About This Newsletter….

The purpose of this newsletter is to reach out and connect with the veterinary community in Pierce County. The connection between veterinary medicine and public health has always been there. This newsletter will allow us to provide information to the veterinary community on a regular basis. We look forward to enhancing our relationship.

Toxic Blue-Green Algae Blooms
Ray Hanowell, RS
TPCHD Water Resources Program

With spring here and summer quickly approaching, it is useful to review some basic information about toxic blue-green algae (cyanobacteria) blooms in local lakes. Toxic blooms have occurred on a fairly regular basis over at least the past decade in Steilacoom Lake and have also been identified in many other lakes, including American Lake, Bay Lake, Clear Lake, Lake Josephine, Spanaway Lake, Wapato Lake, and Waughop Lake. The deaths of a number of cats and dogs have been attributed to toxic blooms in Steilacoom Lake, American Lake, and Clear Lake.

There are two genera of blue-green algae that have been attributed to toxic blooms in Pierce County lakes: Anabaena and Microcystis. Anabaena primarily produces a neurotoxin and Microcystis produces a hepatotoxin.

American Lake and Clear Lake toxic blooms have been primarily Anabaena and have generally occurred in the late fall, winter, or early spring. The other lakes have generally had toxic blooms of Microcystis and these blooms have occurred during the summer or fall.

Two dogs and one cat were seen by a veterinarian during a toxic bloom in American Lake in the fall and winter of 1989-90. The animals were suspected of being poisoned by the neurotoxin anatoxin-A. Signs of poisoning were apparent within 30 to 60 minutes of ingesting algae and lake water and included: vomiting, lethargy, muscle tremors, and seizures. Body temperatures generally remained normal or slightly subnormal, mucous membrane appearance ranged from slightly pale to congested, respirations were shallow or labored, pulses thready, and the animals looked “shocky.” Treatment included IV fluids (Lactated Ringer’s solution), Dexamethasone Na Phosphate (4 mg/ml) slowly IV (0.5-2 mg/lb), and oxygen via positive pressure ventilation if respiratory arrest occurred. One dog was treated with Diazepam for seizures (with little effect). All three animals appeared much improved within 1 to 2 hours after treatment and initial seizures and tremors lasted for 1 to 3 hours after ingestion of algae and lake water. Some coordination problems lasted for up to three days, with lethargy persisting for 3 to 10 days post-ingestion. These cases suggest that animals poisoned by the neurotoxin can recover without long-term impacts if immediate and appropriate supportive care is provided.

Animals poisoned by the hepatotoxin microcystin-LR are likely to display weakness, anorexia, and pallor of the extremities and mucous membranes. Death can occur minutes to days after ingestion if liver damage is extensive. If a sub-lethal dose is ingested, the animal may suffer chronic liver disease.

The death last fall of a 65-pound chocolate lab and Doberman mix was attributed to a Microcystis bloom in Steilacoom Lake and several pets were reported to have died this spring during an Anabaena bloom in Clear Lake. Animal poisonings from toxic blue-green blooms continues to be an ever present problem.

If an animal is presented to you with the above symptoms, please consider toxic blue-green algae poisoning as a possible cause. For more information on toxic blooms, please call Ray Hanowell, Environmental Health Specialist II, at (253) 798-2845.

Zoonotic Hotline 253-798-7694
**Bat Tests Positive for Rabies**

Joyce Seger, RS  
TPCHD Zoonotic Disease Program

Imagine the horror this mother must have felt when her two small children presented her with a dead bat they had found on Saturday, March 12, 2005. The children, four and six years old, had found the dead bat while playing in their yard. After both children had handled the bat they took it to show their mother. Luckily, Mom kept her wits about her and packaged and stored the bat in her refrigerator until she could contact the Tacoma-Pierce County Health Department (TPCHD) on the following Monday.

Questioning by a TPCHD staff member revealed that the family owned a cat, approximately two years old, for which there were no immediate vaccination records available. The mother recalled the cat had been spayed and received a variety of shots over a year before.

The bat was delivered to the TPCHD for shipping to the Washington State Public Health Laboratory for rabies testing. Two days later the Washington State Department of Health Lab had completed the rabies test on the bat and reported back to TPCHD that the results were positive. The family was referred to TPCHD’s Communicable Disease program for follow-up by a department nurse and to make arrangements for post exposure prophylaxis for the children.

At that time the mother was also advised of options she could take concerning the family cat. There was no way to know if the cat had been in contact with the bat. Given its unvaccinated status (received first rabies shot only), she could either hold the cat in isolation and observe it for six months or euthanize it. She chose to have the cat euthanized.

She was also asked if any neighbors had pets so that they could be alerted to the fact there had been a rabies positive bat found in the neighborhood. She knew of only one neighbor nearby with dogs and was told by their owner that they were all current on rabies vaccine. The neighbor took the dogs in for boosters as a precaution.

The last time a bat tested positive for rabies in Pierce County was in October 2004 (see Veterinary Newsletter, December 2004). That case involved the bat having contact with two family dogs. Unfortunately, as in the above case, the dogs had only received the first rabies shot and were overdue for the second shot in the series. The owner in that case also chose to euthanize the pets.

