



QUARTERLY

FALL • 1980
Vol. XIX, No. 3



Celebrate ACRES 20th year

VISIT ALL FOURTEEN ACRES AREAS THIS FALL !



SAT. SEPTEMBER 20 - ALLEN COUNTY, WELLS & WABASH TOO!

Naturalist-in-charge: Bob Weber

TIME: 9 AM MEET: City Parking Lot N. of Freiman Square for
Share-The-Ride

SEPT. 20

We are particularly anxious for our Senior Citizen members to enjoy an outdoors day visiting our nearby ACRES areas. We are arranging a lunch and travel. Here's what we've planned:
9:30 AM visit at the Mengerson Nature Preserve, 5900 Stelhorn Rd. (NW of Maplecrest Shopping Center), then to Foxfire Woods off Hull Rd. NE Allen County.

LUNCHEON SPECIAL at Poe's beautiful lake pavilion south of Foxfire Woods. After lunch, travel south to Maumee River Overlook, then to the Fogwell Forest. Then south again to Acres Along The Wabash and Hanging Rock and back to "Start" by 5:30 PM. We can arrange to shorten the tour. If this looks like too much-tell us.

IMPORTANT NOTE: CALL 637-6264 by Sept. 18!

Call-in your lunch reservation -Lunch & Drink, \$1.25 and tell us if you need a ride, or if you can take passengers.



SAT. OCTOBER 11 AND SUN. OCTOBER 12 - STEUBEN COUNTY

TIME: 1:30 PM MEET: Parking area Ropchan Wildlife Refuge
Rte.827 S.of Fremont, In.

OCT. 11

Naturalist-in-charge: Art Eberhardt

Visit the Ropchan Wildlife Refuge and the Woodland Bog.

An Evening at Pokagon State Park -

For CAMPERS RV campground, \$4; Regular \$3: Primitive \$2.

Ask at GateHouse for ACRES campers.

INN or Cabins - Reservations 219-833-1077

(Potawatomi Inn serves breakfast, lunch & dinners)

7:15 PM PROGRAM - Downstairs Meeting Room- Potawatomi Inn

. Homestead High Environmental Education Program - a five projector program narrated by Chris Roberts, prepared for National Wildlife Federation by Jay Hammel/Doug Waldman

. ACRES - Sights and Sounds . . . Art Eberhardt



TIME: 10 AM MEET: Beechwood Nature Preserve Parking Area.
Old Rte 27 N. of Pokagon St. Park

OCT. 12

Visit the Beechwood and the Ropchan Memorial Nature Preserve near Orland.

JOIN US FOR ALL OR ANY PART OF THESE EVENTS!

SUN. NOVEMBER 9 - NOBLE COUNTY

TIME: 10 AM MEET: Fortmeyer Parking Lot, Rte 30 & I-69
or

10:45 AM Meet at Crooked Lake Nature Preserve (go W. on County-Line Rd. off Rte.9. 7 mi. N. Columbia City)

Visit the Ralph F. Gates Nature Preserve; the Lloyd W. Bender Memorial Forest; the Edna W. Spurgeon Woodland Reserve; and Lonidaw.

BRING: Picnic lunch and drink.

Naturalist-in-charge: Jim Haddock

NOV. 9



ACRES ANNUAL DINNER

CONCORDIA

NOV.14

MAIN DINING HALL AT
6600 NORTH CLINTON
FORT WAYNE, IN

6:30 PM
\$7.00 Plate

Please phone reservations by November 5 to:
Ed & Nancy Eberhardt 424-2462
or call 637-6264

Decorations arranged by

Dorothy Frary and Ethyle Bloch

PROGRAM TIME is 8 PM in Classroom 201. If you are unable to join us for dinner, WELCOME to the program at 8, Room 201.

SPEAKERS: We welcome John & Florence Klotz to highlight our special 20th anniversary program. Both ACRES founders and charter members, the Klotzs' contributions to ACRES continue to be substantial even though John's ministry took them to St. Louis, Mo. in July of 1974. John Klotz, Professor of Natural Sciences at Concordia, served as ACRES President for 10 years from 1960 to 1970. His bi-weekly column "Of Bogs and Logs" in the Fort Wayne Journal Gazette from 1962 to 1974 continually attracted new ACRES members and friends. Florence collaborated with illustrating many of this outstanding wild-life series. Florence served from 1960 to 1974 as recording secretary, ACRES historian and annual dinner chair. Coming to Fort Wayne from Chicago in the late '50s, the Klotz's efforts in the preservation of the Indiana Dunes created the nucleus which became ACRES' beginnings. WELCOME John & Florence Klotz!

