



## NEWSLETTER FOR WILDLIFE REHABILITATORS OF NORTH CAROLINA

Volume 7

December 2001

A quarterly newsletter produced by the Wildlife Rehabilitators of North Carolina (WRNC). WRNC's mission is to share information and knowledge about wildlife rehabilitation for the benefit of native wildlife. For comments or questions, write to: WRNC, 2542 Weymoth Rd, Winston-Salem, NC 27103.

### \*\*\*PLEASE NOTE THE CHANGE IN LOCATION OF \*\*\*\*\*THE GENERAL MEMBERSHIP MEETING

**Emergency Stabilization and treatments for debilitated or starving birds**  
by Laurie Degernes, DVM, Dipl ABVP, Assistant Professor, College of  
Veterinary Medicine, NCSU.

1. The initial assessment of the patient should include an accurate weight, a complete physical examination, evaluation of the hydration status, body condition ("keel score"), the color of the mucous membranes, the extent of injuries, and the birds' attitude.
2. It is safe to assume that all sick, injured, or debilitated animals are 7-10% dehydrated and fluid therapy is advised.
3. The initial physical examination and assessment and any immediate treatments may have to be kept short with new arrivals, if the birds show signs of stress.
4. Prepare all anticipated treatments ahead of time to shorten actual handling time. As an alternative, the animal could be returned to a quiet, dark container after the initial examination, while all necessary supplies are prepared.
5. The "shot gun" approach to treatments:
  - Fluids, fluids, fluids (warmed to about 100° F)
  - Injectable vitamin B complex for emaciated birds or to help stimulate appetite

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### Next General Meeting of WRNC:

**Where:** Bobby Schopler's  
Mom's house, Mebane, NC

**When:** Sat, January 19, 2002,  
at 12 noon (Bd Mbrs meet @ 10)

**Directions: Fr. Raleigh**  
take I-40W to Hwy 54W to  
Chapel Hill. Turn R @ 6<sup>th</sup>  
stoplight onto Hamilton Rd  
(right before Glenwood/Glen  
Lennox shopping center).  
Take the 1<sup>st</sup> R off of Hamilton  
(Berkley Rd). Take the 1<sup>st</sup> L  
onto Oakwood Dr. 4<sup>th</sup> house  
on L. (27 Oakwood Dr)(919-  
942-3937). Mom's name-  
Betsy.

**Fr G'Boro:** Take I-40E to  
Hwy 54E (exit 148) to Chapel  
Hill (this rd joins 15-501 by-  
pass. Take the Hwy54 exit off  
the by-pass (to Raleigh), get in  
the L lane and take the 1<sup>st</sup> L at  
the light onto Hamilton Rd  
(just after Glenwood/Glen  
Lennox shopping center).  
Turn R onto Berkely. Turn L  
onto Oakwood. 4<sup>th</sup> house on L  
(27 Oakwood Dr)(919-942-  
3937).

**Board Elections** will be  
held at this meeting.

Continued from page 1

- Antibiotics, as indicated for injuries. Use caution in birds with possible liver or kidney damage or very dehydrated birds. Proper hydration level has to be maintained during the use of certain antibiotics such as Sulfatrim<sup>TM</sup> (Sulfamethoxazole & Trimethoprim).
  - Tube feeding formulas
  - Supplemental heat via heating pads, heat lamps, or incubators (preferred because they heat uniformly and cannot burn a patient)
  - Quiet and dark/dim caging – reduce visual and auditory stimuli
  - Cage arrangements, perches, water bowls as appropriate
6. Plan to do the more extensive diagnostic and therapeutic procedures after initial stabilization. This includes radiographs, any extensive wound management, and surgeries.

There have been recent reports of secondary *Aspergillosis* infections following the use of corticosteroids such as Dexamethasone injections. Dexamethasone is commonly used to treat concussions in wildlife. Problems, especially in species prone to *Aspergillosis* infection, were reported regardless of how the medication was administered (injection, oral, ophthalmic).

**Fluid Therapy and Nutrition** by Laurie Degernes, DVM, Dipl ABVP,  
Assistant Professor, College of Veterinary Medicine, NCSU.

