Rhode Island Department of Environmental Management Division of Fish and Wildlife

# Wildlife Rehabilitation Manual



#### Introduction

This manual will serve as an introduction to becoming a wildlife rehabilitator in Rhode Island. It contains factual and philosophical information about wildlife rehabilitation. It also contains regulations that pertain to wildlife rehabilitation in Rhode Island. This manual will help you to prepare for the written examination which you must successfully pass as part of the criteria to become licensed as a wildlife rehabilitator in Rhode Island. It does not contain everything that you will eventually learn as a wildlife rehabilitator. You will continue to develop skills and knowledge through experience, working with other wildlife rehabilitators and through your own continuing education.

#### Acknowledgements

Special thanks to Pat Martin, NY DEC and Mark Potras, DVM, the International Wildlife Rehabilitators Council and the National Wildlife Rehabilitators Association. Also, thanks to; Jennifer Broom, Pamela O'Hearn, and Peter Naumann. Many thanks also to Stacey O'Donnell and Sharlene Lundy.

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# Wildlife Rehabilitators Code of Ethics

From the: International Wildlife Rehabilitators Council

In order to provide quality care, rehabilitators should have a working knowledge of the animals in their charge. Understanding the creature's natural history, diet in the wild, and the components of its niche will enable the rehabilitators to lend them safe and proper aide.

Rehabilitators should be objective enough to wisely and carefully analyze the condition of each animal and make decisions in that creature's best interests.

A rehabilitator must be able to be sensitive enough to understand the needs of the animal and detached enough to think clearly about the animal in his or her care.

A rehabilitator's decision should not be impaired by the emotional response of the uninformed public. Every opportunity should be made to educate the public as to the reality of an animal's situation no matter what the circumstances.

A rehabilitator should try everything possible to reunite infant and adult animals without risking harm to himself or herself or the creature's in question.

A rehabilitator's record keeping should be systematic and detailed in order to provide the licensing agency the necessary data at the close of the permitting year and assist with future rehabilitation problems.

Wild animals should never be raised as pets. Euthanasia must be considered for all non releasable animals, unless it is species of concern for which an educational facility can be found to house it.

# Introduction to Wildlife Rehabilitation

#### **Purpose and Philosophy**

#### Definition of Rehabilitation:

Wildlife rehabilitation is the process by which specially trained individuals provide care for injured, sick, orphaned or displaced wild animals so that they may be returned to the wild. For rehabilitation to be deemed successful, released animals must be able to function as wild animals. This would include being able to recognize and obtain the appropriate foods, select mates of their own species and reproduce, establish and defend territories, migrate, and react tactfully to predators and other potential dangers.

#### Who is a rehabilitator?

A wildlife rehabilitator is any person who provides care to injured, sick, orphaned or displaced wild animals until such time as they can be returned to the wild. In most areas of the United States, including Rhode Island, a permit is required to legally perform wildlife rehabilitation. In addition, federal licenses are also required to handle migratory birds.

#### The rehabilitator's role in the community:

#### 1. Provide care for distressed wildlife.

Rehabilitators provide places for the public to bring animals in need of help. Rehabilitators then coordinate the medical and nursing care for these ailing or orphaned wild animals. A license to rehabilitate wildlife does not make a person a veterinarian, wildlife biologist, law enforcement agent, or nuisance wildlife control specialist. Rehabilitators however do work with these and other professionals to prevent or alleviate many of the problems that occur when people and wildlife interact or come into conflict. Wildlife biologists working for the Department of Environmental Management (DEM) and other state and federal agencies are charged with maintaining healthy wildlife populations and with preserving the natural habitats that wild animals need to survive. The R.I. Department of Health personnel are concerned with any diseases that wildlife may spread to people. The DEM Division of Law Enforcement enforces regulations promulgated through this program and all fisheries and wildlife related statutes and laws. An effective rehabilitator must understand and balance all these concerns.

#### 2. Public education.

As a wildlife rehabilitator, you will be working directly with the public. When the Division of Fish and Wildlife receives calls about injured or orphaned wildlife, your name and phone number may be given to the caller to provide assistance. In general, the public is relatively uninformed about wildlife biology. One of your responsibilities is to help educate the public whenever possible. Rehabilitators must serve as purveyors of

accurate biological and legal information and at the same time also be sensitive to the concerns of the person on the other end of the telephone. What you convey to the public, both on the phone and in person may be crucial to the way that person perceives wild animals and conservation problems. Take this opportunity to make them aware of our interaction with the natural communities around us.

#### 3. Knowing limits.

#### a. How to recognize when an expert is needed.

Although it's always exciting and interesting to try something new, never take any unnecessary risks. In the end, if you make a mistake it will be you and/or the animal that ends up paying the price. If assistance is needed, get on the telephone and ask other rehabilitators who may have experience in that particular area or a veterinarian.

Rehabilitators are not licensed to provide nuisance wildlife control services such as removing nuisance raccoons from chimneys or trapping skunks living under someone's porch. In addition, rehabilitators are not legally required to go out and pick up sick or injured wildlife, although in practice many rehabilitators do perform this service as their time and money permit. However, by giving the public sound biological information, rehabilitators can prevent animals from being injured or orphaned unnecessarily.

#### b. Safety of the rehabilitator and the public

Often, in our eagerness to help an animal we forget the most important thing of all, human safety. Always protect yourself and those who work with you. This includes establishing a close relationship with your veterinarian in order to recognize diseases that could be transmissible from animals to people (zoonotic diseases) or endemics that affect many animals of the same or similar species (epizootic diseases).

#### c. Recognizing endangered and threatened species.

The appendix contains a listing of birds, mammals, amphibians, and reptiles considered endangered or threatened in the State of Rhode Island. Learn to recognize them as they are especially deserving of your care. Should you receive a member of one of these species, your license requires that you notify the DEM Division of Fish and Wildlife within 24 hours.

#### 4. Realities.

Under normal circumstances mortality rates are high for most juvenile wildlife animals. In wildlife rehabilitation centers, as illustrated in the Brukner Nature Center Wildlife Care and Rehabilitation, as many as 50% of the injured animals taken in will die within 24 hours. Another 15-20% will have to be euthanized because of irreparable injury. Only 30% or less will recover fully and be released. After release, a portion of those will succumb to predation, disease, or accidental trauma. Survival in the wild means living on the edge and an animal's abilities cannot be compromised for them to be successful.

#### What it entails to be a rehabilitator:

Although wildlife rehabilitation can be a very rewarding experience, it creates great demands and difficulties on your personal life, and at times will restrict your activities. This needs to be understood and appreciated <u>before</u> you become involved.

#### 1. <u>Time.</u>

Rehabilitating wild animals will take much more time than you expect. Before long, you will become known locally as the person who takes care of wild animals. Your name will be given to many local people by veterinarians, the local police and animal control, and other organizations. You can expect irregular and unpredictable calls asking what to do about the baby bird someone's cat just brought home, a fox hit by a car on the highway, the raccoon in their chimney, etc. You cannot do all these things well and still care for the animals you have, along with caring your family and home, and (perhaps) maintain a full time job. Here are some important factors to consider:

- Having wild animals in your care requires constant attention to their needs. Young birds need to be fed every 15-20 minutes from early morning to evening. Young mammals need to be bottle fed every couple hours around the clock.
- You must decide what you can and cannot do and be comfortable with that decision.
- You must be able to convey, gently and sympathetically, to the public if you can or cannot help, or be able to refer them to someone who can.
- Good rehabilitation should be, in large part, *preventative rehabilitation*. Much of your telephone time is spent trying to convince people *not* to interfere with wildlife.

#### 2. Money.

A common misconception is that "the state" pays for wildlife care. In reality, most expenses associated with wildlife rehabilitation are paid for by *you*, the rehabilitator. This cost can add up quickly to hundreds (if not thousands) of dollars per year. You must buy food for the animals, caging, or materials so that you can build caging, special handling equipment and clothing, medications, along with paying veterinary bills, increased use of your car, telephone, electricity and other utilities. You will need reference books for species identification or to find answers to your problems, and you will likely want to continue your education through membership and participation in related organizations or attending workshops or symposiums.

#### 3. Death and euthanasia.

A wildlife rehabilitator must accept the fact that not all animals will survive. Some studies have shown that approximately half of the animals that enter rehabilitation facilities do not survive. Some animals will die because of the extent or seriousness of their injuries or illness, others will be euthanized. Euthanasia is defined as the act of inducing a humane death in an animal. A humane death is one that occurs with a minimum of stress and pain. A euthanasia technique is only as humane as the skill level and compassion of the person performing it.

There is no way around it; if you become a wildlife rehabilitator, you will either euthanize animals or make decisions about euthanizing animals. Often, animals arrive at your facility so badly sick or injured that no amount of care could save their lives. In these cases, euthanasia is not a difficult decision. At least you are saving the animal from what you know to be prolonged suffering.

What about euthanizing animals that might otherwise survive? You will receive animals whose lives you can save, but which cannot be returned to the wild and expected to survive. Certainly, a gray squirrel with an amputated leg could live for a long time in captivity, but would it be humane to release it? Occasionally, there will be an opportunity for some individuals to be used for educational purposes, but for most, legal, quality placements are rare. This means you are faced with the unpleasant choice of what to do with un-releasable animals. Some beginning rehabilitators desire to keep everything alive. But after awhile, you find this only prolongs the animal's discomfort and stress at being in captivity and your anguish over sacrificing a life. In addition, it creates more work for you. Your license does not allow you to become a long-term holding facility for <u>unreleasable animals</u>. It is also not in the animals' best interest. It is far easier to make the decision to euthanize early in the rehabilitation effort before too much time, money, and tears are expended.

It is important to consider who will perform the euthanasia. Will you (or can you) euthanize the animals yourself? What techniques will you use? How will you dispose of the carcasses? You must have answers to these questions before you start receiving animals. Many humane euthanasia techniques require the use of controlled substances that can only be administered by a veterinarian, so it is important to talk to your veterinarian or sponsor about this issue early. The American Veterinary Medical Association (AVMA) Report on Euthanasia, included in the appendix of this manual, and the section on euthanasia in your International Wildlife Rehabilitators Council (IWRC) Basic Wildlife Rehabilitation Training Manual describes the humane methods that are acceptable.

#### **Issues of Importance to Rehabilitators**

#### Identification of Animal Species:

It is very important that rehabilitators accurately identify animal species in order to provide proper care for the animal. In addition, knowing the specific identity of the animal will assist you in identifying which parasites or diseases can be expected. You can learn to identify animal species by referring to the field guides listed in the appendix of this manual. You can also look into trips to natural history museums or taking classes in mammalogy and ornithology to help improve your skills. Division of Fish and Wildlife biologists can also be of assistance in identifying more difficult species but it is the rehabilitator's responsibility for proper identification. Utilize the experience and knowledge of your sponsor and other rehabilitators.

#### Individuals vs. Populations:

The science of wildlife management is focused on protecting and enhancing the value of wildlife as a public resource and for other intrinsic values. This view deemphasizes the role of individual animals and focuses on preservation or creation of quality habitat and genetically viable populations. Conversely, animal welfare advocates and the veterinary community most often focus on animals as individuals. This view does not incorporate the complex issues of long-term population stability for animals in the wild. It is important for rehabilitators to appreciate both points-of-view and not to get caught in the middle.

- In most wildlife rehabilitation facilities, it is often impossible to give the best possible care to every injured or sick wild animal that is presented.
- As a wildlife rehabilitator, you must decide which animals are most likely to survive based on your skills and technology you have at your disposal.
- The rehabilitator must give priority in some order of importance such as the rarity of the species.

#### Releasability:

Injured wild animals are treated with the express purpose of releasing them back into their native environments as soon as they are healthy. No one wants to condemn a wild animal to life in a cage, nor do we wish to release severely disabled animals that will have little ability to compete and survive in the wild. It is important to constantly balance the eventual releasability of an animal versus euthanasia.

- First, consider the health of the animal. It must be able to fly, swim, or run well enough to perform all the functions of a member of its species (i.e. find food, escape predators, reproduce, migrate, etc.)
- Second, consider the animal's behavior. Any animal that has become acclimated to humans or imprinted is unlikely to successfully acquire food on its own and may become a problem animal due to its lack of fear of people.

• Third, consider the location for the release. It is important to choose a location where competition or aggression from other members of its species will be minimal. This does not mean releasing an animal into an area where that species does not already occur. For instance, releasing land mammals into island habitats could prove devastating to other wildlife already living there. Some species, such as box turtles, have a very strong fidelity for established their home range and must be returned to the same location. They are not likely to survive if released elsewhere. Record the exact location where an animal was found at the time of intake for when it is time to release. Landowner permission must be obtained before releasing animals onto private property.

It is essential to remember that in some cases a rehabilitated animal can simply not be taken out to the woods, released, and be expected to survive. Animals that have been in captivity for extended periods of time may need some sort of "soft-release". This would involve an open box or cage shelter temporarily provisioned with food and water from which the animal can gradually explore their surroundings and learn where to find natural sources food and water.

#### What if the animal cannot be released?

Often the kindest consideration that can be made for injured wildlife is to opt for euthanasia early in the decision making process.

- The purpose of treating wild animals is to release them so they can carry out their normal wild existence.
- While <u>some</u> non-releasable animals may occasionally be placed in appropriate facilities, the decision to allow an animal to spend the remainder of its life in captivity should not be taken lightly. Your permit requires that you coordinate such activity with the Division.
- Wild animals are greatly stressed by being in captivity, and death may often be preferable to having the animals live for an extended period while in terror of people around them or chronic pain from an old injury.

#### Acclimation and Imprinting:

One of the rewards of a wildlife rehabilitator is to experience close contact with the animals, but the more contact you have; the more harmful it may be for the wild animal.

- The more acclimated a wild animal is to people; the less likely it is to survive and function in the wild. Wild animals that consistently seek out human contact are most likely to be labeled as threats or pests and be killed.
- Acclimation can be avoided by raising animals with others of their own species, minimizing unwarranted handling, petting, talking, and association with pets or other domestic animals.

#### Species that can be rehabilitated in Rhode Island

There are a wide variety of wildlife species that can be rehabilitated in Rhode Island. Certain species or groups of species may not be candidates for rehabilitation. Permit level, and your facility accommodations or limitations will also determine what species you may receive and treat. Exotic species, i.e. those species not native to Rhode Island presently or historically cannot, in some cases be legally rehabilitated in this state. Juvenile mammals that are currently classified by the DEM and R.I. Department of Health as rabies vector species (RVS) can only be transported or treated by those rehabilitators who have obtained a specific level of licensing. Adult rabies vector species and bats of all age classes are not candidates for rehabilitation. The rehabilitation of certain species of furbearers may require prior notification to or approval of the DEM. The rehabilitation of raptors, i.e. hawks and owls requires a specific level of licensing. The care of all migratory birds requires a permit from the U.S. Fish and Wildlife Service in addition to a Rhode Island license.

