



APPALACHIA - SCIENCE
IN THE PUBLIC INTEREST

Route 5 Box 423
Livingston, KY
40445 - 9506

Coexisting with Wildlife

ASPI Technical Series

INTRODUCTION

Wildlife includes more than mammals that occasionally scamper past us (squirrel, rabbit, deer, etc.). In this technical paper "wildlife" refers to wild plants, all animals including birds, insects, and fish. Our purpose here is to encourage a healthy balanced natural community with a great variety of wildlife of every kind, as variation and diversity are gifts well worth treasuring. We perceive wildlife of itself as good, worthy of protection, and an integral part of the entire complex ecosystem around us. All creatures have their niche and the right to fulfill their own destiny. In turn, we have no right to destroy or endanger these species.

As human beings convert wildlife habitats to domestic uses they often remove natural predators or introduce species into areas in which they have no natural predators. Frequently, it is human activity that creates pests and nuisances. At that point wildlife appears in need of highly effective controls. However, some methods merely transfer the burden of the "pest" to other localities and do not strictly address the issue.

In areas of high or increasing human population, endangered species with limited range and wildlife existing in large numbers compete with humans for space and/or food. This situation gives rise to a sticky problem -- competition for limited garden, lawn, or orchard sites in urban or suburban areas. Rural areas usually are spacious and thus can better accommodate human interests and wildlife needs.



ATTRACTING SPECIES

Recently, approximately 120 types of birds were sighted on the ASPI grounds by one of our interns who was an experienced bird watcher. The construction of nest areas, as well as regular feeding of non-migratory birds in the winter months will help attract migratory ones as well. A rich and varied gathering of birds can populate areas where they have ready access to proper nesting sites, perches and cover crop, and seeds and other feed.

Attracting wildlife sometimes requires intentional elimination of aspects of your grounds that actually discourage wild creatures. For instance, we discovered that domestic fowl threatened some of our earthworm species and wildflowers. As a result we have removed the chickens from the impacted areas. Also the presence of domesticated cats can impact the population of birds and small mammals.

Phil and Mary Stern of Allenspark, Colorado have a nature center in the Rocky Mountains at which they keep no pets. The property is in a pine forest, somewhat removed from traffic and other homes. Their practice of providing food attracts about twenty varieties of birds in winter and more in other times of the year. These birds, together with deer, squirrel and coyotes are often seen very near the residence, a rare wildlife spectacle.

Salt blocks may attract deer, for all animals need varying quantities of salt. Be cautious when supplying these needs. Nature has a way of providing for her creatures, and some adaptation may be lost when wildlife become dependent on handouts. There is a delicate line between attracting and incapacitating.

NOTE: This is the only of our technical papers in which some of the policies have not been fully introduced at ASPI. This is due in part to our present need of dogs for security. Deer and bobcats came closer to our buildings in the early years before the dogs. Our current canine occupants are mature and not persistent trackers or hunters and have been kept somewhat confined. The situation is not perfect but has been necessary due to ASPI's location.

WILDLIFE AND THE GARDENER

Cultivars are tasty to certain members of the wildlife community. While insect pests often attack the less healthy, the opposite may be true for the hungry rabbit, squirrel, raccoon, deer, opossum, or groundhog. A combination of these varmints (along with terrapins in the ripe tomatoes) can devastate a garden in highly forested areas such as at ASPI. Although these animals are undomesticated, they may be persuaded to go elsewhere. We have never found that simply planting more allows all to share equally. Forceful measures may be necessary, depending on the persistence of the uninvited visitor and damage done. Levels of persuasion include:

Human presence: Snakes and other excessively shy animals will avoid places that people frequent. Plant in high traffic areas.

Barriers: Fences of fine mesh with bottoms fastened to the ground can deter rabbits, opossums, raccoons and possibly groundhogs. They have to be at best 8 feet high to stop deer. Plastic cylinders or cut out metal cans encircling plant stems keep rabbits away from young plants.

Friendly attractants: Salt blocks can attract deer to areas away from the garden. Protected garden areas with adjacent patches of plantain or other leafy greens will satisfy rabbits and may convince them to overlook your favorite plants.

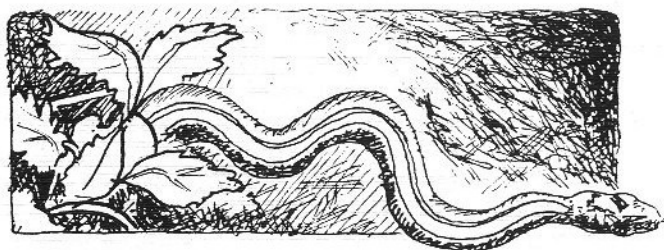
"Hav-a-Heart" and similar live traps: These are effective traps but releasing the unwanted critter may simply unload it on neighbors with similar problems. Use these traps for animals that are not pests throughout your vicinity.

