REHABILITATION WILDLIFE COUNCIL

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ENDANGERED SPECIES ACT

The U.S. Endangered Species Act expires September 30, 1982. Hearings on its reauthorization are now being held in Congress. The current law passed in 1973 protects 756 species of which 288 are domestic. This includes 35 mammals, 69 birds, 25 reptiles, 8 amphibians, 45 fish, 8 snails, 23 clams, 1 crustacean, 13 insects and 61 plants.

The Reagan Administration attempted to reduce the Endangered Species Program budget by 43% from $23 million to $13 million, but Congress has okayed $18 million in funding in 1982. This reduction eliminates all money for co-operative state and federal programs. Further budget cuts involving enforcement of the act are being planned by the Administration.

For the past two years the listing of endangered species has been virtually frozen. The only new listings in 1981, which were proposed by the previous administration, were of 3 plants and one genus (41 species) of Hawaiian tree snails. This February the Reagan Administration did list a shrimp whose habitat is within the National Zoo in Washington.

Lobbyists from timber, mining, oil and gas and utility industries are working hard to win over congressmen of the House Merchant Marine and Fishing Subcommittee on Wildlife, Conservation and the Environment which has begun hearings on the fate of the Act. These lobbyists want to force the government to give much more weight to the anticipated economic worth of a new project versus the potential and essentially undefinable worth of a threatened plant or animal.

Secretary Watt has called for a one year reauthorization of the Act, which conservationists consider a political move to avoid doing anything politically unpopular until after the fall elections.

It is important for those concerned with species preservation to let their congressmen know that they should support a multi-year reauthorization of the Endangered Species Act with no weakened amendments.

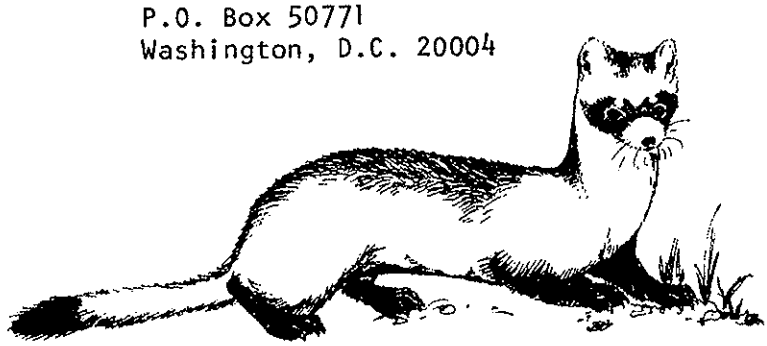
For more information on the history of the Endangered Species Act and its present status see:

"A Year of Reckoning for Endangered Species," National Wildlife, Feb.-March, 1982.

"Endangered Species Act in Jeopardy," Science, March 5, 1982.

For more information on how you and your organization can become involved in helping to save the Act, contact:

The Endangered Species Reauthorization
Coordinating Committee
P.O. Box 50771
Washington, D.C. 20004



Sylvia Feder

Black-footed ferret

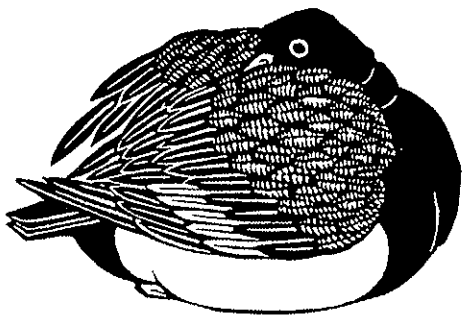
NOMINATIONS FOR W.R.C. BOARD

There is currently one vacancy on the W.R.C. Board of Directors, and the three year term of five members will be up in the fall.

The nominating Committee is now accepting names with brief resumes to be considered for the ballot. To be eligible you must be a professional or organizational member, and be able to attend 75% of the board meetings each year. These meetings are normally held in northern California.

If you are interested or would like to recommend someone, send resumes no later than JULY 31, 1982, to:

Susan Kelly
Nominating Committee
1915 Kentucky St.
Redwood City, CA 94061



WILDLIFE CONFERENCE "MAMMALS"

The informational packet from the Sixth Annual Wildlife Conference on Mammals is now available from the Council.

The packet includes charts on average temperatures, heart and respiratory rates of mammals, vaccination recommendations, feeding charts, a bibliography and more.

To order the packet, please send $7.50, postage included to:

Wildlife Rehabilitation Council
P.O. Box 3007
Walnut Creek, CA 94598

PESTICIDE INVESTIGATION UNIT

The California Department of Fish and Game has a Pesticide Investigation Unit which examines cases of wildlife poisoning due to pesticides. Their biologists would like to enlist the help of wildlife rehabilitators in bringing such possible cases to their attention. They are interested in poisoned fish as well as birds and mammals.

If your center has a suspected pesticide poisoning (this is particularly likely if more than one animal is brought in with the same symptoms), the Pesticide Investigation Unit should be contacted. Be ready to give the biologist as complete a case history as possible. In addition to medical records, this should include a description of the area where the animals were found. If there are any crops that may have been sprayed or rodent control programs in the area, the biologist should be informed. The more information you can give, the more likely the source can be found.

Be sure to make arrangements with the biologist before sending any specimens. They need to be prepared for the arrival of suspected pesticide cases and may have specific shipping instructions for you.

The Pesticide Investigation Unit works with agricultural interests to prevent wildlife losses from occurring and to remedy problem situations. They are eager to cooperate with wildlife rehabilitators in this endeavor and will gladly discuss their program in more detail with you. For more information or to report a possible pesticide related poisoning, contact:

Ed Littrell
Wildlife Biologist
Department of Fish and Game
Pesticide Investigation Unit
1701 Nimbus Road, Suite F
Rancho Cordova, CA 95670
(916) 355-0136

