

The Wild Life



A NEWSLETTER FOR THE WILDLIFE REHABILITATORS OF COLORADO

JANUARY 2007

Register Now for the 2007 CCWR Symposium

Now is the time to register for the upcoming CCWR 2007 Symposium, being held February 9-11 in Westminster, Colorado. If you haven't received a Symposium brochure in the mail, you can get all the information, daily schedule and registration information you need on our website, www.ccwr-co.org.

A Welcome Reception Friday night, plus two full days of lecture are planned. Topics, subject to change, will cover zoonoses, disease control, comparative anatomy, nutrition, caging and licensing. Specific lectures on passerines,

Inspiring Fine Art Donations: Sincere Thanks from the CCWR Board of Directors

Don McFann, acclaimed wildlife photographer and keen supporter of wildlife rehabilitation in Colorado, has generously donated a framed print of a Fox and its Kit (the same shot he uses on his business cards — see below right) in support of our upcoming 2007 Education Symposium. The photograph is heartwarming. What a delight to see Nature as she should be — an eager healthy youngster with its parent. This is a real treasure.

Susan Silberberg-Peirce, Canyon Lights Photography, Lyons, CO - graduate of UCLA and professor of Art History, Susan has been photographing ancient sites, architecture, landscape and the natural world for the past two decades. Her work has been exhibited across the States, Great Britain, Sweden and Sicily. Wildlife and wild places are of special importance to Susan — a serendipitous moment enabled her to capture this one-off image — a meeting of mountain lion and fledgling golden eagle (above right)! Susan has kindly donated a framed print to be given away at our symposium as an expression of her thanks, and in celebration of the wonderful work Colorado rehabbers do. www.canyonlights.com These framed prints are prizes to be given away to some lucky delegates at our symposium! Could it be YOU?

cottontails and squirrels are also on the agenda. There will be a fabulous door prize given away at the Welcome Reception, so please join us if you can!

Lunch, snacks and beverages will be included both days. Attendees are also welcome and encouraged to relax and dine together Saturday night at Joe's Crab Shack at our "unofficial" dinner.

Please note: We are no longer able to offer the Wildlife Hospitality Suite; we apologize for any inconvenience this may cause.

Dates to Remember: The deadline for special CCWR rates at the hotels is **January 8**. After this date this rate may not be available. All registrations received after **January 25** are subject to a \$5 increase in price. ☼





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Dear Friend of Wildlife,

On behalf of the board of directors — we’re all looking forward to seeing YOU next month! We have a group of highly talented, experienced and inspirational speakers for the 2007 CCWR Education Symposium on February 9-11. Furthermore, we’ve listened to your feedback and purposefully scheduled in opportunities to exchange stories and experiences with fellow rehabbers and likeminded folks. Learning from one’s peers oftentimes represents at least half the benefit of attending an education symposium. If you haven’t registered yet – do it quickly as spaces are filling up. Also, the deadline for the special CCWR discount hotel room pricing is **Monday January 8**. After this date, availability of rooms at the special CCWR rate is not confirmed.

If you have mislaid your symposium brochure – don’t worry! We listened again to your requests and we now have a web site up and running. Visit www.ccwr-co.org and let us know what you think and take the opportunity to download a registration form and mail it in! Do you need volunteers? Send us details and we’ll post them under the Resources section on the CCWR web site!



Deirdre Butler

While some consider winter to be relatively ‘quiet’ for wildlife rehabilitators, many of us are very busy with planning for the upcoming spring and summer busy seasons. Along with this planning comes concern about wildlife rehabilitation capacity — how to cope with the volume of animals with limited resources? At the last symposium, the majority of attendees agreed that reducing intakes by educating the public during that initial phone call makes all the difference and potentially up to 50%. The article, “Strategies to Reduce Wildlife Needing Rehabilitation,” published by NWRA (http://www.ewildgain.org/pubs/strategies_to_reduce_incoming.htm) provides some great practical tips. Discussion on the difficult and complex topic of wildlife rehabilitation capacity will be included in our upcoming symposium.

If you have something to share please e-mail ccwr_4_members@msn.com. You are also most welcome to contact me, Deirdre Butler, directly via deirdre@cogico.com or 303-823-8649.

See you in February!

Deirdre Butler
President, CCWR

Tips from the Trenches

How to Reduce Stress in Captive Cottontails

By Beth Bridges

What is stress?

