



MN Branch AALAS

Newsletter

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Promoting training and education of laboratory animal technicians and the public in the use of laboratory animals in research.

2005 Board Members

President:

Mary Jane Courtney

Mark Your Calendars

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Banquet and Program

Robin Miller

5th Annual Minnesota Branch AALAS Golf

Friday July 29, 2005

3M Tarten Park Lake Elmo, MN

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Treasurer:

Jim Kadera

are still in the shell

Chicken Facts - Did You Know?

A hen and her Chicks communicate while the young

Secretary:

Robin Miller

1st Year Board Members:

by the Pet Poison Control

Angela Craig

available to pet owners

Heidi Fust

questions or would like

Cheryl Griese

poisoned pet. Our pet poison

Rebecca Kennedy

health professionals

28 years of experience

exposed to potentially

household chemicals,

plants.

Pet Poison Help Line: a service offered

Center, is nationwide 24 hour service

and veterinary professional who have

assistance with treating a potentially

control center is staffed with veterinary

and clinical toxicologists with more than

and expertise in the management of pets

dangerous substances such as pesticides,

drugs and

2nd Year Board Members:

1-800-213-6680

Nan Allen
Susan Coopmans
Lea Jackson
Linnea Lentz

What's Inside:
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District 6 Trustee
Chris Medina
Rita Moore

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District 6 TBR - Jim Kadera

AALAS Needs You....District 6 – Trustee & Alternate Trustee

PLEASE - Help out AALAS while you help out yourself and your institution. You can learn a huge amount from your fellow trustees and gain valuable networking contacts while you help shape AALAS's future. If you are interested, please contact me and I will help you get started with collecting nominating signatures, etc.

Thanks in advance,
Cyd Gillett
Director, Research Animal Resources
University of Minnesota
612-624-4625
gille002@umn.edu

AALAS Needs You...District 6 – Trustee & Alternate Trustee to run for trustee or alternate trustee. Serving in a leadership role offers you (as an AALAS member) the opportunity to make a difference in the association, network with your peers, and have fun! Terms begin at the close of the 2005 AALAS National Meeting in St. Louis and end at the close of the 2008 AALAS National Meeting in Indianapolis, Indiana.
2005 St. Louis, 2006 Salt Lake City, 2007 Charlotte, 2008 Indianapolis

To be placed on the ballot for a trustee or alternate trustee position, submit to the AALAS national office, no later than April 15, 2005, a supporting petition with at least 25 signatures of current AALAS national members from within your district. Review the AALAS Policies and Procedures Manual (P&PM), sections 4-25 & 4-9, for more information. (The P&PM and online and downloadable election related forms are available on the AALAS website, www.aalas.org.)

Requirements for eligibility – Board of Trustees

1. AALAS national membership in good standing for the past five consecutive years.
2. Have served in AALAS branch leadership and/or on a district, regional or national committee during the past five years.
3. Make a commitment to the three-year trustee or alternate trustee leadership term.
4. Reside in district of representation.

As a trustee, you must be willing to commit to attending the next three AALAS National Meetings, including the Board of Trustees Annual Session on the Friday preceding the Sunday opening, and two additional Board of Trustees Sessions during the year. As an alternate trustee, you may be asked to attend should the district trustee be unable to attend the meeting(s).

If you have any questions regarding responsibilities or time commitments associated with these positions, contact Eileen Morgan, Nominations Committee Chair, at (301) 496-9055, email morgane@mail.nih.gov, or your district trustee. You may also contact Ann Turner or Amy Sauls (amy.sauls@aalas.org) at the AALAS national office (901) 754-8620.

Heart Worm Disease:

In every state in this country, there is a dog or cat that is suffering from heartworm disease. It does not matter if you live in the driest, or the coldest, or the least populated state. Pets from every single area of our country can, and do get heartworm disease. Anywhere that there are warm-blooded animals (cats, dogs, ferrets, coyotes, and others) and it gets warm enough, even for a few days, for a mosquito to survive, there will be heartworm disease. Although the illness is more common in hot, wet areas of the country, it does occur everywhere. It is up to you to know about the disease and prevent it in your pets.