PESTICIDE SYMPTOM AND TREATMENT CHART

PESTICIDE	SYMPTOM	TREATMENT
Anticoagulants Coumarin	Hemorrhage and sudden death without previous warning. Anemia, weakness, pale mucous membranes, dyspnea (difficulty breathing), bloody feces, scleral and conjunctival hemorrhage, staggering, ataxia, blood-tinged froth from mouth and nose.	Sedation to prevent trauma, well ventilated cage, oral vitamin K, warmth
Arsenic-- Organic & inorganic	Acute: Intense abdominal pain, staggering, extreme weakness, trembling, salivation, vomiting, diarrhea, fast feeble pulse, normal to subnormal temperature, collapse, and death. Subacute: anorexia, diarrhea, frequent urination followed by anuria, partial paralysis of hind limbs, stupor, subnormal temperature, and death.	BAL(dimercaprol) I.M. three times a day until recovery. Supportive therapy for additional signs, such as dehydration. May also need antibiotics.
Carbamates carbaryl or sevin, etc.	Acetylcholinesterase depression, hypersalivation, diarrhea, vomiting, sweating, dyspnea, cyanosis, muscle twitching, seizures. Death is usually a result of hypoxia due to bronchoconstriction.	Atropine (0.5 mg./kg.) Valium for convulsions (watch respirations). Saline cathartic is recommended, especially for nonruminants.
Organochlorines DDT, chlordan, lindane, etc.	Hypersensitivity and spasms of eyelids and front quarters progressing to the hindquarters; these may be continuous or intermittent. Clonic-tonic seizures, loss of coorindation, circling, and abnormal posturing. Animal may become comatose.	Control convulsions with chloral hydrate or long lasting barbiturate. Supportive care.
Organophosphates parathion, malathion, etc.	Hypersalivation, vomiting, diarrhea, sweating, dyspnea, cyanosis, muscle twitching (in extreme cases, tetany, followed by weakness and paralysis), convulsions. Death usually results from hypoxia due to bronchoconstriction. Extremely slow pulse in some cases.	Atropine (0.5 mg./kg.) Valium for treatment of convulsions (watch respirations). Saline cathartic is recommended, especially for nonruminants.
Metaldehyde-- Snail & slug killer	Muscle weakness, frothing at the mouth, hypersalivation, incoordination, fast pulse, loss of consciousness, cyanosis, and often convulsions. Death usually follows respiratory failure.	Supportive treatment for respiratory failure, glucose for treatment of possible liver damage, It is often necessary to anesthetize the animal to control convulsions.

Excerpted from "Pesticide Poisoning in Domestic Animals," Modern Veterinary Practice, Volume 58, Number 11, November 1977.

Fresno Wildlife Rescue

What do you do when the local zoo decides not to take in any more orphaned or injured wildlife, and the nature museum follows the same path? That was the dilemma that we were faced with almost seven years ago.

My husband and I had done some volunteering for various agencies that cared for wildlife prior to the policy changes made by both the zoo and the museum, and we were well acquainted with our local California Fish and Game and U.S. Fish and Wildlife agents and, like them, we were gravely concerned about what would happen to our local wildlife if they needed care. So we filed for and received our state and federal wildlife rehabilitation permits and our federal banding permit. We also began working on our non-profit status, realizing what a terrific financial burden it might become for a postal carrier and a piano teacher. At this time we also began making trips to various rehab centers to see their set-ups, ask lots of questions, and see what techniques were used. In retrospect, I can remember the days when I used to call more experienced rehabilitators concerning every new animal that came in the door. I owe them all a great debt of thanks for their patience, interest, and help.

Seven years have gone by very quickly. This last year we moved our residence and our wildlife operations from the center of the city of Fresno, California to the rolling hills on the outskirts of Clovis, (a small suburb of Fresno). Instead of one standard city lot we now have five acres. Presently we have a large flight cage measuring 66'long, 20' wide, and 23' high for our larger raptors, two large deer areas and various other cages located here and at volunteers' homes, as we are an in-home care service. From our new location we are able to hack back most of our raptors in a very natural way. We have had great success with gray foxes as well as San Joaquin Kit foxes, for which we have the only rehab permit in the state for this endangered species. We've cared for approximately 600 birds and mammals each year for the last few years, with as many as 200 raptors in one year.

Most of our project is paid for out of our pockets and the volunteers' pockets. However, we are reimbursed partially for some expenditures. We annually submit a request for funds from the county CA Dept. of Fish and Game's Fine Commission. From that fund we have purchased a freezer, phone answering device, various supplies i.e. heating pads, medical supplies, wildlife food, and we have paid for veterinary expenses. We also paid for the moving of our new large flight cage from where it was donated to our new home out of that fund.

A television station ran a feature on our project which the reporter ended by mentioning how hard it is to haul deer to the vet's office in the back seat of a 1965 Dodge Dart and said that if anyone had a van they would like to donate to us for our wildlife work they could contact her. Two days later the Franciscan Sisters donated their 1973 Dodge van in perfect condition to us. They had seen the show and just the day before they had decided they needed a 16 passenger van instead of the 12 passenger one they had. When they saw the program they said they felt that the van had been in God's service working with people and would still be in God's service helping animals. How lucky we were!

In addition to caring for the wildlife we put great emphasis on educating the public, especially the children in our area. We give wildlife presentations to school children numbering as many as 3,000 elementary age children in one year not counting the service clubs, 4-H clubs, Boy Scouts, Girl Scouts, high schools and colleges, and nature groups. Knowing we may only be making a small dent in saving our native wildlife, we hope a much larger effect will be felt through education. Now that we are getting settled in our new location we hope to care for many more of our native wildlife with the help of our dedicated volunteer veterinarians and our volunteers.

Cathy Garner
Fresno Wildlife Rescue
Fresno, California

KEEPING THEM WILD

Probably one of the hardest steps in the rehabilitation of an orphaned mammal is keeping it wild. Without that quality the animal is a poor candidate for release. An animal that does not avoid and fear humans will usually end up in trouble often ending in tragedy.

Sometimes when an orphan comes in rehabilitators get caught up in its cuteness, helplessness, and wanting to mother the animal, one often forgets this is a wild animal. Somewhere along the line the decision to stop mothering it must be made. If the decision is not made soon enough, the animal may become to dependent on humans.

For the past eight years we have been raising wild mammals at Peninsula Humane Society and have come up with a method that keeps these wild orphans wild. In the beginning we spent a lot of time with each orphan that came in and in turn had to spend even more time teaching the animal to be wild so it could be released. Over the years we began to get more animals in and had less hours to spend with them. We noticed that by leaving them alone more they seemed to mature sooner and stay wilder. Raccoons that we raised from day old youngsters were as wild at 5 months of age as the ones that had come in to us at 3 or 4 months old. The key was that we were leaving them alone a lot more.

We offer the very young the mothering they need, but once they start to show independence and start eating on their own they are left to themselves. Some animals take only a few days to go from bottle to whole food, while others take longer. We try to encourage them to make the transition as soon as possible. Once they become self-feeders, the human contact is reduced to feeding and cleaning time.

As the animals grow, their cage sizes are increased so they can develop their climbing skills and have some place to hide when we approach. If the animals approach us, they are discouraged. We also try not to talk to the animals when we are feeding them. This not only works with raccoons but with the other mammals you might receive.

Another key to our method is that we try <u>never</u> to raise one of anything. If we receive one raccoon, fawn, squirrel, etc. we make an effort to take an orphan of the same species from another group or ask them to take ours. We usually hold the animal alone only for a short time, one to two weeks depending on species, in hope of another one coming in. It is not always easy for a volunteer to give up a single animal they want to raise but it may mean the survival of the animal in the long run.

We know that we have done a good job on our orphans when time for release comes and we cannot easily handle the animals. We now have to use capture equipment such as nets or come-a-long poles on many of the animals. By release time some of our deer are so wild that some have been to hard to man down and have had to be tranquilized for moving them to release sites.

Even though these animals have spent most of their lives near humans, the fact that they have to be handled in this manner, leaves us with the feeling that they have a good chance of making it on their own in the wild, far from human contact.