#### Hydration assessment

- If the animal is sick or debilitated, assume 7-10% dehydration
- Subjective parameters – “tenting” skin fold test, dry & tacky mucous membranes, small thread-like veins, dull & sunken eyes, weakness, depression
- Objective parameters – increased hematocrit, total solids, uric acid, or plasma osmolality

#### Calculation of fluid requirements

- Daily maintenance requirements – non-passerines estimated at 50ml / kg / day
- Fluid deficit replacement – weight (in grams) times fluid deficit (converted to decimal value of estimated percent dehydration). Example: 1 kg red-tailed hawk with 10% dehydration:  $1000 \times 0.10 = 100 \text{ ml}$
- The fluid deficit is usually restored over the first 36 – 48 hours after arrival. In the above example, the 100 ml replacement amount is divided into 2 days of 50 ml per day, then combined with the 50 ml per day for maintenance requirements. This red-tailed hawk will therefore need 100 ml/day for the first 2 days, after that it can be reduced to maintenance levels.
- Some animals are severely dehydrated and 15% - 20% fluid deficit replacement may be indicated.

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### Routes of fluid administration, advantages and disadvantages

- Oral (PO) – fluids given orally are often absorbed faster than SQ fluids. A safe starting point is to give 3 ml/100 g bodyweight at a time. Do not give oral fluids to birds that are not standing.
- Subcutaneous (SQ) – administered on the upper back between the shoulder blades, or in the fold of skin between the femur and the abdominal wall. Rate is 2-3 ml/100g bodyweight and multiple sites can be utilized.
- Intravenous (IV) – a slow drip is often not practical because the animals will not tolerate IV lines. A bolus (single large dose) can sometimes be administered over the course of a few minutes. Rate is 1 – 2 ml/100 g body weight.
- Intraosseous (IO) – administered through a needle, which has been inserted into the marrow cavity of a bone such as the ulna. The ulna in raptors has vascularized bone marrow and fluids are almost instantly delivered into the bloodstream. Rate is 1 2- ml/100 g body weight. The needle, which is inserted into the bone using sterile technique, can be left in place as long as 72 hours and used repeatedly during that time. A figure-of-8 bandage is used to protect the needle from being pulled out.
- Intraperitoneal (IP) – into the body cavity. This technique is not advised in birds, because all available air spaces in the body cavity are filled with air sacs and thus part of the respiratory system.
- Through the vent into the caecum/caeca - May not stay in the body long enough to be absorbed.

### Types of fluids

#### A. Crystalloids

- Normal saline (0.9% NaCl)
- Lactated Ringers Solution
- 5% dextrose in water (D5W) – PO, IV, IO, but **NOT** SQ
- 50:50 saline and D5W – ok for SQ
- 2.5% dextrose in water or saline - ok to give SQ

#### B. Colloids

- Blood or plasma – transfusions work best if donor is the same species of bird
- Hetastarch (hydroxyethyl starch) or Dextran – high molecular weight polysaccharide molecules that draw fluid in from the extracellular space to increase volume within the vascular system. Works well in birds, but must be combined with crystalloids.
- Oxyglobin (bovine hemoglobin) – limited studies in birds

### Nutritional Therapy

Do not try to start starving birds on nutrition until you have addressed the dehydration. The GI tract may not be functioning properly in dehydrated birds and may not be able to process solid food or even tube feeding formula.

Once the GI tract has been mobilized, high-calorie, easy-to-digest formulas can be administered in small amounts 2-3 times daily.

- For carnivores, Hill's canned A-D, watered down a little, can be tubed.
- For omnivores and vegetarians, commercial powdered diets such as Emerald II and Emerald Critical Care from Lafeber Co. or Passerine I and II diets from Harrison are available.

The amount of calories per volume can be increased if needed by adding Nutrical<sup>TM</sup>. Gradually wean bird onto a normal diet after a few days of fluids and nutritional support. Monitor the weight daily by weighing the animal before morning treatments each day.

**Selected Notes, Part three, from the NWRA symposium, March 2001** by Mathias Engelmann  
(These notes are by no means meant to be a complete summary of each presentation. Look for the proceedings to be published by the NWRA in 2002 with selected, complete papers)

**The Southern Appalachian Northern Saw-whet Owl** by Corrie Williams, Blue Ridge Wildlife Institute, Jonas Ridge, NC.

The northern saw-whet owl is found in southern Canada and the northern United States. In addition to this main population, there are several smaller and apparently isolated populations. The North Carolina population is thought to consist of less than 500 breeding pairs. Other isolated "pockets" are found in Montana, Wyoming, South Dakota, and Virginia/West Virginia. In North Carolina saw-whets breed in the spruce-fir forests at elevations above 4000'. Juvenile birds may be migrating down slope during the winter months, as low as 2700' elevation.

This research project deals with the dispersal of juvenile birds. 120 nest boxes have been installed and were monitored periodically for signs of nesting. 5 young birds were fitted with radio transmitters, but the signals to all five were lost within a week of each other. This could be due to the migration patterns. A large number of juveniles were found dead before fledging.