State List of wildlife species for which a rehabilitation permit is required:

#### Mammals

Cottontail rabbits Virginia opossum Gray squirrel Red squirrel Southern flying squirrel Eastern chipmunk Muskrat Long-tailed weasel Mink

# Mammals which require additional notification to DEM

Beaver River otter Coyote Fisher Bobcat White-tailed deer Porcupine Black bear

# Mammals classified as rabies

vector species (RVS) Level TX or IIX permit required\* Raccoon Bats\* Striped skunk Red fox Gray fox Woodchuck

#### <u>Birds</u>

All native migratory and nonmigratory birds

#### **Amphibians**

All native species of amphibians (frogs, toads, and salamanders)

#### **Reptiles**

All native species of reptiles (turtles and snakes)

\*Rehabilitation of adult RVS species (>10 weeks old) and bats of any age is prohibited.

The rehabilitation of the following species does not require a wildlife rehabilitation permit in Rhode Island:

House (English) Sparrow Rock Dove (pigeon) European Starling Voles Mice Shrews Moles

The rehabilitation of exotic species, "...not occurring naturally, either presently or historically, within the boundaries of the State of Rhode Island including, but not limited to: Mute Swans, Monk Parakeets, Mudpuppies, and Red-eared sliders" is prohibited.

The rehabilitation of domestic animals is prohibited for wildlife rehabilitators.

The following federally protected species which occur in Rhode Island require immediate notification of the U.S. Fish and Wildlife Service in Hadley, MA (413-253-8200):

<u>Birds</u>	<u>Turtles</u>	Insects	<b>Mammals</b>
Roseate tern	All sea turtles	American Burying Beetle	All marine
Piping plover			mammals
Bald and Golden e	eagles		

Many species of reptiles and amphibians are in decline in Rhode Island. In an effort to gain a better understanding of the current status and distribution of reptiles and amphibians in the state the Division of Fish and Wildlife would like to obtain specimens of the following species when they die or must be euthanized:

<u>Snakes</u>

Eastern ribbon snake (*Thamnophis sauritus*) Northern redbelly snake (*Storeria occipitomaculata*) Eastern hognose snake (*Heterodon platyrhinos*) Northern ringneck snake (*Diadophis punctatus*) Eastern worm snake (*Carphophis amoenus*) Black rat snake (*Elaphe obsolete*)

**Turtles** 

Eastern box turtle (*Terrapene carolina*) Wood turtle (*Clemmys insculpta*) Spotted turtle (*Clemmys guttata*) Northern diamondback terrapin (*Malaclemys terrapin*)

<u>Frogs and Toads</u> Eastern spadefoot toad (*Scaphiopus holbrookii*)

### **Pertinent Federal Laws and Agencies**

The following laws are administered by the United States Fish & Wildlife Service (USF&WS) – Department of the Interior. License applications to hold animals covered by any of these statutes must be obtained from:

Assistant Regional Director (LE) U.S. Fish and Wildlife Service Department of the Interior P.O. Box 779 Hadley, MA 01035 Tel. (413) 253-8200

#### a. <u>Migratory Bird Treaty Act</u>

This act makes its illegal to possess any migratory bird, its nest, egg, or feathers. It is under this law that rehabilitators may be permitted to handle migratory birds. Aspecial purpose permit-application form must be obtained from the Special Agent-in-Charge. Separate special purpose permits are required to handle bald eagles or other federally endangered species.

#### b. The Lacey Act

The Lacey Act of 1900 regulates interstate and international commerce in wildlife. It controls the transportation of wildlife across state lines. This law makes it a federal violation to import or export across state or national boundaries any animal taken in violation of the laws of the state or origin. This statute applies to rehabilitators by preventing the rehabilitator from accepting animals from other states, transporting animals into or out of the state, or releasing a rehabilitated animal in another state.

#### c. <u>The Endangered Species Act</u>

This act provides special federal protections for species threatened with extinction. A variety of birds, mammals, reptiles, amphibians, fish, invertebrates, and plants are listed as protected. Those known to occur in Rhode Island are listed on page 10 of this manual. Rhode Island rehabilitators can handle any of these species on an emergency basis. But you must call the Division of Fish and Wildlife and inform them that you have the animal within 48 hours (401) 789-0281. For anyone planning continued or extensive work with endangered species, an additional "special purpose permit" is required from the USF&WS.

#### d. The Bald Eagle Protection Act

This act provides specific protection to bald eagles and has been extended to protect golden eagles. Anyone wishing to work with these species, whether for rehabilitation, education or research, must obtain a specific special purpose permit from the Special Agent-in-Charge. Rhode Island law also provides additional protection for eagles.

The following law is administered by the National Marine Fisheries Service (NMFS) National Oceanographic and Atmospheric Administration-Department of Commerce.

#### Marine Mammal Protection Act

Strict laws and regulations protect all marine mammals (whales, dolphins, seals, sea otters). No rehabilitation of these species, or sea turtles, should be considered without prior approval of:

<u>NE Regional Office – NMFS 14 Elm St., Federal Bldg., Gloucester, MA 01930</u> <u>Tel: 617-281-3600</u>

#### **Telephone Tips & Intake Procedures**

In a perfect world, the public would call you <u>before</u> they handled any wild animal. In that case you could describe appropriate handling techniques to prevent additional injuries and stress to the animal. You could provide guidance as to what animals may not be safe to handle and minimize any injuries to the handler or potential exposure risks from zoonotic diseases.

As required in the regulations, record the name, address, and telephone number of the person submitting the animal on your initial physical exam form. Also, include the location where the animal was found.

In some cases people will already have handled animals before they called you and there could be potential exposure to disease or injuries. Human health and safety come first. Ask if they have had any contact with the animal. If they indicate to you they were scratched or bitten, or injured in some way advise them to contact their physician. If you suspect there is any possibility of an exposure to rabies (i.e. a scratch or bite from a wild mammal) you must advise them to contact their physician and notify the Rhode Island Department of Health Rabies Hotline. Be familiar with the State of Rhode Island Manual for Rabies Management and Protocols and the Rabies Vector Species Handbook.

You will need to determine what type of animal the caller has in their possession and may be in need of help. That information is sometimes harder to get than it seems. The average person may have difficulty accurately identifying the species of the animal they've found; especially birds. A red-tailed hawk might be called an eagle, an American goldfinch might be called a canary. With experience, you will be able to rule out what it is not likely to be.

People may have some difficulty describing to you the actual size of the animal. Try, as a comparison some well-known common bird species. "Is it about the size of a robin? a pigeon? a crow?" Ask about the shape or size of the bird's bill. This may help you to determine if it is a raptor, a songbird, or a duck.

Become familiar with the other agencies and professionals in your area. Knowing where to get information and who to call in a particular situation is important to be a successful wildlife rehabilitator. Every rehabilitator should have the following numbers next to their phone:

> DEM Environmental Police (401-222-3070) Local Animal Control Officer Local veterinarian R.I. Dept. of Health Rabies Hotline (401-222-2577) DEM Division of Fish and Wildlife (401-789-0281) Local Nuisance Wildlife Control Specialists Other local Wildlife Rehabilitators

The following are telephone tips covering many different situations. These tips were provided by Carol Odell, and cover the most common problems you will encounter. For more information on telephone tips see <u>Wildlife Rehabilitation Volume I</u>, section titled Living with Wildlife: "A Preventative Approach for Wildlife Rehabilitation", and <u>Wildlife Rehabilitation Volume II</u>, section titled "Things That Go Bump in the Night", both by Sally Joosten. Also, <u>Wildlife Rehabilitation Volume III</u>, section titled "The Telephone as an Educational Tool" by Lou Strrobhar.

## **General Emergency Care and Transportation**

- A. <u>Determine what action is needed.</u>
- B. Leave the animal alone if:
  - 1. The parent is nearby. Parents rarely abandon healthy offspring. It is natural for some species to leave their young for several hours while foraging for food.
  - 2. The animal is fat, bright eyed, appears healthy, and is in no apparent danger. Parent animals have strong self preservation instincts. Observation may be necessary to determine if the animal really needs to be rescued. People must watch from a hiding place some distance away, so the young and parent are not frightened. The caller must keep children and other animals away, so the reunion can be accomplished.
- C. <u>Rescue if:</u>
  - 1. The parent is known dead and the young is too young to be on its own.
  - 2. The animal is weak, thin, cold, or in any way appears sick.
  - 3. The animal is injured in any way, including cat or dog bite, hit by a car or shot.
  - 4. There are flies or insects on or around the animal.
  - 5. If the animal is in obvious danger that cannot otherwise be alleviated.
- D. <u>If it has been determined a rescue is needed, arrange transportation as quickly as</u> possible. Until transport can be completed, advise the caller to:
  - 1. Place the animal in a secure box, equipped with air holes and a lid. Use a box that is the right size for the animal—nothing too large or too small. Provide a clean, ravel free cloth for the animal to hide in and make certain there is nothing inside the box that the animal can get caught in when moving around. Inside the box place a hot water bottle or closed jar of warm water in a clean, ravel free cloth to provide extra warmth. The box should be placed in a warm, dark, quiet area.
  - 2. Not feed or provide water to the animal.

- 3. Place a young bird in a makeshift nest. Using a small box or dish (such as a plastic margarine dish) put a soft clean ravel free cloth or a paper towel inside and place the bird's (legs underneath) into the nest. Make certain the bird's body (especially the head) is supported on all sides by the cloth or paper towel. Place the nest, with the bird, in a box, in a manner that protects the primary and tail feathers from breakage, and keep the box in a warm, dark, quiet place until it can be transported.
- 4. Advise caller not to use green grass as bedding for any type of bird or mammal, as the dampness could contribute to pneumonia or other contagious diseases. Old bird nests are usually infested with insects or parasites and should be avoided.
- 5. Discourage unnecessary handling. A young animal's bones are fragile and can be injured by squeezing when the animal moves. Sometimes more harm is done due to the animal not being handled properly. Advise the caller not to let children hold the animal; even a small rabbit can bite. Instead, let the child hold the box during transportation.
- 6. Encourage the public to bring the small or non-dangerous animals to you, rather than you transporting the animal.
- 7. Always tell the caller to use caution when handling wildlife. Wild animals normally do not attack people, but when they are sick or injured and cannot fly or run away, it is natural for them to defend themselves when approached. Even small mammals can bite or scratch; birds can peck.
- 8. Larger species can be quite dangerous. Know which animals they are and pick up those animals yourself.
- 9. Never put or transport a bird in a bird cage. Wild birds can break their bill and/or damage feathers on the cage wire when attempting to fly. Always use a box which will increase security and decrease stress.

### **Telephone Tips for Birds**

A. Heron – type and other large birds:

<u>These birds can be dangerous</u>. Learn how to handle them correctly and pick these birds up yourself. If the caller has already handled the bird, caution them on the use of the bird's bill as a means of defense. Protect your eyes!

#### Injured

Any heron – type bird than can be easily approached either needs emergency care or observation by a rehabilitator. Arrange to pick up the bird as soon as possible.

- B. Altricial (hatched naked and blind, totally dependent on parent).
  - 1. Nestling out of nest:

If the bird is cold to the touch, warm it by gently holding in hands. When warm, replace in nest. (DO NOT attempt to feed or water). Birds have little sense of smell, and <u>it is not true</u> that a parent bird will not accept her young if a human has touched it.

2. Nestling and nest down:

Tie the nest back up into the tree in about the same place, if possible, with heavy twine. Birds can get tangled in thin string.

If the nest is torn apart, a new one can be made out of margarine tub (about the same size as the nest), lined with dryer lint or shredded towel. DO NOT use fresh grass, mud or cotton, as bird's claws can get caught in it. Drainage holes should be placed in the bottom of the tub in case of rain. Tie the new "nest" in the tree with heavy twine and watch from a distance. If the parents have not returned in 2 hours have the birds brought in.

3. Deformed nestling

Have the nestling brought in as soon as possible and bring this information to the attention of the Division.

4. Fledging or brancher (feathered, juvenile and cannot fly):

Often birds fledge or jump out of the nest a few days before they can actually fly. The parents will continue to care for them on the ground until they can fly. Leave the fledging alone, unless it appears injured or sick. Keep cats in for a few days. If the fledging has already been picked up, advise the caller to put it back.

# APPENDICES

#### **APPENDIX A: SOURCES OF ADDITIONAL INFORMATION**

#### Networking with other rehabilitators

A list of all licensed wildlife rehabilitators is available from the Division of Fish and Wildlife. These people are available for referrals and additional sources of information. A great deal can be learned through the sharing of information.

Internet Sources:

US Fish and Wildlife Service: <u>http://www.fws.gov</u> National Wildlife Rehabilitators Association: <u>http://www.nwrawildlife.org</u> International Wildlife Rehabilitation Council: <u>http://iwrc-online.org</u> RI Division of Fish and Wildlife <u>http://state.ri.us/dem/programs/bnatres/fishwild/index.html</u> Wildlife Rehabilitators List Server—wlrehab@listserv.nodak.edu

#### **APPENDIX B: ANNOTATED BIBLIOGRAPHY**

Rehabilitation Associations- There are two national organizations which provide many important publications for rehabilitators:

**~National Wildlife Rehabilitators Association**. NW Newsletter Annual Directory, symposium proceedings, membership information:

NWRA c/o Carpenter Nature Center 12805 St. Croix Trail Hastings, MN 55033 http://www.nwrawildlife.org

**~International Wildlife Rehabilitation Council.** The Wildlife Journal (quarterly) reprints skills seminar packets, proceedings, and directory.

IWRC 4437 Central Place, Suite B4 Suisun, CA 94585 http://iwrc-online.org

#### **IDENTIFICATION GUIDES**

Several publishers offer excellent sets of field guides for identification of native wild animals. You may find that you need to get several. Check with other rehabilitators and local nature centers to find out what is available and what seems most useful to you. ~Peterson Field Guide series: Houghton Mifflin Co.

~Audobon Society Field Guide series: Alfred A. Knopf Pub.

~Golden Field Guide series: Golden Press

~Field Guide to the Birds of North America: National Geographic Society.

#### **BASIC REHABILITATION**

Anonymous. Wildlife Rehabilitation Minimum Standards and Accreditation Program. NWRA/IWRC Joint Publication. 1989. (Important reading for all rehabilitators)

Anonymous. Minimum Standards for Wildlife Rehabilitation. 3<sup>rd</sup> Ed. NWRA/IWRC Joint Publication. 2000.

Anonymous. Bird Care and Rehabilitation Manual. Published by Volunteers for Wildlife Inc. P.O. Box 427, Cold Spring Harbor, NY 11724. 1990 (Good!)

Anonymous. Manual for the Care and Rehabilitation of Small Mammals, Volunteers for Wildlife Inc. P.O. Box 427, Cold Spring Harbor, NY 11724. Spring 1990. (Good!)

Adams, P and Johnson, V. Wild Animal Care and Rehabilitation. Manual 3<sup>rd</sup> Ed. Kalamazoo Nature Center, 700 Westledge Ave., Kalamazoo, MI 49007. 1987. (Good!)

Caras, R etal. Pet Medicine: Healthcare and First Aid for all Household Pets. McGraw-Hill, NY. 1977.