Susan B. Kelly
Peninsula Humane Society
San Mateo, CA



Emily Woodard

PROBLEM SOLVING
with
Carol Hamilton and Friends

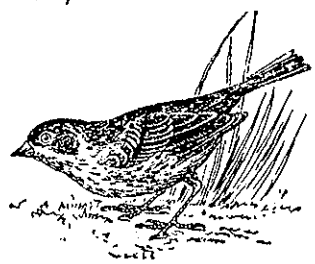
It's said that "necessity is the mother of invention". Doesn't every rehaber know all too clearly the meaning of those words! No college or university I know of offers a degree specifically in wildlife rehabilitation. So how do we rehabers find answers in a field that is still in its pioneering stage?

Well, we research answers from a meager (but growing) number of rehabilitation books and magazine articles, and we sparingly make use of our wonderfully interested and uncomplaining (but often overworked) volunteer veterinarians. But, haven't you found that even with all the wonderful help you get from the above resources, in the final analysis you've still had to draw from your own experience, resources, and ingenuity to come up with inventive, practical, nitty gritty solutions to the specific dietary, medical/nursing, housing needs, etc. each species requires?

Alot of time and frustration could have been saved if someone had only told you how he/she had already solved that problem....last year! Sharing of information is the primary reason for the Wildlife Rehabilitation Council and the Wildlife Journal. And that's what this continuing column on problem solving will be about, anything you and I can think of that has helped us help the animals, or ourselves. Nothing is too insignificant--if it works!

BOOK REVIEW: Gerstenfeld, Shelden, VMD, THE BIRD CARE BOOK: EVERYTHING YOU NEED TO KNOW TO KEEP ANY BIRD HEALTHY AND HAPPY, Reading, Mass. 1981, 185pgs., over 50 black & white charts and illustrations. $6.95.

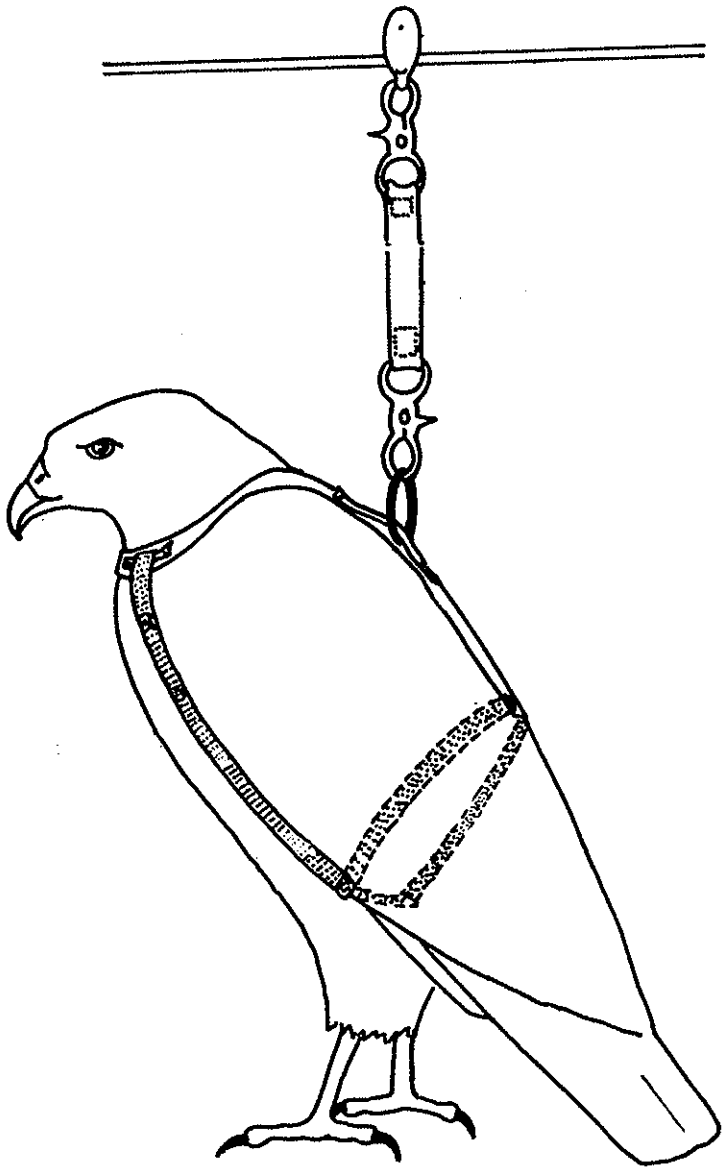
The author is not exaggerating in his title. There is so much information jam packed in this book it would be impossible to pick and choose. Of course he is mainly concerned with the pet bird, but I found the information very adaptable to wildlife. This is my kind of resource book. When I have a problem I usually want information in a hurry. I get frustrated and turned off by long chapters and long paragraphs which take too much time for me to search out an answer. This book has large type chapter headings on the top outside corner of each page; paragraphs are short and to the point; many bold type subheadings for quick reference; lots of charts, diagrams, illustrations; where applicable, multiple column style and outline form. This is a "must" in your reference library.



PROBLEM SOLVING

CONFINEMENT OF NON-STANDING BIRDS

Problem: How to confine birds who are unable to stand or perch due to illness, debilitation, concussions injuries, shock, stress, etc.?
Problem Solver: Juanita Heinemann, Peninsula Humane Society, San Mateo, CA
Solution: Supportive Circle of Soft Material.
1. Take a soft non-stringy material or toweling and roll it up on itself. Bring both ends together to make a circle and secure with tape. This is called a "donut". Size and depth depend on size of bird.
2. Wrap donut in cellophane to waterproof and to help animal retain body moisture and heat.
3. Use a soft (not harsh or stiff) paper toweling to cover donut, and soft crumpled facial tissue in center of donut.



A NEW METHOD FOR EXERCISING AND REHABILITATING RAPTORS

by

Terry Schulz
Julie Klingman
and
Russell Tucker

UC Davis Raptor Center
Davis, CA

INTRODUCTION

Raptor rehabilitation is the process by which injured and orphaned birds of prey are restored to a condition of good health and former capacity; i.e., the ability to fly and successfully hunt prey.

The raptor rehabilitator is faced with many concerns in the effort to successfully return injured birds to the wild. These include: 1) providing experienced veterinary service; 2) use of proper husbandry techniques; 3) prevention of disease; 4) prevention of trauma to body and feathers; 5) application of a sound exercise program.

It is important to rehabilitate a raptor in as little time as possible to prevent habituation, loss of fear of people and to minimize the potential for further trauma brought about by captivity. Many individual birds may refuse to adapt to captivity during the convalescent stage and thereby risk self trauma. Feather damage and trauma to the body such as foot problems ("bumble foot") may prolong, or in some cases, prevent rehabilitation efforts. The goals of a sound exercise therapy program include: 1) accelerating the rehabilitation process; 2) minimizing the effects of inactivity by maintaining or increasing the range of motion without delay; 3)stimulating the bird to use the ability it has regained in the performance of normal functional activities; 4) increasing strength, endurance and coordination.