Stress is the psychological, physiological and behavioral response of an animal to a situation which exceeds the animal's ability to cope. Stress releases powerful neurochemicals and hormones in the body which prepare an animal for action (to fight or flee). If an animal is unable to take action to release the stress, health problems occur. Prolonged periods of stress are the most detrimental to an animal's well being.

Why is stress an important consideration in wildlife rehabilitation?

For a wild animal in a rehabilitation setting, captivity, in and of itself presents a significant source of stress. The majority of the animals that we see in a rehab setting are injured or recently orphaned. Capture and handling by humans further compounds the stress associated with either situation and can further compromise the health of the animal. It is because of this that every aspect of the care that we give as rehabilitator's needs to take stress into consideration.

How does stress affect cottontails in a rehab setting?

Cottontails are a prey species and as such they are extremely sensitive to certain stressors and stimuli. The 'flight response' is an important part of how they cope with stressful situations. This natural response is impeded in rehab. Additionally, their GI tract differs greatly from that of other mammals. They require an appropriate balance of 'good' and 'bad' bacteria in their gut for normal functioning and, for recovery to take place. If care is not taken stressors as simple as noises while cage cleaning or daily handling to give medicines can throw off this equilibrium. Once the GI balance is shifted it can be extremely difficult to reverse.

How can I help reduce stress for cottontails in my care?

Transport. Provide detailed instructions to people trans-

porting cottontails to your care. The level of stress they encounter during transport and immediately following capture is often the determining factor in how they will respond to rehab. **Adults:** Use an appropriate sized container (err on the smaller side as this will make them feel more secure) with ventilation holes and a well fitting lid. Provide bunched t-shirts for bedding so that the cottontail can hide itself. Once contained, handling, noise such as radio in the car and talking, should be prohibited. A heat source can be provided if conditions or injuries make it necessary. Adults should never be transported in pairs, always alone. **Juvies/Neonates:** The same as above applies only ventilation holes must be extremely small as young cottontails can escape through very small openings. If available, flip top carriers are best for this age. Under most circumstances heat should be provided. Neonate cottontails should be transported together but juveniles separated if possible.



Intake Examination, First Aid, & Meds.

Handling should always be at a minimum but especially so upon arrival into rehab. A new cottontail will need time to recover from the stress of capture and transport before a physical exam should be performed. The exceptions to this include, if the patient needs immediate medical attention due to a bleeding wound or if immediate euthanasia is necessary. In all other instances, place the cottontail into a safe container as outlined above and leave it for at least 20 minutes in a dark, quiet, warm space to de-stress. Learn how to properly handle a cottontail before attempting to perform a physical exam. If not held properly, kicks from the hind legs can fracture the spine. Keep the head covered as much as possible to give the cottontail the illusion that it is hidden from predators (you!). Medical procedures should be prepared prior to treatment and handling. Antibiotics or treatments that will be needed on an ongoing basis should be performed once per day, if possible, and correspond with

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feeding and cage cleaning so as to minimize disturbance.

Caging. Set up: Caging should be set up in an area where there is little human traffic. Noises and smells are two of the most common causes of daily stress that impact a cottontail's recovery. Cages that can be accessed from the side, instead of the top, are preferred for cottontails but if this is not possible having a box or brush to hide in will greatly reduce stress during daily cleaning. Cottontails are territorial and except for breeding times, solitary in the wild. Because of this adult cottontails must never be housed together and even young rabbits — eyes open and older, should not be housed together in groups, as they can be a significant (and often overlooked) cause of stress to one another. Because of space limitations it is sometimes decided that two or three young rabbits will be housed together. If this is the case they must each have access to separate hiding areas as well as separate food and water sources.

Cleaning: A full clean should be performed once daily to correspond with a feeding time. If additional quick



Only when cottontails are very young should they be housed together.

cleaning is needed it should also be scheduled to correspond with a feeding time to minimize disturbance.

Feeding. Solid Food: It is important to provide primarily vegetation that a cottontail would find in the wild. Branches and dirt can also be given. Dried vegetation should exceed fresh in the diet by at least 3:1 (timothy hay can be used). Rabbit pellets, oats and fresh vegetables should *never* be given

as they will cause GI imbalance and bloat, which can be fatal, especially in young or weaning cottontails eating solid foods for the first time. The cottontail's unique GI system requires that they have access to food at all times. By providing natural and copious food source you will greatly reduce GI stress. **Formula:** The newer technique of tube feeding formula to neonate cottontails greatly reduces stress because it requires significantly less handling. Tube fed babies need to be fed only 2-3 times a day and feeding takes, on average, five minutes per cottontail. Cottontails do not suckle in the same way that other mammals do, which can make syringe feeding a long and stressful process – both for the bunny and the rehabber!