Evans, AT. Introduction to Wildlife Rehabilitation. NWRA publications 1986 revision. (Good, basic advice-contains many useful "hot tips" for dealing with common problems).

Gerstenfeld. S L. The Bird Care Book. Addison-Wesley Publishing Co. 1982. (Easily read medical information on pet bird care and some wild bird information).

Hayes. MB. (Ed.). Rehabilitation Guidebook for Birds and Mammals. Bruckner Nature Center, 5995 Horseshoe Bend Road, Troy, Ohio. 45373. 1980. (Good!)

Hodge. G.R. The Humane Control of Wildlife in Cities and Towns. Humane Society of the United States, 2100 L. St., NW Washington, DC 20037. 1990. (Contains basic natural history and excellent information on solving many wildlife-related problems).

Jordan, W.J. and Hughes, J. Care of the Wild: Family First Aid for all Wild Creatures. Rawson Associates, NY. 1983.

Lyons, J. Wildlife Rehabilitation Course Manual. Wildlife Rescue, Inc., Austin, TX. 1980.

Schimmel, L. Hand Raising Passerines and Other Selected Species. New England Wildlife Center, 146A Justice Cushing Way, Hingham, MA 02043. 1987.

Tappan, A Baby Bird Care, Spring Wild Bird Rehabilitation Manual. P.O. Box 161, Strafford, NH 03884.

#### **ADVANCED REHABILITATION**

Arnall, L and Keymer, IF. Bird Diseases. TFH Publications, Inc. 1975. (Excellent book for bird diseases).

Cooper, J E. etal. Manual of exotic pets. British Small Animal Veterinary Association. 1985.

Cooper, J E., Gibson, L and Jones, CG. The Assessment of Health in Casualty Birds of Prey Intended for Release. Veterinary Record 106: 340-341. 1980.

Evans, D. Fluid Therapy in Birds (parts I and II). Journal of the Wildlife Rehabilitation Council (now the IWRC). Spring and Fall issues. 1984.

Fowler, ME. Restraint and Handling of Wild and Domestic Animals. (2<sup>nd</sup> Ed.) Iowa State Univ. Press. Ames, IA. 1990.

Frink, L and Frink, J. A New Approach to Record Analysis in a Wild Bird Rehabilitation Center. In: Beaver, P (Ed.) Wildlife Rehabilitation. National Wildlife Rehabilitators Association. 1986.

Garbe, J. A. L. Wildlife Law. In: Wilson, J. F. Law and Ethics of the Veterinary Profession. Priority Press, LTD. Yardley, Pennsylvania. Pp. 376-410. 1988.

Hess, E. H. Imprinting. Van Nostrand Reinhold Co. NY. 1986.

Hoff, G.L. and Davis, J. W. (ed.) Noninfectious Diseases of Wildlife, Iowa State University Press, Ames, IA 1982.

Lobou, R Wildlife Rehabilitation: A Guide to the Literature. Tri-State Bird Rescue and Research, P.O. Box 1713, Wilmington, Delaware. 1984.

Markowitz and Stevens (Ed.) Behavior of Captive Wild Animals. Nelson Hall, Publications. Chicago, Illinois. 1978.

Moore, A.T. and Joosten, S. Principles of Wildlife Rehabilitation: The Essential Guide for Novice and Experienced Rehabilitators, 2<sup>nd</sup> Ed. 2003.

Page, LA (Ed). Wildlife Diseases. Plenum Press, NY. 1976.

Pokras, MA, Karas A, Kirkwood J and Sedgwick, CJ. An Introduction to Allometric Scaling and Its Uses in Raptor Medicine. In: Redig, P (Ed.) Proceedings of the International Symposium on the Status of Biomedical Research on Raptors (in press).

Young, E. (Ed.) The Care and Capture of Wild Animals. Human and Rousseau, Capetown, R.S.A. 1973.

#### **NUTRITION**

Croxall, J. F. (Ed). ). Seabirds: Feeding Ecology and Role in Marine Ecosystems. Cambridge University Press, NY 1987.

Evans, R.H. Rearing Orphaned Wild Mammals. Veterinary Clinics of North America 17(3): 755-783. 1987.

Geraci, J.R. Husbandry, Nutrition, and Nutritional Disorders. In: Fowler, ME (Ed): Zoo and Wild Animal Medicine. 2<sup>nd</sup> Ed. W.B. Saunders Co. Philadelphia, PA. 1986. pp 757-764.

Lint, K.C. and Lint, AM. Diets for Birds in Captivity. Blanford Press, Poole, Dorset, England.1981.

Recheigl, M. Section G: Diets, Culture Media, Food Supplements, Vol I. Diets for Mammals. CRC Handbook in Nutrition and Food, CRC Press, Cleveland, OH, 1977, pp. 645.

Robbins, CT. Wildlife Feeding and Nutrition, Academic Press, San Diego, CA. 1983.

Rowdybush, T. The Nutrition of Altricial Birds. Proc. 7<sup>th</sup> Annual Dr. Scholl's Nutrition Conference. Lincoln Park Zoological Gardens, Chicago pp. 83-91. 1987.

Stoskopf, MD. Feeding Piscivorous Birds, a Review. Proc. Am. Assoc. Zoo Vets. Annual Mtg. pp. 69-83. 1986.

#### VETERINARY MEDICINE

Boever, W.J. (Ed). The Veterinary Clinics of North America: Symposium on Nondomestic Pet Medicine. W.B. Saunders Co., Philadelphia, PA. Vol 9, No 3. April 1979.

Burr, E. W. Companion Bird Medicine. Iowa State Univ. Press, Ames, IA. 1987.

Coles, B. H. Avian Medicine and Surgery. Blackwell Scientific Pub., Boston, MA. 1985.

Cooper, J.E. Veterinary Aspects of Captive Birds of Prey. 2<sup>nd</sup> Ed. Stanfast Press. Gloustershire, England. 1986.

Davidson, W.R. and Nettels, VF. Field Manual of Wildlife Diseases in the Southeastern United States; pub. by Southeastern Cooperative Wildlife Disease Study, Dept. of Parasitology, College of Veterinary Medicine, University of Georgia, Athens, GA 30602. 1988.

Faler, K. and Faler K. Fluid Therapy in Large and Small Animals. Modern Veterinary Practice. 66: 635-639, September 1985.

Flecknell, PA. Laboratory Animal Anesthesia. Academic Press. San Diego, CA 1987.

Foreyt, W. Veterinary Parasitology Reference Manual. 5<sup>th</sup> Ed. 2001.

Fowler, M. (Ed).). Zoo and Wildlife Medicine. W.B. Saunders, Philadelphia, PA 1983.

Fox, J etal (Ed).). Laboratory Animal Medicine. Academic Press. San Diego, CA. 1985.

Friend, M (Ed). Field Guide to Wildlife Diseases. Vol. 1. US Dept. of Interior Fish and Wildlife Service, Resource Publications, 167, Washington, DC 1987. (Very good, not expensive). Griner, LA. Pathology of Zoo Animals. Zoological Society of San Diego. 1983.

Harrison and Harrison (Eds).). Avian Medicine and Surgery. Saunders Publishing Company. Philadelphia, PA. 1986.

Harrison, G (Ed).). Caged Bird Medicine. The Veterinary Clinics of North America-Small Animal Practice. W.B. Saunders Company, Philadelphia, PA. 1984.

Jacobsen, ER and Kollias, G.V. (Des).). Exotic Animals. Churchill Livingstone. NY. 1988. (Much good information about reptile medicine).

Kirk, R. W. (Ed). Current Veterinary Therapy, volumes I-X W.B. Saunders, Philadelphia, PA. 1961-1989. (each volume has several chapters on wildlife).

Lumb, WV and Jones, E.W. Veterinary Anesthesia (2<sup>nd</sup> Ed.). Lea and Febiger. Philadelphia. 1984.

Montali, R. J. and Migaki, G. The Comparative Pathology of Zoo Animals. Smithsonian Institution. 1980.

Nielsen, L and Haigh, J.C. and Fowler, ME. (Des). Immobilization of North American Wildlife. Wisconsin Humane Society, Inc. 1983.

Otto, CM, Kaufman, GM and Crowe, DT. Intraosseus Infusion of Fluids and Therapeutics. Comp. On Contin. Ed. If or the Practicing Veterinarian. 11 (4): 421-431. 1989.

Petrak, M (Ed). Diseases of Caged and Aviary birds. 2<sup>nd</sup> Ed. Lea & Febiger. Philadelphia, PA. 1986.

Redig, PT. Fluid Therapy and Acid-base Balance in the Critically Ill Avian Patient. Proceedings of the Association of Avian Veterinarians. 1984. Pp. 59-73.

Siegmund, OH. etal (Des). The Merck Veterinary Manual. (6<sup>th</sup> Ed.) Merck and Company, Inc. Rathway, NJ. 1986.

Sloss, M. W. and Kemp, R.L. Veterinary Clinical Parasitology. (5<sup>th</sup> Ed.) Iowa State University Press. Ames, IA 1978.

Stunkard, JA Diagnosis, Treatment and Husbandry of Pet Birds (2<sup>nd</sup> Ed.) Stunkard Publishing Co., Edgewater, MD. 1984.

Tseng, S and Mitchell, M. Topics in Wildlife Medicine: Clinical Pathology. Vol.1. 2005.

Wallach, JD and Boever, W.J. Diseases of Exotic Animals. W.B. Saundes, Philadelphia, PA. 1978.

Wobeser, GA. Diseases of Wild Waterfowl, Plenum Press, NY. 1981.

#### MAMMALS - General

Burt, W.H. and Grossenheider, R.P. A Field Guide to the Mammals. (3<sup>rd</sup> Ed.) Houghton Mifflin Co. Boston, MA. 1976.

Chapman, JA. And Feldhamer, GA (ed.) Wild Mammals of North America. John Hopkins University Press, Baltimore, MD. 1982. (Note: Excellent information. Useful for all rehabilitators).

Churchfield, S. The Natural History of Shrews. Cornell Univ. Press. Ithaca, NY. 1990.

Davis, J. W. etal. (Des). Infectious Diseases of Wild Mammals. (2<sup>nd</sup> Ed.) Iowa State University Press. Ames, IA 1981.

Davis, J.W. etal (Des). Parasitic Diseases of Wild Mammals. Iowa State University Press. Ames, IA 1971.

Godin, A. J. Wild Mammals of New England. Globe Pequot Press, Chester, CT. 1977. (A good, inexpensive guide to the natural history of many native species)

Hamilton, WJ. And Whitaker, J.O. Mammals of Eastern North America. Cornell University Press, Ithaca, NY. 1979.

Jackson, DD. Nobody Counts Squashed Skunks. Audubon. National Audubon Society. New York March. Pp. 78-81. 1986.

Lee Rue m L. Sportman's Guide to Animals. Halper & Row, NY. 1968

MacDonald, D. (Ed.) Encyclopedia of Mammals. Facts on File Publications, NY. 1985.

Rue, L.L, III, Furbearing Animals of North America. Crown Publishers, Inc. NY. 1981.

Williams, C. Practical Guide to Laboratory Animals. CV Mosby Co., St. Louis, MA. 1976.

#### **Rodents**

Booth, ES. Notes on the Life History of the Flying Squirrel. J. Mammalogy 27 (1):28-30, 1946.

Broadbrooks, HE. Life History and Ecology of the Chipmunk, *Eutamias amoenus* in eastern Washington. Miss. Pub. Mus. Zool., University of Michigan, 103:5-42, 1958.

Dalgish, J. and Anderson, S. Growth & Development of the Southern Flying Squirrel. J. Mamm. 60(3):620-622, 1979.

Gurnell, J. The Natural History of Squirrels. Facts on File Pub. 1987.

Hamiton, W.J., Jr. The Life History of the Rufescent Woodchuck, *Marmota monax rufescens*. Howell, Annals Carnegie Museum, 23: 85-178, 1934.

King, J.A., ed. Biology of *Peromyscus*, Spec. Pub. No. 2. American Soc. Mamm. 1968.

MacClintock, D. Squirrels of North America. Van Nostrand Reinhold Co., NY. 1970.

Moore, J.C. The Natural History of the Fox Squirrel (Sciurus niger shermani. Bulletin Amer. Mus. Nat. Hist. 113(1): 1-71, 1957.

Nichols, J.T. Food Habits and Behavior of the Gray Squirrel. J. Mamm. 39(3): 376-380, 1958.

Roze, U. The North American Porcupine. Smithsonian Inst. Press. 1989.

Rue, L L, III, The World of the Beaver. J.B. Lippincott, Philadelphia, PA 1964.

Short, H.L. Seasonal Food Consumption and Body Weights of Captive Tree Squirrels. J. Wild. Manage. 35(3): 435-439, 1971.

Suther, J.H. Biology of the Great Plains Muskrat in Nebraska. Wildlife Society Monograph #2, 1958.

Wishner, L. Eastern Chipmunk: Secrets of Their Solitary Lives. 1982.

Lagomorphs –Rabbits and Hares

Hagen, A.O. Life History Studies of the Cottontail Rabbit in Southwestern Michigan. Am. Midland Nat. 28(1): 204-244, 1942.

Lockley, RM. The Private Life of the Rabbit. MacMillan Pub. Co., Inc., NY, 1964.

Lord, RD. The Cottontail Rabbit in Illnois. Dept. Cons. Tech. Bull. #3, Southern Illinois Univ. Press, Carbondale, IL, 1963.

Petrides, GS. The Determination of Sex and Age Rations in the Cottontail Rabbit. Am. Midland Natualist 46(2): 312-336

Voorhies, CT. and Taylor, WP. The Life Histories and Ecology of Jackrabbits, *Lepus alleni* and *Lepus californicus ssp.* in relation to grazing in Arizona. Ariz. Ag. Expt. Sta. Tech. Bull. 49:471-587, 1933.

#### **Opossum**

Hartman, CG. Possums, Univ. of Texas Press, Austin, TX, 1952.

Keefe, J.F., and Wooldridge, D. The World of the Opossum. J.B. Lippincott, Philadelphia, PA, 1967.

Petrides, GA. Sex and Age Determination in the Opossum. J. Mamm. 30(4): 364-378, 1949.

Reynolds, H.C. Studies on Reproduction in the Opossum (*Didelphis* virginiana virginiana, Univ. California Pub. Zool., 52(3):223-284, 1952.

#### <u>Canids</u> – Dogs and their relatives.

Ballenberghe, W. and Mech, L.D. Wieghts, Growth, and Survival of Timber Wolf Pups in Minnesota. J. Mamm. 56(1):44-63, 1975.

Bekoff, M. (Ed). Coyotes: Biology, Behavior and Management. Academic Press, San Diego, CA. 1978.

Beckoff, M. and Jamieson, R. Physical Development in Coyotes (*Canis latrans*) with Comparison to Other Canids. J. Mamm. 56(3): 685-692, 1975.

Fiennes, R. The Order of Wolves. Bobbs-Merrill, Indianapolis, IN. 1976.

Fox, M. W. Behavior of Wolves, Dogs, and Related Canids. Harper & Row, NY. 1971.