Heartworm disease is a potentially life-threatening illness spread from animal to animal through mosquito bites. It is caused by a parasitic worm called *Dirofilaria immitis*. Young *Dirofilaria* worms, called microfilaria, circulate in the bloodstream of an infected animal. When mosquitoes feed on the infected animal, the mosquitoes pick up these immature, microscopic parasites. Within a couple of weeks, the microfilaria have matured within the body of the mosquito and are ready to infect another mammal. The next time the mosquito feeds, these young parasites, now called larvae, are injected into the next animal. This animal could be your cat or dog.

Once within your pet, the immature worms migrate through the body, eventually reaching the heart, lungs, and connecting blood vessels. In approximately six months, they grow to become adults as long as 14 inches in length. When they reproduce, their tiny offspring, the microfilaria, circulate in the

bloodstream. At this point the cycle repeats and the worms can be spread to another animal by a mosquito bite.

The adult worms can live in your pet's body for many years. While there, they cause severe disease. Because these parasites live in the heart and blood vessels, the disease signs are those of heart and lung problems. Dogs with heartworm disease may tire easily, cough, lose weight, and have trouble breathing. As the illness progresses, animals may have fluid build-up in the abdomen and swelling of the legs. If not identified and treated, heartworms can cause cardiac failure and the death of the pet. Cats may show no early outward signs, but collapse and die without warning.

Heartworm disease is a terrible illness. Fortunately, it is treatable if diagnosed early, before severe heart and lung disease occurs. Diagnosis can be made with simple blood tests, but more sophisticated tests, including radiographs, angiography, and ultrasonography, may be used. Treatment involves injections of medication that kill the adult heartworms, specific drugs to eliminate the microfilaria, weeks of rest, and therapy as needed to control the medical problems that occur as a result of killing the worms. Treatment is typically successful and most, but not all, pets survive.

It is far wiser and much easier to prevent heartworm disease. This is done by administering medications to your pets that will kill larval heartworms if they are injected by a mosquito bite. Several types of preventive medication are available for dogs, including tablets given on a daily basis, monthly tablets, and a monthly spot-on topical solution. Cats can also be placed on monthly heartworm preventive medication, available either as a tablet or a spot-on topical solution. Animals should be on preventive medication whenever mosquitoes are present. In some areas of the country, pets may be kept on preventive medications year round, while in areas with cold winters, preventive may only need to be used during warm weather. Pets that are traveling from heartworm-sparse areas into warmer locations should also be on preventive medication.

Heartworm testing is a necessary, although sometimes confusing part of heartworm disease prevention. Testing is performed prior to placing a pet on heartworm preventive and to detect the illness

in a sick pet. The tests check for the presence of adult heartworms. There are many methods of testing, including several types of blood tests. A very common test, often done in the veterinarian's office, is called an antigen test. This test detects female adult heartworms that are at least six or seven months old. Other tests include blood smears to look for microfilaria and older, antibody tests.

All dogs should be routinely tested for heartworm disease. Your own veterinarian will advise you as to the proper time to test your dog. Testing is typically done on an annual basis, although some dogs may require more frequent testing. Young dogs are not tested, but any puppies over six or seven months of age should be tested prior to starting preventive. Dogs that are taking heartworm preventative for only part of the year should be tested each year prior to beginning preventive therapy. If the test is negative, the dogs should be immediately placed on preventive medication. Dogs that are on year-round preventive are tested approximately once per year, at the discretion of the veterinarian. It is important to understand that the preventive should never be given without performing the blood test. Placing any animal on preventive that is already infected with heartworms can result in a severe reaction and the death of the animal.

Testing of cats can be quite confusing and is not routinely performed. Microfilaria tests are not helpful as most cats do not have these baby heartworms in their blood stream. Antigen and antibody tests, although helpful in determining disease in sick cats, are too often inaccurate to be used for routine screening. Therefore, cats are not tested prior to being placed on heartworm preventive.

Heartworm preventives are extremely effective. They will prevent heartworm disease if appropriately administered to your pets. If you live in, or travel through, an area where your veterinarian recommends their use, there really is no good excuse for not using heartworm preventives. Even dogs and cats that do not set foot outside are candidates for the disease. The female mosquitoes that carry the disease are small enough to pass through screened doors and windows, and can infect indoor pets. So find out from your veterinarian if your cat or dog needs heartworm preventive. If so, make sure that your pet is placed on preventive medications. With so many products to choose from, you will definitely find

one that will meet the needs of your pet and you.

