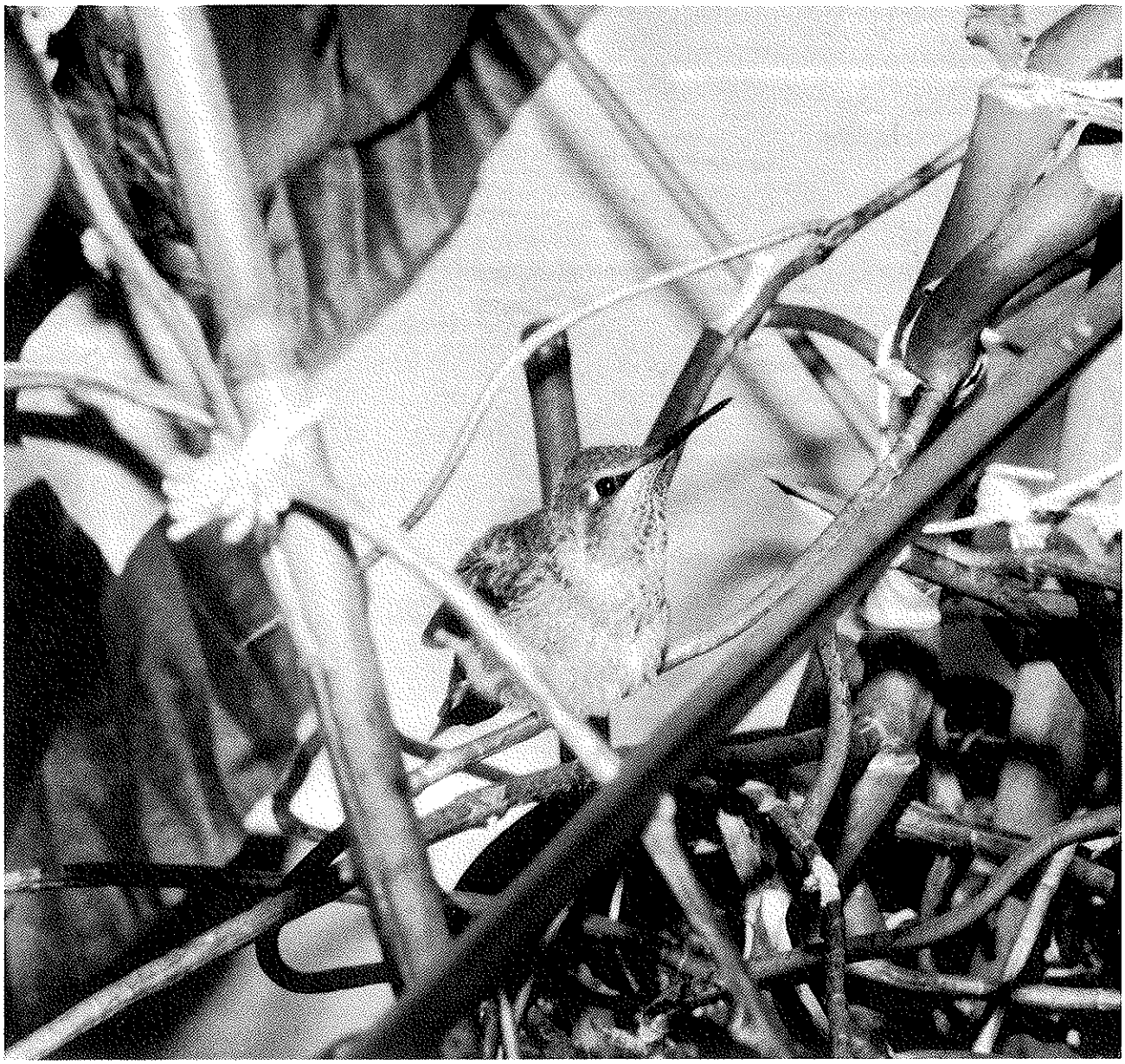
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JOURNAL of Wildlife Rehabilitation

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The *Journal of Wildlife Rehabilitation* is designed to provide useful information to wildlife rehabilitators and others involved in the care and treatment of native wild species with the purpose of returning them to the wild. All feature articles are subject to a review process, and our staff and reviewers work with authors to produce the most accurate information possible in our ever-changing field.

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Editorial . . .

Biology and Natural History:
Sign Posts on the Road to Successful Rehabilitation

Occasionally, I will get asked why it is that we persist in feeding raptors prey species. After all, if people can feed their dog vegetarian feeds, why can't we do the same for a hawk or owl? First, I carefully take the rehabilitator into a sequence of questions regarding dog physiology. They are omnivorous with teeth and GI tract evolved to eat meat-based or plant-based diets. Then, we address how an absolute carnivore such as a Barn Owl or Coopers Hawk is designed to process food. For me, the answer to the question is in the biology (and physiology) of the animal.

When I first began to practice wildlife rehabilitation in 1975, I had no real science background. I was a social worker. I quickly realized I needed to know what the animal was, what it ate, when it was self-sufficient and where it lived in the wild. I joined the National Audubon Society (NAS) and began to read a broad cross-section of biology journals looking for information. Since IWRC was in its infancy, producing only a newsletter and NWRA wasn't even thought of yet, there was virtually no wildlife rehabilitation literature. Like everyone else, I had the standard books of the time (e.g., *Care of the Wild-Feathered and Furred*). However, it was up to the individual to search out or create the hard way, information relevant to our developing field.

We worked 12-14 hours a day rehabilitating wild animals and then we went out into the 'woods' every chance we had to see what the lifestyle was that we were trying to create in captivity. Looking back, I don't know where we got the stamina to do both - but then again, we had little choice.

The lessons were so valuable and I have never regretted those NAS field trips and mammalogy field courses. I remember being amused by watching my brancher Great Horned Owls (GHOs) stalk and catch giant banana slugs in our large pen—thinking their capture boredom must have gotten the best of them. Then one night at sundown during one of our evening forays into the woods, we saw a brancher GHO come down onto a country road and much to our amazement, pounce on a slug. My babies were learning normal developmental skills!

We also learned to let normal alone. Every spring I used to get several calls on 'abandoned' baby foxes that were so hungry they were eating fruit in trees where they were 'stuck'. We innocently went out to rescue several such litters before we realized that they normally climb fruit trees and munch. I shudder to think of how we orphaned by capture and captive care those early litters.

To me, doing wildlife rehabilitation without understanding natural history is a recipe for disaster. Yet today, I wonder how important such knowledge is considered. We have more large centralized centers and where the volunteers learn by following established procedures. I see many new people entering the field asking for protocols, directions, recipes and relying heavily on them. I think we have to be vigilant in teaching this generation. They have to know more than just the rehabilitation procedures. They need to learn how to approach problems—how to figure out new answers—not just how to be rehabilitation technocrats.

To be the best rehabilitators, we must be inherently curious about nature. Part naturalist, part nurturer, wildlife rehabilitators today face greater challenges as human encroachment pressures wildlife resulting in an ever increasing need for our services. Those services are, however, limited by available funds and personnel so we have to be more efficient every year and select carefully which animals require our intervention. Biology keeps us honest in that selection. It should be a part of the curriculum we teach.

-Jan White-

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Security Behavior in Black-chinned Hummingbird Mothers and Nestlings

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ABSTRACT

Black-chinned Hummingbird mothers and their nestlings are very quiet during feeding. After leaving the nest, however, the hungry young make a loud call to attract their mother's attention. The following is a discussion of silence as a possible security strategy to protect nestlings. Rehabilitators may use calling from the nest as an indication of abandoned young.

Key Words: Black-chinned Hummingbird, *Archilocus alexandri,* nestling behavior

Introduction

Skutch (1976) noted that feeding rates of parents in many altricial birds seems to be regulated by the level of noise generated by hungry nestlings. Nestling begging behavior is not always essential to stimulate the bringing of food, however. Skutch (1976) also recorded parents offering food to eggs, and even to long dead nestlings. He suggested that during the incubation and nestling period parental focus is on the nest and its contents, rather than the individual offspring. Examples of this focus are parents that ignore offspring separated from the nest or clutch. Many birds also fail to respond to an increased number of nest inhabitants (e.g., as by cowbird and cuckoo). After fledging, parental focus seems to switch from nest to individual offspring.