Most raptor rehabilitators exercise their birds with one or more of the following techniques: A) falconry training; B) creance line; C) fishing line attached to rod and reel; D) flight enclosure. Although all methods have been used successfully, each has its inherent problems. Briefly stated, falconry techniques require a great number of man hours for each individual bird. The bird is first tamed to perch quietly on the fist. After that, it is trained or conditioned to fly to a lure and to return to the fist upon signal. The amount of time involved and the problems created by taming the bird may only compound the problem of future release. In some extreme cases in which nervous birds fail to habituate to being captive (i.e., continually fly against cage walls causing chronic trauma to feathers, feet, cere or carpal joints) falconry techniques may be necessary in order to calm the nervous bird down.

Today many raptor rehabilitators use methods which do not require taming the bird. A creance line or fishing line has been used with some success if used on a regular basis. However, it is often difficult to find a large, open, undisturbed and "snag-free" area in which to fly the bird. Most creance lines do not allow enough freedom and the bird is usually dragged down too abruptly. Raptors flown on a fishing pole with approximately 200 yards of 60-80 lb. test line have more space in which to fly non-stop. The line is attached to both legs by a snap hook which is attached to traditional-type swivel and jesses. The bird is lifted into the air and allowed to fly as far as possible. By applying thumb pressure to the unwinding spool, one can gradually slow the flying bird to prevent leg or pelvic injury. Cases are not uncommon in which fractured legs have occurred due to abrupt stops. All equipment used in this method should be carefully checked each time before flying a bird. The safety check should include examining the condition of the bracelets, grommets, jesses, swivel and clasp. The fishing line should be checked thoroughly for frayed weak spots after each exercise period. This should be done while reeling in the line and could prevent premature release (escape) of birds.

Some rehabilitation centers may be fortunate enough to have large enclosed flight areas. Birds can be exercised in large enclosures in two ways: A) they may be stimulated to fly back and forth between perches; B) food may be placed on the ground making it necessary for the birds to fly vertically to get back on the perch after securing the food. This method increases strength but not stamina or endurance. For the larger hawks and eagles the space required for sufficient exercise is more than most rehabilitation centers can afford to construct.

A method to exercise raptors in a limited area without the need for an exercise enclosure was badly needed at the U.C.Davis Raptor Center. A body harness (Fig. 1) was designed to restrain the bird being exercised on a fixed flight line. The design of the harness took the following prerequisites into consideration: 1) force should be placed on entire body to prevent damage from abrupt stops; 2) adequate restraint with freedom of wing motion should be provided; 3) sternal movement should not be restricted, thereby preventing inhibition of respiration.

DESCRIPTION OF HARNESS AND ATTACHMENTS

The harness body (Fig. 1j) is made from 1/8" thick cowhide. The leather attachments (Fig. 1b,d,e) are riveted to the harness body. The adjustable velcro straps are sewn to a seam tape backing (Fig. 1g,h,i). These straps can be lengthened or shortened to accommodate different sized birds. The dimensions provided here are for a Red-tailed hawk-sized bird and are too large for smaller birds. The harness is placed on a hooded bird with the head through the hole (Fig. 1a). The adjustable velcro straps (Fig. 1,2g) are brought back on the outside of the legs. The other (rear) adjustable velcro straps (Fig. 1i,2h) are pulled through the leather loops (Fig. 1d,2h) under the wings and adjusted for size before securing the safety snaps (Fig. 1f). The bird is then secured to the flight line by attaching a trigger type clasp (Fig. 2c) to the metal ring (Fig. 1c). The clasp is sewn to 2.5 cm. wide nylon webbing (Fig. 2d) which is 0.5 - 3 M (2-3') long depending on the distance between the perch and the flight line (Fig. 2b).

The other end of the nylon attachment is hooked to an awning pulley (Fig. 2a) by another trigger clasp. The awning pulley rides on the plastic-coated cable (Fig. 2b). The cable should be at least 30-40 yards in length and should be attached to sturdy posts with a strong turn buckle to tighten it. The fixed flight line must be taut to prevent swaying when the bird is flying. The posts should be well padded with foam to prevent accidental trauma to the bird (Fig. 3). Behind each post a blind (bamboo or black plastic) is placed to inhibit the bird's vision beyond the perch. There should be spring stoppers at least 3' long on each end of the cable to stop the bird. A perch platform covered with Astroturf (Monsanto Co.) is attached to the posts no higher than 4' off the ground. Another moveable perch can be placed any distance from either end for shorter initial exercise periods (Fig. 3). It is necessary to initially fly most birds short lengths to the perches to familiarize them with landing on the end perches.

EXERCISE METHOD FOR HARNESS

After the bird is properly fitted with the harness, it is attached to the line and perched on the platform. The hood is now removed. The bird should be allowed to become acclimated to the harness for a few minutes. The period of time in which individual birds settle down may vary. After the bird appears calm and acclimated, it is ready to be exercised. Since the bird is perched at eye level and has unrestrained use of its legs, persons working with raptors attached to this apparatus should wear a protective face mask and heavy leather gloves. Some birds may initiate flight on their own, but most may have to be stimulated to fly. Approach the bird from behind with slow, deliberate movement and quickly push it off the perch by placing a gloved hand on its back above the tail with a forward thrust. If the bird stops and hangs suspended before reaching the other perch, approach it cautiously and grasp the legs. Allow the bird to complete the flight by giving it a gentle sliding push. Occasionally a bird may get its wing caught behind the tether line. If this happens it should be untangled quickly by first restraining the legs. Allow the bird to settle down before continuing.

The exercise period and number of repetitions should be increased gradually. The resistance of the flight line will strengthen the flight muscles, and repetition will increase stamina and endurance. To monitor the bird's progress, record the number of respirations per minute immediately after a set number of flights. Repeat the recording of respirations after a 3-minute rest period. As the bird's strength and stamina increase, its respirations will normalize more rapidly.

In conclusion, the harness exercise technique can be useful to rehabilitate some raptors by increasing their strength and endurance through repetitious exercise. The method described here is, however, only a start. It is hoped that other rehabilitators will share new techniques and improve upon this one.

