may be asked to undergo a security screening.

For more information about Sustainable Resource Development, the Fish and Wildlife Division, and, in particular, the Wildlife Management Branch, please visit http://www3.gov.ab.ca/srd/. Please also visit the Wildlife Disease webpage at: http://www3.gov.ab.ca/srd/fw/diseases/index.html.

Salary

$46,692 TO $70,212 (Canadian) PER ANNUM

Closing Date

Open Until Suitable Candidate Selected.
Competition No. 028929-IN; Open Competition

To Apply

Online applications are preferred. Visit www.gov.ab.ca/jobs or submit your resume to Alberta Sustainable Resource Development, Human Resource Services, 4th Floor, Petroleum Plaza, South Tower, 9915-108 Street, Edmonton, Alberta T5K 2G8. Fax No. (780) 427-2513. Please ensure you quote the competition number.

We thank all candidates for their interest; however, only individuals selected for interviews will be contacted. Due to the large volume of applicants, we regret we cannot confirm that our office has received resumes. Applicants who apply online will receive an email acknowledging receipt of their application.

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F O L D H E R E

C U T H E R E

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.

AAWV Ballot—Summer 2005

❑ I do
❑ I do not

support the changes in the AAWV Constitution and Bylaws listed in the January 2005 AAWV newsletter.

Please circle one candidate for each office:

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Kirsten Gilardi

Vice President
Mike Ziccardi
Jonathan Sleeman

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Colin Gillin

Secretary
Mark Cunningham
Kathy Quigley

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SUMMER 2005

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