Future National AALAS Meeting Dates-

November 6-10, 2005 St. Louis, MO
October 15-19, 2006 Salt Lake City, UT
October 2007 Charlotte, N.C.
November 9-13, 2008 Indianapolis, IN

Pets Vaccinations

In an increasingly complicated world, it should come as no surprise that even choosing your pet's vaccinations can be a bit confusing. All those letters, numbers, and combinations of letters and numbers do not help one bit. Learning exactly what the letters stand for and how the numbers are put together can help you make the correct choice when picking out your pet's vaccines.

Let's start with the letters. The letters in the name of the vaccination usually stand for the diseases that the vaccine works to protect against. The letters are frequently the first letter of the name of the disease, so a vaccine that protects against distemper, most likely has a "D" somewhere in its name. Typically, the more letters in the product name, the more diseases covered by the specific vaccine.

The numbers typically stand for the number of individual vaccines combined in the product you will be purchasing. So a product with the number "5" in its name most likely has 5 vaccines in it. This does not always mean that the vaccine protects against 5 different diseases, because some manufacturers put more than one vaccine into a product to protect against only one disease. So a product with the number "8" in its title may actually protect against 6 diseases. This may sound confusing, but the confusion will clear up as you learn about the diseases and their vaccines.

Let's take a look at the vaccines, letter by letter. We'll look at each letter and the disease it stands for, and then examine some of the most common combinations.

The most common dog injectable vaccine products found in the combination products may have the letters D, A2, H, P, PV, Pv, CPV, CV, CVK, L, and L4.

"D" stands for distemper. Distemper is a highly contagious disease caused by a virus that often results in the death of the dog. It affects the gastrointestinal tract and respiratory system. If the dog survives the initial infection, the illness often spreads to the nervous system, causing death. There is no specific treatment except supportive care, and over half the infected dogs die. Additionally, many more have to be euthanized due to seizures and other chronic problems. Vaccination is the key to prevention and all dogs that are able to be vaccinated should receive distemper vaccinations.

“H” and “A2” stand for hepatitis and canine adenovirus type 2. The disease that both these vaccines protect against is infectious canine hepatitis. This illness is caused by a virus, the canine adenovirus type 1. Both canine adenovirus type 1 and type 2 are used to make vaccinations, so you may see both in the name of the vaccine. Canine infectious hepatitis can cause liver and blood vessel disease. Dogs may recover from the disease, die rapidly, or develop chronic liver problems. There is no specific treatment, except supportive therapy. Vaccination is highly effective at protecting dogs from this illness and all dogs that are able to be vaccinated should receive canine infectious hepatitis vaccinations.

“P” typically stands for parainfluenza. Parainfluenza is a virus that causes respiratory infections in dogs. It is also one of the culprits involved in infectious canine bronchitis, commonly called ‘kennel cough’. Vaccination with parainfluenza vaccine is important to protect dogs from respiratory disease. All dogs that are able to be vaccinated should receive parainfluenza vaccine as part of their vaccination regime.

“PV”, “Pv”, “CPV”, and sometimes “P” stand for canine parvovirus. This highly contagious viral disease is a well-known cause of gastrointestinal disease and death in many dogs. It is especially lethal to young dogs or those with inadequate immune systems. Because there is no specific cure, treatment is primarily intensive in-hospital nursing and supportive care. Vaccination can be highly effective at reducing the disease. Canine parvovirus vaccination should be included in the vaccination regime of all dogs that are able to receive vaccinations.

“CV” and “CVK” stand for coronavirus disease. This contagious viral disease causes intestinal illness that can be mild or severe, and has been associated with death, especially in young puppies. It is especially dangerous if it infects a dog at the same time as canine parvovirus. As with the other viral diseases, there is no specific therapy that eliminates the virus. Animals are treated with supportive and nursing care. It is often included in the vaccinations given to young dogs, as well as older animals.