Behavioral Observations

Loud vocalizations by nestlings have been associated by Skutch (1976) and others, with birds such as woodpeckers, tanagers, and flycatchers. Many rehabilitators report observing stimulus evoked nestling vocalizations in kestrels, doves, cuckoos, swifts, woodpeckers, flycatchers, swallows, nuthatches, wrens, finches, old world sparrows, starlings, and others, both in the wild and in rehabilitation circumstances (England, Hamburg, Harden, Kyle, pers. comm.).

The author's observations of the behavior of Black-chinned hummingbirds *(Archilocus alexandri)* during the period of raising young, suggest that these nestlings remain absolutely silent. Neither nestlings nor the mother seem to vocalize prior to or during feeding episodes. This silence is also observed when orphaned Black-chinned nestlings are being raised in captivity (pers. obs. N=>50).

Fledging in juvenile Black-chinned hummingbirds is usually sudden and complete. After several days of wing exercise, while holding on to the nest tightly with the feet, the young bird lets go, and flies to a perch a meter or more from the nest. At this stage the fledgling begins to practice flight and feeding behaviors. It extends its tongue to everything within reach. As flight capabilities improve, and tongue placement produces some nutrient reward, the bird begins to learn how to forage. While still dependent on maternal care, the young bird signals its location to its mother by the use of a high, thin peep, sometimes called a squeak (Bent 1940, Schuchmann, 1988). This location call is easily heard, but as Cogswell (1949) observed, locating the source of the sound is usually circumstantial, as the call is highly non-directional.

Fledglings in captivity use this call when they are hungry or distressed. During the two weeks after fledging the call is used less and less frequently as the bird develops its foraging capabilities.

Black-chinned hummingbirds often build nests in vulnerable places easily seen and reached by predators. They are particularly easy prey for avian predators. Johnsgard (1983) suggested that

the low rates for fledging young reported by Stiles (1972) and others may be largely due to predation. He pointed out that Carpenter (1976) attributed the high nest success rate of 88.9% to the Andean Hillstar, speculating that they may avoid high predation losses due to their inhospitable and secluded nesting environment. Baltosser (1986) observed jays, orioles, and tanagers involved in predation and mobbing of nest sites. The author has seen roadrunners take birds about to fledge and has watched a female Black-chin, busily refurbishing a nest which had been successfully used for three years, abandon it after a starling's close examination. Here it is suggested that the unusual silence of nestling hummingbirds decreases the likelihood that the young will be taken by predators.

If the silence of the parent and nestlings is a behavioral strategy to increase security, calling from the nest, or strategic override, can be viewed by rehabilitators as a signal of extreme distress.

Wildlife Rescue of New Mexico receives many calls each year from people who have been watching "their" hummingbird nest, and have suddenly noticed that the mother isn't returning at night. Whether or not to recommend intervention is the question. Unless one can maintain a full hour of uninterrupted observation of the nest, one is likely to miss a 15-45 second visit from the adult. Vocalization by the nestlings is a good indication of abandonment. We recommend that the nest be left alone if the youngsters are silent. However, if the young birds call, the nest can be immediately cut down for delivery to a rehabilitator. Rarely does the mother show up the next day. If the female parent does appear, the author's 15 years of experience indicates that the nest can be successfully replaced at the original location, as female Black-chinned hummingbirds are tenacious parents.

Acknowledgments:

I thank the many individuals who made these observations possible by bringing abandoned hummingbird nestlings to Wildlife Rescue of New Mexico for care. Many thanks also go to David J. Ligon and William H. Baltosser for reviewing earlier drafts of this manuscript. Appreciation is expressed to the 'Share With Wildlife' Program of the New Mexico Dept. of Game and Fish (NMG&F) for financial assistance to Wildlife Rescue, and to NMG&F and The US Fish and Wildlife Service for permitting the activity.

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Security Strategy Data:

Two levels of observation were made. The first was observation of nestlings in the wild. No calling was heard from any of them until the birds fledged and left the nest. In older nestlings (18-20 days) a little chipping chatter was sometimes heard as they exercised their wings. Though this sound may jeopardize the security of the nestling, it is not the same call as the fledgling hunger call described above and seems to be made only in the enthusiasm of preflight practice (N=27).

The second was that of calling nestlings arriving at Wildlife Rescue in the original nest. These birds were clearly in various stages of starving, some having been documented abandoned for as much as 40 hours. When their needs were met they stopped calling and did not resume that behavior until fledging (N=10).

A variation of the above are the nests that we received before the birds showed evidence of acute distress. These were brought in when they were pruned out of a tree or when mother wasn't coming back to feed. These birds never called while in the nest. On leaving the nest they immediately vocalized, as though a switch had been thrown (N=6).

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Banding Birds in Rehabilitation: Color Coding

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Discriminating between individuals for the purpose of evaluating their progress is often a problem in rehabilitating birds. It is especially important when juveniles are housed together for imprinting, foraging/hunting practice or just plain conspecific company. A good inexpensive method has been described for birds no bigger than House Finches (Hill, 1992), but for the many larger species no successful (but cheap) technique has come to our attention.

For years we have tried pieces of colored yarn, toenail polish and colored sheaths slipped from electrical wire, as temporary bands. The last alternative has been quite successful, but obviously labor intensive. Refusing to believe that the right material was not available somewhere, we spent a lot of time looking in hobby shops and electronic shops all over the US and abroad. Last year we found the answer in California, and used it in our first "baby season" center.

Four inch nylon cable ties, commonly known as tie wraps, can be obtained in at least seven colors from Fry's Electronics, at a cost of about $0.02/pc. They are made by All-States, Inc. 1801 W. Foster Ave., Chicago IL 60640.

We have used them successfully in birds ranging from jays to Great-horned Owls and, in 1994, over 41 robins, 31 kestrels', and 15 roadrunners wore them as juveniles.

They can be attached around the tarsus/metatarsus of a bird as small as an adult House Sparrow. It makes weighing and monitoring development of hunting/foraging skills easy for everybody. It can also be used to discriminate the origin of a bird for the purpose of returning to that place for release, and is a useful research tool when comparing diet or treatment protocols i. e., all those one group banded in red, another group in blue; house all the birds together to reduce other variables.

Attaching the tie wrap to the chosen leg is a two person job; one to hold the bird, the other to place the wrap. Great care must be taken not to pull the wrap too tight so it cannot be loosened. On the other hand, it should be tight enough to remain when the foot is closed. Attention should be given to the age of the bird and the likelihood of the leg growing inside the constricting band. After securing the wrap, the protruding end should be cut off flush with the eye with nail clippers. (Specific warning is raised against the use of scissors which can sever a leg or wing that slips into the jaws at just the last second.) Particular care should be placed when trimming the end, as raptors or corvids will seize any tiny protruding piece and pull, thereby tightening down the nylon strap.

Remove tie wraps with diagonal cutters or nail clippers before release.

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Color banding on the leg of a Roadrunner.

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Wildlife Rehabilitators and a State Wildlife Agency: Strengthening a Relationship

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ABSTRACT

Recently published research confirmed what Colorado wildlife rehabilitators had long believed: while the relationships between some wildlife rehabilitators and Colorado Division of Wildlife (CDOW) staff were positive, in other cases misunderstanding and tension prevailed. The authors describe an approach they used to try to facilitate increased understanding and strengthened relationships between Colorado wildlife rehabilitators and the CDOW. They started by learning about the wildlife agency (structure, operations, priorities and staff). They also facilitated getting information about wildlife rehabilitation to the wildlife agency. Excerpts from training materials are included. Fellow rehabilitators and wildlife enthusiasts as well as CDOW staff provided significant input to the process and were the people most responsible for positive results.