Terry Schultz may be contacted for more information on this subject. Phone (916) 752-6091 or write him at the Veterinary Medical Teaching Hospital, University of California at Davis, Davis, CA 95616

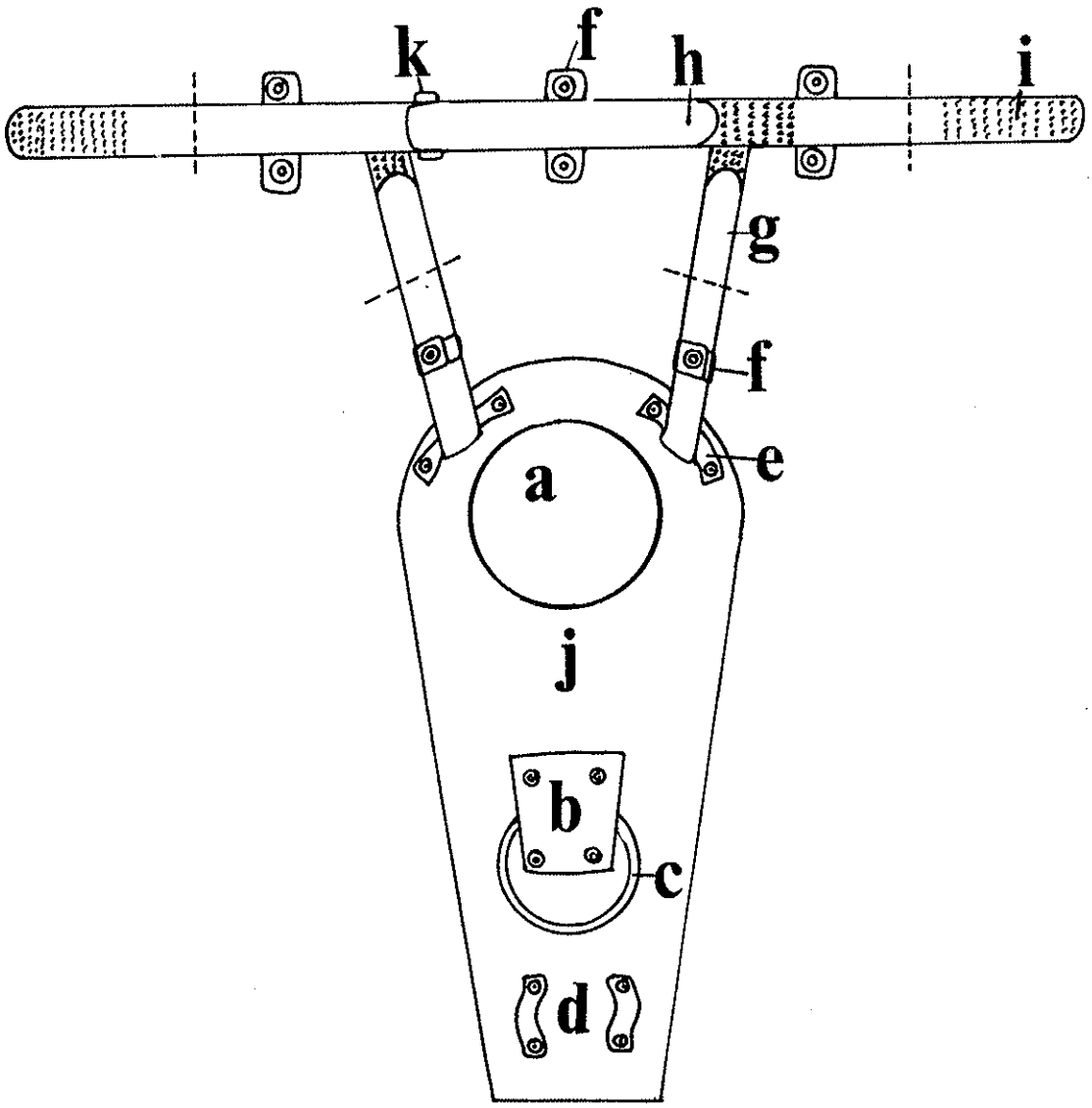
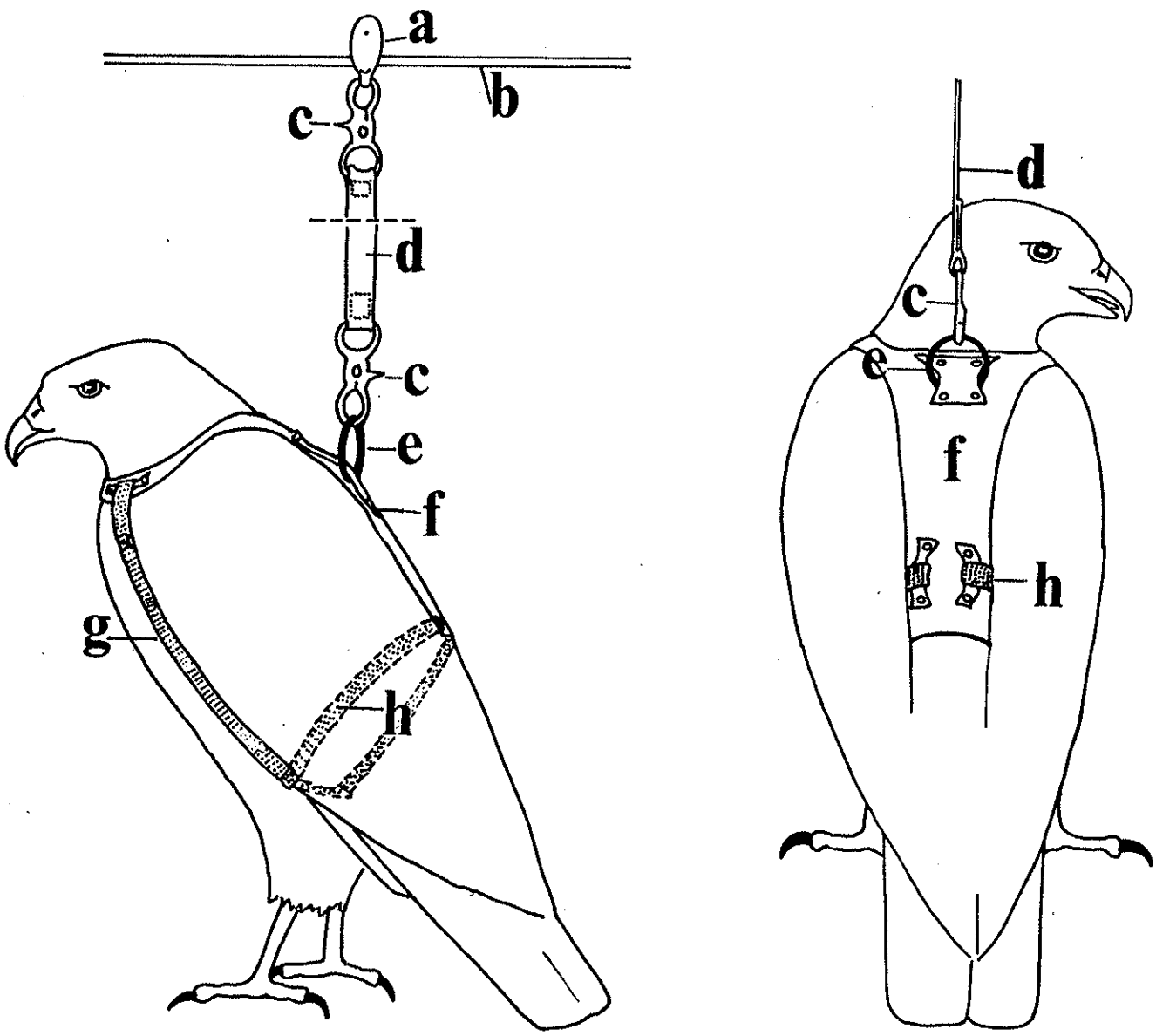


Fig. 1
Exercise Harness For Raptors

a) Head hole (90 mm diameter). b) Leather to secure attachment ring (40 mm X 30mm) secured at four corners with rivets. c) Metal ring for attaching to tether. d) Leather loops for attaching adjustable velcro straps (h). e) Leather loops for attaching adjustable velcro straps (g). f) Safety snaps for securing velcro straps. g) Adjustable velcro straps (29 cm length). h) Adjustable velcro straps (43 cm length). i) Velcro strap opposite end of (h) 21 cm from point where (g) is sewn to (h). j) Leather harness body (23.5 cm length).