“L” and “4L” stand for a leptospirosis. Leptospirosis is a bacterial disease that can cause several problems, including liver and kidney disease. The illness may be acute or chronic, inapparent or severe, and can cause death. The bacteria exist in many different subtypes, called serovars. Several of these serovars are known to cause disease in dogs. Most available vaccines protect against two of these serovars, *L. canicola* and *L. icterohaemorrhagiae*. A few vaccines protect against two additional serovars, *L. grippityphosa* and *L. 7omona*. It is important to read the vaccine label carefully to identify which serovars are present in the vaccine. Although vaccination against leptospirosis is very important for many dogs, not all dogs should receive this vaccine. Discuss the use of leptospirosis vaccine with your veterinarian.

In summary, there are six major components that may be found in the combination dog vaccines. These are canine distemper, infectious canine hepatitis, parainfluenza, parvovirus, coronavirus, and leptospirosis. The various combination vaccines have numbers and groups of letters to describe the vaccines present in each product. Because many manufacturers make similar types of vaccine, you may find more than one brand of each combination vaccine.

During production, vaccines are put together in different combinations to meet the needs of all types of dogs in all types of situations. Each vaccine will have a manufacturer's name, a product name, and a listing of the diseases covered by the product. The specific vaccines that you pick for your dogs will depend on several variables, including their ages, previous vaccinations, and their potential exposure to disease. Vaccines can be purchased with only one component, such as an individual parvovirus vaccine or coronavirus vaccine. However, for most dogs, combination vaccines are commonly used.

Cat vaccinations also come in combinations designed to meet the needs of different cats. They are manufactured by several manufacturers, so similar products may be available from different producers. Letters and numbers are also used to identify the different combinations of vaccines available for cats.

"FVR" stands for feline viral rhinotracheitis. This disease is an acute disease of the respiratory tract caused by a herpes virus. Cats that are infected with this virus may show sneezing, coughing, salivating, runny and red eyes, tongue ulcers, and congestion of the nose and sinuses. Eye ulcers may develop. Treatment is usually designed to control the symptoms and includes nursing care. Death may result in cats that are dehydrated, refuse to eat, or develop secondary bacterial infections. Because this illness is extremely debilitating and can reoccur throughout the cat's life, all cats that can be vaccinated should receive vaccines to protect against feline viral rhinotracheitis.

"C" stands for calicivirus. One member of the group of diseases that cause contagious respiratory infections in cats, this virus also causes an acute infection of the respiratory tract and can be difficult to distinguish from feline herpes virus. Signs that may differentiate it from viral rhinotracheitis may include ulcers on the palate and pneumonia. Although often less severe than viral rhinotracheitis, feline calicivirus can lead to death, especially in young kittens. All cats that are able to be vaccinated should receive proper immunization against feline calicivirus

"P", **"FPV"**, and **"FP"** stand for feline panleukopenia. Feline panleukopenia is also called feline "distemper" and feline infectious enteritis. This highly contagious viral disease is caused by a parvovirus and leads to a loss of circulating white blood cells. Signs include rapid, sudden onset of fever, lack of appetite, dehydration, vomiting, diarrhea, and often death. It can infect unborn kittens and lead to death of the newborns. Nursing and supportive care are the only available treatments. Feline panleukopenia vaccine should be included in the vaccinations given to healthy cats.

Chlamydia is not usually abbreviated, but is the fourth component of the 4-way vaccines. This bacteria-like organism, *Chlamydia felis*, is implicated as a cause of respiratory and ocular infections in cats. It can be difficult to differentiate from the herpes virus and calicivirus that also cause feline respiratory infections, and can cause sneezing, congestion, fever, lack of appetite, discharge from the nose, and eye infections. It can be treated with antibiotics. This vaccination may be included with the combination vaccinations designed to help prevent infectious respiratory infections in cats.

FELV, FeLV, LVK, and LV-K stand for feline leukemia virus. Feline leukemia is caused by a virus that replicates in the cat's body and attacks the immune system. It can cause many illnesses, including anemia, cancer, and multiple infections secondary to the loss of immune function. Cats with feline leukemia may be depressed, lose their appetites, lose weight, run fevers, have vomiting and diarrhea, and show many other disease signs. Infected cats that show disease symptoms eventually die from this illness. Cats with potential exposure to the feline leukemia virus should receive proper immunizations to help prevent infection.

3-Way, 3, or any other title with a 3 in it, typically refers to a vaccine that contains FVRCP, which are feline viral rhinotracheitis, calicivirus, and feline panleukopenia vaccines.