KEY WORDS: wildlife rehabilitation, relationship with state wildlife agency

Introduction

Discussions with fellow Colorado wildlife rehabilitators identified ongoing concerns about the relationship between wildlife rehabilitators and the Colorado Division of Wildlife (CDOW) over a several year period. Recent research conducted by the Human Dimensions Unit of Colorado State University confirmed what some Colorado wildlife rehabilitators had been saying informally. While there are some examples of excellent relationships, in many cases there has been and continues to be some tension and misunderstanding between rehabilitators and CDOW staff (Bright, 1995).

When we formed WildAgain Wildlife Rehabilitation, Inc. as a Colorado non-profit corporation in 1993, we developed several broad goals beyond direct wildlife rehabilitation. One of WildAgain's initial objectives was to try to increase understanding and strengthen the relationship between wildlife rehabilitators in the state and CDOW. Our professional experiences with similar large organizations helped increase our comfort with such a project and gave us some idea of where to start. We knew we could not speak for other rehabilitators but wanted to help facilitate such a project.

The following article describes how we approached the project and some of the initial results. As with other rehabilitation activities, there are many approaches and techniques that can be effective. One needs to determine the specific needs, assess the resources and options, and take the first step. This project is not suggested as a single model, but as an example of one approach for others who might be facing similar situations. It is also important to note that during this process other individuals and groups were also involved in a variety of activities that helped increase communications and strengthen the relationships, such as presentations by two CDOW staff at the symposiums presented by the Colorado Council for Wildlife Rehabilitation.

Gathering Initial Input

We continued to gather input from fellow rehabilitators about their concerns and the project. Some said we were crazy to work on it and should not waste our time. Some were glad we were willing to try it but did not want to be involved. Others wanted to observe, a few considered getting more actively involved.

Many of the rehabilitators with whom we talked felt that CDOW staff had limited understanding of or respect for rehabilitators and perceived little reason to work with them. Other rehabilitators worked closely with individual CDOW officers and had excellent relationships with them; they offered helpful suggestions.

Learning About the System

We realized that we had much to learn about the CDOW, its staff and how decisions were made (not unlike learning about a new species that arrives at the door of your rehabilitation facility). We talked with receptive CDOW field wildlife officers and headquarters staff about CDOW history and procedures, as well as some personal philosophies and concerns that affect rehabilitation. Discussions which were not focused on a specific problem or immediate crisis generally seemed to encourage communications.

Several CDOW staff were extremely helpful. They gave us copies of useful CDOW publications: annual reports, general plans, budgets, and wildlife policies and regulations. They encouraged rehabilitators to become more familiar with the chain of authority in order to be able to contact the person's manager to express concerns or even compliments for jobs well done. Copies of CDOW organization charts helped with this. They also provided copies of various wildlife regulations and policies.

During these discussions we learned how the Colorado Wildlife Commission, composed of eight Commissioners appointed by the Governor, oversees the CDOW and establishes wildlife policy. The Commission meets for two days every other month at different locations around the state to hear about issues and concerns raised by staff and the public in open testimony before they vote on wildlife policy and regulations.

By attending these Commission Meetings we learned more about what issues and factors were considered, what type of testimony was effective, and how decisions were made. The Commission Meetings were also an opportunity to get to know the Commissioners and CDOW senior managers in a more relaxed setting. We encouraged other rehabilitators to attend also; soon each Commission Meeting was attended by at least two rehabilitators. While several Commissioners and CDOW managers joked that "rehabilitators were hatching out all over," their getting to know the rehabilitators personally and learning a bit about the rehabilitator's perspective and concerns seemed to be a positive development.

In addition, the Commission was, at that time, in the process of developing a new Long Range Plan for the CDOW. Extensive public input was sought as they worked to broaden the overall objectives of the CDOW. Rehabilitators were informed of this opportunity and encouraged to provide comments through personal phone calls and letters as well as in an article submitted by WildAgain to a newsletter published by the Colorado Council for Wildlife Rehabilitation.

The final CDOW Long Range Plan (1994) emphasizes ecosystems (not just consumptive wildlife activities), protection and preservation of all species, increased collaboration with diverse groups of wildlife enthusiasts and much more. Many of us feel that this Plan is a significant step for the agency, the public and wildlife.

The Wildlife Commission has since had an external consulting firm conduct a major review of CDOW operations (1994-95) to identify what changes were needed to ensure effective implementation of the new Long Range Plan. The resulting 270 page report identified major performance concerns, described a new vision for the future (including an emphasis on quality customer service), and recommended implementation strategies; it was available to the public for review and feedback. This Management Review has resulted in major organizational and operational restructuring in order to implement the Plan.

We also learned about the Legislative declaration which states that wildlife is to be protected and preserved for the enjoyment of people and

Figure 1

SOME GENERAL FACTS ABOUT WILDLIFE REHABILITATION (examples)

- The number of wildlife rehabilitators in Colorado doubled in the last four years as interest in wildlife grew. There are estimated to be over 5,000 licensed rehabilitators in the U.S.A.
- The majority of rehabilitators in Colorado are women; they live in both urban and rural areas.
- The majority of rehabilitators in Colorado conduct wildlife rehabilitation from their residences; most personally finance the majority of their wildlife rehabilitation expenses.
- Most rehabilitators are highly committed and dedicated people. Research shows many of the public coming into contact with rehabilitators find them highly professional and capable.
- Many rehabilitators spend hundreds of hours annually involved in wildlife rehabilitation or related activities. Wildlife rehabilitation involves much more than direct animal care.
- Many wild animals come into rehabilitation as a result of human action: habitat destruction or injury caused by humans. (examples provided)

which provides the basis for many policy decisions. Various Legislative Committees, especially the House Agriculture, Livestock and Natural Resources and the Senate Agriculture, Natural Resources and Energy Committees, are often among the first to be involved with proposed legislation which affects wildlife. These two Committees, composed of primarily rural legislators, seems to have been particularly concerned with encouraging consumptive wildlife recreation and preventing livestock damage. Legislation affecting wildlife goes through these and other Committees and the full Legislature. Plus, an Interim Legislative Oversight Committee was just established (May 1995) to review CDOW operations (and to ensure that the CDOW is more responsive to the public, among other things). The state Legislature has a significant impact on the CDOW and wildlife.

Learning From Other Wildlife-Oriented Groups

Attending the Commission meetings also provided an excellent opportunity to identify other people and groups who are concerned with wildlife and who interact with the CDOW and Commission. Groups like the Colorado Environmental Coalition, Wildlife 2000, various humane societies and some local Audubon chapters provided very useful information on working with the CDOW and invited collaborative efforts (which have been invaluable). They also were helpful in introducing us to a variety of other issues affecting wildlife which could affect rehabilitation either directly or indirectly through regulations or statute. This information was passed to other rehabilitators by phone, mailings, and newsletters; some of the rehabilitators then sent letters to the CDOW, Wildlife Commission and Legislators as well as testified on some issues. Some rehabilitators have since become active with these other wildlife-oriented groups.

Providing Information About Wildlife Rehabilitation

Having heard some rehabilitators' concerns about a need for increased understanding of and respect for rehabilitators, it seemed some educational efforts were also needed. WildAgain, again with input from fellow rehabilitators, prepared some general handouts about wildlife rehabilitation specifically for the CDOW. These included the purpose of wildlife rehabilitation and descriptions of basic rehabilitation processes and methods. Some information on the need for wildlife rehabilitation and rehabilitators was also provided. Changing public values about wildlife and the public's desire for humane treatment for wildlife (Siemer, 1994) were described to support and validate the need for wildlife rehabilitation.