Release. Cottontails should not linger in a rehab setting. The stress of a prolonged stay can cause sudden death. **Adults:** Release back into appropriate habitat as soon as possible once recovered, eating and moving well. **Young:** Once young cottontails have reached 130-150g they should be released as soon as possible into appropriate habitat providing they are acting wild, eating solids, and moving well. 🐰



Q & A with the CDOW

Why should rehabilitated wildlife be released within 10 miles of where it was found?

The 10 mile release criteria was put in place with the idea that a release within 10 miles of where the animal originated would allow that animal to return to its native habitat and familiar surroundings, thereby making a successful release more likely. If animals are released in the same localities time after time, overcrowding and the potential for

disease in concentrated populations is definitely a concern.

Obviously, rehabbers will not always know where the animals they are rehabbing originated, but the regulation covers the majority of the cases a rehabilitator will encounter.

What should a rehabilitator do if they are brought a "special" patient — one that is rare or a recently-introduced species?

If a rehabber obtains a "special species" such as a threatened or endangered species, or one that is

being introduced in the state, such as the lynx, then it is imperative to immediately contact your local wildlife officer or nearest DOW office (see internet listing at: <http://wildlife.state.co.us/About/OfficesAndPhone/>).

Note: Kathy Konishi, Special Licensing Unit Manager, will be clarifying "CDOW Policy Guidelines for Sponsors and Provisional Wildlife Rehabilitators" at the upcoming symposium. These new materials will be posted on the CDOW web site mid to late January. Read up before the symposium so you can get any questions answered by Kathy in person.

A Closer Look at *Mycoplasma bovis*

A recent, October 2006, report regarding an outbreak of *Mycoplasma bovis* (*M. bovis*) in one of the oldest buffalo herds at Maxwell Wildlife Refuge and in a number of herds across the state of Kansas is raising new awareness of the disease. It has caused 25 to 50% mortality in the affected herds thus far. Cattle ranchers have been dealing with this deadly disease since the 60's but this is the first time outbreaks have occurred in buffalo herds at this magnitude in the state. It is unclear exactly where or how the disease originated in the herds. In cattle, *M. bovis* is extremely virulent. It has proven to be even more so in these buffalo herds, which have had little to no pre-exposure to the disease.

It is the general belief among vets and ranchers that *Mycoplasmas* play a secondary role in infections, attacking an animal that is susceptible because it is already fighting off a pre-existing disease. However, it has been shown that *Mycoplasma bovis* (*M. bovis*) can play a primary role in infection. *M. bovis* is considered to be one of the more pathogenic species and is the most frequent *Mycoplasma* pathogen of pneumonia, mastitis, and arthritis in cattle.

Mycoplasma carriers can introduce the disease into a herd quite easily as infected cattle may shed the organism through nasal discharge for months to years without showing clinical signs. Clinical signs observed in cattle with *Mycoplasma* pneumonia are coughing, induced by stress or movement, rapid breathing, low grade fever and mild depression. Affected cattle usually maintain a good appetite, which helps distinguish this type of pneumonia from other viral and/or bacterial pneumonias.

Mycoplasma mastitis in cows varies in its severity from completely stopping milk production to mild inflammation of the mammary gland. As with all forms, *Mycoplasma* mastitis is highly contagious and is therefore, a big concern. Cows with sub clinical infections may return to normal milk production, but can continue to shed the organism within their milk. *Mycoplasma* mastitis can thus be transmitted via handling, and milking machines. Oral infection of calves from their mothers can also occur. The incidence of *Mycoplasma* arthritis is increased in cattle herds where *Mycoplasma* mastitis and/or pneumonia is present. *Mycoplasma* arthritis tends to occur as a secondary infection with swollen joints and dropping ears as common symptoms. With the exception of mastitis, the various disease syndromes associated with *M. bovis* are typically seen in young dairy calves (4-8 weeks old) and beef cattle in high density stocker/feeder operations.

The really tricky thing about treating *M. bovis* is that it does not definitively fall under the category of a virus or bacterium. Because it is more like a combination of the two, antibiotics are not terribly effective as treatment and while there is a vaccine available in the U.S, its effectiveness is almost equally questionable. *M. bovis* is a complicated organism in that it can mutate easily and adapt to different conditions. This makes pinning down one vaccine to do the job more than a little difficult. The vaccine currently requires an initial dose followed by a booster a month or so later. But it is generally agreed that once you are treating for *M. bovis*, you are too late. The damage has already been done and you are essentially throwing money away trying to treat the untreatable.