NOTE: These dimensions are for a Red-tailed hawk-sized raptor.



Lateral View

Dorsal View

Fig. 2
Lateral And Dorsal Views Of
Harness And Attachments Fitted On Bird

a) 1½" awning pulley. b) 1/8" plastic-coated cable (tether line). c) Trigger clasp. d) 2.5 cm width nylon webbing. e) Attachment ring (metal) approximately 2 cm in diameter. f) Leather harness. g & h) adjustable velcro straps.

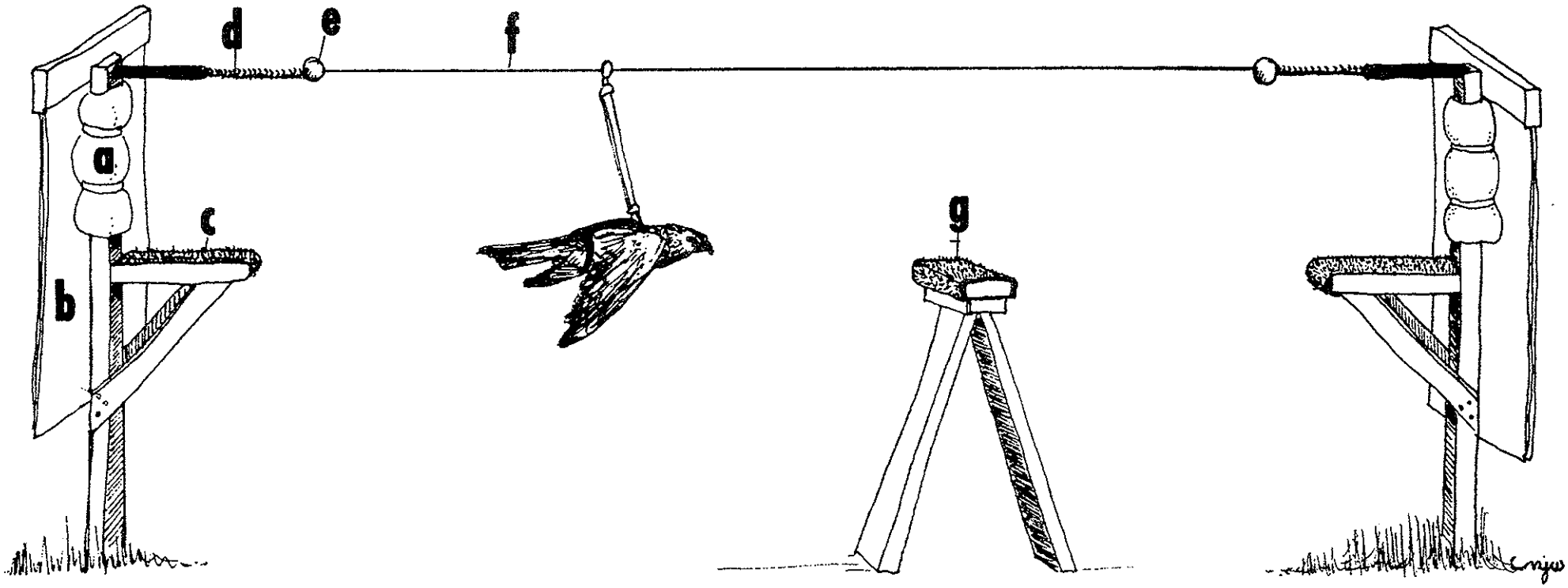


Fig. 3
Fixed Flight Line

a) Canvas covered foam.
b) Bamboo shade.
c) Perch (Astroturf, Monsanto Co.).
d) ½" spring.
e) "Wiffle" ball (Whamo Co.).
f) 1/8" plastic-coated cable
g) Movable perch (Astroturf, Monsanto Co.).

4. Place donut in cardboard box (see next topic) and then place bird in center of donut.
5. Secure food dishes with tape to prevent being knocked over. Put small pebbles or marbles in water dish to prevent accidental drowning.

Advantages:
1. Confines bird in well defined protected area.
2. Prevents pressure sores on chest.
3. Allows for freedom of movement of legs and wings as these functions return.
4. Keeps bird within reach of food.
5. Prevents bird from wasting energy needed for healing.
6. Small area of confinement helps to retain body moisture and heat.

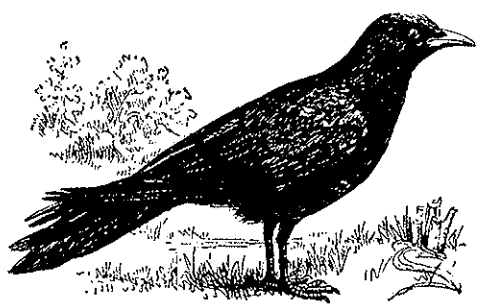
C.H. Comment: Particular and frequent daily attention to hygiene must be paid to skin and feathers that cannot be bathed or preened. Especially watch for a plugged cloaca from fecal accumulation around the vent. Clean vent daily with warm water and use a protective ointment if necessary to prevent irritation.

CARDBOARD BOX HOUSING

Problem: How to provide safe, inexpensive housing for birds?
Problem Solver: Carol Meaney, Wildlife Rescue, Palo Alto, CA
Solution: Cardboard Box with Fiberglas Screen Windows.
1. Obtain cardboard box with lid intact. (Free at grocery and liquor stores.)
2. Using a ruler make outline of a large full size window on the front of box; a smaller window on the forward half of one side of the box; a door on the forward half of the other side; and a full length ceiling window on the forward half of the top lid.
3. Carefully cut out the windows with a knife. Make sure you only cut through three sides for your door.
4. Measure and cut fiberglas screening (30 in. width is approximately $.34/ft. obtained at hardware stores) at least ½ inch beyond border of windows.
5. Secure fiberglas screening on outside of box windows with plumbers duct tape (A silver color tape obatined at hardward stores. 2 in. by 60 ft. roll is about $6.99. Smaller rolls are available for about $1.50.)
6. Cut away the two top side flaps of the box. Secure the front flap to the box with the duct tape and make a ceiling window as directed above.
7. The opened back top flap allows easy access to the inside for cleaning. To secure the top flap to the box make a tape flap by cutting a four inch piece of duct tape and stick one inch of each end of the tape on opposite sides of the box edge. Where the tape meets, press to stick to itself. Do this on the forward side edge of the top box flap where it now meets the secured ceiling window. Position a companion tape flap on the box frame where it will meet the other tape flap. The two can now be secured together with a clothespin.
8. Make similar tape flaps for the door and secure with clothespin.
9. Line bottom of box with aluminum foil to prevent moisture from feces, or spilled water from soaking thru to cardboard.
10. Cut to size numerous sheets of news paper which are easily removed through top flap or side door.
11. Use natural branches or wood dowels for perches.