* * * * *

TO THE NEXT TWENTY

In two decades a persistent, dedicated, and often lucky handful of people have acquired and maintained 14 nature preserves totalling more than 650 acres. While doing these things they have helped to shape and stimulate a growing local and national appreciation and respect among others for our remaining "wild" areas. These people, operating under the banner of ACRES could not have done this had it not been for an abiding love for their land, along with a genuine respect for its future visitors, by our land donors. Neither could they have succeeded without the precious dollars and time donated so unselfishly by so many to acquire and maintain other preserves and to lead the program thus far. There are important debts of thanks to businesses and foundations as well as to members. It is certainly fitting that we pause now to reflect upon the work and success of these first twenty years, and to celebrate by revisiting each of the preserves.

There is probably no volunteer group in Indiana with a higher percentage of what I consider good and worthwhile people than we have in our ACRES membership. There have been many occasions when I have felt the sincerity and warmth generated during our fieldtrips, indoor programs, and board meetings. For the most part we have been a family in our pursuit of natural area preservation, and in our work and play and learning time together. We are stronger because of this. We will yet be even stronger because we are learning to share the road with others who are often going our way - Audubon, Fox Island, TNC, DNR, SCS, business friends, foundations, etc.

Our program people have set up a promising series of Fall visits to the preserves. How about making sure your cameras and film are ready for these visits? I'm sure we can set up a superb winter meeting to share our pictures and thoughts. Not that we can't use plenty of good shots of our natural creatures and scenery, but let's also get some interesting ones of each other enjoying those creatures and scenery. At the end of our first twenty years we need to be recorded so that those we bring into the fold anew can't forget us! CHEERS TO THE NEXT TWENTY!

Bob Weber

THE SKUNK

John James Audubon is best known today for his observations of birds and for his bird drawings. Audubon was also known among his contemporaries for his sense of humor. He delighted in practical jokes, and one which usually brought a hearty laugh was one played on European guests. He enjoyed telling them of the American black and white striped squirrel and inviting them to observe this New World creature for themselves.

The skunk is one of the few North American mammals that has not been bothered by civilization. Indeed he has actually benefited from human settlement. While the destruction of forests in the eastern United States and along the Pacific slope has harmed many wild animals, the skunk has in fact prospered. He prefers the bushy corners of meadows, the edges of forests and open fields with some cover near water.

The skunk is actually a member of the weasel family. His scientific name, *Mephitis mephitis*, means "noxious odor." His weapon is a chemical known as n-butylmercaptan, an oily, yellowish liquid with a high sulfur content. It can be smelled more than a mile away and in damp weather will linger for up to two weeks. The skunk is able to fire with deadly accuracy within a 12 to 15 foot range. It has enough equipment for five or six dousings, each released in a fine shot-gun spray. The liquid itself has been used in preparing perfumes, but it burns the eyes and can cause temporary blindness for up to twenty minutes.

The skunk usually gives warning that he is about to fire. He first lowers his head, stamps his feet and may even growl a harsh note of warning. It is only then that he raises his tail, arching it high over his back, finally he fires.

The skunk isn't fussy about what he eats. In the spring and summer he feeds on grasshoppers and other insects; in the fall and winter on a diet of plants and whatever is available. One naturalist claims that he is able to attack poisonous snakes and is immune to their venom. Others have reported seeing skunks raid bee hives and leave with no ill effects. Normally the diet consists chiefly of field mice, vegetation and insects.



SKUNK

Young skunks known as kits are born in spring or early summer. There are usually four to six kits in the litter and they weigh about 1 ounce each. At birth they are blind and unscented. They nurse for six weeks, after which they join their mother on her nightly hunting excursions. She teaches them to feed, to swim and to distinguish between edible and inedible plants.

The skunk is not a true hibernator though he does take long winter naps. The females and young tend to remain underground for long periods of time, the length of time depending on the severity of the local climate. The males are up every mild day.

There was a time when the skunk was threatened by unlimited trapping. Its soft fur dyed to simulate that of more valuable mammals was eagerly sought after until a law was passed requiring that all furs be labeled according to the animal source from which they came. Women were not especially attracted to the idea of showing a label that indicated their coat had come from a skunk.

Skunks are part of the balance of nature. I remember one old codger who told me he had come back to town to see Johnny riding a new bike and immediately concluded that duck hunting had declined. He went on to explain that Johnny's dad was a notorious skinflint and that it was obvious to him that Johnny had bought a bike with the proceeds of a trapline from which he harvested enough skunk skins to buy the bike. Then he went on to explain that skunks eat turtle eggs. Turtles eat young ducks. With a decrease in the number of skunks he was sure there would be an increase in the number of turtles which in turn would result in a reduction in the number of ducks.

Skunks do have some natural enemies. These include the great horned owl, the fox and the badger. Today one of the major enemies is the family automobile.