We also emphasized that the public often tries to save wildlife themselves, thus increasing risk of injury or disease to the public, potential "improper" release of a diseased animal to a healthy wildlife population, and of improper care and suffering of the animal itself. (Simon, 1994). The CDOW often placed more weight on the first two items; rehabilitators often emphasized the last. We also mentioned our own personal experiences that, like the published research about wildlife rehabilitation in New York, the members of the public who bring animals to rehabilitators often feel that care for individual wildlife in distress is part of the wildlife agency's mission and thus

Figure 2

ACCOMPLISHMENTS OF WILDLIFE REHABILITATORS (examples)

- It is estimated that Colorado wildlife rehabilitators receive over 5,000 injured, orphaned or distressed wild animals for rehabilitation each year. The numbers of animals rehabilitated nationally is estimated to be well over 1 million.
- Rehabilitators provide public education about wildlife and the natural environment to thousands of citizens annually.
  - On the phone
  - One on one contact
  - Group presentations
  - Community events
  - In the media
- Rehabilitators also handle thousands of calls from the public about how to prevent and resolve problems with wildlife humanely.
- **And all this is done voluntarily — <u>at no charge to the rescuer, state or taxpayer!</u>**

Figure 3

"MYTHS ABOUT WILDLIFE REHABILITATORS"
(excerpts)

- **Rehabilitators consider wildlife rehabilitation to be a hobby.** The time demands involved with rehabilitation are more than a hobby: many non-discretionary hours are required; the rehabilitator is usually "on-call;" interruptions occur at all times of day and night; feedings and monitoring health can be hourly and through the night. Many of the tasks are not pleasant: talking with the public about how their irresponsible actions caused the problem, picking off maggots, cleaning wounds, collecting roadkill, euthanizing injured wildlife.

- **Rehabilitators want as many animals as they can get for as long as possible.** The purpose of rehabilitation is to get wildlife back to nature. Rehabilitators do not want to subject the animal to more confinement or stress than necessary for them to be able to regain self-sufficiency and survive in the wild. Also, it takes considerable time and money (both which are usually in short supply) to provide quality care for wildlife. There are plenty of animals which absolutely require care in order to regain health and be released without keeping them longer than necessary or accepting some which do not need rehabilitative care.

- **Rehabilitators refuse to euthanize wildlife.** Most rehabilitators do not enjoy euthanizing an animal, but they will do it if the animal is suffering and has little or no chance of survival back in the wild. Euthanasia decisions are made with clear criteria and a process that often includes assessment by veterinarians.

- **Rehabilitators want to make wildlife into pets.** Again, this would defeat the purpose of rehabilitation: getting the animal back to the wild. It would be dangerous for wildlife and people to try to "tame" wildlife and could result in the animal's death. It also reduces time, energy, space and money available for animals in serious distress.

- **Rehabilitators spend most of their time cuddling cute wildlife.** Effective rehabilitators work to minimize handling wildlife since excessive handling increases the animal's stress — which can delay recovery or cause death. Excessive handling would also make it more difficult for wildlife to recognize people as predators and survive in the wild. Plus, rehabilitators are busy with other tasks.

- **Rehabilitators do not know much about wildlife.** On the contrary, rehabilitators can be extremely knowledgeable about care of wildlife in distress and the specific species they rehabilitate, including habitat, development, nutrition, behavior, and health concerns. Rehabilitators frequently seek information through published wildlife and rehabilitation literature, attending training sessions, and communicating with experienced and knowledgeable resource people.

- **Rehabilitators release rehabilitated wildlife anywhere, anytime.** Rehabilitators want the animal back where it can survive. Release at the wrong time or in the wrong place would defeat this purpose. Criteria for release include such things as health and self-sufficiency of the animal, site appropriateness, population levels and time.

- **Rehabilitators ignore risks of working with wildlife.** Most rehabilitators are aware of the risks of working with wildlife and exercise caution, whether it is with handling the animal, avoiding zoonoses, working with the irate public or whatever. Rehabilitators work to manage risk.

- **Rehabilitators keep wildlife in inadequate environments.** Again, since rehabilitators want the animal to survive in the wild, rehabilitators want an environment that teaches the animal to be effective in its natural habitat. So they build and create enclosures to try to provide that setting. Keeping the animal too close to people, pets, and so forth could reduce its fear of these predators and teach the wrong skills. Caging is an important element of rehabilitation.

- **Rehabilitators interfere with the natural life/food cycle.** Most of the animals brought to rehabilitators arrive as a result of problems caused by humans interfering with their lives: car accidents, habitat destruction and encroachment, attacks by dogs and cats, etc. Rehabilitators work to give wildlife a second chance to live in the wild.

- **Rehabilitators are anti-hunting.** Like the population in general, some rehabilitators hunt; some are non-hunters; and some are against hunting. Many seem to have strong concerns about ethical treatment of animals, including hunting. Some rehabilitators are also concerned that the emphasis on consumptive wildlife practices (i.e., hunting) and the income from those has caused the CDOW to put more emphasis on consumptive practices and less on preservation.

- **Rehabilitators hate the CDOW.** Some rehabilitators think the CDOW is great; some dislike some CDOW policies, practices and staff; and some are in the middle. This is probably much the same as CDOW staff feels about rehabilitators. But the fact is that threats to wildlife are growing daily; help is needed from everyone working together to preserve wildlife and wildlife habitat for the future!

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Our annual literature sale on selected items will be in effect until September 30, 1995. Only those items listed in the sale catalog will be sold at these reduced prices.

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prompted or supported the changes. General comments by some of the rehabilitators and CDOW staff suggest that the understanding seems to be increasing and the relationship improving. That is not to suggest that there are no more disagreements, conflicts or difficulties. But rather, better understanding and communications seem to be allowing more rational, easier and faster resolution to problems.

Conclusion

While published research has only involved a few states, our personal experience with rehabilitation in two states and comments by rehabilitators in many others, indicated that some tension between rehabilitators and their state wildlife agencies is fairly common. When the tensions rise it is certainly easier to sit back and voice concerns (or complaints) to those who often share our perspective and opinions. Our time, energy and emotional resources are already in short supply because of our rehabilitation commitments. However, positive results are possible when a concerted effort is made to communicate.

Rehabilitators we have known already believe that they can make a difference working with a wild animal in distress — and they do what it takes. Working with a wildlife agency is just another aspect of rehabilitation. It is not easy, but most of rehabilitation is not easy. It requires getting involved and taking risks. Some people may be more willing to be involved and effective with such a project than others, just like some people are more interested in and effective with some species than they are with others.

We generally tried to approach this like other rehabilitation projects: do the research, be patient, identify risks, exercise caution, and try to be constructive. Be persistent, improvement is often slow. Try to not be surprised by snarling, difficulties, and criticisms — and learn from them. Appreciate any and all progress, regardless of size. Build and nurture relationships. Collaborate with others whenever we can: synergy does work. Express thanks for the many contributions needed to make it happen. And continue to believe that it is possible to make a difference.

While it is tough to measure change, both rehabilitators' understanding of the CDOW and the CDOW staff's understanding of wildlife rehabilitation seems to be growing. Communications also seem to be becoming more positive. While we hope that some of the activities described helped facilitate the process, we firmly believe that the real and lasting results are due to the ongoing efforts by many of the individual rehabilitators and CDOW staff.

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We also extend thanks to the even longer list of wildlife rehabilitators, other wildlife enthusiasts and CDOW staff who were not listed by name but were so helpful. Many thanks for working so hard and giving so much to help wildlife and us.

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Stomatitis in Reptiles

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ABSTRACT

Stomatitis (literally, inflammation of the oral cavity), or mouthrot, as it is commonly referred to by herpetoculturists, is a symptom of systemic infection in reptiles. Noted for a wide variety of signs, it typically presents as cheesy yellow or yellowy-gray plaques in the soft gum tissue in the mouth, with erythema and increased salivation. Stomatitis is a secondary infection. The mouth must be treated and the animal started on a regimen of appropriate systemic antibiotics. The animal's environment should be modified as necessary to aid in recovery.

Key Words: Stomatitis, mouthrot, bacterial infections, reptiles, ulcerative stomatitis

Identification

Stomatitis, an opportunistic infection secondary to a serious systemic infection, occurs in snake, lizards and chelonians. Early signs may be subtle and often overlooked: slight petechia; inappetence, a reluctance to feed or change in food selection; and increased, thickened, ropey or sheeting saliva. In cases of sudden and severe onset, there may be acute inflammation of the buccal and pharyngeal membranes or gingival necrosis. Pockets of caseous yellow, yellowish-gray or white-gray pus may occur in the soft tissues. Left untreated, the condition may progress to osteomyelitis of the mandibular and cranial structures. In advanced cases, the head may be quite swollen. Teeth may be found loose within the necrotic tissue.