Advantages:
1. Very economical.
2. Fiberglas screening recyclable. Can be put through the washing machine.
3. Boxes easily replaced, however, if clean can be reused.
4. Box is light and easy to carry and transport.
5. Good hygiene control (especially when used for infectious disease). When bird removed whole housing can be discarded and fresh box substituted.
6. Safe for birds as it eliminates stripped or broken feathers associated with cage bars.

(con't. on page 8)



(con't. from page 7)

7. Box with screen windows on only two sides and front top offers in the back half of the box the privacy and security absolutely necessary for fledgling, juvenile and adult birds.
8. Box makes good hospital housing. In addition to #7 it offers less draft and more warmth than a cage. Humane society transport boxes when door added are excellent hospital boxes.
9. Sizes of boxes obtainable is virtually unlimited.
10. For all of the above reasons it is also good for raising baby birds.

Disadvantage: Can harbor germs if not discarded when soiled and uncleanable. See #5 above.

C.H. Comment: Because of the safety factor as well as the economics, Wildlife Rescue, Inc. of Palo Alto, CA no longer uses cages for its songbirds.

WOUND OINTMENT

Problem: How to find an afforable wound ointment when funds are limited.

Problem Solver: Carol Odell, Wildlife Rescue Team, Inc., Walton, Nebraska.

Solution: An Old Fashioned Sulphur Wound Ointment. (Obtained from a mink rancher.)

1. Mix: 1 pound softened lard (approximately 79¢/lb) and 4 tsp. of Sulphur (approximately $1.30 for 3 oz. Yields 6 tsp./oz).
2. Rub small amount into wound and skin edges. (Always consult veterinarian for deep puncture wounds). Repeat treatment as necessary.
3. Must refrigerate ointment.

Advantages:

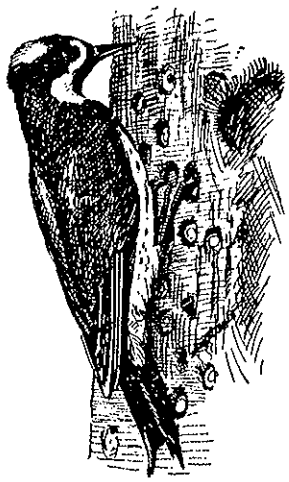
1. Inexpensive (commercial brand: Lilly Sulphur Ointment is about $1.40/oz.). This is approximately $1.10 per pound.
2. Contains no artificial preservatives as often found in commercial preparations.
3. Promotes healing.
4. Keeps skin edges from drying out.
5. Seems not to harm feathers or fur.
6. Apparently not harmful if ingested.
7. Repels insects from wound site. Especially helpful when animals are kept outdoors.
8. Unused portion can be divided into small jars and stored in freezer.

Disadvantages: If not refrigerated, lard can become rancid.

C.H. Comment: I checked the above with two different pharmacists who concurred that this is an old fashioned remedy that can work. Newer more expensive ointments contain antibiotics.

Well, have you learned even just one solution shared by your fellow rehab problem solvers? One good solution received by you deserves at least one good solution from you! Using the same format, send your problem solutions to:

PROBLEM SOLVING WITH CAROL HAMILTON AND FRIENDS
50 Pine Ridge Way
Portola Valley, CA 94025



★★★★★★★★★★★★★★★★★★★★★★★★★★★★

CAN YOU HELP US?

The Evergreen Wildlife Conservation Society is collecting information on humane methods of keeping wildlife out of vegetable gardens and plans to issue a brochure for the public. Please send any information to:

Evergreen Wildlife Conservation Society, Inc.
P.O. Box 417
Lake Zurich, IL 60047

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Raptor Information and Quiz Book

John Gumbs of the North Jersey Raptor Care Center has designed a bird of prey education packet for the New Jersey Raptor Association. It is available for $10.00 to schools, which can then make copies for their students.

The 21 page, 8½" by 11" booklet printed on heavy paper is called the Raptor Information and Quiz Book. It includes definitions, vocabulary, word games, a crossword puzzle, an owl coloring page and more. It is very professionally done and can be used with various age groups.

John and the New Jersey Raptor Association also have other educational materials, including:

- a field guide for identifying
- hawks of the North-East
- a raptor first aid article
- a sheet on how to rescue a raptor
- a sheet about bird banding
- information on raptor migration
- plans for an American Kestrel nest box
- "I Love Hawks" decal

If you are interested in obtaining copies of John's materials, contact him for more information:

John Gumbs
New Jersey Raptor Association
102 Highview Terrace
Hackettstown, NJ 07840

New Jersey
Raptor Association

DID YOU KNOW?

**** THAT **raptor** means **bird of prey**...

**** THAT **ALL** raptors are protected by both federal and state laws...

**** THAT hawks have eyesight equivalent to that of a human with 8 to 10 power binoculars...

**** THAT it is ILLEGAL to have any raptor in your possession without both federal and state permits...

**** THAT raptors are useful predators -- they help maintain the balance and stability of our living world...

**** THAT one pair of mice could produce over 1,000,000 offspring in a year if all lived and in turn reproduced...

**** THAT rodents cause over $700,000,000 in damage to crops each year...

**** THAT a hawk or owl can consume over 15 mice a day...

**** THAT an owl can see about 100 times as well as a human in dim light...

**** THAT a Barn Owl can see well enough to hunt in the light produced by a candle burning 2,582 feet away...

Excerpt from RAPTOR INFORMATION AND QUIZ BOOK

Current Literature

Evans, Sydney M., D.V.M. "Avian Radiograph Diagnosis" Compendium on Continuing Education for the Practicing Veterinarian, 3(7):660-666, 1981. (School of Veterinary Medicine, University of Pennsylvannia, Philadelphia, PA.)

Morgan, Rhea V., D.V.M. "Shock", Compendium on Continuing Education for the Practicing Veterinarian 3(6):533-539, 1981. (Angell Memorial Animal Hospital, Boston, MA.)

Langham, Marlee A., LAT. "Avian Anesthesia: Parts I&II" Compendium on Continuing Education for the Animal Health Technician, Part I - 2(3):136-141, Part II - 2(4):192-197, 1981. (Zeeb Animal Hospital, Lansing, MI)

MacCory, Douglas M., D.V.M. "Modified Kirschner Splints for Application to Small Birds," Veterinary Medicine/Small Animal Medicine 76(6):853-5, 1981. (Dept. of Clinical Science, New York State College of Veterinary Medicine, Cornell University, Ithaca, NY 14853.)