There are very few people who haven't seen the American black and white striped squirrel. It is all right to observe him as long as you don't come too close - and as long as he doesn't raise his tail. Of course you had better be sure that he has read the book and that he is supposed to raise his tail before firing away.

Written by: John W. Klotz
Art by: Florence S. Klotz

COVER PHOTO ART shows a fall field trip group wending its way through the rolling lands of the Edna W. Spurgeon Woodland Reserve in Noble County. This outstanding woodland of beech, maple and cherry was given to ACRES in March of 1961 by Edna W. Spurgeon, and by this first gift ACRES began the list of fourteen natural areas now administered.

Although this photo (photographer unknown) was taken in 1961, it is used in this 1980 Fall Quarterly to celebrate the preservation of this glorious natural setting. And to celebrate the fact that it will be available for visitors this fall season and for year after year after year . . .

REMINDER

WHILE GIFT SHOPPING
DON'T FORGET !

REMINDER

- 12 notepaper/envelopes (2 each of 6
Quarterly cover-art designs) . . . \$2.00/ pk.
- 20 postcards (10 each of 2 designs). . . \$1.50/ pk.
- 20 gummed book plates (old owl design). . \$1.00/ pk.

PROCEEDS GO TO ACRES LAND ACQUISITION FUND - CALL 637-6264

The Essential

by Durward L. Allen

We are in a century of significant "explosions." One of them is in the field of information. Biologists will affirm this, and with their expanding comprehension has come a signal realization: the structure and functioning of living organisms are the most complex phenomena we know anything about in the universe.

Among mysterious unknowns, some elemental facts seem clear. No form of life exists alone. Each is dependent on a plant-animal community of which it is a working member. There are no free riders, no unemployment. One way or another, in its living and its dying, every species contributes to the cycling of nutrients—the basic process that produces new generations and makes possible the awesome drama of survival.

The flow of energy through an ecosystem (a life community plus its physical environment) takes many paths. One such route is the feeding by meat-eaters on the herbivores. Historically, people have had oversimplified ideas about predation, and this kind of thinking is still with us. We tend to adopt clichés and plausible explanations that lead us astray.

A notable example is the so-called balance of nature—often overworked in discussions of predator-prey relations. Actually, the expression is helpful if you take for granted that balance does not mean stability. Biocommunities are in a constant state of change. The numbers and productivity of plants and animals fluctuate with variations in weather, water level, and biotic factors—such things as plant succession, grazing or browsing pressure, and the spread of disease. A balance does exist, but it is the containment of changes within limits that reliably fall short of destroying the ecosystem.

Various investigators and natural philosophers have achieved a growing perception of predator habits since Darwin, Wallace, Agassiz, Marsh, and other pioneers of the 1800's began sketching in the outlines of an orderly system of nature. It became evident that the meat-eaters have

Roles of Predation

community functions (niches) essential to many different plans of survival.

On this continent the early 1900's brought extensive inventories of animal life to find out what we had, after which the studies became more ecologically sophisticated. Since 1960 research on the predators has increased substantially, and field workers are filling in the fine print under some good ideas, theories, and principles.

The Question of Control

An early assumption relative to the role of small predators—hawks, owls, foxes, weasels, and the like—was that they controlled the numbers of their prey. Since the prey often were rodents injurious to agriculture, the idea converted into an economic justification for protecting small predators. When "plagues" of mice or lemmings occurred and attracted large numbers of gulls and other mobile feeders, the control function seemed verified.

A disturbing question was, how did the plagues (the proper term is irruption) happen in the first place? We may have an incomplete answer. When food supply, weather, and other important conditions are favorable, no amount of hunting by the local contingent of predators will stop an irruption of rapidly breeding voles or lemmings.

Outnumbering their predators is sometimes a conspicuous adaptation of prey animals. This was the key to survival for the now-extinct passenger pigeon, even though it laid only one egg a year. The huge flocks settled in and vastly overloaded many square miles of forest. They did their nesting all at once and got out before the predators could concentrate. In Africa, the migrating herds of wildebeest do something similar. They move into an area, have their young over a short period, and then are gone. Predators take a toll, but it is small compared to the great numbers of wildebeest.

Another kind of predator-prey relationship is illustrated by the

regular cycling in numbers (about every 10 years) of hare populations in the northern hemisphere. Predators were suspected as a cause of the cycles, but they seem to have been exonerated. They are indeed involved, especially the lynx, which preys as a specialist on the snowshoe hare. As hare numbers double and redouble, the lynx prospers and multiplies accordingly. On the other hand, when disaster strikes and the hare population crashes, the lynx (with a short delay) declines drastically. Both red and arctic foxes also show ups and downs in response to major changes in the numbers of hares, lemmings, and voles on which they feed.