Fox, M. W. The Wild Canids, Their Systematics, Behavioral Ecology and Evolution. Van Nostrand Reinhold Co., NY, 1975.

Henry, JD. The Little Foxes, J.B. Lippincott, Philadelphia, PA. 1969.

Henry, JD. Red Fox: The Catlike Canine. Smithsonian. 1986.

Rue, LL. III. The World of the Red Fox. J.B. Lippincott, Philadelphia, PA. 1969.

Ryden, H. God's Dog, A Celebration of the North American Coyote. Viking Press, NY. 1979.

Snow, CJ. Some Observations on the Behavioral and Morphological Development of Coyote Pups. Amer. Zool. 7: 353-355. 1967.

Taketazu, M. Fox Family, Four Seasons of Animal Life. Weather Hill/Heibonsha, Tokyo, Japan. 1979.

Van Wormer, J. The World of the Coyote. J.B. Lippincott, Philadelphia, PA. 1964.

Felids - Cats and their relatives. Barnes, CT. The Cougar or Mountain Lion. Ralton Co., Salt Lake City, UT. 1960.

Van Wormer, J. The World of the Bobcat. J.B. Lippincott, Philadelphia, PA. 1963.

Young, SP. The Puma, Mysterious American Cat. American Wildlife Institute, Washington, DC. 1946.

Young, SP. The Bobcat of North America. Univ. of Nebraska Press, Lincoln, NB. 1978.

#### Cervids - Deer

Davidson, WR (ed.) Diseases and Parasites of White-tailed Deer. Miss. Pub. #7, Tall Timber Res. Sta., Southeastern Cooperative Wildl. Dis. Study, Athens, GA 1981.

Rue, Lee III. The Deer of North America. Brown Pub., Inc., New York, NY. 1978.

Wallmo, OC. (ed.) Mule and Black-tailed Deer of North America. Univ. of Nebraska Press, Lincoln, NB. 1981.

Wemmer, C. (ed.) Biology and Management of the Cervidae. Research Symposium National Zoological Park. Washington, DC. #7. 1987.

#### Mustlids -Weasels and related species.

Anonymous. Mink Management and Nutrition. Agriculture Canada, Canada Dept. of Agriculture, Ottawa, Canada. 1975. Chanin, P. The Natural History of Otters. Facts on File Pub. NY. 1985.

Crabb, WD. Growth, Development and Seasonal Weights of Spotted Skunks. J. Mamm. 25(3): 213-221, 1944.

Hall, RE. American Weasels. Univ. of Kansas Press, Lawrence, KS, 1951.

Mason. CRF and MacDonald, SM. Otters: Ecology and Conservation. Cambridge Univ. Press. NY. 1986.

Powell, RA. The Fisher. U. Minnesota Press. Minneapolis, MN. 1982.

Verts, BJ. Biology of the Striped Skunk. Univ. of Illinois Press, Urbana, IL, 1967.

Wayre, P. The River People (river otters). Taplinger Pub Co., NY. 1976

#### **Procyonids - Raccoons and relatives.**

Johnson. AS. Biology of the Raccoon in Alabama. Agr. Exp. Sta. Bull. #402, Auburn Univ., Auburn, AL 1970

MacClintock, D. A Natural History of Raccoons. Chas. Scribner's Sons, NY. 1981.

North, S. Raccoons are the Brightest People. E.P Dutton & Co., Inc., NY. 1966.

Rue, LL. III. The World of the Raccoon. J.B. Lippincott Co., Philadelphia, PA. 1964.

Sieber, AJ. Vocal Communication in Raccoons (*Procyon Lotor*).) Behavior, 90:81-113. 1984

Whitney, LF. And Underwood, AB. The Raccoon. Practical Science Pub. Co., Orange, CT. 1962.

#### Marine Mammals

Anonymous. First Aid for Stranded Marine Mammals. International Fund for Animal Welfare. P.O. Box 193. Yarmouth, MA 02675. 1980.

Bayne, BL etal. The Effects of Stress and Pollution on Marine Animals. Praeger Pub. New York. 1985.

Dierauf, LA. Handbook of Marine Mammals Medicine. CRC Press, Boca Raton, FL. 1990. (Expensive, but contains lots of useful information)

Geraci, J. Marine Mammal Care. University of Guelph. Guelph, Ontario, Canada. 1977.

Geraci, JR. Dietary Disorders in Marine Mammals: Synthesis and New Findings. J. Am. Vet. Med. Assoc. 179(11): 1183-1191, 1981.

Howard, EE. Pathobiology of Marine Mammal Disorders (several volumes). CRC Press, Boca Raton. FL. 1983.

Kinne, O. (Ed). Disease of Marine Animals (4 volumes). John Wiley, NY. 1980-1984.

Ridgway, LM and Gorham, JR. Mammals of the Sea: Biology and Medicine. Charles C. Thomas. Springfield, IL. 1972.

#### **BIRDS**

Anonymous. Laboratory Animal Management: Wild birds. National Academy of Science, Washington, DC. 1977.

Andrle, RF and Carroll. Jr. Atlas of Breeding Birds in New York State. Cornell U. Press. Ithaca, NY. 1988.

Atwater, S and Schnell, J. (Eds.). Ruffed Grouse. Stackpole Press. Harrisburg, PA. 1989.

Baicich, P and Colin, J. Nest, Eggs, and Nestlings of North American Birds. 2<sup>nd</sup> Ed. 2005.

Bent, AC. Life Histories of North American Birds. 26 vols. NY: Dover Publications, Inc. (Good! A comprehensive series published under the auspices of the Smithsonian Institute. All-inclusive studies of the life histories of all North American birds.)

Davis, JW etal (Eds.) Infectious and Parasitic Diseases of Wild Birds. Iowa State University Press. Ames, IA. 1971.

Gill, FB. Ornithology. W.H. Freeman, San Francisco, CA. 1989.

Harrison, C. A Field Guide to the Nest Eggs and Nestling of North American Birds. Collins, Great Britian. 1978.

King, AS and McLelland, J. Birds, Their Structure and Function. (2<sup>nd</sup> Ed.) Bailliere Tindall. Philadelphia, PA. 1984.

MacDonald, JW. Mortality in Wild Birds. Bird Study 11-12: 18 1-195. 1965-66.

Pyle P. et al. Identification Guide to North American Passerines. Slate Creek Press. Bolinas, CA 1987.

Stokes, DW. A Guide to the Behavior of Common Birds. Little, Brown and Company. Boston, MA. Vols I and II. 1979.

Welty, JC. The Life of Birds. (3<sup>rd</sup> Ed.) WB Saunders Co., Philadelphia, PA 1982.

Zeleny, L. The Bluebird. U. of Indiana Press. 1978.

#### Waterfowl

Bellrose, FC. Duck, Geese and Swans of North America. Stackpole Press. Harrisburg, PA. 1974.

Hyde, DO (ed). Raising Wild Ducks in Captivity. EP Dutton and Company, NY. 1974.

Johnsgard, PA. Waterfowl: Their Biology and Natural History. University of Nebraska Press. Lincoln, NE. 1968. Ducks, geese and swans of the world. University of Nebraska Press. Lincoln, NE. 1978.

Wobeser, GA. Diseases of Wild Waterfowl. Plenum Press, NY. 1981.

#### Other aquatic birds

Ashmole, NP. Sea Bird Ecology and the Marine Environment. In: Farner, DS and King, JR (Eds). Avian biology. Vol I. Academic Press. NY. 1971, pp 224-286.

Burger, J. Olla, BL and Winn, HE(eds). Behavior of Marine Animals. Vol 4: Marine Birds. Plenum Pub. Co. NY. 1981.

Croxall, JF et al (eds). Status and Conservation of the World's Seabird Communities. Ecology 54(1): 31-44, 1973.

Croxall, JP (ed): Seabirds: Feeding Ecology and Role in Marine Ecosystems. Cambridge Univ. Press. NY. 1987.

Hancock, J. and Kushlan, J. The Herons Handbook. Christopher Helm Pub. 1990. Harrison, P. A field guide to seabirds on the world. Greene Press. Lexington, MA 1987.

Seabirds: An Identification Guide. Houghton Mifflin. Boston, MA 1983.

Johnsgard, PA. Diving Birds of North America. U. Nebraska Press. Lincoln, NE. 1987.

Ocean Wanderers: The Migratory Seabirds of the World. Stackpole Books. Harrisburg, PA 1974.

Lofgren, L. Ocean Birds. AA Knopf, NY. 1984.

McIntyre, JW. The Common Loon. U. Minn. Press. Minneapolis, MN. 1988.

Nelson, B. Living with Seabirds. Edinburgh Univ. Press. Edinburgh, Scotland, UK. 1987.

Nelson, B. Seabirds: Their Biology and Ecology. A&W Publishers, Inc. NY. 1979. The Sulidae: gannets and boobies. Oxford Univ. Press, NY. 1983.

Nettleship, DN and Birkhead, TR (Eds.). The Atlantic Alcidae. Academic Press. San Diego, CA. 1986.

Stokes, T. and Shackleton, K. Birds of the Atlantic Ocean. County Life Books. Felthan, Middlesex, Great Britian. 1968.

#### **Raptors**

Arent, L. Raptors in Captivity: Guidelines for Care and Management. 2007.

Bird, DM (ed). Biology and Management of Bald Eagles and Osprey. MacDonald Raptor Research Center of McGill University, Raptor Research Foundation. 1983.

Brown, L and Amadon, D. Eagles, Hawks and Falcons of the World. (2 vols.) McGraw-Hill Book Co., NY. 1968

Clark, RJ, DC Smith and LH Kelso. Working Bibliography of Owls of the World. Raptor Information Center. NWF,1412 Sixteenth St. NW, Washington, DC 20036. 1978.

Cooper, JE. Veterinary Aspects of Captive Birds of Prey. The Standfast Press. Great Britain. 1978.

Cooper, J.E., Gibson, L. and Jones, CG. The Assessment of Health in Casualty Birds of Prey Intended for Release. Veterinary Record 106:340-341. 1980.

Craighead. JJ and FC Jr. Hawks, Owls, and Wildlife. Dover Publications, Inc. NY. 1969.

Durham, K. Injuries to Birds of Prey Caught in Leg-hold Traps. International Journal for the Study of Animal Problems 2 (6): 317-328. 1980.

Garcelon, D. and Bogue, G. Raptor Care and Rehabilitation. Alexander Lindsey Junior Museum. Walnut Creek, CA. 1977.

Grossman, ML and Hamlet J. Birds of Prey of the World. Bonanza Books. New York. 1974.

Halliwell, WH. Diseases of Birds of Prey. Small Animal Practice, Vol 9, no #3.

Hamerstrom, F. Harrier: Hawk of the Marshes. Smithsonian. 1986.

Johnsgard, P.A. North American Owls. Smithsonian. 1988.

Hawks, Eagles, and Falcons of North America. Smithsonian. 1990.

McKeever, K Care and Rehabilitation of Injured Owls. 4<sup>th</sup> Ed. WF Rannie. Lincoln, Ontario, Canada. 1987.

Peeters, HJ and Jameson, EW. American Hawking. Privately printed. Davis, CA. 1970.

Poole, AF. Ospreys. Cambridge U. Press. NY. 1989

Stevens, R. Observations on Modern Falconry. Peregrine Press, College Station, Texas. 1970.

Woodford, MH. A Manual of Falconry, A&C Balck, Ltd. London, England. 1966.

#### **REPTILES**

Barten, S.L. Common Problems Among Reptiles Presented to Rehabilitation Centers. In: Beaver, P. (ed.) Wildlife rehabilitation. Vol 5. National Wildlife Rehabilitators Association. 5:80-85. 1986.

Bush, M. Antibiotic Therapy in Reptiles. In: Kirk, RW., (ed.). Current Veterinary Therapy. Vol 7. W.B. Saunders, Philadelphia, PA, USA pp647-649. 1980.

Cooper, JE and Jackson, OF. Diseases of Reptila. (two volumes). Academic Press. San Diego, CA. 1982.

DeGraaf, RM and Rudis, DD. Amphibians and Reptiles of New England. U Mass Press. Amherst, MA 1983. (A good, inexpensive introduction to the natural history of many native herps)

Demeter, B. Herpetological Husbandry for the Naturalist. Dept. of Herpetology. National Zoological Park, Washington, DC 20008. 1989. (good husbandry information).

Frye, FL. Biomedical and Surgical Aspects of Captive Reptile Husbandry. Kreiger Pub. Chicago, IL. 1990. (Very good, but very expensive.)

Frye, FL. Biomedical and Surgical Aspects of Captive Reptiles. VM Publishing Co., 1982.

Frye, FL. Husbandry, Medicine, and Surgery in Captive Reptiles. VM Publishing Co. 1978.

Harless, M. and Morlock, H. Turtles: Perspectives and Research. John Wiley & Sons. NY. 1979.

Jacobson, ER. Infectious Diseases of Reptiles. In: Kirk, RW., (ed). Current Veterinary Therapy, Vol. 7. W.B. Saunders, Philadelphia. PA, USA. pp. 625-633. 1980.

Jacobsen, ER. Use of Chemotherapeutics in Reptile Medicine. In: Jacobson, E.R. and G.V. Kollias. Exotic Animals. Churchill Livingstone. New York. pp. 35-48. 1988.

Jacobson, E.R Evaluation of the reptile patient. In: Jacobson, E.R. and G.V Kollias. Exotic Animals. Churchill Livingstone. New York. pp. 1-18. 1988.

Jarchow, JL. Hospital Care of the Reptile Patient. In: Jacobson, E.R. and G.V. Kollias (eds.) Exotic Animals. Churchill Livingstone. New York. pp.19-34. 1988.

Marcus, L. Veterinary Biology and Medicine of Captive Amphibians and Reptiles. Lea and Febiger. Philadelphia, PA. 1981.

Mattison, C. The Care of Reptiles and Amphibians in Captivity. Sterling Publishing Co. NY. 1987.

Millichamp, NJ. Surgical techniques in reptiles. In: Jacobson, E.R. and G.V. Killias (eds). Exotic animals. Churchill Livingstone. New York. pp.49-74. 1988.

Murphy, JB and Collins, JR (ed.) Reproductive Biology and Diseases of Captive Reptiles. Society for the Study of Amphibians and Reptiles. 1980.

Murphy, JB and Collins, JR. A Review of the Diseases and Treatment of Captive Turtles. AMS Publishing. RR2, Lawrence, Kansas 66044. 1983.

Needham, JR Laboratory Aspects of Reptilian Infections. Reptiles: Breeding, behavior, and Veterinary Aspects. British Herpetological Society. 1985.

Olson, GA, Hessler, JR, and Faith, RE. Techniques for Blood Collection and Intravenous Infusion in Reptiles. Lab. Anim. Sci. 25,783-785, 1975.

Page, CD. And Mautino, M. Clinical Management of Tortoises. Comp. Cont. Ed. For the Pract. Vet. 12(2), 221-228. 1990.

Ross, RK. The Bacterial Diseases of Reptiles. Inst. for Herp. Res. P.O. Box 2227 Stanford, CA 94305. 1984.