Bogue, Gary & Pat Quinn. "Proper Handling of Wildlife Mammals & Other Animals," New Methods 4(4):17-21, 1981. (SPCA, Monterey, CA.)
"Proper Handling of Injured & Orphaned Birds of Prey," New Methods 4(3);15-22, 1981. (SPCA, Monterey, CA.)

Hamilton, K.L. & R.L. Neil. "Food Habits and Bioenergetics of a pair of Barn Owls & Owlets," American Midland Naturalist 106:1-9, 1981. (Dept. of Biology, Univeristy of Texas at Arlington, TX 76019.)

Halbrooks, Ralph Douglas, D.V.M., Larry J. Swango, D.V.M., PhD., Paul R. Schnurrenberger, D.V.M., MPH, Frank E. Mitchell, D.V.M., MS, Edward P. Hill, PhD. "Response of Gray Foxes to Modified Live-Virus Canine Distemper Vaccines," Journal of the American Veterinary Medical Assoc., Vol. 179, No.11, pp.1170-1174, December 1, 1981.

Zinkel, J.G., D.A. Jessup, A.I. Bischoff, T.E. Lew & E.B. Wheeldon. "Fenthion Poisoning of Wading Birds," Journal of Wildlife Diseases 17:117-119, 1981. (Dept. of Clinical Pathology, School of Veterinary Medicine, U.C. Davis, CA 95616.)

Fenwich, Bradley, D.V.M. "Nutrition of Temporarily Captive Birds of Prey," California Veterinarian 35(11):16-18, Nov. 1981.

Mueller, H.C., D.D. Berger, G. Allez. "Age, Sex, & Seasonal Differences in Size of Cooper's Hawks," Journal of Field Ornithology 52(2):112-126, 1981. (Dept. of Zoology & Curriculum in Ecology, University of North Carolina, Chapel Hill, NC 27514.)

Vainisi, Samuel J., D.V.M., Henry F. Edelhauser, PhD, E. Dan Wolf, D.V.M., Edward Cotlier, M.D., Frederich Reeser. M.D. "Nutritional Cataracts in Timber Wolves," Journal of the American Veterinary Medical Assoc., Vol. 179, No.11, pp. 1175-1180, December 1, 1981.

Knudsen, Eric I., "The Hearing of the Barn Owl" Scientific American, pp. 113-125, December, 1981.

Hall, Timothy R., Walter E. Howard, Rex E. Marsh, "Raptor Use of Artificial Perches," Wildlife Society Bulletin, Vol. 9, No. 4, pp. 296-298, Winter 1981.



Meadow vole

Sylvia Feder

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Jacky L. Averill, CA
Joann Balliet, NJ
Jim Bauersfeld, DVM, OR
Taffy L. Beauvais, CA
Pamela Rae Bellinger, CA
Kathleen Bepko, CA
Linda Berg, TX
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George Butler, III, WY
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Terry Williams, CA
Martin Wood, OR
Dana Yaw, AHT, CA
Lou Ann Yonish, NY

ORGANIZATIONS

American Association of Zoo Keepers - Little Rock Chapter
#1 Jonesboro Drive
Little Rock, AR 72205

Animal Rescue and Care Center
2692 E. Thousand Oaks Blvd.
Thousand Oaks, CA 91362

Bird Rescue, Inc.
200 E. 11th Street
Weslaco, TX 78596

California Conservation Corps.
3710 Christian Valley Rd.
Auburn, CA 95603

California Conservation Corps.
P.O. Box 645
Montague, CA 96064

Indianapolis Humane Society
7929 N. Michigan Rd.
Indianapolis, IN 46268

Lake Tahoe Wildlife Care, Inc.
P.O. Box 10557
So. Lake Tahoe, CA 95731

Orphan Animal Care Facility, Inc.
4643 S. Main Street
South Bend, IN 46614

San Benito County SPCA
P.O. Box 1046
Hollister, CA 95023

Warrick Co. Wildlife Rehabilitation
8270 Highway 66
Newburgh, IN 47630

Wild Bird Rehabilitation Center
P.O. Box 4327
Audubon Park Zoo
New Orleans, LA 70178

Wild Birds Rehabilitation Center
325 So. First Street
Surf City, NJ 08008

Wildlife Rescue Team, Inc.
Rt. 1, Box 82A
Walton, NE 68461

Youth Science Institute
16260 Alum Rock Ave.
San Jose, CA 95127

WRC QUARTERLY MEETING

Date: July 10, 1982

Place: Monterey S.P.C.A.
Monterey, CA
From Highway 101, take the Monterey Peninsula (Hwy 68) off ramp. From the coast Highway 1, take the Salinas/ Highway 68 turn off. Follow Highway 68 until you come to the SPCA. It is directly across from Laguna Seca Raceway. If lost call 373-2634.

Time: 10:00 a.m. Business meeting
11:00 a.m. General meeting

Speakers: Pat Quinn and Gary Bogue

Topic: Tour of the new wildlife facility.

Editorial staff: Ann Brice, Susan Kelly, Kathy Hobson, Tina Papenhause, Carol Hamilton.

Informational Literature

Copies may be ordered at a cost of 50¢ each unless otherwise noted. There is also a postage and handling fee of 50¢ for 1-5 copies, 75¢ for 6-10 copies, and $1.00 for more than 10 papers.

"Raptor Care"
"Care and Feeding of Orphaned Birds"
"Emergency Care of Birds and Squirrels"
"Vector Borne Disease Potential in California Mammals"
"Care of Sick and Injured Birds"
"Gardening to Discourage Deer Damage"
"Care and Feeding of Bushtit Babies"
"Necropsy Precautions and Procedures"
"Substitute Diets for Orphaned Birds"
"Substitute Diets for Orphaned Mammals"
"Care and Feeding of Orphaned or Abandoned Tree Squirrels"
"Fluid Therapy in Birds"
WRC Logo Sticker ($1.00)

"A New Method For Exercising And Rehabilitating Raptor" ($1.00)
"Water Turtle Care Sheet"
"Initial Care of Injured or Oiled Water Birds"($2.00)
"Raptor Care and Rehabilitation" (Bound, $15.00)
"Avian Drugs and Dosages" ($4.25)
"Opossum Rehabilitation" ($2.50)
"Raccoon Rehabilitation" ($3.50)
"Goldfinches" ($2.50)
"Immobilization of Simple and Compound Fractures in Songbirds and Raptors" ($2.00)
"Immobilization of Simple and Compound Fractures in Mammals" ($2.00)

WILDLIFE REHABILITATION COUNCIL APPLICATION: (Please Print) DATE:_____

NAME:_____ OCCUPATION:_____ PHONE: (area) Hm:_____ Wk:_____

ADDRESS:_____ CITY:_____ STATE:_____ ZIP:_____

ORGANIZATION:_____ YOUR TITLE:_____

TYPE OF MEMBERSHIP: ASSOCIATE($7.50)___ PROFESSIONAL($15)___ ORGANIZATION($20)___ RENEWAL___

Mail to: Wildlife Rehabilitation Council, P.O. Box 3007, Walnut Creek, CA USA 94598