Future studies may include supplemental feeding of young birds in the nest boxes and the possible removal of the weakest sibling from each nest to be raised with captive foster parents.

**Forced Hibernation of Turtles in captivity** by Sandy Heyn, Willowbrook Wildlife Center

Animals have to be in good condition before attempting to hibernate them – well-hydrated, infection-free, of acceptable weight, and with an empty gut. The goal is to keep them at 40 – 42° F for 6 weeks.

Three methods were presented – in water, in soil, and in soil in refrigerator

- Water method – turtles breathe under water. Their throat cavity is lined with blood vessels which can absorb oxygen from the water. Also have two thin-walled sacs near the anus which allows breathing. The metabolic rate drops from 40 beats /minute to one beat every 10 minutes during hibernation. Calcium salts from shell are dissolved into the blood stream to counteract lactic acid buildup. This method cannot be used with shell fractures. The water helps rehydrate the animal. Plan to drop the temperature by 4-5 degrees every 5 days, down to 40 – 42 degrees.
- Soil method - used for large turtles. Use moist potting soil, cover turtles with moist newspaper and mist them down every 3-4 days. Less control over temperature since this method is usually done outdoors. Have to monitor ambient temperature frequently and move container around to find optimum temperature.
- Soil-in-refrigerator method – used with weak animals and with shell fractures. Moist potting soil and sphagnum moss is provided for the turtle to burrow into and the animal is misted every 3-4 days.

When warming up turtles, increase the temperature slowly and begin feeding at 80°. The average turtle loses about 6% of its body weight during hibernation.

#### **It's Election time!**

We hope you are planning to attend the next WRNC general meeting in January. You may vote for board members at the meeting if you are a WRNC member in good standing.

If you cannot attend the meeting, you may vote for board members or nominate additional board members using the enclosed absentee ballot on page 5. Copy the page to save this newsletter. The deadline for voting by absentee ballot is January 17<sup>th</sup>, 2002.



## WE NEED YOUR INPUT!

Our first year of data have shown some interesting statistics. Of the 95 species of animals reported to have been rehabilitated, ~ 65% were birds, ~ 34% mammals (no rabies vector species), with a few reptiles thrown in. Of the birds reported, 57% were raptors and 9% were shore birds or water fowl, and 34% were songbirds. However, this data must be looked at with an informed eye. There are about 900 rehabilitators listed in North Carolina and only 1983 animals reported in our first year of reporting. That would be an average of slightly more than 2 animals per rehabilitator. Come on folks! We know there are more people out there. Lets get some meaningful information. Please send in your reports to Carla Johnson, 2542 Weymoth Rd, Winston-Salem, NC or email her @ [cmjohnso@wfubmc.edu](mailto:cmjohnso@wfubmc.edu). We need to have a more accurate report on how North Carolina's rehabilitators are impacting wild populations of animals. Send in your data this January! The information for each animal should include:

Species/common name...date in...where found (town/county) reason brought in...disposition\*...date out...\*disposition (R=released; D=died; DOA=dead on arrival; E=euthanatized; EOA=euthanatized on arrival; T=transferred (to whom); I=institutionalized (educational use); P=pending).

If you have interesting cases, innovative techniques or any other tips you would like to share with the readers, please send us the information.

All submissions will be edited for clarity and contents, and suggested revisions will be sent to the author for approval prior to printing.

## TO SUBMIT INFORMATION, PLEASE USE ENCLOSED FORM ON PAGE 6

### ABSENTEE BALLOT

You may cast one vote for up to six candidates by placing a check next to candidates' names. Write-in candidates must be members in good standing that have agreed to serve as Trustees. The Nominating Committee hereby nominates the following slate of candidates for positions on the WRNC Board of Trustees.

#### Three-year term

\_\_\_\_ Mathias Engelmann, Cornelius  
\_\_\_\_ Sheri Koester, Raleigh  
\_\_\_\_ Sandra Justus, Valdese  
\_\_\_\_ Lee Bolt, DVM, Asheville  
\_\_\_\_ Gail Houston, Corolla

#### Write-in candidates

\_\_\_\_  
\_\_\_\_  
\_\_\_\_

#### Two-year term

\_\_\_\_ Joan McMurray, Asheboro

#### One-year term

\_\_\_\_ Ellen Westerman, New Bern

Ballots must be received by January 17, 2002.  
Mail to WRNC, 2542 Weymoth Rd, Winston-Salem, NC 27103