It is becoming more certain that the only truly effective way ranchers can reduce *Mycoplasma's* in their cattle herds is by prevention. Vets tend to agree that the most likely source of infection is the auction barn or the truck. In both places, cattle are closely packed together.

The rate of transmission falls dramatically once the calves are released into a more spacious feedlot. Ranchers will continue to need to transport their cattle from place to place but transmission during transport and at auction can be reduced by avoiding mixing animals from different sources. It is common practice to collect calves from six or more sources at auction and transport them together back to the feedlot. This standard may need to change in the near future. Additionally, including a herd specific vaccine for *M. bovis* as a part of the early vaccination (pre-infection) routine for calves may be beneficial in deterring the disease.

What all this means for the fate of the buffalo herds is hard to tell. The Kansas Wildlife and Parks Service has enforced quarantine for buffalo's exhibiting symptoms of *M. bovis* and a vaccination regime is underway that will continue on a yearly basis. Only time will tell how the buffalo will respond to the vaccine. It seems likely that other industry practices will need to be considered to promote a program of long term prevention akin to what is being looked into within the cattle industry. 🌱



Red Fox *Vulpes vulpes*

Red foxes are found throughout Canada, Alaska, almost all of the contiguous United States, all of Europe and Britain, and almost all of Asia, including Japan. There are also several populations in North Africa. Red foxes were introduced into Australia in the nineteenth century. They are the most widely distributed wild carnivore in the world, utilizing a wide range of habitats including forest, tundra, prairie, and farmland. They prefer habitats with a diversity of vegetation types and are increasingly encountered in suburban areas.



Photo by Peter Butler, Cogico, Inc. Lyons, CO

lap somewhat, but parts may be regularly defended, making them at least partly territorial. Ranges may be between 5 and 50 square kilometers, depending on the quality of the habitat.

Red foxes are essentially omnivores. They mostly eat rodents, rabbits, insects, and fruit. They will also eat carrion. They eat between 0.5 and 1 kg of food each day. 🌱

Source: *Museum of Zoology, University of Michigan*

Coloration of red foxes ranges from pale yellowish red to deep reddish brown on the upper parts and white, ashy or slaty on the underside. The lower part of the legs is usually black and the tail usually has a white or black tip. Two color variants commonly occur. The cross fox has reddish brown fur and has a black stripe down its back and another across its shoulders. The silver fox ranges from strong silver to nearly black. These variants are about 25% and 10% of the species, respectively.

The average mass is 3 to 7 kg (6.6 to 15.4 lbs), and are anywhere from 827 to 1097 mm (32.56 to 43.19 in) in length.

Red foxes are generally monogamous. The exact time of estrous and breeding varies across the broad geographic range of the species: December-January in the south, January-February in the central regions, and February-April in the north. Females may mate with a number of males but will establish a partnership with only one male. The male partner will provision his mate with food but does not go into the maternity den. Both males and females, and sometimes their older offspring, cooperate to care for the pups. Gestation is typically between 51 and 53 days but can be as short as 49 days or as long as 56 days. Litters vary in size from 1 to 13 pups with an average of 5. Birth weight is between 50 and 150 g. The pups are born blind but open their eyes 9 to 14 days after birth. Pups leave the den 4 or 5 weeks after birth and are fully weaned by 8 to 10 weeks. Mother and pups remain together until the autumn after the birth. Sexual maturity is reached by 10 months.

Red foxes have been known to live 10 to 12 years in captivity but live on average 3 years in the wild. They are solitary animals and do not form packs like wolves. During some parts of the year adjacent ranges may over-

CCWR 2007-08 Membership Application/Renewal

(For membership through 3/31/08).

Check one: New or Renewal Individual Membership \$15
or: New Organization Membership \$20

Name: _____

Organization (if applicable): _____

Address: _____

Phone (best place to reach you): _____

E-mail: _____

In an effort to save resources, e-mail is CCWR's primary method of communicating. We promise not to share your e-mail address outside the organization. Thank you.

Are you a licensed rehabilitator? Y N If Yes, how long? _____

Areas of expertise: _____

Other areas of interest: _____

- I would like to be nominated to the Board.
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 - Newsletter Education/Seminars/Symposium
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