Samour, HJ. etal. Blood Sampling Techniques in Reptiles. Vet. Rec. 114, 472-476. 1984.

Welch, KRG. Handbook on the Maintenance of Reptiles in Captivity. Krelger Press. 1987. (Good basic information).

#### ZOONOTIC DISEASES

Anonymous. Zoonoses. In: Fraser, C.M. etal (eds.). The Merck Veterinary Manual. Merck & Co. Rahway, NJ. pp: 1601-1609. 1986.

Anonymous. Zoonoses. American Medical Association. Chicago, IL. 1977.

August, JR and Loar. AS. Zoonotic Diseases. The Vet. Clin. of No. America. 17 (1). Jan. 1987.

Evans, RH. And Carey, DP. Zoonotic Diseases. In: Harrison, G. and Harrison, L. Clinical Avian Medicine and Surgery. W.B. Saunders Co. Philadelphia, PA. pp. 537-540. 1997.

Schnurrenberger, PR and Hubbert, WT. An Outline of Zoonoses. Iowa State Univ. Press. Ames, IA. 1981.

Siemering, H. Zoonoses. In: Fowler, M.E. Zoo and Wild Animal Medicine. W.B. Saunders Co. Philadelphia, PA. pp.64-68. 1986.

#### ENVIRONMENTAL PROBLEMS

Anonymous. Oiled Bird Rehabilitation. Tri-State Bird Rescue and Rehabilitation, Inc. Wilmington, DE. 1990.

Armstrong, ID etal. Further Mass Seabird Deaths from Paralytic Shellfish Poisoning. Brit. Birds 7:58, 1978.

Bayne, BL etal. The Effects of Stress and Pollution on Marine Animals. Praeger Pub. NY. 1985.

Beasley, VR. Ed. Toxicology of Selected Pesticides, Drugs, and Chemicals. The Veterinary Clinics of North America. WB Saunders Co. Philadelphia, PA. 1990.

Boersma, PD and Davies, EM. Ingestion of Petroleum by Seabirds Can Serve as a Monitor of Water Quality. Sci. 231:373-376, 1986.

Bogan, JA and Bourne, WRP. Organochlorine Levels in Atlantic Seabirds. Nature 240:358, 1972.

Bowker, M. Caught in a Plastic Trap. International Wildlife 16(3):15-16, 1987.

Dein, FJ and Frink, LS. Rehabilitation of Oil-contaminated Birds. In: Kirk, RW (ed): Current Veterinary Therapy LY. WB Saunders Co. Philadelphia, PA 1986. pp. 719-22.

Durham, K. Injuries to Birds of Prey Caught in Leg-hold Traps. Int'l Journal for the Study of Animal Problems. 2(6): 317-328. 1981.

Feierabend, JS and Russell, AB. Lead Poisoning in Wild Waterfowl. Nat'1. Wildlife Federation. Washington, DC. 1986.

Frink, LS and Jones. Oiled Bird Rehabilitation: Fact and Fallacy. In: Frink, LS; Pokras, MA, etal. (eds): Wildlife Rehabilitators of Eastern North America: 1984 Symposium Proceedings. Tri-State Bird Rescue and Research. Wilmington, DE. 1989.

Howard, EB, Young, D and Exra, GN. Acute Food-borne Pesticide Toxicity in Cormorants and Seagulls. In: Animals as Monitors of Environmental Pollutants. Nat'l. Acad. Sci. Washington, DC. pp. 290-96, 1979. Locke, LN, Keff, SM and Zoromski, D. Lead Poisoning in Common Loons. Av. Diseases 26 (2): 392-395, 1982.

Moriarty, F. Ectoxicology. (2<sup>nd</sup> Ed.). Academic Press. San Diego, CA 1989.

Rosie, DG and Barnes, SN (Eds). The Effects of Oil on Birds: Physiological Research, Clinical Applications and Rehabilitation. Tri-State Bird Rescue and Research. Wilmington, DE. 1983.

Russell, WC, Choules, DL and Gauthier, DA. Detergents and Waterfowl. Journal of Zoo Animal Medicine, 12: 1013. 1981.
### **Organizations for Rehabilitators and Veterinarians**

National Rehabilitators Organzations: National Wildlife Rehabilitators Association c/o Carpenter Nature Center 12805 St. Croix Trail South Hastings, MN 55033

International Wildlife Rehabilitation Council, 4437 Central Place, Suite B-4, Suisun, CA 84595

#### **State Organizations:**

Wildlife Rehabilitation Today, Coconut Creek Publishing, 2201 NQW 40<sup>th</sup> Terrace, Coconut Creek, FL 33066

Veterinary Related Organizations, Amer. Assoc. of Wildlife Veterinarians Wyoming State Diagnostic Lab, Box 950, Laramie, WY 82070

American Assoc. of Zoo Veterinarians 34<sup>th</sup> Street and Girard Avenue Philadelphia, PA 19104

Internat'l Assoc. for Aquatic Animal Medicine Institute for Marine Mammals P.O. Box 4078 Gulfport, MS 39502

Wildlife Disease Association P.O. Box 7065 Lawrence, KS 66044 (785) 843-1234

Assoc. of Avian Veterinarians P.O. Box 299 East Northport, NY 11731

Northeastern Research Center for Wildlife Disease University of Connecticut Dept. of Parasitology 61 North Engleville Road Storrs, CT 06269 (203) 486-3737

Southeastern Cooperative Wildlife Disease Study College of Veterinary Medicine University of Georgia 589 D.W. Brooks Drive Athens, GA 30602 (706) 542-1741

### **RECORD KEEPING**

### WHEN AN ANIMAL IS FIRST RECEIVED

When an animal is first received, find out the following information from the person bringing you this animal:

- 1. Where did it come from?
- 2. Why did they take it? Was it truly necessary? If not, can it be returned?
- 3. What have they done for it?
- 4. Has it had anything to eat or drink?
- 5. Has it produced feces or urine?
- 6. How long have they had it? Did anyone else have it first?
- 7. Name, Address, & Telephone number of person bringing you the animal.

Examine the animal. Look for injuries, signs of shock and/or dehydration. Take a rectal temperature. A low temperature is common with shock. Treat for dehydration and shock first. Except to stop bleeding, an animal should not be treated until it is out of shock. Determine if the animal needs veterinary care.

When rehydrating the animal, be sure to begin in small amounts so that you do not stress the animal. Warmed rehydrating fluids can be given by eyedropper or syringe into the mouth, or if possible, by subcutaneous injection.

Place the animal in a warm quiet area to allow it to rest and bring its body temperature to normal.

Administer appropriate nutrition after it has been determined that the animal's condition has stabilized.

### **Daily Log Sheet**

It is important to keep a written record of everything that is done to an animal, for anyone who may handle or treat this animal. A log sheet allows for the monitoring of weight, amount fed, and other factors in the overall condition of the animal. This way, any problem with an animal can be shown to a veterinarian in a quick and concise form. A form should be developed that is comfortable to use and easily readable. Below is an example of a form which includes all information that should be needed.

Animal ID:	Species:	Sex:	_ Age:
Where From:			
Circumstances (why here?):			
Comments:			

Date	<u>Time</u>	Weight Oz./Grams	<u>Amt. Fed.</u> Kcal./Unit	A.D.U.F. ate, drank, urine, <u>feces</u>	<u>Med.</u> Given	Temp.	Note/Initials

Permit:	
Name:	
Street:	
Town:	
Telephone #:	

### Wildlife Rehabilitation Log Sheet Return to: RI Division of Fish & Wildlife

Return to: RI Division of Fish & Wildlife 277 Great Neck Road West Kingston, RI 02892 Permit Year: Division: Phone #: 401-789-0281

Date	<u>Species</u>	<u>Sex</u> M/F	Age	Received from: Address & Phone	Reason for Handling	Seen by Vet? Y/N	Treatment	Date & Location of Release

Appendix 1 Agents and methods of euthanasia by species (refer to Appendix 4 for unacceptable agents and methods.)

Species	Acceptable*	Conditionally acceptable <sup>†</sup>
	(refer to Appendix 2 and text for details)	(refer to Appendix 3 and text for details)
A 1'1'		
Amphibians	Barbiturates, inhalant anesthetics (in appropriate species), CO2,	Penetrating captive bolt, gunshot, stunning
	cO, incame methane sulfonate (TMS_MS 222) benzocaine hydrochloride	
	double pithing	
Birds	Barbiturates, inhalant anesthetics, CO2, CO, gunshot (free-ranging	N2, Ar, cervical dislocation, decapitation,
	only)	thoracic compression (small, free-ranging
		only)
Cats	Barbiturates, inhalant anesthetics, CO2, CO, potassium chloride in	N2, Ar
	conjunction with general anesthesia	
Dogs	Barbiturates, inhalant anesthetics, CO2, CO, potassium chloride in	N2, Ar, penetrating captive bolt, electrocution
	conjunction with general anesthesia	
Fish	Barbiturates, inhalant anesthetics, CO2, tricaine methane sulfonate	Decapitation and pithing, stunning and
	(TMS, MS 222), benzocalne hydrochloride, 2-phenoxyethanol	decapitation/pitning
Horses	Barbiturates, potassium chloride in conjunction with general	Chloral hydrate (IV, after sedation), gunshot,
Marina maranala	Derbiturates, storphing budgesblaride	Curshet (actorsons, ( 4 meters long)
Marine mammals	Barbhurates, etorphine hydrochloride	Gunshot (cetaceans < 4 meters long)
Mink, fox, and other	Barbiturates, inhalant anesthetics, CO2 (mink require high	N2, Ar, electrocution followed by cervical
mammals produced for fur	concentrations for euthanasia without supplemental agents), CO,	dislocation
	potassium chloride in conjunction with general anesthesia	
Nonhuman primates	Barbiturates	Inhalant anesthetics, CO2, CO, N2, Ar
Rabbits	Barbiturates, inhalant anesthetics, CO2, CO, potassium chloride in	N2, Ar, cervical dislocation (< 1 kg),
	conjunction with general anesthesia	decapitation, penetrating captive bolt
Reptiles	Barbiturates, inhalant anesthetics (in appropriate species), CO2 (in	Penetrating captive bolt, gunshot, decapitation
	appropriate species)	and pithing, stunning and decapitation

Rodents and other small	Barbiturates, inhalant anesthetics, CO2, CO, potassium chloride in	Methoxyflurane, ether, N2, Ar, cervical
mammals	conjunction with general anesthesia, microwave irradiation	dislocation (rats $< 200$ g), decapitation
Ruminants	Barbiturates, potassium chloride in conjunction with general	Chloral hydrate (IV, after sedation), gunshot,
	anesthesia, penetrating captive bolt	electrocution
Swine	Barbiturates, CO2, potassium chloride in conjunction with general	Inhalant anesthetics, CO, chloral hydrate (IV,
	anesthesia, penetrating captive bolt	after sedation), gunshot, electrocution, blow
		to the head (< 3 weeks of age)
Zoo animals	Barbiturates, inhalant anesthetics, CO2, CO, potassium chloride in	N2, Ar, penetrating captive bolt, gunshot
	conjunction with general anesthesia	
Free-ranging wildlife	Barbiturates IV or IP, inhalant anesthetics, potassium chloride in	CO2, CO, N2, Ar, penetrating captive bolt,
	conjunction with general anesthesia	gunshot, kill traps (scientifically tested)

Acceptable methods are those that consistently produce a humane death when used as the sole means of euthanasia.
 †Conditionally acceptable methods are those that by the nature of the technique or because of greater potential for operator error or safety hazards might not consistently produce humane death or are methods not well documented in the scientific literature.

Agent	Classification	Mode of action	Rapidity	Ease of Performance	Safety for personnel	Species suitability	Efficacy and comments
Barbiturates	Hypoxia attributable to depression of vital centers	Direct depression of cerebral cortex, subcortical structures, and vital centers; direct depression of heart muscle	Rapid onset of anesthesia	Animal must be restrained; personnel must be skilled to perform IV injection	Safe except human abuse potential; DEA- controlled substance	Most species	Highly effective when appropriately administered; acceptable IP in small animals and IV
Benzocaine hydrochloride	Hypoxia attributable to depression of vital centers	Depression of CNS	Very rapid, depending on dose	Easily used	Safe	Fish, amphibians	Effective but expensive
Carbon dioxide (bottled gas only)	Hypoxia attributable to depression of vital centers	Direct depression of cerebral cortex, subcortical structures, and vital centers; direct depression of heart muscle	Moderately rapid	Used in closed container	Minimal hazard	Small laboratory animals, birds, cats, small dogs, rabbits, mink (high concentrations required), zoo animals, amphibians, fish, some reptiles, swine	Effective, but time required may be prolonged in immature and neonatal animals
Carbon monoxide (bottled gas only)	Нурохіа	Combines with hemoglobin, preventing its combination with oxygen	Moderate onset time, but insidious so animal is unaware of onset	Requires appropriately maintained equipment	Extremely hazardous, toxic, and difficult to detect	Most small species including dogs, cats, rodents, mink, chinchillas, birds, reptiles, amphibians, zoo animals, rabbits	Effective; acceptable only when equipment is properly designed and operated
Inhalant anesthetics	Hypoxia attributable to depression of vital centers	Direct depression of cerebral cortex, subcortical structures, and vital centers	Moderately rapid onset of anesthesia, excitation may develop during induction	Easily performed with closed container; can be administered to large animals by means of a mask	Must be properly scavenged or vented to minimize exposure to personnel	Some amphibians, birds, cats, dogs, furbearing animals, rabbits, some reptiles, rodents & other small mammals, zoo animals, fish, free- ranging wildlife	Highly effective provided that subject is sufficiently exposed; either is conditionally acceptable

### Appendix 2 Acceptable agents and methods of euthanasia—characteristics and modes of action (refer to text for details)

Microwave irradiation	Brain enzyme inactivation	Direct of brain enzymes inactivation by rapid heating of brain	Very rapid	Requires training and highly specialized equipment	Safe	Mice, rats	Highly effective for special needs
Penetrating captive bolt	Physical damage to brain	Direct concussion of brain tissue	Rapid	Requires skill, adequate restraint, and proper placement of captive bolt	Safe	Horses, ruminants, swine	Instant loss of consciousness, but motor activity may continue
2- Phenoxyethan ol	Hypoxia attributable to depression of vital centers	Depression of CNS	Very rapid, depending on dose	Easily used	Safe	Fish	Effective but expensive
Potassium chloride (intracardially or intravenously in conjunction with general anesthesia only)	Hypoxia	Direct depression of cerebral cortex, subcortical structures, and vital centers secondary to cardiac arrest.	Rapid	Requires training and specialized equipment for remote injection anesthesia, and ability to give IV injection of potassium chloride	Anesthetics may be hazardous with accidental human exposure	Most species	Highly effective, some clonic muscle spasms may be observed
Tricaine methane sulfonate (TMS, MS 222)	Hypoxia attributable to depression of vital centers	Depression of CNS	Very rapid, depending on dose	Easily used	Safe	Fish, amphibians	Effective but expensive