A variety of organisms have been associated with stomatitis, such as *Aeromonas aerogenes, A. aerophila, A. hydrophila, Citrobacter freundii, Proteus sp., Pseudomonas aeruginosa* and *P. fluorescens, Staphylococcus sp., and Streptococcus*. Other bacteria, such as *Mycobacterium chelonie* and the anaerobic *Clostridium sp.*, have also been found in these lesions and exudates.

Treatment

Before the appearance of modern antibiotics, diverse substances were used to wash out the buccal cavity: vinegar, hydrogen peroxide, feminine douche products, iodoform, mouthwashes such as Listerine® (often still recommended by the pet trade), and a variety of patent medications. Some of these worked to a certain degree in that they altered the environment of the mouth to make it less desirable for many of the organisms. Some of these products are, however, cytotoxic and have fallen out of use in favor of less destructive preparations and systemic antibiotics.

Dilute solutions of povodine iodine (Betadine™) and chlorhexidine diacetate (Nolvasan™) are two products with low cytotoxicity. There are a variety of objects used to dislodge and remove the plaques from the mouth, including dulled dental curettes, small bone curettes, needle-nose serrated tweezers, and cotton-tipped swabs. In a pinch and when nothing else is at hand, the jagged end of a broken cotton-tipped swab shaft is useful. Gentle debridement is necessary to minimize trauma to already sensitive inflamed tissues.

Care must be taken to prevent accidental aspiration or ingestion of detritus when flushing the mouth. The reptilian glottis is high up in the mouth at the base of the extremely agile tongue; in snakes, it is close to the front of the mouth. To this end, the reptile should be laid on its side or held with the head tilted towards the ground.

Flush the mouth with the dilute solution of 1% povodine-iodine or a 0.25%-0.5% solution of chlorhexidine diacetate (Frye, 1992). Debride using the curettes or tweezer. The resultant cavity must be checked to ensure removal of all the material. Any loose detritus should be swabbed away with a swab dipped in the dilute solution. Once the plaques are removed, the mouth should be flushed again. The animal is then started on a course of antibiotics. (See Table 1.)

During the course of the antibiotic therapy, the mouth should be checked daily to watch for any recurrent plaques. It is not unusual for the above process to be repeated two or more times during recovery. Particularly severe cases may require more than a single treatment on the first day or two.

Pre-treatment

If there is copious bleeding upon the removal of the first plaque, the animal may be started on a 10 day course of antibiotics before continuing the curetting. This encapsulates the plaque and reduces vascular activity immediately around the site.

Resistant Infections

Reptiles have a variety of Gram-negative and anaerobic bacteria. While they may not be the underlying cause of the stomatitis, their existence may impede recovery. The presence of such bacteria may require that two antibiotics be administered simultaneously (Stahl, 1995).

Ideally, a culture and sensitivity should be done to determine the most efficacious antibiotic. When doing so it not feasible, most veterinarians and rehabilitators begin with a broad-spectrum antibiotic. The antibiotic selected, however, may not be effective due to the causal organisms and the degree of patient debilitation. The standard culture sampling techniques of swabbing or washes may a yield a confusing mixture of natural and opportunistic buccal and environmental flora. A better method for obtaining a sample for culturing in resistant stomatitis cases is to make a incision into the infected gum and take a small sample of the infected tissue (Mader, 1993).

Stomatitis in Chelonians

Simple stomatitis in chelonians may be treated by thorough washing of the buccal cavity with dilute povodine-iodine solution, finished by an application of topical antibiotics. Some veterinarians believe that systemic antibiotic therapy is generally not required in mild cases (Frye, 1992); it should be remembered, however, that stomatitis is an opportunistic infection, merely a sign of an underlying systemic infection.

In severe or resistant stomatitis in chelonians, cultures should be done to identify the primary or any secondary organisms (for example, herpesvirus stomatitis in California desert tortoises) that may be at work and parenteral antibiotic therapy should be initiated.

Supportive Therapy

Reptiles suffering from stomatitis often cease or greatly reduce voluntary intake of food and water. Supportive therapy should include replacement of fluids (15-20 mg/kg q 24 hr) and the administration of vitamin B-complex (0.25-0.75 mg/kg)(Frye, 1992). The literature previously reported the efficacy of vitamin C in the treatment of stomatitis. It has since been found that reptiles manufacture Vitamin C endogenously and thus any supplementation (typically, 10-20 mg/kg daily) (Frye, 1992) may not have any effect (Barten, 1995). Vitamin A may also be supplemented with care given to administer only very small doses due to potential toxicity. If the patient is going to be tube-fed, vitamin A should be given orally, mixed in with the food.

If the patient has not eaten in some time and feeding is indicated, whole prey should not be given. Force feeding whole prey is stressful under the best of conditions; given the intensive curetting some patients require, additional stresses should be minimized as much as possible. Instead, pureed prey or a nutritional slurry should be administered by gastric tube. (See Table 2.)

Environment

Reptiles should be kept at temperatures near the upper end of their required temperature gradient to ensure maximum benefit from the antibiotics and to boost their immune system function. Reptiles who would otherwise have temperatures dropped at night should be kept at their daytime gradients. Heat should be supplied according to the nature of the animal (thigmotherms require warm surfaces to lie upon

or against; heliotherms require overhead basking lights). If heliotherms require supplemental heat at night to keep temperatures in the optimum range, it should be provided by an undertank heating pad, a special nocturnal heat light, or a ceramic heating element that emits no light. White light should not be used at night as it disturbs both diurnal and nocturnal animals.

The enclosure should be set up to reduce stress. Hide boxes work well for burrowing and cave-dwelling animals. Arboreal animals should be furnished with a secluded branch on which to lay. The enclosure should be screened from high levels of activity.

Water should be supplied in a form that can be utilized by the animal. Many small lizards require droplets to lap. A drip bottle can be set up over a clean plant or rock, or the sides of the tank may be misted with water at least once daily, taking care to not over-saturate the enclosure. Other lizards, snakes and chelonians do well with a shallow bowl of fresh water.

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Article is continued on Page 18

Table 1. Parenteral Antibiotics from "Emergency Care of Reptiles" Boyer, 1994.

Amikacin (Amiglyde®)	5 mg/kg SQ, IM then 2.5 mg/kg q 72 hrs (snakes); 2.25 mg/kg IM q 96 hrs (alligators)
Carbenicillin	200 mg/kg IM q 48 hrs (tortoises)
Ceftazidime (Fortaz®)	20 mg/kg IM q 72 hrs (snakes)
Enrofloxacin (Baytril®)	5 mg/kg PO, SQ, IM q 24-38 hrs
Gentamicin (Gentocin®)	2.5 mg/kg IM q 72 hrs (snakes) 6 mg/kg IM q 72-96 hrs (red-eared slider)
Piperacillin	100 mg/kg IM q 48 hrs (pythons)

Table 2. Nutritional Slurries	**Ingredients**
Carnivore	Hill's a/d™ thinned with Pedialyte®, 1:1 solution of Gatorade™ and water, or plain water.
Omnivore	Equal amounts of Hill's a/d™and baby food vegetable, thinned with Pedialyte®, 1:1 solution of Gatorade™ and water, or plain water. Herbivore Slurry mixed with equal parts Hill's a/d™, thinned with Pedialyte®, 1:1 solution of Gatorade™ and water, or plain water.
Herbivore	Soaked alfalfa pellets, pureed squash, pureed fruit, reptile multivitamin, and reptile calcium supplement, thinned with Pedialyte®, 1:1 solution of Gatorade™ and water, or plain water. 1 can Ensure®, one banana, 1 Centrum® blended (Barten, 1995).