Home remedies: Many of the commercial repellents advertised are only partly effective. Human hair in panty hose left at strategic spots in a garden will often do no more than a scare crow. Some use soap as a deer repellent but this will not deter a large hungry population.

Dogs: Dogs will dissuade wildlife from garden areas and are highly recommended, provided the individual pets are mature non-hunting breeds.

Harvesting: Many herbivores are prized for their meat and allowance for harvesting (deer, squirrel, rabbit, etc.) can be made if strictly controlled. Remember to keep your land posted as over-hunting can become a problem.

Encourage Natural Predators: One of the reasons for the wildlife imbalances presently afflicting many areas is the elimination of



predators that once served the function of natural wildlife population controls. Although, an individual's capacity to encourage predator populations is limited by the amount of land one has control of, every person can contribute simply by allowing predators to live unharassed and by educating others about the ecological role filled by species such as hawks, coyotes, and foxes. The practice of forcing predator species out of an area is based on ignorance of the balances necessary to the health of natural systems.

Elimination: In some cases (especially with introduced plants) mere toleration may not be sufficient and some elimination by non-chemical means may be advocated. Certain garden weeds need deliberate control. At times, undesired weed trees need to be cut and trimmed and plants that proliferate and smother other species must be eradicated. An example of such a weed species is Kudzu. This exotic introduction is a rampant vine which is difficult to control. It is always unwise to introduce any non-native species until it is confirmed that it will not escape control. Curbing pests, once properly defined, becomes a balance of effectiveness without jeopardizing the ecosystem.

MAKING IT PUBLIC

One of the best ways to engender respect for indigenous wildlife is to display photographic, dried, sketched, and/or stuffed examples of various plants and animals. Make the displays attractive and readable, with adequate space and lighting. The scientific and common names should be prominent and a sentence or two about each specimen included. In the case of plants, tags on wild trees will simplify identification and help people remember the names of each.

Display of caged live specimens is not recommended. Wild animals do not adapt well to captivity, except in rare cases when injured wild animals have been rehabilitated by humans. Such animals can help educate youthful visitors about the inherent value of wildlife. A final point to consider in regard to keeping wild animals is the spread of rabies and other diseases. The general rule is to avoid close contact with wildlife.

RARE AND ENDANGERED SPECIES

Every effort must be made to secure space for threatened and endangered wildlife. Begin by compiling a list of the species native to the bioregion. Assistance may be available from the nearby Nature Conservancy, Wilderness Society, university biology or environmental studies departments, as well as from libraries or state agencies. The resource inventory is not a once-and-for-all venture but should be ongoing and expand beyond mammals and birds to include fish, wild flowers, trees, etc. Geological, hydrological, and climatic data will fit into the emerging bioregional picture.

Awareness of what species are endangered or threatened involves comparing existing lists from federal, state and private agencies. Guided by a regional inventory, we at ASPI have discovered several endangered and threatened wild flowers in the Rockcastle Valley. For this reason, visitors are requested not to pick or dig up wild flower specimens. Through the contributed labors of Dr. Sigrid Liede and Jim Conrad a number of ASPI trees have been identified and tagged. We hope to extend this to wildflowers in the near future.

Animals are not easily sighted due to mobility. Mountain lions have been seen near ASPI, but these extremely rare incidents were in the remote areas behind the property. It is likely that the opening of I-75 has impacted that species. Bobcats are more numerous and sightings, while less frequent than in the past, are still reported. Security dogs discourage the shy creatures from coming too close to inhabited places.

How do we encourage rare species? An initial requirement is to restrict access to certain areas and to post all sections against hunting and trapping. Secondly, develop materials which list and describe rare and endangered species. These should be readily available to residents and visitors to help create an atmosphere of respect for all plants and animals.

A further step is to research habitat and feeding requirements of target species and to ensure that some land is left as wilderness. In some cases it is necessary to fence off areas and severely limit access to sections of property. The Las Cabezas de San Juan Nature Reserve in the northeast tip of Puerto Rico has a 316-acre area under strict control. It is open to the public only by special reservation and controlled tours. These measures minimize damage to the area's three distinct ecological communities. While touring rare settings under controlled conditions

can be beneficial, some endangered species' habitats should be placed completely off limits, except to experts on rare occasions until the immediate threat of extinction is past.

HEALTHY COEXISTENCE

Once human activity has destabilized the environment, simply leaving the remaining wildlife to generate at their own pace denies the natural checks and balances. In fact, the human development of our hills and plains has created grave imbalances. With elimination of the majority of large predators, many smaller species can become pests which threaten the ecosystem. For example, without a sufficient number of red foxes the field mice can become a nuisance. The ideal solution would be to curb human expansion and return to the inherent balances which control population in a healthy ecosystem.

One challenge in environmentally safe "pest" control is the elimination of chemicals (herbicides, pesticides, etc.). Mechanical and biological controls, while not as immediately effective, work well in a balanced ecosystems. Earth friendly pest control is a matter of restoring ecological health to our gardens, lawns, farms, etc. "Pests", whether plant or animal can never be eliminated. We must instead compromise within the limits of what we can physically accomplish and what is environmentally beneficial.