4-Way, 4, or any other title with a 4 in it, typically refers to a vaccine that contains FVRCP plus Chlamydia, which means that the vaccine contains components to protect against feline viral rhinotracheitis, calicivirus, feline panleukopenia, and Chlamydia infection.

A Colorful World

The common belief that dogs are color blind is false. Dogs can see color, but it is not as vivid a color scheme as we see. They distinguish between blue, yellow, and gray, but probably do not see red and green. This is much like our vision at twilight.

Cats can see color. Studies have shown that cats can distinguish between red and green; red and blue; red and gray; green and blue; green and gray; blue and gray; yellow and blue; and yellow and gray.

Easy Microwave Doggie Doughnuts

Ingredients:

2 cups	Whole Wheat Flour	1 tsp	Garlic
	Powder		

3 tsp Oatmeal 2/3 cup Beef or Chicken
broth

1 Egg, lightly beaten

Step 1: Place flour in a bowl, add egg and broth; mix well. Blend in oatmeal and garlic powder. Roll dough into a ball; roll out on a lightly floured surface to ½" thick. Cut with small doughnut cutters.

Step 2: Re-roll scraps and repeat. Arrange on a shallow baking dish or on a sheet or parchment paper in a single layer.

Step 3: Cook on HIGH 10 minutes or until firm. Let cool until hardened. Store in a covered container, in the refrigerator.

Help a Turtle Across the Road

Turtles (Chelydra serpentine) have survived for 200 million years - they watched the dinosaurs come and go. Now they face their biggest challenge in an uncertain future - MAN. Over exploitation, habitat destruction and pollution are the biggest factors in the decline of all Minnesota's amphibians and reptiles

Turtles are unique in having a heavy, boney armor that protects them from so many predators. Their shell (carapace), allows them to move quickly through the water, but hinders movement on land. It has remained virtually unchanged for countless generations. The ability to pull into a shell and wait for danger to pass by has proven very successful, until the automobile.

A study at the State University of New York estimates a 10-20% mortality rate of turtles in the Great Lakes region due to traffic encounters. Given that female turtles can take up to 20 years to reach sexual maturity, the loss of such high numbers can seriously affect an entire population's viability.

Turtles will move from one pond to another at any time of the year, but most turtle's that are found on the road are females heading to a nesting site during May through July. This spring ritual of traveling to ancestral nesting grounds on sandy riverbanks and upland fields comes into conflict when roads become a life threatening barrier between the relative security of wetland and higher nesting ground. For the female who makes the trip once successfully, she must return after laying her eggs to face the gauntlet of traffic a second time. Turtles may travel up to a mile for nesting which could force them to cross multiple roads.

Virtually impossible to see while traveling at highway speeds, a baby turtle must make this deadly journey in the fall in order to arrive at water. These offspring have a 1% chance of surviving to breeding age.

Helping

Realize that warm months bring more than turtles out onto roads. Salamanders will cross roads from winter uplands to wetlands on rainy spring nights. During the summer, after the sun goes down, reptiles and amphibians are attracted to blacktop and gravel roads to soak up the additional warmth held on the surface when the surrounding air is cooling.

Jeff Lang, biologist for University of North Dakota is researching a system of culverts to divert turtles through an underground passageway. Once testing is completed as to which size that turtles are likely to pass through; you can support the addition of tunnel systems on roads with heavy turtle losses.

Turtle on the Road

If you are unable to safely pull off and help the turtle to cross, move to another lane to avoid hitting the turtle. If you are able to stop, here are some tips: pull over as quickly as you safely can, turn on your flashers, look for oncoming cars, quickly get to the turtle. The need to move quickly isn't because the turtle will be moving fast, as much as the need to move the turtle before another vehicle runs it over. Be cautious and be sure of your own safety before trying to help a turtle cross the road.

Always move turtles to the side in the direction they were heading; this is not always the water. If you move a turtle back to where it came from, it will only attempt to cross the road again.

Hold a turtle you have picked up away from your body; they can try to get you to put them down by releasing any liquids held in their bladder. Realize that turtles perceive us as a threat as they can't run or hide at this point and will try to defend themselves.