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Simple Things That Make A Difference: Making Water-based Incubators

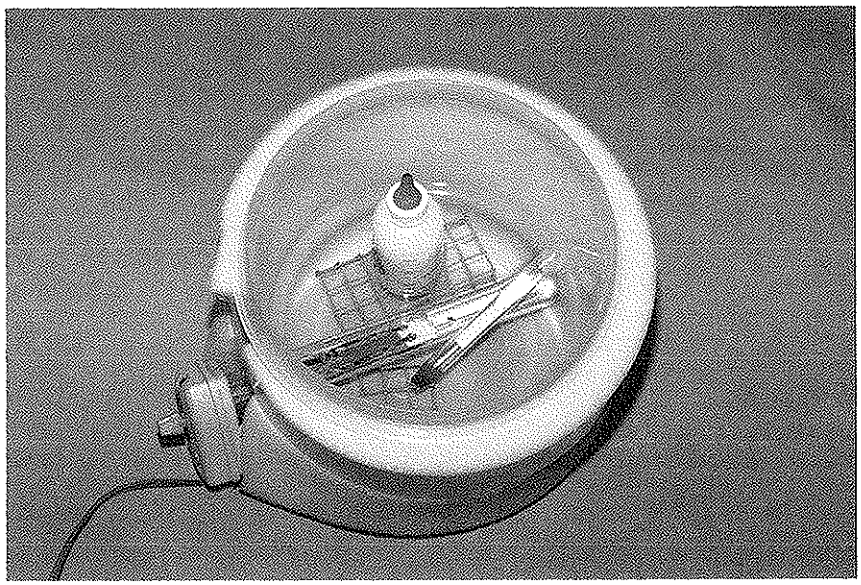
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Like many wildlife rehabilitators, the search for inexpensive wildlife care equipment has served as a driving factor to lead the author to create a water-based incubator from easily accessible materials that cost $20-30. This article describes the materials and process required to construct such an incubator.

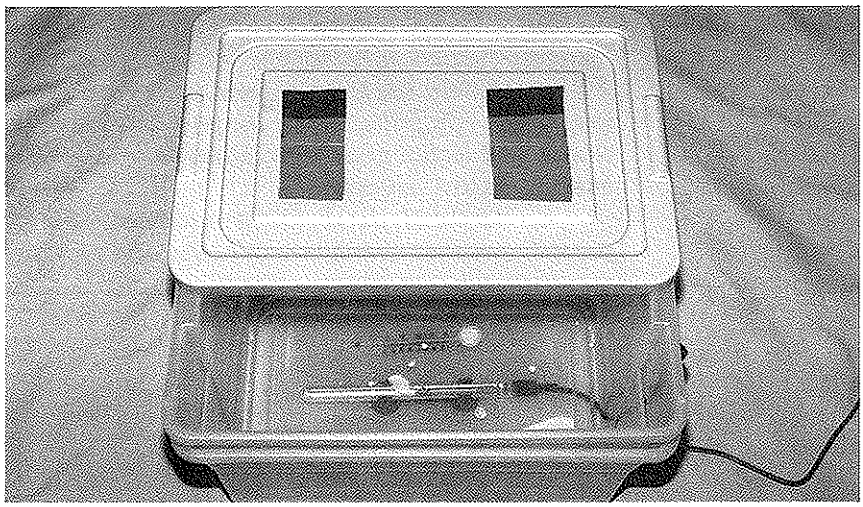
Adapting 'downward' from a commercial model and using the general concept of warming an air space through heating water below it, the author purchased two identical plastic containers and slid them together whereby a 2-3" space was created in between. The space was then filled with warmed distilled water (to prevent mineral deposits on the heater) with the temperature maintained by a 100 watt submersible aquarium heater. The air temperature of the chamber above the water can be dependably heated within 1-2° F. The author prefers to purchase aquarium heaters that do not have the temperature pre-set. Small holes are cut into the top, which are covered with netting or screen. The netting is secured by using a glue gun. This type of water-based incubator provides a gentle radiant type of heat that provides overall warming to the animal it houses.

The author has used this type of incubator successfully with birds, mammals (including fawns, in a larger version) and reptiles. For most mammals, the water is heated to 100° F. When the water is 100°F, the air temperature is warmed to between 85-95°F depending on the substrate and the number of ventilation holes in the top of the incubator. For reptiles on antibiotics, the water is heated to 90°F and for opossums, who have a body temperature of 95° F normally, the water is heated to 95°F. The aquarium heater will maintain the temperature of the warmed water but would take a little while to heat cold water. The author leaves them plugged in when use is anticipated. The water should not be heated above 100°F because the bottom of the incubator will be the same temperature as the water which could potentially be in contact with the animal. Most animals will stay closer to the bottom if they require more heat. Baby squirrels absolutely love it. Some of them will actually dive down underneath the bedding to get closer to the bottom if they want to get warmer. Likewise, the author offers a place for animals to go higher to get away from the heat if they so desire by providing a crumpled towel or perch. This type of unit has been used to successfully raise hairless opossums.

One adaptation the author has made to this type of unit is to make it portable by adding



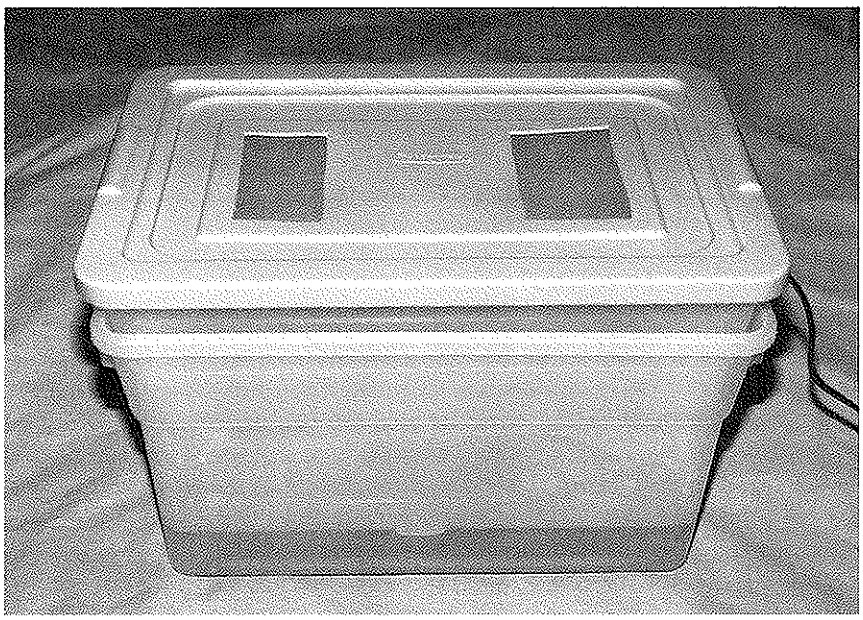
Waterbath made from a 3 quart cylindrical Rubbermaid™ plastic container.



Incubator made with two 19.5 quart Rubbermaid™ containers. The dimensions are 16" x 11" x 9".

foam around the outside. In this way, the animal and the unit can be transported to veterinary care without worry of chilling. Once at the new location, the unit can be plugged in.

Another variation of this incubator that has also been found useful is to use it as a water bath to heat baby bottles. Essentially, this is set-up as a single plastic container that has 2-3" of distilled water heated by an aquarium heater to a temperature of 100°F. The heated water warms formula so that it is not too cold or hot. The author sets the bottle in the water bath for a few minutes while doing other things and returns to a warm bottle. The water level must cover the heater and if that level is too deep for a small "pet nurser" bottle used on animals then the author simply places a jar lid under the bottle to raise it slightly. This method is preferred over microwave heating of bottles because it does not heat food from the inside out. When food is heated in a microwave, the true temperature of the core is not obvious to the handler. One may notice that the bottle gets warmer after removal from the oven which reflects the core temperature radiating outward. Using a water bath, what you feel on the outer edge of the bottle is the warmest that the bottle will be inside. In either case, one should always test the milk on your own forearm before feeding to the neonate.



A side view of the home made incubator.

This incubator set-up has been successfully used in wildlife rehabilitation care with a range of species from birds to fawns. They are constructed using easily obtained materials that are inexpensive. Additionally, if the heater breaks, the water cools slower than the air-based incubators and replacement heaters are available locally at any pet store.

These little gadgets have allowed the author to provide effective and efficient care to injured or orphaned or diseased wildlife. It is hoped that others will find them useful as well.