Appendix 3 Conditionally acceptable agents and methods of euthanasia—characteristics and modes of action (refer to text for details)

Agent	Classification	Mode of action	Rapidity	Ease of	Safety for	Species	Efficacy and
Blow to the head	Physical damage to brain	Direct concussion of	Rapid	Requires skill, adequate	Safe	Young pigs <3 weeks old	Must be properlyapplied
		brain tissue		restraint, and appropriate force			to be humane and effective
Carbon dioxide(bottled gas only)	Hypoxia due to depression of vital centers	Direct depression of cerebral cortex, subcortical structures and vital centers; direct depression of heart muscle	Moderately rapid	Used in closed container	Minimal hazard	Nonhuman primates, free- ranging wildlife	Effective, but time required may be prolonged in immature and neonatal animals
Carbon monoxide (bottled gas only)	Нурохіа	Combines with hemoglobin, preventing its combination with oxygen	Moderate onset time, but insidious so animal is unaware of onset	Requires appropriately maintained equipment	Extremely hazardous, toxic, and difficult to detect	Nonhuman primates, free- ranging wildlife	Effective; acceptable only when equipment is properly designed and operated
Cervical dislocation	Hypoxia due to disruption of vital centers	Direct depression of brain	Moderately rapid	Requires training and skill	Safe	Poultry, birds, laboratory mice, rats (< 200 g), rabbits (< 1 kg)	Irreversible; violent muscle contractions can occur after cervical dislocation
Chloral hydrate	Hypoxia from depression of respiratory center	Direct depression of brain	Rapid	Personnel must be skilled to perform IV injection	Safe	Horses, ruminants, swine	Animals should be sedated prior to administration

Decapitation	Hypoxia due to disruption of vital centers	Direct depression of brain	Rapid	Requires training and skill	Guillotine poses potential employee injury hazard	Laboratory rodents; small rabbits; birds; some fish, amphibians, and reptiles (latter 3 with pithing)	Irreversible; violent muscle contraction can occur after decapitation
Electrocution	Нурохіа	Direct depression of brain and cardiac fibrillation	Can be rapid	Not easily performed in all instances	Hazardous to personnel	Used primarily in sheep, swine, foxes, mink (with cervical dislocation), ruminants, animals > 5 kg	Violent muscle contractions occur at same time as loss of consciousness
Gunshot	Hypoxia due to disruption of vital centers	Direct concussion of brain tissue	Rapid	Requires skill and appropriate firearm	May be dangerous	Large domestic and zoo animals, reptiles, amphibians, wildlife, cetaceans (< 4 meters long)	Instant loss of consciousness, but motor activity may continue
Inhalant anesthetics	Hypoxia due to disruption of vital centers	Direct depression of cerebral cortex, subcortical structures, and vital centers	Moderately rapid onset of anesthesia; excitation may develop during induction	Easily performed with closed container; can be administered to large animals by means of a mask	Must be properly scavenged or vented to minimize exposure to personnel; either has explosive potential and exposure to ether may be stressful	Nonhuman primates, swine; ether is conditionally acceptable for rodents and small mammals; methoxyflurane is conditionally acceptable for rodents and small mammal	Highly effective provided that subject is sufficiently exposed

Nitrogen, argon	Hypoxia	Reduces partial	Rapid	Used in closed	Safe if used with	Cats, small dogs,	Effective except
		pressure of		chamber with	ventilation	birds, rodents,	in young and
		oxygen available		rapid filling		rabbits, other	neonates; an
		to blood				small species,	effective agent,
						mink, zoo	but other
						animals,	methods are
						nonhuman	preferable
						primates, free-	
						ranging wildlife	
Penetrating	Physical damage	Direct	Rapid	Requires skill,	Safe	Dogs, rabbits,	Instant loss of
captive bolt	to brain	concussion of		adequate restraint		zoo animals,	consciousness
		brain tissue		and proper		reptiles,	but motor
				placement of		amphibians, free-	activity may
				captive bolt		ranging wildlife	continue
Pithing	Hypoxia due to	Trauma of brain	Rapid	Easily performed	Safe	Some ectotherms	Effective, but
	disruption of	and spinal cord		by requires skill			death not
	vital centers,	tissue					immediate unless
	physical damage						brain and spinal
	to brain						cord are pithed
Thoracic	Hypoxia and	Physical	Moderately rapid	Requires training	Safe	Small- to	Apparently
compression	cardiac arrest	interference with				medium-sized	effective
		cardiac and				free-ranging	
		respiratory				birds	
		function					

## Table 4 – Summary of some unacceptable agents and methods of euthanasia

### Agent

### Comments

Exsanguination	Because of the anxiety associated with extreme hypovolemia, exsanguination should be done only in sedated, stunned, or anesthetized animals.
Decompression	Decompression is unacceptable for euthanasia because of numerous disadvantages. (1) Many chambers are designed to produce decompression at a rate 15 to 60 times faster than that recommended as optimum for animals, resulting in pain and distress attributable to expanding gases trapped in body cavities. (2) Immature animals are tolerant of hypoxia, and longer periods of decompression are required before respiration ceases.
	<ul> <li>(3) Accidental recompression, with recovery of injured animals, can occur.</li> <li>(4) Bleeding, vomiting, convulsions, urination, and defecation, which are aesthetically unpleasant, may develop in unconscious animals.</li> </ul>
Rapid freezing	Rapid freezing as a sole means of euthanasia is not considered to be humane. If used, animals should be anesthetized prior to freezing.
Air embolism	Air embolism may be accompanied by convulsions, opisthotonos, and vocalization. If used, it should be done only in anesthetized animals.
Drowning	Drowning is not a means of euthanasia and is inhumane.
Strychnine	Strychnine causes violent convulsions and painful muscle contractions.
Neuromuscular blocking agents (nicotine, magnesium sulfate, potassiumchloride, all curariform agents)	When used alone, these drugs all cause respiratory arrest before loss of consciousness, so the animal may perceive pain and distress after it is immobilized.
Chloroform	Chloroform is a known hepatotoxin and suspected carcinogen and, therefore, is extremely hazardous to personnel.
Cyanide	Cyanide poses an extreme danger to personnel and the manner of death is aesthetically objectionable.
Stunning	Stunning may render an animal unconscious, but it is not a method of euthanasia (except for neonatal animals with thin craniums). If used, it must be immediately followed by a method that ensures death.

### Sources of Equipment and Supplies

### **Capture and Handling Tools**

Animal Care Equipment & Services (wide range of handling equipment) 580 Forest Shade Drive P.O. Box 3275 1-800-338-ACES

One of a Kind (gloves) 327 E. Lake St. Horicon, WI 53032

J.A. Cissel (cage netting) P.O. Box 339 Farmingdale, NJ 07727-0339

Safe-N-Sound Live Traps 116 Main St. Garrison, IA 52229

Animal Spectrum Inc. (infra-red heaters) P.O.Box 6307 Lincoln, NB 68506-0307

Animal Technology (heated sleeping platforms) 23655 San Fernando Rd. Newhall, CA 91321-3198 Ketch-All Co. (heavy gloves) Dept. VMA 2537 University Ave. Crestline, CA 92325

Animal Technology (squeeze cages) 23655 San Fernando Rd. Newhall, CA 91321-3189

NASCO (wide range of equipment) 901 JanesvilleAve. Fort Atkinson, WI 53538

Live Traps Tomahawk Live Trap Co. P.O. Box 323 W. Tomahawk, WI 54487

Heating Units Gorman-Rupp Industries Div. (circulating water blankets) Belleville, OH

### **General Veterinary Supplies & Equipment**

Wholesale Veterinary Supply (wide range of items, catalog on request) 800-435-6940 J.A. Webster, Inc. 86 Leominster Rd. Sterling, MA 01564-2168 800-220-7911

### **Broad Spectrum Lighting**

Sun Box Co. (Vitalite) 1037 Taft St., Rockville, MD 20850 Sylvania Corp (Gro-lux® light) Danvers, MA 01923

### Sources of Food

Grubco, Inc. (grubs, waxworms, mealworms) Box 15001 Hamilton, OH 45015 Tel: 513-863-4937

Rainbow Mealworms Inc. P.O. Box 4907 Compton, CA 90220

Rio Bravo Lab Farms (frozen mice & rats) P. O. BOX 533 5 Oakwood Plaza Dripping Springs, TX 78620 Tel: 512-858-5657 Borden Company (KMR, Esbilac, SPF Lac, Multi milk) RR# 1, Box 127 Elgin, IL 60120 Tel: 800-323-0877

Foremost McKesson (Doe milk replacer) P.O. Box 2277 Tel: 415-828-1440, ext. 41

Ceva Labs, Inc. (Normosol – R replacement fluids) 10560 Barkley Overland Park, KS 66212

Ralston Purina Co. (Dog Chow, Cat Chow, Kitten Chow, Puppy Chow, Rabbit Chow, Checkerboard Square, Lab- Rodent Chow, and others) St. Louis, MO 63164

Animal Spectrum (zoo diets: birds of prey diet, omnivore diet, etc.) 5801 Locust St. Lincoln, NE 68516 Tel: 800-228-4005

Now Foods (powdered thiamine) 221 N. Yale Villa Park, IL 60181 Tel: 312-833-4460

Wild Wings Enterprises 1515 El Verano Way Belmont, CA 94002 Tel: 415-593-4707 Animal Health Sales, Inc. (Headstart vitamin mix for poultry) Selbyville, DE 19975 Tel: 800-441-8011

Freeda Vitamins (Kovitonic Vit. B-12 & Iron Liquid) 36 East 41<sup>st</sup> Street New York, NY 10017 Tel: 212-685-4980

Roudybush, Inc. (wild bird diets) 405 S. Main St. Templeton, CA 93465 Tel: 805-434-0303

### RULES AND REGULATIONS

### GOVERNING

### HYPODERMIC NEEDLES, SYRINGES,

AND OTHER SUCH INSTRUMENTS (R21-28-CS-4)

### STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Health August 1979

> As Amended: March 1982 September 1985 March 1987(E) April 1987 November 1992 June 1997 October 1997 December 1997 (E) March 1998 August 2000 (E) December 2000 (E) February 2001

#### **INTRODUCTION**

These amended *Rules and Regulations Governing Hypodermic Needles, Syringes, and Other Such Instruments (R21-28-CS-4)* are promulgated pursuant to the authority set forth in section 21-28-3.01 of the General Laws of Rhode Island, as amended, and are established for the purpose of promoting public health by permitting the sale of hypodermic needles and syringes in licensed pharmacies and adopting provisions governing hypodermic needles, syringes, and other such instruments without the need for a prescription.

Furthermore, pursuant to the provisions of section 32-35-3(c) of the General laws of Rhode Island, the following issues were given consideration: (1) alternative approaches; (2) duplication or overlap with other state regulations; and (3) significant economic impact which would be placed on small business as defined in Chapter 42-35 of the General Laws, through these amended regulations. No known alternative approach, duplication or overlap with other regulations or significant economic impact, were identified. Consequently, the amended regulations are adopted in the best interest of the public health, safety, and welfare.

These amended regulations shall supersede all previous *Rules and Regulations Governing Hypodermic Needles, Syringes, and Other Such Instruments* promulgated by the Department of Health and filed with the Secretary of State.

### Section 1.0 Definitions

Wherever used in these rules and regulations, the following terms shall be construed as follows:

- 1.1 "Authorized pharmacy personnel" means a person who is licensed, registered, or enrolled by the Department pursuant to Chapter 5-19 of the Rhode Island General Laws, as amended, and the Rules and Regulations Pertaining to Pharmacists, Pharmacies and Manufacturers, Wholesalers and Distributors (R5-19-PHAR).
- 1.2 *"Department"* means the Rhode Island Department of Health.
- 1.3 *"Director"* means the Director of the Rhode Island Department of Health.
- 1.4 "*Pharmacy*" means that portion or part of a premises where prescriptions are compounded and dispensed, including that portion utilized for the storage of prescription drugs or legend drugs, and which is licensed pursuant to Chapter 5-19 of the Rhode Island General Laws, as amended, and the *Rules and Regulations Pertaining to Pharmacists, Pharmacies and Manufacturers, Wholesalers and Distributors (R5-19-PHAR).*

# Section 2.0 Sale of Hypodermic Needles and Syringes in Licensed Pharmacies General Requirements

- 2.1 As of September 1, 2000, a prescription shall no longer be required for each sale of a hypodermic syringe(s), needle(s), or any instrument adapted for the administration of drugs by injection.
- 2.2 Hypodermic needles and syringes shall be sold only in licensed pharmacies.
  - 2.2.1 Hypodermic needles and syringes shall be stored in the pharmacy. Access to hypodermic needles and syringes shall be by authorized pharmacy personnel only.
- 2.3 Upon each sale of a hypodermic needle(s) and syringe(s), the pharmacist shall make available to the purchaser, information on the safe disposal of hypodermic syringes or needles that shall include:
  - 2.3.1 Information on the safe disposal of home-generated medical waste, and
  - 2.3.2 A list of local disposal locations, and/or
  - 2.3.3 A telephone number to call for information on local disposal sites and methods of disposal.

2.4 Pharmacists may also provide purchasers with information on drug addiction treatment, including a local telephone number to get assistance.

### Section 3.0 Pharmacy Certification

- 3.1 <u>The registrant of each licensed pharmacy in the state shall certify to the Director, on a form</u> provided by the Department, his/her participation in an appropriate activity for the safe disposal of hypodermic needles and syringes. Activities shall include:
  - 3.1.1 Pharmacy is registered as a regulated medical waste generator with the Department;

or

- 3.1.2 Pharmacy is an established site for the collection for home-generated medical waste in a medical waste program certified by the Director, or provides information to purchasers that lists the locations of the local collection sites for home-generated medical waste; or
- 3.1.3 Pharmacy provides written information relating to the safe disposal of hypodermic needles and syringes.
- 3.2 When there is a change in registrant, the incoming registrant shall certify participation in activities as outlined in section 3.1.

### Section 4.0 Destruction of Excess, Undesired, and Contaminated Hypodermic Needles, Syringes, or Other Such Instruments

- 4.1 The legal destruction of hypodermic needles, syringes or other such instruments is the responsibility of the last entitled or authorized possessor.
- 4.2 *Methods of Disposal:* In accordance with the requirements of reference 3 herein, the following methods of disposal are intended to accomplish the purpose of adequate final destruction without danger of contamination of or injury to waste disposal personnel and to prevent diversion of the instruments or transmission of communicable diseases to the general population.
  - 4.2.1 The requirements cited below shall apply to all health care facilities and individuals licensed by the Department of Health and authorized to handle needles, syringes, and other such instruments.
    - a) Pursuant to section 21-29.1-1 of the General Laws of Rhode Island, as amended, all facilities or persons legally entitled to use disposable syringes and needles including but not limited to hospitals, physicians, skilled nursing and intermediate care facilities, shall destroy them after one (1) use. Any violation of this provision shall constitute a misdemeanor.