PLEASE PHOTOCOPY IF MORE  
FORMS ARE NEEDED

RETURN TO:WRNC

2542 Weymouth Rd.

Winston Salem, NC 27103

or E-mail [cmjohnso@wfubmc.edu](mailto:cmjohnso@wfubmc.edu)

# WILDLIFE REHABILITATORS OF NORTH CAROLINA END OF YEAR REPORT FOR 2000

REHABILITATORS NAME OR INSTITUTION NAME: \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

COUNTY \_\_\_\_\_

REGION \_\_\_\_\_

	SPECIES/COMMON NAME	DATE IN	WHERE FOUND		REASON FOR REHAB	DISPOSITION*	DATE OUT
			TOWN	COUNTY			
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

R = released; D = Died; DOA = dead on arrival; E = Euthanatized; EOA = euthanatized on arrival; T= transferred; I = institutionalized (educational use);  
P = pending



**Why do we do it.** by Mark Ansley, President, Eastern Wildlife Center

As baby season slowly lets up, we at Eastern Wildlife Center are proud that this year we have turned back 50 % of the animals presented to us. It is frustrating to be in the business, when you allow unsupervised animal drop-offs and you know that 90 % of these animals don't need us --fawn deer lying in a field, baby ducks crossing a road, a nest in the chimney. "Oh my, they will surely die if I don't take them home". We as rehabilitators hear all the stories, all the reasons the public can muster, but do we practice the hard decisions of not getting involved. Do we, as rehabilitators, give an outlet to the public to bring wildlife to our door without permission? Sure, the ones that are bleeding, shot, or hit by a car are no-brainers, but a healthy one who is found? Compassion is one thing, rehabilitation is another.

We have turned people back in the veterinarians office, with the box in their hand, especially if they know exactly where the animal came from. When the public doesn't have an easy outlet or drop-off site, they become reasonable people that just want the best for the animal. They will listen to good advice. They think we would be more than happy to take the animals and believe that we would love to have them. But our organization will not admit animals without one of us talking to the presenter first. This is especially true of veterinarians that are not part of your organization. If you allow them to bring animals with no questions asked, you are making a mistake. Now of course we have to take all animals. We don't just leave them, but we have over the years put this seed in the minds of everyone we talk to, that they need to speak with us first. It will cut down on your work, and its best for the animal, especially fledglings.

We as rehabilitators want to do the best we can. An important part of our job is knowing when to leave animals alone and teaching the public when to leave animals alone. Step back and look at your ways of handling calls. Being firm will not make you new friends, but we aren't in wildlife rehabilitation for friendships, are we?

**Corrections for the WRNC Directory**

**Aileen Haynes**

P.O. Box 151  
Lawsonville, NC 27002  
H 336-593-2317  
Pgr 336-783-1079  
County : Stokes, District 7

**Joan Peluso**

remove work #  
Add email: possummama6@aol.com

**Derrick Schubert**

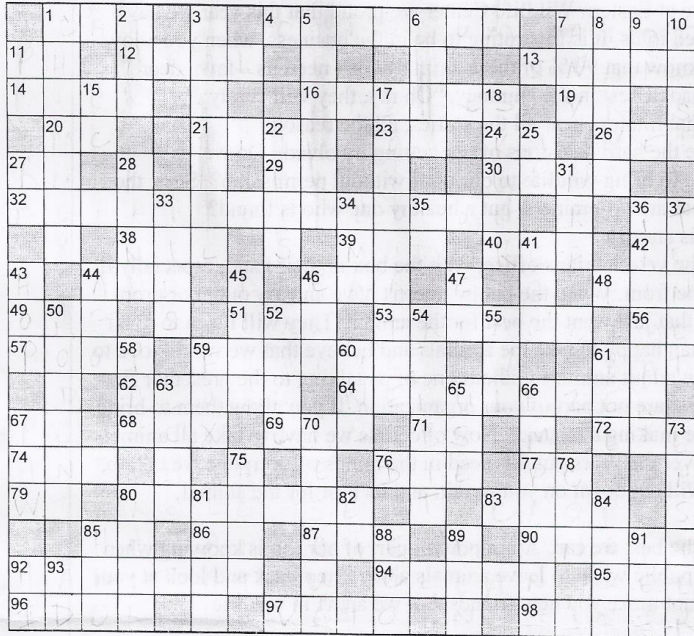
H 910-253-7482  
W 910-872-5590  
Accept: nothing at this time

**REMINDER**

If you have corrections for the WRNC Directory, please submit them to Carla Johnson at the WRNC address on page 1.

**Disclaimer** The opinions, techniques, and recommendations expressed in the articles of this newsletter are those of the author(s) and do not imply endorsement by WRNC.