* *Editors note: A dilute chlorhexidene solution can be made with distilled water to reduce any possibility of bacterial growth in warmed water.*

Request for Photographs

As those of you on Internet Wildlife Rehab List know, I am committed to producing a book on nestling identification. For those who would like to contribute photos, they need to be in sharp focus, color (with negatives if possible) with either a ruler or common coin nearby for scale. All information possible regarding the approximate age, weight, where found is requested. A signed written note of permission is needed for publication.

For further details or clarification, please write:

Sherry Ellesson
1201 Chapel Ridge Road
Apex, North Carolina 27502
Phone collect: (919) 387-1128 or
sherry@critter.pdial.interpath.net

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Sources:

Betadine™ (povodine-iodine)
The Purdue Frederick Company
Norwalk, CT, 06950-3590 USA

Centrum® Human Multi-vitamin
Lederle Consumer Div.
American Cyanamid Company
Pearl River, NY 10965

Hill's a/d
Hill's Pet Nutrition, Inc.
P.O. Box 148
Topeka, KS 66601 USA

Nolvasan™ (chlorhexidine diacetate)
Fort Dodge Laboratories
Fort Dodge, IA 50501 USA

Authors Profiles

Melissa Kaplan has been doing reptile and amphibian rehabilitation for the past four years. A writer and lecturer, she specializes in reptile and environmental education.

Robert M. Jereb, DVM is a small animal practitioner that specializes in avian and reptiles.

Glossary of Terms:

arboreal-living or situated among trees
buccal-resembling or relating to a turtle, tortoise, or terrapin
cranial-relating to the cranium or head
cytoxic-detrimental or destructive to cells
detritus-any broken down material, carious or gangrenous matter, etc.
exudate-any fluid that has exuded out of a tissue or its capillaries
gingival-relating to the gums
glottis-opening to the trachea
heliotherm-animal that gets body heat from the sun
hepatic-relating to the liver
mandibular-relating to the lower jaw
necrotic-pertaining to or affected by necrosis
osteomyelitis-inflammation of the bone marrow and adjacent bone
parenteral-by means other than through the GI tract, by injection
pharynx-upper expanded part of the digestive tube between the esophagus and the mouth.
pharyngeal-relating to the pharynx
petechia-minute hemorrhagic spots
plaques-a patch or small differentiated area on a body surface
renal-nephric, relating to the kidney
stomatitis-inflammation of the mucous membrane of the mouth
thigmotherm-animal that gets body heat from contact with the ground
vascular-relating to or containing blood vessels

IWRC International Committee Formed

The IWRC Board recently approved the charter for the newly formed IWRC International Committee. Shirley Casey, Committee Chair, requests that people interested in learning more about or joining the IWRC International Committee contact her at 29319 Northstar Lane, Evergreen, CO, 80439, USA; phone (303) 670-3309; or fax (303) 670-8938. Since one of the initial projects will be to identify wildlife rehabilitators operating outside the USA, readers are invited to submit those names and addresses to Shirley.

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Author Profiles

Allan and Shirley Casey are the founders of WildAgain Wildlife Rehabilitation, Inc., a non-profit 510(c)(3) organization based in the foothills west of Denver, Colorado. Permitted rehabilitators since 1986, they work with small mammals. Through WildAgain, they also conduct and sponsor statewide training on introductory and advanced rehabilitation subjects. WildAgain's goals also include enhancing relationships between rehabilitators and regulatory agencies, and furthering the State of the Art of Wildlife rehabilitation.

The Casey's both hold degrees of Master of Business Administration from Southern Methodist University. Allan is a financial manager for a major international coal company. Shirley is President of Strategic Linkages, Inc., which provides management consulting services. They have both had professional responsibilities for strategic planning activities, large scale organization change efforts, and collaborative ventures.

Announcements/General Requests

WILDLIFE REHAB On Line

The WLREHAB mailing list is intended for discussion of all areas of wildlife rehabilitation. Through this list, discussion and information gathering can be accomplished by wildlife rehabilitators at all levels. Persons with an interest in wildlife and/or questions about wildlife may also become involved. (We will eventually have a newsgroup for general wildlife topics so that this mailing list can be specifically devoted to wildlife rehabilitation topics.) A mailing list is simply a group of people interested in the same subject that "subscribe" to the list (it is free); anyone on the list can then type a message into their computer and it is automatically sent to everyone on the list. For example, if you want to know what other people do to successfully raise baby cottontails, you just ask the question, and anyone on the list can then write back to you with their techniques.)

Due to the nature of wildlife rehabilitation, rehabilitators often have questions on how best to rehabilitate a certain species, need diet information, and so on. Often it is hard to get quick answers. This list will provide a mechanism for immediate exchange of questions and answers. It will also provide a much needed "support" system for rehabilitators who are often overworked, underpaid, and under a great deal of stress. This list will hopefully provide access to and be like a "continuous convention". We can also exchange our stories, successes, failures, problems, good ideas, diets, rehabilitation techniques, etc.

This list will work best if as many wildlife rehabilitators as possible subscribe to it. So, tell others involved in wildlife rehabilitation about this unique opportunity. Currently, there are 130+ people who subscribe from the United States and other countries such as Australia, India, England, etc.

To Subscribe to the List:

Send an email message to:
LISTSERV@VM1.NODAK.edu
with a blank subject line
and with a text that reads:
SUBSCRIBE WLREHAB Your Name

Submitted by: Ronda DeVold
email address: devold@badlands.NoDak.edu
Phone: (701) 293-6225 H; 701 231-7519 W
Address: 3510 2nd Street N. #34
Fargo, North Dakota
58102

Editors Note: We have entered a new age with this level of communication. While the access to other rehabilitators is great, folks new to this medium need to remember that nothing on this type of system is edited or reviewed for accuracy. It is like a giant phone conversation. Great fun, but not like reading the printed page.

Request for Help from The Fund for Animals

The Fund for Animals, a national animal protection organization, is continuing its campaign to ban live pigeon shoots in Pennsylvania, and, as a part of that campaign, will be conducting a bird rescue and rehabilitation effort at the annual pigeon shoot in Hegins, PA on Labor Day this year. We are asking for wildlife rehabilitators in the PA, NJ, DE, OH, and MD areas who can accept injured birds for treatment. If you are able to help, contact Christine Wolf at The Fund for Animals, 850 Sligo Ave., Suite 300, Silver Spring, MD 20910 or call (310) 585-2591.

A Note from the President

Jan White, IWRC's Executive Director for many years, is leaving the position. She has decided to pursue new challenges in her career and devote more time to other interests in her life. Jan has been the guiding force in IWRC for as long as most of us have been members and her absence at the helm will be felt by all. Jan's vision for IWRC was to create an educational resource for all wildlife rehabilitators and she has guided the organization through many uncertainties to its present fulfillment of that dream. She has led the IWRC Journal to a new professional standard and has helped heighten respect for wildlife rehabilitation and wildlife rehabilitators among veterinarians, biologists, and state and federal officials. She has much to be proud of for she has accomplished many wonderful things during her time as Executive Director.

Jan will continue to help us coordinate our Skills Seminar programs and will also remain active on the Standards Committee. In addition, she has graciously consented to continue serving as editor of the IWRC *Journal of Wildlife Rehabilitation*. We appreciate her ongoing commitment to the organization and look forward to her future contributions.

Hope Douglas, whom many of you have met at our conferences and through her work as a member of the IWRC Board of Directors, will be stepping in as interim Executive Director until a permanent replacement is chosen. She is looking forward to working with all of you.

The Board realizes that, in many ways, finding a replacement for Jan is impossible. Her sense of vision, her dedication, and her unswerving commitment to the future of wildlife rehabilitation will be difficult qualities to find in any candidate. However, there comes a time for all living things when a choice is made between growth and stagnation. Jan has decided that for her, that time is now. As wildlife rehabilitators, all of us understand the need to let that growth occur and to let the ones we work with fly free when their time comes. I and the IWRC Board of Directors support Jan in her search for new growth and wish her well in her future endeavors.