- b) Excess and undesired needles, syringes and other such instruments shall be stored in impervious, rigid, puncture-resistant containers for disposal. Intact needles must be placed directly into the collection containers (i.e., without recapping, clipping, breaking or compacting) unless the person can demonstrate that an alternative is feasible and the alternatives are approved by the Department of Health, or that such action is required by a specific medical procedure.
- c) Personnel handling disposal waste materials such as needles, syringes, and other such instruments may treat and destroy such waste on-site in a Department of Environmental Management (DEM)-permitted incinerator or by a DEM-approved alternative treatment/destruction technology or prepare the regulated medical waste for off-site transport by a DEM-permitted medical waste transporter.
- d) Containers with used or unused needles, syringes, and other sharps may be treated and destroyed on-site in a DEM-permitted incinerator or by a DEM-approved alternative medical waste treatment/destruction technology, or at an off-site treatment and destruction facility.

### Section 5.0 Severability

5.1 If any provision of these regulations or the application thereof to any facility or circumstances shall be held invalid, such invalidity shall not affect the provisions or application of the regulations which can be given effect, and to this end the provision of the regulations are declared to be severable.

needles-syringe-finalregs-feb01.doc October 2, 2012

### **REFERENCES**

- "Procedure for Disposing of Controlled Substances," Drug Enforcement Administration, Department of Justice. Title 21 *Code of Federal Regulations (CFR)* Part 1307.21, p. 81 (April 1, 1996 edition) and subsequent amendments thereto.
- 2. *Rules and Regulations Governing the Disposal of Legend Drugs (R21-31-LEG)*, Rhode Island Department of Health, March, 1998 and subsequent amendments thereto.
- 3. Rules and Regulations Governing the Generation, Transportation, Storage, Treatment, Management & Disposal of Regulated Medical Waste in Rhode Island (DEM-DAH-MW-01-92), Rhode Island Department of Environmental Management, June 1994 and subsequent amendments thereto.



# STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

DIVISION OF FISH AND WILDLIFE

## RULES AND REGULATIONS GOVERNING WILDLIFE REHABILITATION



AUTHORITY: These regulations are adopted pursuant to Chapters 42-17.1 "DEM"; 42-17.6; 20-1-4, 20-1-18, 20-1-22, 20-37-3 and in accordance with the requirements of the administrative procedures act Chapter 42-35 of the Rhode Island General Laws of 1956, as amended.

WILDLIFE REHABILITATION DEM - FISH AND WILDLIFE

# STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

### DIVISION OF FISH AND WILDLIFE

### RULES AND REGULATIONS GOVERNING WILDLIFE REHABILITATION

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### STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

### DIVISION OF FISH AND WILDLIFE

### RULES AND REGULATIONS GOVERNING WILDLIFE REHABILITATION

### **1. PURPOSE**

The proper care of orphaned and/or injured wildlife requires special knowledge and facilities not possessed by the general public. Specially trained individuals, collectively called Wildlife Rehabilitators, provide for the care of injured and orphaned wildlife so that such wildlife may be returned to the wild. The purpose of these regulations is to establish the standards under which such wildlife rehabilitators may be permitted to temporarily possess wildlife protected by the Department under Rhode Island General Laws (RIGL) Chapter 20-1, in order to provide necessary aid.

### **2. AUTHORITY**

These rules and regulations are adopted pursuant to authority vested in the Director pursuant to Chapters 42-17.1 "DEM"; 42-17.6; 20-1-4, 20-1-18, 20-1-22, 20-37-3 and in accordance with the requirements of the administrative procedures act Chapter 42-35.

### **3. APPLICATION**

The terms and provisions of these rules and regulations shall be liberally construed to permit the Department to effectuate the purposes of state law, regulations, and policies.

### 4. DEFINITIONS

Wherever used in these rules and regulations the following terms shall be construed as follows:

(A) "RIDEM " means the Rhode Island Department of Environmental Management.

(B). "Director" means the Director of the Rhode Island Department of Environmental Management, or his/her duly authorized agent or agents.

(C) "Division" means the Division of Fish & Wildlife of the Rhode Island Department of Environmental Management so-called in the RIGL's; and called Fish and Wildlife (F&W) in regulations.

(D) "Endangered Species" means those species of animals designated as threatened or endangered according to the U.S. Fish and Wildlife Service as published in 50 CFR 17.11 and 17.12.

(E) "Euthanasia" for the purpose of wildlife rehabilitation means the methods as described in the "2000 report of the AVMA panel on Euthanasia" published in the *Journal of the American Veterinary Medical Association*, vol. 218, no. 5.

WILDLIFE REHABILITATION DEM - FISH AND WILDLIFE (F) "Exotic animals" as defined in these regulations refers to animals not occurring naturally, either presently or historically, within the boundaries of the State of Rhode Island including, but not limited to: Mute Swans, Monk Parakeets, Mudpuppies, and Red-eared sliders.

(G) "Fish and Wildlife" (F&W) means the Fish and Wildlife Program of DEM's Office of Natural Resources, formerly referred to as the Division.

(H) "IWRC" means the International Wildlife Rehabilitation Council

(I) "Native Wildlife" means animals occurring naturally, either presently or historically, within the boundaries of the State of Rhode Island.

"Permittee", see (U) "Wildlife Rehabilitator"(J) "Person" any individual, partnership, firm, joint stock, company, corporation, association, trust, estate, municipality, or other government entity or other legal entity.

(K) "Person" means any individual, partnership, firm, joint stock, company, corporation, association, trust, estate, municipality, or other government entity or other legal entity.(L) "RVS Handbook", shall mean, the most current rabies vector species handbook prepared by the Division of Fish and Wildlife

(M) "Sponsor", shall mean, person previously permitted as a Level II rehabilitator, agreeing to assist between one and three Level I apprentices, according to the guidelines adopted in the sponsor packet, as provided.

(N) "Sharps" Sharps that have been used in animal or human patient care of treatment, including sharps generated from the preparation of human and animal remains for burial or cremation, or in medical, research, or industrial laboratories, including, but not limited to, hypodermic needles, syringes with or without the attached needle, pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, glass carpules, and glass culture dishes regardless of presence of infectious agents. Also included are other types of broken or unbroken glassware that have been used in animal or human patient care or treatment, such as used slides and cover slips. For the purpose of these regulations, disposable syringes and needles are considered regulated medical waste after one use.

(O) "Standards" shall mean the most current "Minimum Standards for Wildlife Rehabilitation" 3<sup>rd</sup> edition 2000 established by National Wildlife Rehabilitators Association (NWRA) and the International Wildlife Rehabilitation Council (IWRC) and in accordance with these regulations.

(P) "State List" means currently listed wildlife species requiring a permit for handling.

(Q) "State Manual" means the most current wildlife rehabilitation manual prepared by the Division of Fish & Wildlife.

(R) "Sub-permittee" means persons authorized to assist with the rehabilitation of wildlife under the authority of a Level II licensee's permit.

(S) "Transporter" means persons authorized to transport wildlife to licensed wildlife rehabilitators.

(T) "Vector Species" means those species that are the most common wildlife carriers of rabies including raccoons, skunks, bats, groundhogs, and foxes, may be referred to as RVS.

WILDLIFE REHABILITATION DEM - FISH AND WILDLIFE (U) "Wildlife Rehabilitation" means the practice of providing care for injured, orphaned or sick wildlife including their capture, housing, feeding, emergency treatment for the primary purpose of release into the wild.

(V) "Wildlife Rehabilitator or permittee" means persons receiving a special purpose scientific collectors' permit pursuant to these rules and regulations.

### **5. SEVERABILITY**

If any provision of these Rules and Regulations, or application thereof to any person or circumstances, is held invalid by a court of competent jurisdiction, the validity of the remainder of the Rules and Regulations shall not be affected thereby.

### 6. SUPERSEDED RULES AND REGULATIONS #718

On the effective date of these rules and regulations, all previous rules and regulations (#718), and any policies regarding the administration and enforcement of wildlife rehabilitation shall be superseded. However, any enforcement action taken by, or application submitted to, the Department prior to the effective date of these Rules and Regulations shall be governed by the Rules and Regulations in effect at the time the enforcement action was taken, or application filed.

### 7. VIOLATIONS

- I. Any violation pursuant to the provisions of Title 20 of the General Laws of Rhode Island and the rules and regulations herein, either by a permittee or a sub-permittee working under said permittee may be cause for imposing penalties in accordance with the provisions of the above mentioned statute, removal of regulated species, as well as revocation of existing rehabilitation permit(s) of both the sub-permittee and responsible permittee
- II. Special Purpose Scientific Collector Permits for Wildlife Rehabilitation may be terminated by the Director for any of the following reasons:

A. The Wildlife Rehabilitator has ceased to meet appropriate eligibility requirements for appointment as set forth in these regulations.

B. The Wildlife Rehabilitator has failed to perform duties as provided in these regulations.

C. The Level I Wildlife Rehabilitator or sub-permittee does not meet criteria on evaluation form and is no longer endorsed by the designated sponsors.

D. The Wildlife Rehabilitator has ceased to have an approved wildlife rehabilitation facility available for permittee's use.

E. In cases where a permit is terminated, the Director, in his/her discretion, may impose a period of probation, recertification and testing, and/or reduce the level of permit, or reinstate the permit.

### 8. APPEAL & HEARING PROCEDURES

Opportunity for Hearing

A. Denials -- Any person whose application for a permit, permit renewal, or other approval, has been denied by the permitting agency, acting through Fish and Wildlife, may appeal to the Administrative Adjudication Division, for review of the decision on which the denial is based.

B. Violations -- Any person who has been issued a notice of violation of any of the provisions of these rules, may request a hearing from the Administrative Adjudication Division, subject to the provisions of R.I.G.L. 42-17.1-2(u).

C. Hearings and Administrative Procedure -- Pursuant to the authority granted to the Department in Chapter 42-17.7-9

- Any person who seeks an adjudicatory hearing in order to contest an enforcement action which alleges violation(s) of these rules and regulations must file said request in writing with the clerk of Administrative Adjudication Division, 235 Promenade Street, Providence, Rhode Island, 02908 within twenty (20) days of receipt of the contested agency enforcement action.
- 2. Any person who seeks an adjudicatory hearing relative to the denial of a permit or sub-permit arising under these rules and regulations must file said request in writing with the clerk of Administrative Adjudication Division 235 Promenade Street, Providence, Rhode Island 02908 within thirty (30) calendar days of receipt of the contested agency action.

**9. REGULATIONS** As follows:

### Part 1 REQUIREMENTS

- 1.1 Criteria -- Fish and Wildlife may issue an annual special Scientific Collectors Permit to rehabilitate native wildlife to persons meeting the criteria set forth in these regulations. Prior to permit issuance, Fish and Wildlife shall determine that the applicant has met the following requirements in the categories described below:
  - 1.1.1 Level P-Sub-permittee:
  - A. Sub-permittees must pass a written examination established by the Department. Following satisfactory completion of the State test, as delineated in 1.2.8, a person may qualify to assist any class of Level II permittees under the direct supervision of the permittee. Sub-permittees are strictly prohibited from handling raptors, or RVS species at any time. In addition, sub-permittees are strictly prohibited from handling any category of animals for which their supervising permittee has not been duly authorized to care for.
  - B. Following the completion of not less than 25 hours of hands on activity and 6 hours of instructional training sufficient to demonstrate to the satisfaction of the permittee that the sub-permittee has sufficient skills knowledge, the permittee shall be considered for off-site approval.
  - C. In order to be considered for off site approval, the applicant must meet the following requirements:
    - 1A. Facility must meet or exceed the minimum standards and be inspected by the permittee on forms provided by and submitted to DEM prior to acceptance of any wildlife for rehabilitation.
    - 2B. The submission by the permittee of a written policy which shall include inter alia, the relationship to be maintained between the permittee and the sub-permittee, frequency and extent of inspection and continuing monitoring of the sub permittee. In no case shall the sub-permittee's facilities not be inspected by the permittees less frequently than 1 month interval during the season for initial year and one visit per season for subsequent years and that the permittee submit a report on the progress of the sub-permittee on the form provided at 30 and 60 day intervals.

In addition to 1.1, Sub-permittees are restricted to pre-fledged songbirds and waterfowl and un-weaned non-RVS small mammals.

Sub-permittees are permitted to temporarily house post weaned non RVS mammals for soft release only, restricted to the providing of food and water limited to a period not to exceed two weeks. Handling of soft release candidates strictly prohibited.

Sub-permittees must comply with all requirements set out in part 3.

- 1.1.2 Level I Apprentice: Authorized to receive, rehabilitate, transfer and release all wildlife in categories listed on the permit under the supervision of a Division approved sponsor and under conditions specified in the regulations. Applicants for licensure as Level 1 rehabilitators must present written letter of recommendation by Level II or IIA rehabilitator willing to serve as the applicant's sponsor/consultant during the first year of applicant's apprenticeship and must pass a written examination established by the Department and the IWRC. Apprentices must consult sponsor immediately after receiving any wildlife, as well as adhering to regulatory requirements. Level 1 permittees are not authorized to list sub-permittees on their permit.
  - 1.1.3 Level II Qualified persons are persons who were previously licensed as a Level II rehabilitator in Rhode Island or in another state having equivalent requirements and offering reciprocal privileges to licensed rehabilitators of this state, or who have currently held a Level I permit for 1 (one) year with a letter of recommendation from a Level II sponsor and having passed required examination, may apply for licensure by the Division as a Level II rehabilitator. Sub-permittees are permitted to assist under the direct supervision of Level II permittees. Level II permittees are directly responsible for the action of any sub-permittee acting under his /her permit. Level II permittees shall sponsor no more than 5 sub-permittees as an individual or 10 sub-permittees at an approved center.
  - <u>1.1.4</u> Level II R Persons meeting Level II requirements, having held a previous Level II R permit or with a letter of recommendation from a Level II R sponsor.
  - 1.1.5 Level F Qualified persons holding a valid Rhode Island General or Master class Falconer permit may obtain a permit restricted to raptors. Level R permit holders are required to adhere to all requirements set out in part 1.1 with the exception of the IWRC class.

- <u>1.1.6</u> Level T Qualified persons are limited to the transport only of nonvector species native wildlife. Qualified persons shall be those holding transport permits in the past or individuals who have attended and successfully completed class in transporting wildlife, approved by the Division.
- 1.1.7 Level TX Qualified persons are limited to the transport of non-vector species and rabies vector species. In addition to above transport requirements, Level TX permit holders must abide by the conditions in Part 3 of these rules and regulations and the requirements in the RVS Handbook and the State Rabies Protocol Manual.
- <u>1.1.8</u> Level II V Restricted to veterinarians licensed in the State of Rhode Island.
- <u>1.1.9</u> Level II X Qualification is limited to those persons meeting Level II requirements in addition to the conditions, requirements, and training as described in Part 5 and the referenced RVS Handbook and State Rabies Protocol Manual.