Most turtles can be picked up and moved, remaining cautious of the long claws as they can scratch. Although unlikely to bite off a finger as is believed regarding the snapping turtle, all turtles can inflict a very painful bite with their bird-like beak. Many turtles may back up and raise their back end high off the ground in an attempt to frighten a predator.

Special considerations should be given to the biggest turtle in Minnesota, the common snapping turtle (*Chelydra serpentina*). Contrary to popular opinion, snapping turtles are fascinating and actively contribute to a well balanced ecosystem. It can be recognized by its large overall size, head size, muscular limbs, webbed feet, long tail, and saw tooth appearance on the back. Colors may appear black, brown and even green from algae growth on the shell. The common snapping turtle, given their long neck, can reach back half way down their shell, so watch where you have your hands.

Never pick up or carry a turtle by its tail as this can damage the vertebra

Here are some methods for moving a turtle:

- Place one hand on each side of smaller turtle with thumbs on top and fingers below and carry to safety, but be prepared it may scratch with the claws.
- When turtles are small, they can be easily picked up with one hand. Grab the turtle's carapace with your thumb on top, keep the tail between the middle and index finger with finger tip on the plastron
- Middle size turtles are much easier to manipulate using all of your fingers, in the same manner, but trying to keep its tail between the middle and third finger
- Very, very gently push across with stick or any long object
- Lift most of the turtle off the ground and very gently drag it by grabbing shell directly above the tail
- Stomp behind them and chase off road - some turtles, however, will hide instead of moving
- Get them to bite a stick and gently pull off of the road - don't use something you would want back as they may hold on for a very long time before letting go of the object - this works really well with snapping turtles
- Be a warning flag for other cars - with the utmost care for your safety - waive hands to alert other drivers of the turtle until it crosses the road on its own
- When a turtle kicks its back leg out, place your finger in the pocket in front of the leg as they will be unable to retract the legs back in; then apply thumbs to the top of the carapace and lift the turtle up.
- With great care and experience, even an large snapping turtle can be picked up, by placing one hand grasping firmly on the shell directly behind neck and the other hand on the shell above the tail

Types of Turtles

Minnesota has nine species of turtles; few are seen or recognized other than the painted and snapper. Two species are protected in Minnesota: Wood Turtle (Endangered) and Blanding's Turtle (*Emydoidea blandingii*) (Threatened). It is illegal to harm, harass, or collect them. Blanding's Turtles are dome shaped with smooth shells. The identifiable characteristic is the bright yellow chin and underside of the neck. The Wood Turtle gets its name from the rings on each scute on the back.

Finding an Injured Turtle

Your job is to get the turtle to a suitable veterinary or rehab clinic capable of providing adequate care as quickly as possible. Note the location where the turtle is being removed, so it can be returned to the same location after rehabilitation. Place the turtle in a container or cardboard box away from direct sun, excessive heat or cold. DO NOT

attempt to wash the turtle, clean the turtle or rinse the turtle in water.

Rehabilitators

- Minnesota Wildlife Haven, Minneapolis (612) 522-3644
- Wildlife Rehabilitation Clinic, U of MN (612) 624-7730
- Wildlife Rehabilitation and Release, Crystal (612) 822-7058
- Wildlife Rehabilitation Center, Roseville (651) 486-9453

Information from: Brochure "Help a Turtle Across the Road"
Minnesota Herpetological Society
Bell Museum of Natural History
10 Church Street South East
Minneapolis, MN 55455
(612) 624-7065

You have been enjoying some activity outdoors and you have found one of our native Minnesota turtles. It is a fascinating animal and you want to take it home. THINK FIRST! Keeping this turtle will make YOU personally responsible for all the needs of a unique living thing. If you cannot take this responsibility, leave the animal in the wild. Do not collect it on an impulse and leave it in its natural setting.

If you are sure you can care for the animal and wish to keep it in captivity, you will need to know how to maintain it. The following paragraphs list some basic information on caring for native Minnesota turtles.

SPECIAL NOTE: Two species of turtles, the Blanding's turtle and the Wood turtle are threatened in Minnesota and may not be possessed without a special permit from the Department of Natural Resources.