**A crossword puzzle with a wildlife rehabilitation theme**  
by Jean Chamberlain



**Across**

1. Bird enemy
4. Marsupial
7. Not a little
11. Acidity level
12. Medication route
13. Reptile
14. Raptor food
16. Disease
19. Period of time (abbrev)
20. Show host
21. Cope
23. Opposite of off
24. A distance
26. Rehabber's friend
27. Nurse
29. Prefix for two
30. Bone in wing
32. Theme of this puzzle
36. Hands on recovery aid
38. Nothing
39. \_\_\_dauber

**Across (continued)**

40. New Zealand Parrot
42. Prefix for again
44. Sum
46. Organ
48. Bone stabilizer
49. Association (abbrev)
51. Raptor
53. First line treatment
56. Myself
57. Rehabber's "tea leaves"
59. Food for the young
61. Rabies vector species
62. Squirrel food
64. Breathing aid
67. Gym class
68. Head injury med
69. Raptor organization
71. Degree
72. Organ
74. Insect
76. Expire

**Across (continued)**

77. Computer
79. Poundage (abbrev)
80. Goal of rehab
83. Digestive organ
85. Exclamation of surprise
86. Per
87. Prompt
90. Incompetent
92. Animals are losing it
94. Rehabbers do this repeatedly
95. What 72 across does
96. One to look up to
97. Vote against
98. Strength of protection

**Down**

1. Swift residence
2. Digit
3. Antibiotic
5. Required to rehab
6. Animal covering
7. Some
8. Insect stage
9. Approval (slang)
10. Trial
11. Afternoon
15. Syringe unit
17. Cardboard reptile?
18. Rabies vector species
22. Heron cousin
25. CC equivalent
27. Train
28. Apply bird ID
31. Not your favorite organization
33. Makes an offer
34. Doctor's organization
35. Badge
36. Feather
37. Doctrine
41. Reproductive body
43. What rabbits do
44. Past time
45. Part of a cage
46. Tree
47. Gastrointestinal abbrev
50. Squirrel for one
52. Rehabber organization
54. Burrowing mammal
55. Falconer's tool
58. Foot cushion



Down (continued)

- 59. Rabies vector species
- 60. Carolina school
- 65. Utilize
- 66. On mom, not you
- 67. Animal foot
- 70. Save
- 73. Holiday
- 75. Necessary for the young & sick
- 78. In opposition
- 80. Wading bird
- 81. Poison to birds
- 82. Group of nations
- 84. Nuisance
- 85. Movie channel
- 88. Environmentally friendly prefix
- 89. Fox home
- 91. Companion to 57 across
- 92. Greeting
- 93. Banner

#### **RABIES VECTOR SPECIES**

Please respond to the Rabies Vector Species Survey being mailed to all wildlife rehabilitators in North Carolina. This is important information being gathered and your help can make a difference!

**The deadline for sub-missions for the next newsletter is February 1<sup>st</sup>, 2002.**

**The answers to this crossword puzzle will be posted on WRNC's website: <http://ncwildliferehab.org>**

#### **CONTINUING EDUCATION**

Carolina Raptor Center will hold its annual Rehabilitation Seminar Feb 9<sup>th</sup> & 10<sup>th</sup>, 2002. The format combines lecture, slides, and hands-on practice.

The basic class on Saturday will cover Basic Anatomy, Physical Examination, Diet, and Indoor & Outdoor Housing. Registration fee is \$ 70, with a maximum class size of 16 attendees. Some previous experience in wildlife rehabilitation is helpful but not required.

The advanced class on Sunday will cover Raptor Eye Anatomy & Injuries, Wound Management, and Release Evaluation. Registration fee is \$ 90, with a maximum class size of 12 attendees. Previous experience in wildlife rehabilitation is strongly suggested for this course.

Contact Mathias Engelmann at 704-875-6521 ext. 108 for more information or to register.

Dear members

I want to thank you for the opportunity to serve on the board of directors for WRNC. It has been a difficult challenge to create an organization in this state that over the last three years has tried to be all inclusive with our goals. I feel we have made tremendous progress and we are finally into the rehabilitation aspects of our commitment to you as members. There were a lot of legal, moral, and technical things we had to address first. This has been accomplished through hard work by the WRNC board.

I would urge all of you to become involved. No one on this board believes he or she is a better rehabilitator than any of you. We gave our most precious asset - time. Will you please contact any person on our directory, introduce yourself, become involved, and sacrifice your time for the betterment of native wildlife species in NC.

Sincerely,  
Mark Ansley  
Eastern Wildlife Center, Greenville NC