As veterinarians, you are in the best position to remind pet owners of the importance of not only getting that second rabies shot on time to confirm full immunity, but of also keeping the shots current after that. You all know how heartbreaking it can be to lose a family pet. Having to make the decision to euthanize an otherwise healthy pet is doubly hard. Knowing that we have rabies positive bats in Pierce County, we at the TPCHD hope that you will take the extra few moments necessary and make your patients aware of the importance of keeping rabies vaccinations current.

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**Hemolytic Uremic Syndrome, Petting Zoo - USA (Florida)**

Byline: Dennis M. Blank

Six farm animals at a Florida petting zoo have been identified as the source of the potentially deadly strain of *Eschericia coli* (E. coli) bacteria that caused more than 26 people, most of them children, to be hospitalized, state health officials said Friday, April 8, 2005. As a result, the officials said, all 37 animals at the zoo have been quarantined.

The outbreak dates from late Feb and early Mar 2005, when the zoo, Agventure Farm Shows, provided petting animals for fairs in Orlando, in Tampa and in Plant City. Of the more than 24 people admitted to hospitals with the illness that followed, eight remain hospitalized, and the condition of one is described as critical. In addition, the cases of 41 people who suffered symptoms linked with *E. coli* 0157:H7 have been identified as "suspect."

That *E. coli* strain can cause hemolytic uremic syndrome, a disease in which the kidneys shut down. The syndrome is most dangerous to youngsters and the elderly, and many of the children hospitalized in this outbreak had to be put on dialysis machines because their kidneys had failed.

Agventure, based in Plant City, just east of Tampa, was the only zoo to provide animals to the 3 fairs that have been identified as sources of human contact with *E. coli*. Dr. John O. Agwunobi, Florida's secretary of health, said at a news conference Friday, April 8, 2005 in Tallahassee that the six animals at issue were the only ones identified -- through DNA testing on them and patients -- as carrying the bacteria.

State officials said the infected animals -- 2 sheep, 2 calves and 2 goats -- would be permanently barred from contact with the public and from slaughter for human consumption.
Outbreak of Equine Strangles in California

Strangles due to Streptococcus equi is a highly contagious upper respiratory bacterial infection. The disease can affect horses, donkeys and mules of all ages, but, most frequently, those younger than 2 years old. A person handling an infected horse can carry the organism on clothing, boots, or unwashed hands. Dr. Jonathan Fielding, Los Angeles County’s public health director reports that “although not terribly common”, transmission of S. equi to humans from domestic animals has been reported. The disease may affect people with a suppressed immune system and such persons should avoid contact with horses with strangles.

The following information was obtained from Washington State Department of Health and Washington State Department of Agriculture, and reported by Nedda Turner, Veterinary Newsletter Editor.

Plague and Tularemia Serosurvey Project Update—Any Results Yet?

A quick update for you on the plague and tularemia serosurvey conducted by the Washington State Department of Health. As you may remember, several veterinarians across Washington State were asked to participate in the plague and tularemia serosurvey. The project objective is to determine if cats and dogs have had exposure to plague and tularemia. Serum samples were collected from outdoor cats and dogs from both urban and rural dwelling pets. The Washington Animal Disease Diagnostic Laboratory received specimens from 21 vets/shelters from the state and will be testing them soon. A big thank you to those that contributed to this project. Results will be shared in the near future.

Chicks and Ducklings Discouraged as Easter Gifts

Washington State Departments of Agriculture and Health issued a joint press release on March 24, 2005. The press release was an effort to warn parents that these fuzzy little pets may also make children sick by exposing them to bacteria. Over the past 10 years there have been at least five outbreaks of salmonellosis in the Pacific Northwest associated with handling chicks. One of the largest outbreaks occurred in the spring of 2004 and affected over 22 residents of Washington and Oregon. In this outbreak, about half of those that became ill were children under the age of thirteen.

Please help share the prevention message with our community. Order your free educational materials, Salmonella/Chick-Wash Hands 4/8 flyer (334-072), 11/17 poster (334-070), duck sticker (334-069), and chick sticker (334-071). Simply fill out the publication request form available at www.doh.wa.gov/ehp/is/zoo/puborderform.pdf and fax it to the Washington State Department of Health—Publications Warehouse at (360) 664-2929.

2005 West Nile Virus Update

The Washington State Department of Health has announced they will resume testing birds for West Nile Virus starting April 18, 2005. Birds may be delivered to the Tacoma-Pierce County Health Department for shipment. The primary focus for bird testing will be birds in the corvid family, including crows, raven, magpies, etc. If you have questions or need information, please call our 24-hour hotline (253) 798-7694.

Pierce County Zoonotic Disease Data

1st Quarter January 1, 2005 through March 31, 2005

| Phone Calls/Consultations | 168 | 3 bats, 118 dogs, 34 cats, 13 other animals |
| Animals Quarantined       | 161 | 102 issued by the Health Department (79 dogs, 23 cats) 59 issued by other animal control agencies (45 dogs, 14 cats) |
| Animals Tested For Rabies | 9   | 4 dogs, 3 cats, 1 bats, 1 racoon |
The Veterinary Newsletter is produced by the TPCHD Environmental Health Zoonotic Disease Program. Your contributions are welcome. Please contact the Veterinary Newsletter Editor, Nedda Turner, at one of the options listed below.

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Thanks
To everyone who contributed to this issue of the Veterinary Newsletter.

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