State regulations allow up to three unprotected turtles to be taken by a citizen who has a regular fishing license. Children under 16, who are not required to have a fishing license may also take up to three unprotected turtles. Snapping turtles need to be a minimum of 10" long to be kept without a permit. Persons wanting more information on turtle laws, or to find out the current regulations should contact the DNR's section of Fisheries

Housing

A turtle can be housed in any enclosure that is watertight and does not allow the animal to escape. An aquarium or large tub that has either high sides or a tight fitting cover that can be fastened down will serve this purpose. The cage should provide a deep water area for swimming, a shallow water area and some rocks, a shelf or other area above the water level for basking purposes. The cage setup should be as simple as possible because the entire setup will have to be taken apart and THOROUGHLY cleaned whenever the water begins to foul. This is necessary to prevent the growth of bacteria and fungi that may have detrimental effect on the health of the turtle or its owner. Turtles, as with ANY animal, can carry diseases; therefore, it is imperative that an individual washes their hands after handling a turtle or cleaning its cage.

Heat and Light

Turtles, being cold-blooded animals, rely on their environment to regulate their body temperature; thus they must be provided with a heat source. This can be a light that would generate the heat needed to maintain the cage environment between 75 and 85 degrees Fahrenheit.

Turtles also require a sufficient amount of the right type of light in order to metabolize their food properly and utilize vitamins and minerals. Natural unfiltered sunlight is best, but usually not feasible for an indoor cage. Therefore, it is necessary to provide a fluorescent bulb that emits these UVB rays. There are a few bulbs commercially available that emit these rays. NEVER leave a turtle outside in direct sunlight or a sunny window where the temperature of its cage could rapidly rise above 85 degrees Fahrenheit. The animal would quickly die from overheating. All lights should be turned off at night. Heating and lighting are absolutely essential to the turtle's health. If the turtle is not kept warm enough, it may refuse to eat. It is also imperative that the turtle is able to bask and become completely dry under the heat source or it will develop shin and shell problems.

Feeding

All but two of Minnesota's turtle species can eat only when they are in the water because they have a fixed tongue. Therefore, feed your turtle directly in the water.

For the most part, Minnesota's turtles are carnivores and scavengers feeding on a variety of living and dead animal matter. The key to feeding your turtle is to keep the diet varied. Live fish, earthworms, insects, wax worms, mealworms, snails, and pieces of lean meat or fish are good

choices. You may also offer leafy dark green vegetables, especially for the adults. Commercial diets are great additions, although they should not be used exclusively. Rotate commercial diet feeds with some of the items listed above. Always remove excess food when the turtle is finished feeding.

Young turtles should be fed every other day. As turtles grow into adulthood, this can be reduced to two to three times per week. Young turtles also need calcium supplements added to their diet.

If you meet all the heat, light and food requirements and your turtle still will not eat; it may be trying to hibernate. This is common for freshly caught specimens as winter approaches. The temperature in the cage should be increased. Artificial hibernation is generally not recommended for first time turtle owners. If you have increased the temperature and the turtle still refuses food and is lethargic, it may be best to release the turtle exactly where it was found if the temperature stays above freezing at night. Otherwise contact the Minnesota Herpetological Society for advice, or to place the animal up for adoption.

Conservation

Properly cared for, turtles can live long lives - up to 50 years in some cases. This, combined with the fact that there are only a finite number of turtles in the wild, indicates collecting should be limited to one or two animals. Do not collect several just for the sake of having them. Leave as many as possible for others to look at and enjoy and to help preserve Minnesota's wildlife heritage. Never release turtles from one location into another. NEVER release turtles that were caught in a different state. Turtles, especially box turtles, are regularly brought into Minnesota. If released, they will die. Contact the Minnesota Herpetological Society if you want to get rid of a non-native turtle, or a turtle that cannot be released exactly where it was caught.

Turtle Nests

Turtles reproduce by laying eggs in nests dug in loose soil on sunny uplands. Nesting occurs in May and June. Skunks and raccoons dig up many nests in order to eat the eggs. Occasionally, someone finding such a disrupted nest call asking how to hatch the remaining eggs. Such eggs do not survive in captivity. The best alternative is to carefully re-cover the remaining eggs and nest site

Those who are interested in learning more about turtles should contact the Minnesota Herpetological Society at (612) 624-7065.

Information from: Brochure "Basic Care of Turtles"
Minnesota Herpetological Society
Bell Museum of Natural History

10 Church Street South East
Minneapolis, MN 55455
(612) 624-7065

American Association for Laboratory Animal Science Inc.