Many reptiles are regarded as pests or even threats. We neither discourage nor kill these creatures. They will instinctively vacate busy areas and ASPI's cleared paths help insure that strollers will not inadvertently step on rattle snakes or copperheads. We have an attitude of peaceful coexistence with reptiles (poisonous and non-poisonous) as well as with the scorpions, native to this locale. They fill a particular ecological niche; allow them their place. Spiders are helpful co-inhabitants curbing the population of flies and gnats. We consider them beneficial in the creation of good indoor living space.

Bothersome and often dangerous insects such as wasps, hornets and yellow jackets are another matter. The sting of these insects can cause a severe reaction in allergic people. The ASPI nature center grounds crew destroys wasp nests once annually for the sake of liability records. The insects seem to multiply even with such efforts. We use kerosene which is effective and far less toxic than strong commercial pesticides. Hornet's nests are removed only if in proximity to places people frequent. The same applies for yellow jackets and bumble bees. We allow the more benign insects to carry on as usual, unless they really bother the inhabitants of buildings.

Making it Public cont...

Another way to enhance respect for wildlife is to have available a variety of books, videotapes, magazines and other resources about different species present in the vicinity. For example, although the golden eagle is sighted rarely, public interest in it is high. Literature about raptors should be available for resident and visitor alike.

SUPPORT FOR WILDLIFE PROJECTS

Funds are often unavailable for individual activities in wildlife preservation. However, there are ways to tap unexpected resources, including:

- * Attract interns and college students who are on break or vacation to do some of the identifying, cataloging and habitat enhancement for wildlife. Biologists and naturalists abound and are often willing to help such efforts.

- * Secure an inventory of the species present. Ask the Nature Conservancy, Audubon Club, Nature Preserves Commissions, and academic environmental groups for assistance.

- * Wildlife preservation is widely accepted and more readily funded by conservative grantors. Seek specific grants for wildlife encouragement.

- * For organizational support and direction write to the Environmental Support Center, 1731 Connecticut Avenue, N.W. Suite 200, Washington, DC 20009 (202) 328-7813.

- * Rally the community to support wildlife through outings, tours, workshops and classes.

- * Some states, including Kentucky, offer financial assistance to landowners who plant food for wildlife. Contact your state wildlife agency.

ACTIONS FOR WILDLIFE PRESERVATION

Encouraging wildlife is not simply a local issue. It embraces a concern for threatened and endangered species and habitat throughout the nation and world. Much of that habitat is being lost through excessive development and commercial exploitation. Some of the actions to halt this, which can be undertaken include:

- * Join effective and active environmental groups working to save species, especially on the local and grassroots level. Do not join those that have compromised with the system. One good rule of thumb is to find out which top "environmental" executives have excessively large annual salaries and avoid those organizations.

- * Protest development projects planned by commercial interests or governmental agencies that will harm the habitat of threatened or endangered species. Take your actions to the doorstep of the corporate headquarters.

- * Write to your congressperson to protest actions which endanger the legislation dealing with threatened and endangered species.

- * Support local and statewide Nature Conservancy efforts to create wilderness preserves. Insist that the areas be protected. Support efforts to declare more of the United States wilderness and wildlife areas.

- * Respond to media presentations that denigrate those who protect wildlife.

- * Subscribe to Wild Earth, P.O. Box 492, Canton, NY 13617, subscription \$20/year.

- * Encourage agencies and media groups that popularize preservation of wildlife.

REFERENCES

Many nature guidebooks are available, ranging from the general, e.g. Eastern Forests, to the specific, e.g. Wildflowers of Kentucky. Check your local library and bookstores.

Attracting Backyard Wildlife, Bill Merilees, 1989, Voyager Press, 123 N. 2nd St. Stillwater, MN 55082.

Landscaping for Wildlife, Carrol L. Henderson, Minnesota Bookstore, Documents Division, 117 University Ave., St. Paul, MN 55155.

Giving Wildlife an Edge: A Guide to Ornamental Plants for Wildlife Habitat, Valerie Sparkman and Robert Hatcher, Tennessee Wildlife Resources Agency, P.O. Box 40747, Nashville, TN 37204.

"Invite Wildlife to your Backyard", National Wildlife Federation, 1412 16th St. NW, Washington, DC 20036.

Further information on safe and effective garden "pest control" is available in a variety of organic gardening magazines currently in print.

SOURCES OF WILDLIFE FOOD PLANTS

Kesters Wild Game Food Nursery, P.O. Box 516 Omro, WI 54963.

Bear Creek Nursery, P.O. Box 411, Northport, WA 99157.



Project Director: Al Fritsch
Designs: Mark Spencer

Editor: Robyn Arnold

Technical Editors: Michael Harley and Robert Fairchild
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