<u>1.2 Application Requirements For All Categories</u> -- The application shall include but not be limited to the following:

- <u>1.2.1</u> Certification that the applicant is at least 18 years of age, and a resident of Rhode Island;
- 1.2.3 Submission of letter of acceptance from sponsor as required
- <u>1.2.4</u> Submission of letter from Rhode Island licensed and permitted veterinarian, agreeing to provide services at no cost to the state
- <u>1.2.5</u> Provide description of education and experience
- <u>1.2.6</u> Provide address and description of facility. Facility must meet or exceed minimum standards as defined and be available for inspection by the Department at any reasonable hour.
- <u>1.2.7</u> Designate category of permitted native wildlife that the applicant wishes to rehabilitate (small mammals, small birds, reptiles, raptors, rabies vector species or all)
- 1.2.8 Prior to licensure, first-time applicants and sub-permittees must receive a grade of 80 percent or higher on the open book written examination administered by the Department. First-time applicants, excluding sub-permittees, must also receive a grade of 70 percent or higher on the exam administered by the International Wildlife Rehabilitation Council's in the Basic Wildlife Rehabilitation Skills Seminar; veterinarians and general or master falconers are exempt.

- <u>1.2.9</u> Submission of applicant's USFWS special purpose rehabilitation permit, if applicable, or application if pending. Federal permit is required prior to handling of any federally regulated species pursuant to 50 CFR Part 13 and 50 CFR 21.27.29
- <u>1.2.10</u> Certification by applicant that no local ordinances prohibit the possession of wildlife and/or that the possession of wildlife does not violate any rental or real estate agreement at the facility where the applicant proposes to conduct wildlife rehabilitation. Applicant must also submit letter of approval from employer if wildlife is to be temporarily housed at a work facility, to include address and description.
- <u>1.2.11</u> Certification from the applicant on application provided by the Division that all rehabilitation activities will comply with these regulations.
- $\frac{1.2.12}{1.2.12}$  Certification of proof of Tetanus vaccine within last ten years, and additionally for rabies vector species, proof of rabies vaccination or report of antibody titre >0.5 IU checked at least every two years.
- 1.2.13 Certification that applicant has not been convicted of the violation of any provisions of these regulations, has not been convicted of or pleaded guilty to a Title 20 misdemeanor, or had his/her license to rehabilitate wildlife revoked or suspended within three years prior to application.

### Part 2

### PERMIT ISSUANCE

2.1 Interview and inspection by a Division representative of a first-time applicant or apprentice to assess the applicant's compliance with licensing requirements and facilities as described in the Standards; Level II-X applicants require an additional inspection, meeting the criteria in Part 5 and RVS Handbook.

<u>2.2</u> Issuance of permits may be made by the Department, not withstanding availability in the program, sponsorship availability, or level of expertise and upon:

- 2.2.1 Receipt of completed application providing the information enumerated under Part 1; and for Level II-X applicants, additionally, Part 5.
- <u>2.2.2</u> Submission of completed rehabilitation log sheet(s) on form provided with information required, on or before January 7 following the expiration date of past license, if applicable and;
- 2.2.3 Submission of proof of a minimum of 12 hours of continuing education credits within three years of permit issuance for Level I, Level II, and Level IIX permit holders.
- <u>2.2.4</u> Payment of the twenty-five dollar (\$25) non-refundable permit fee, subpermittees are exempt.
- 2.2.5 Pending verification of information, permit may then be issued, indicating the level of expertise, category(s) of wildlife species, and expiration date of the permit.

### Part 3

### SPECIAL CONDITIONS

3.1 No person shall rehabilitate, handle, release or transport any wildlife, except as provided in parts 3.2, 3.5, and 5 of these rules and regulations without having first obtained the appropriate permit as designated in Part I from the Department.

<u>3.2</u> No person shall rehabilitate, handle, release or transport any wildlife other than the categories specifically set out in the permit, and in compliance with the state list. Persons may transport non-rabies vector species to rehabilitators, provided rehabilitator records name, address, and telephone number of said person. *Exception*: Rabies vector species transport must conform to conditions in Parts l and 5 and the RVS Handbook.

<u>3.3</u> No person shall rehabilitate, handle, release or transport any species, as defined in these regulations as "Exotics."

3.4 There is no permit required for the rehabilitation, handling, release or transportation of the following species: mice, shrews, voles, moles, house sparrow, Rock Dove, and European Starling.

<u>3.5</u> Veterinarians may provide emergency first aid to any member of an endangered or threatened species, without first obtaining a permit, provided that immediate notification is given to the Division via telephone as to the species, nature of the injury/illness, location where the species was encountered, description of the service provided, and last location where the wildlife was seen. Such species shall be transferred to a licensed rehabilitator within 48 hours, or as soon as medically stable, with additional notice to the Division, to include notice after release, and/or euthanasia. Permittees must further comply with federal regulations. Licensed veterinarians may give emergency treatment without obtaining a rehabilitation permit, to the remainder of the non-rabies vector state listed species, providing that the species be transferred to permitted facility within 48 hours. Notification must be made to the Division within 24 hours of initial contact.

3.6 No person shall release any non-vector species rehabilitated wildlife at a location other than the point of origin, or in suitable habitat and season for that species within the boundary of Rhode Island. Refer to Part 5 of the rules and regulations for release conditions of vector species

<u>3.7</u> All permittees and sub-permittees must operate under all aspects of the current standards and manual guidelines, as defined, and in accordance with these regulations with regard to care and facilities or have a working relationship with permittees with appropriate facilities. Permittees must maintain initial physical evaluation form, to include location of origin, name, address, and telephone number of transporter in accordance with Part 3.2; and disposition logged on each individual. Permittees must

maintain a current Sub-permittee Transfer log, on forms provided by DEM, to track the species, date and location of wildlife to their sub-permittees. Facilities and log sheets may be inspected at any reasonable hour by the Department's designee. Wildlife shall be held no longer than necessary for the restoration of its health and when wildlife is rehabilitated, after which it shall immediately be released to the wild at its point of origin, or in a suitable habitat. Such log sheets shall contain, at a minimum, the information as shown in the IWRC basic skills manual. Refer to Part 5 of the rules and regulations for additional documentation required for rabies vector species.

<u>3.8</u> In addition to the provisions in 50 CFR 17 and 21, certain diseases are reportable to DEM and DOH. As a requirement of this permit, you are required to notify the proper department if you encounter or suspect any of the following as listed in "Reportable Disease in Rhode Island".

<u>3.9</u> Wildlife held under this permit must be released as soon as possible in accordance with criteria established in the "Standards" and into a suitable habitat for that species. All wildlife being treated shall be released to the wild within forty-eight (48) hours of the subject wildlife meeting the "Minimum Standards for Release of Wildlife Following Rehabilitation" as described in Section 7.2 of International Wildlife Rehabilitation Committee and National Wildlife Rehabilitation Association as published in 2000 (a copy of which is attached and incorporated herein). All wildlife being treated shall be released to the wild or euthanatized as soon as its condition can be determined and not later than ninety (90) days of the commencement of treatment. If it is determined by the Division that it is probable that the wildlife being treated will not be able to be released to the wild within ninety (90) days of the commencement of treatment, the wildlife shall be euthanatized within twenty-four (24) hours of the Division's determination unless prior written Division approval is received authorizing extended care of the wildlife. Refer to Part 5 for rabies vector species.

3.10 Wildlife held under this permit shall not be owned, sold, offered for sale, purchased, bartered, offered for barter, tamed, neutered, used for propagation purposes or used to conduct commercial transactions of any nature.

<u>3.11</u> Permittees may not transport wildlife across state borders unless appropriate notification is made to RI DEM Division of Fish and Wildlife or, outside of normal business hours, the Division of Enforcement, and in accordance with applicable federal or state regulations including but not limited to the Federal Lacey Act 50 CFR 20.

<u>3.12</u> Permittees may transfer wildlife to other Rhode Island permitted rehabilitation facilities with like permits to include categories of animals, i.e., small birds, small mammals, raptors, but shall not delegate to any other person the authority granted by this permit. The total duration of rehabilitation shall be in compliance with 3.8. For rabies vector species refer to Part 5.

3.13 The Department reserves the right to repossess any animal held pursuant to these regulations at any time.

<u>3.14</u> Permittee must notify the department within 30 days prior to moving to another facility.

3.15 Permittees and sub-permittees must possess at all times a current wildlife rehabilitation identification card when in possession of wildlife outside the facility and must display permit in a prominent location at their facility.

<u>3.16</u> Sub-permittees cannot accept wildlife directly from the public, prescribe medication, or perform euthanasia. Sub-permittees must report illness, changes in condition, failure to thrive, escapes or death of wildlife in their care to permittees within 24 hours by telephone and written on designated log sheets, documenting both condition and reporting. In case of illness or failure to thrive, permittee must additionally return above wildlife to permittee or his/her level II designee within 24 hours. All wildlife must be returned to the premises of the permittee within 7 days following weaning for small mammals and 3 days for birds. All disposals of carcasses must be provided in a manner consistent with state and municipal regulations.

<u>3.17</u> Any permittee may terminate his/her relationship with any sub-permittee or apprentice at any time. If a permittee elects to terminate said relationship, the permittee shall notify both the Division and sub-permittee/apprentice, in writing, in not more than 5 days following termination. Sub-permittees/apprentices must return any animals in his/her care upon receipt of notice of termination.

<u>3.18</u> All permits expire at the end of the calendar year. Permits must be renewed and are only valid after receipt of completed renewal application, and other conditions as detailed in Part 2 and/or Part 5.

3.19 Permittees must agree, in writing, to hold the state harmless for any damage, injury, or disease caused by any wildlife held under the permit, to include treatment for or prevention of such. Permittees assume all liability associated with this permit.

### Part 4 OTHER RESTRICTIONS

<u>4.1</u> Nothing in these regulations shall be interpreted as permitting the unlicensed practice of veterinary medicine to include but not be limited to: the diagnosis, treatment or dispensing of pharmaceuticals in accordance with Section R5-25-DOH Veterinary Rules and Regulations. Medications must be labeled, stored and disposed of in accordance with said Rules and Regulations. The State assumes no responsibility for the cost of such care.

<u>4.2</u> Nothing in these regulations permits the use of regulated medical supplies including but not limited to syringes and drugs without specific conformance with Section R21-28-CS-4 of the DOH Rules and Regulations governing Hypodermic Needles, Syringes, and Other Such Instruments and Drugs.

- 4.2.1 Nothing in these regulations permits the disposal of excess or unused needles unless in accordance with DOH Rules and Regulations R21-28-CS-4, Section 4 and DEM –DAH-MW-01-92 Rules and Regulation Governing the Generation, Transportation, Storage, Treatment, Management & Disposal of Regulated Medical Waste in Rhode Island.
- 4.2.2 Disposal of sharps generated by permittees or sub-permittees, must conform with section 13.02a, b, and c of the above-stated regulations, providing for small generators at satellite facilities to transport sharps from point of origin to a central collection point. Generators must contact the RI DEM Office of Waste Management with a letter of request for approval of satellite facilities, providing names and addresses of off-site generators. Permittees and sub-permittees are responsible to log the transport of sharps from satellites on forms provided by DEM. Sharps must be stored in approved containers and transferred to the central collection point as requested by the central collection point when the container is full or when permittee/sub-permittee ceases to be licensed for wildlife rehabilitation.

<u>4.3</u> Obtaining a permit pursuant to these regulations does not preclude the permittee's conformance with such other Federal, State or local requirements for licensure certification or permit which may be required.

<u>4.4</u> Permittee may not demand a fee or otherwise charge for services rendered under conditions of this permit. Nothing precludes permittee from accepting a donation(s).

### PART 5

### RABIES VECTOR SPECIES (RVS) Special Conditions & Requirements

<u>5.1</u> Applicants for licensure of a Level II-X permit to rehabilitate RVS must have previously possessed a valid Level II Rhode Island Rehabilitator Permit, meet all permit conditions, requirements, record keeping [see Part 3.7], in addition to the conditions outlined in Part 5, the State Rabies Protocol Manual and the RVS Handbook.

<u>5.2</u> Only apparently healthy, orphaned young-of-the-year (less than 10-weeks of age) can be candidates for rehabilitation, limited to raccoons, foxes, skunks, and woodchucks, if no human or animal exposure has occurred, as determined by the Department of Health (DOH). Apparently healthy animals shall include absence of behavioral, neurological, locomotive impairments, or those animals with wounds. All species of bats and other adult rabies vector species cannot be candidates for rehabilitation.

<u>5.3</u> Level II-X permittees must notify the DOH immediately upon admission of RVS and adhere to DOH procedures appropriate sections in the State Rabies Protocol Manual and the format outlined in the RVS Handbook as a condition of the permit. Level II-X rehabilitators will be responsible for pick-up and transport of RVS and will provide additional information on the person(s) finding the RVS [*see RVS Handbook*]. Level II-X permittees may make arrangements with Level TX permittees only. This permit does not authorize the care of RVS to transport permittees. DEM or DOH personnel will not provide transport of RVS to Level II-X permittees. Transfer of RVS from Level II-X to Level II-X, only will be permitted, providing immediate notification to DOH of the name and address of new location.

5.4 All applicants must obtain a State Rabies Manual and a RVS Handbook available from the Division and certify on the application the Division provides that all rehabilitation procedures and facilities will be adhered to, as a condition of the permit, to include appropriate forms and DOH notification.

5.5 Level II-X permit holders must provide facilities, as a condition of licensure that meet or exceed the requirements listed in the RVS Handbook. Facilities must be inspected by a Division designee with a form provided by the Division, prior to license issuance.
- 5.5.1 Facilities must additionally meet IWRC criteria for specific species as specified in standards manual.
- 5.5.2 Immediately upon receipt by the licensee, each individual RVS must be identified with an external marker or held in such a manner that permits positive identification of the specific animal until that animal is released.

5.6 Any RVS accepted as a candidate for rehabilitation must be released as soon as they are able to survive in the wild, and no later than September 30. Following IWRC Basic Skills Manual, a soft release, no longer than two weeks, will be permitted in a natural setting with natural foods. The DOH must be notified immediately if RVS dies. Any cage mates of a rabies positive RVS must also be euthanized. RVS that cannot be released must be euthanized following criteria outlined in the RVS Handbook.

5.6.1 Level II-X permittees are required to take any RVS showing any abnormal behavioral, neurological, or locomotive signs to the designated Level II-V on their application for examination as soon as possible.

5.7 RVS cannot be released on state or federally owned land. Written permission from private landowner must be obtained prior to release and become part of the individual RVS record.

5.8 Veterinarians with Level II-V permits will be permitted to euthanize RVS under criteria established by DOH, as outlined in 5.2 and 5.7.

5.9 Level II-X permit holders assume all liability in association with this activity

## **RULE 10 EFFECTIVE DATE**

The foregoing- <u>Rules and Regulations Governing Wildlife Rehabilitation</u>, after due notice, are hereby adopted and filed with the Secretary of State to become effective twenty (20) days thereafter, in accordance with the provisions of Chapters 42-17.1 "DEM"; 42-17.6; 20-1-4, 20-1-18, 20-1-22, 20-37-3 and in accordance with the requirements of the administrative procedures act Chapter 42-35.0f the General laws of Rhode Island of 1956, as amended.

W. Michael Sullivan, PhD.

Director of Environmental Management