Promoting Training and Education of Laboratory Animal Technicians and the Public in the Use of Laboratory Animals in Research.

2005 Minnesota Branch Application for Membership

I hereby apply for membership in the Minnesota Branch of the American Association for Laboratory Animal Science

Name: _____

Institution: _____

Street Address/Bldg: _____

City/State: _____ Zip Code: _____

EMAIL ADDRESS: _____

Phone: __ (____) ____ - ____ Fax: __ (____) ____ - ____

PLEASE SEND ME AN ELECTRIC COPY OF THE NEWSLETTER: YES _____ NO _____
(in order to reduce printing costs we are working on sending most newsletters electronically)

Membership status: (Note: Membership expires December 31, 2005)

New _____ Renewal _____

National Member _____ Yes _____ No _____

If applying for new membership, please complete:

Name of Sponsoring Member: _____

Signature of Sponsoring Member: _____

Type of Membership: Note (Membership expires on December 31, 2005)

_____ Individual Membership: Dues \$15.00/Year,

_____ Corporate Sponsor
Includes 2 Complementary Individual Memberships plus AD, (Indicate Ad Size.)

_____ Business Card Ad \$50.00/year
_____ ¼ Page Ad \$75.00/year
_____ ½ Page Ad \$100.00/year
_____ Full Page Ad \$125.00/year

**(Please send a new Ad along with this application form,
This ensures the ads in our newsletter are current).**

SEND APPLICATIONS TO: JIM KADERA, AALAS TREASURER,
GUIDANT CRM, 4100 HAMLIN AVENUE, ST. PAUL, MN 55112
(Make Checks Payable to MN AALAS)

BOARD USE ONLY:	Approved: _____	Disapproved: _____	Renewal: _____
Date: ____ / ____ / ____	Processed By: _____	Copy for Newsletter Mail list	

Please feel free to make copies as necessary

About Our Organization...

THE MINNESOTA BRANCH OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE INC. WAS ESTABLISHED IN 1965 AS AN ORGANIZATION OF LABORATORY ANIMAL PROFESSIONALS, INCLUDING RESEARCHERS, VETERINARIANS, VETERINARY TECHNICIANS AND ANIMAL CARE TECHNICIANS.

OUR MOTTO, "PROMOTING TRAINING AND EDUCATION OF LABORATORY ANIMAL TECHNICIANS AND THE PUBLIC IN THE USE OF LABORATORY ANIMALS IN RESEARCH" REFLECTS OUR COMMITMENT TO BOTH SCIENCE AND ANIMAL WELFARE.

WE ACCOMPLISH OUR GOALS BY PROVIDING A SOCIAL AND PROFESSIONAL NETWORK FOR PEOPLE WORKING WITH LABORATORY ANIMALS; TRAINING PROGRAMS; INFORMATION ARTICLES IN OUR QUARTERLY NEWSLETTER; ACCESS TO VENDORS OF LABORATORY ANIMALS AND RESEARCH AND ANIMAL CARE PRODUCTS; AND PUBLIC OUTREACH PROGRAMS.

Next MN Branch AALAS Meeting:

Tuesday June 7, 2005 at 6:30 PM

For Location and information please contact:

Robin Miller – Branch Secretary
763-514-6866
robin.marie.miller@medtronic.com

For information about the
5th Annual Minnesota Branch AALAS Golf Banquet and Program

Friday July 29, 2005
3M Tarten Park Lake Elmo, MN

Contact the Program Committee:
Lea Jackson
651-763-9888
ldjackson@mmm.com

Robin Miller
763-514-6866
robin.marie.miller@medtronic.com

Heidi Fust
763-514-6800
Heidi.Fust@medtronic.com

Membership Committee

Jim Kadera
Angela Craig

Program Committee

Lea Jackson
Robin Miller
Heidi Fust

Nomination Committee

Mary Jane Courtney
Linnea Lentz
Cheryl Griese

Elections Committee

Angela Craig
Susan Coopmans

Publications
Terrie Grove
Robin Miller

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Rebecca Kennedy
Robin Miller
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Awards Committee

Linnea Lentz
Mary Jane Courtney
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Education Committee

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