-Marnie Allbritten-

JOB LISTING - EXECUTIVE DIRECTOR

INTERNATIONAL WILDLIFE REHABILITATION COUNCIL (IWRC) is looking for a part-time **Executive Director**. IWRC is a 25-year old 501(c)3 non-profit organization headquartered in California with members throughout North America and overseas. IWRC is dedicated to continuing education in the field of wildlife rehabilitation through a quarterly *Journal of Wildlife Rehabilitation*, basic and advanced Skills Seminars, annual conference, newsletter, extensive catalogue of literature covering all aspects of this rapidly changing and growing field, a research committee, and a national standards and accreditation program developed jointly with the other national professional assocation.

Qualifications: Minimum of 3 years work in wildlife rehabilitation with a deep commitment to the field and demonstrated expertise in administrative responsibilities. The successful candidate will also have demonstrated training or experience in business management. Credentials, field experience or academic qualifications in related fields, such as biology or veterinary medicine, a plus. Must have strong communication skills, both orally and in writing; be computer-literate and able to handle own correspondence and word processing. Must have excellent interpersonal skills and be able to work well with the wide range of people important to this field, from beginning rehabilitators to veterinarians, from wildlife biologists and regulatory agency personnel to corporate executives. The successful candidate must have demonstrated initiative, with the capability of operating independently, and must also be able to take direction well. The Board is committed to honest and direct communication and the development of a professional atmosphere in which IWRC can best serve the members of the wildlife rehabilitation community. There will be some travel involved. **Salary**: Part-time: $12,500 - $15,000, depending on experience and qualifications. *Salary can be tied to fund-raising success.* **Job Benefits:** Compensation includes health benefits, sick leave, and annual leave. **Application Period:** May 1 - Aug 30, 1995. Resumes, references, and cover letter detailing experience appropriate to this position should be sent to Marnie Allbritten, IWRC President, 292 Cleveland Hill Rd., Roseburg, OR. 97470. The first screening will be by the Executive Committee of the Board of Directors, which is acting as the Search Committee; the first interview will be by telephone conference call, with the final interview by the complete Board.

Job Responsibilities:

General - Provides overall daily supervision for all the programs operated by IWRC and monitors joint program responsibilities, if any, shared with other organizations. Acts as liason to the Board of Directors concerning the affairs of the organization and as spokesperson for IWRC in its day-to-day affairs. Is responsible for public and member relations, general outreach, membership development, program development, and fund-raising *under the direction of the Board.* May make policy-related decisions in the absence of existing policy, subject to Board review. Brings to the attention of the Board any problem areas of existing policy or proposed policies based on organizational operation; makes recommendations to the Board for program development ideas or ways to improve operational procedures or member services.

Specific -

1. Maintains regular contact with staff and volunteers who perform various roles in operating IWRC committees or departments. Assigns or directs the committee/department work as directed by Board discussions or policies. Performs 'trouble-shooting' to maintain smooth operation of all programs. Evaluates staff/committee heads in their roles and reports back to the Board on the progress of the organization and the performance of the personnel involved.

2. Identifies funding opportunities and, under Board direction, implements fund-raising programs, writes grants or funding proposals, or supervises staff/committee heads in the pursuit of funds for specific programs. Provides general leadership in the development of IWRC and its programs.

3. Responds to any conflicts that may arise within the various departments or committees, with IWRC members or non-members, that are not resolved by committee heads or staff; refers conflicts not resolved by the Executive Director to the Board.

4. Manages the general business affairs of the corporation; is authorized to sign office lease agreements, insurance, and other Board-approved encumberments for property or equipment. Handles personnel affairs such as health insurance, workman's compensation insurance, office supervision and employee performance reports. Implements employee policies as developed or approved by the IWRC Board.

5. Works with committees/staff/Board to develop an annual organizational budget. Provides written reports for the Board at least quarterly to detail current financial status in relation to the approved budget. Prepares for the Board quarterly financial reports detailing income and expenses, assets and liabilities. Ensures that bank deposits, tax deposits, and all bills of the organization are handled routinely and that accurate records detail these transactions. Reviews all requests for funds from staff/committee members to ensure that requests comply with the approved budget or existing IWRC reimbursement policies.

It's a Wild Life

Gary Bogue
Lesher Communications, Inc.
PO Box 5088
Walnut Creek, California 94596
1989
123 Pages **$15.95 US**

Gary Bogue is a full-time columnist, whose work has been published in several San Francisco Bay Area newspapers. He was curator of the Lindsay Museum, in Walnut Creek for 11 years and he started one of the first wildlife rescue hospitals in the United States.

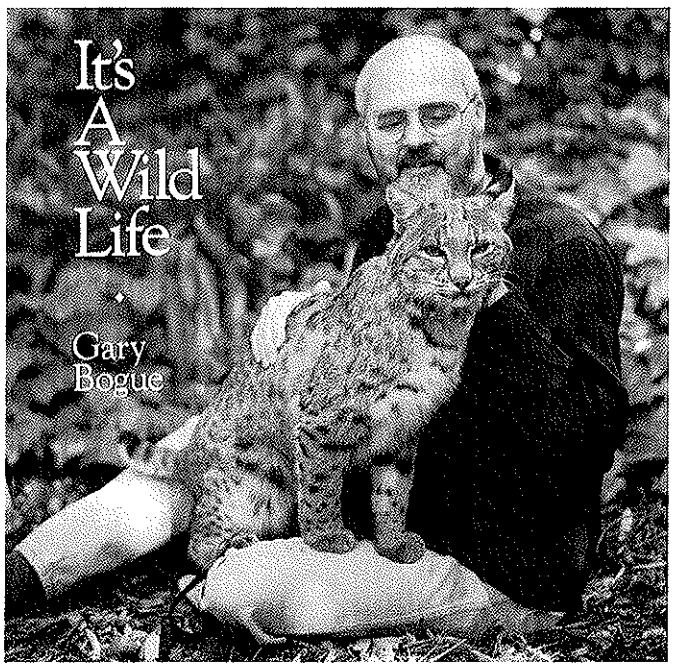
This book is a collection of some of his past columns, and will touch the heart of anyone who has ever been or has ever entertained the thought of becoming a wildlife rehabilitator. His vivid recollections will remind you of the best of times and the worst of times that you might have experienced in your own career as a wildlife rehabber.

This is a book that you can read when you have a little "down" time and need a well-deserved break. Its format of smaller articles, allows you to sit down, even for just a few minutes, to enjoy one or two of the articles at a time. Each article is introduced with a well-chosen line from a poem or proverb that perfectly compliments the article.

The author's love and compassion for animals comes through in every passage. Some of them will make you laugh and some will make you cry, but you will not be unaffected. Many of these tales will have you remembering a similar instance or circumstance in your own life and you may find yourself smiling at the memory or possibly wiping a tear from your eyes. If you sometimes wonder if the work you do is worthwhile or appreciated, you will know after reading this book.

Perhaps the tone of the book can best be summed up by a quote taken from one of the articles entitled *The Last Wild Condor Will Fly No More.* "I wonder what it would be like to be the only one of your kind that's left in the world? ..... How would it feel to know the only voice you will ever hear again will only be yours? ..... How would it feel to never again be able to look up and smile into the eyes of someone you know? ..... How would it feel knowing that just the pleasure of sharing someone's company—of being there, together—will be lost to you forever?"

-Mary Reynolds-



International Wildlife Rehabilitation Council
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Suisun, CA 94585

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Have an unusual animal or problem?
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Get a helping hand from your colleagues!

Wildlife rehabilitation can be challenging or frustrating depending upon how quickly you find answers to those first-time problems. When you are faced with a new situation or looking for a new solution to a recurring problem, avoid that feeling of hopelessness or isolation and give us a call. The Wildlife Hotline is designed to help *wildlife rehabilitators* by connecting you to an expert who can give you the answers you need. IWRC office personnel staff the hotline and make referrals to any number of specialists in our diverse field. So if you are stumped or just want a second opinion from someone who's been there—give us a call and we will try to help. Calls should be placed during business hours (PST) for the fastest response, however, the answering machine will take messages at any hour of the day.

To use the hotline: call (707) 864-1762; leave a message detailing your question, problem or what specific information you need. The Wildlife Hotline will return your call COLLECT with the help you need.