Similarly, snowy owls produce more young and become plentiful in a period of small-rodent abundance in the Arctic. Charles Elton, David Lack, and other biologists extensively documented the increase in reproductive rate by many kinds of predatory birds when there is a glut of food, and correspondingly the reduction in productivity and numbers when prey becomes scarce.

In short, there is much evidence that small animals frequently determine the numbers of predators that depend on them for a food supply.

Habitat Conditions and Predator-Prey Relations

In decades following the dry '30s, investigators in the western U.S. carried out significant studies of range rodents and rabbits, including the effects of predation. Notably consistent was their finding that plant succession relative to grazing was a key factor in determining animal population levels. Small herb-eating creatures (e.g. woodrats, pocket gophers, ground squirrels, jackrabbits) reached high densities most commonly on overgrazed ranges, where perennial grasses had largely been replaced by annual grasses, weeds, and shrubs. These early stages in grassland successions produced "animal weeds," a food resource on which coyotes and birds of prey built up their numbers.

Increases in the predators did not appear to depress, correspondingly, the year-to-year



populations of their food species, especially not to desirable economic levels. In his monograph on the prairie dog, Carl Koford summed up the situation: "If current predation theory is sound, generalized predators [those that prey on various species] could not be expected to hold the numbers of prey below environmental capacity. Nevertheless, through density-dependent effects [i.e., meat-eaters hunt best when prey numbers are high], predators should be able to lower the peaks of population increases and hinder the spread of dog towns."

The concept that habitat conditions tend to protect a large or small segment of the prey population against predation had emerged elsewhere. Paul Errington found that Wisconsin quail wintered well where food, cover, and weather favored them. Below a fairly predictable "threshold of vulnerability" the birds were relatively secure in a given area in ordinary winters. However, in a hard winter, the thresholds dropped, and by spring, horned owls and other predators had reduced the quail to an exceptionally low level.

Errington also did many years of research on muskrats and mink in Iowa marshes. He found that *uncrowded healthy muskrats* in a favorable habitat were seldom killed. The mink lived by a routine weeding-out of incapacitated or disadvantaged muskrats. But with the spread of disease, or with the drying-out or flooding

of marshes, predator-prey relationships changed. With the decline in carrying capacity (the maximum number of individuals that a habitat can support), a population "surplus" became available to the mink. The predation rate increased, muskrats in any state of health were taken, and wasteful feeding practices were in evidence.

Predation does not function independently. It is characteristically linked to other mortality factors and environmental influences, all of which interact to determine the numbers of prey.

Vegetation and Prey Populations

The basic population control among hoofed animals of the world is food supply. Even more basic, the condition and use of vegetation depend on weather. This relationship is striking on semi-arid grasslands and savannas of Africa, where periods of abundant rainfall or devastating drought bring major fluctuations in animal numbers. Among a diversity of specialized grazers and browsers—antelope of various kinds, zebras, giraffes, buffalo, warthogs—reproductive success or failure is the most direct response to changing conditions on the range.

The large predators are specialized to make primary use of certain prey. Hyenas and lions are especially effective on wildebeest and zebra, cheetah and wild dog on gazelles, leopard on the smaller species of borderline habitats and wooded areas. Feeding on young animals of any kind is to be expected according to their availability. Selective killing of malnourished or diseased adults

is common practice as well. However, nearly all of the many recent investigators of these African problems have found that, as can best be judged, healthy adult prey animals also are commonly taken. This emphasizes again that healthy animals, depending on their numbers and conditions of their habitats, can become vulnerable to predators in many situations.

The extent to which predation limits the numbers of herbivores can differ widely from one area to another and from one time period to another. The classically complex African wildlife communities have become intricately adjusted for efficient use of the climate-controlled vegetation. The fact that they have persisted in approximately the present configurations over some millions of years attests that the feeders and the fed-upons have a relationship that works to their mutual advantage.

The annual overproduction in new generations, typical of all plant-eating animals, is the main support of the carnivores. Selective feeding on a part of this "crop" of plant-eaters is a kind of quality control beneficial to the prey. This natural function directs evolution along the lines of stock improvement and survival. It also calls to question widespread attempts to manage big game only with the gun. Could anyone but a wolf cull a deer herd as it should be done? It probably is true that we cannot preserve a prey species in the absence of its native enemies.

In the broadest sense, then, we can regard the predators as conservationists. The outlook would be better for our world and for us if we could say as much for ourselves.

Dr. Durward L. Allen is Professor of Wildlife Ecology at Purdue University and is a member of ACRES National Advisory Board. This article was written for The Nature Conservancy News 3-4/80.

TWENTY YEARS AGO

ACRES first Board of Directors were:

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James M. Barrett III
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Elmer Phelps
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from

"Birds at the feeder" by George H. Harrison

Nov.-Dec. 1979 Michigan Natural Resources Magazine

Finally, it is often said, "Once you start feeding you must not stop until winter is over." And one sometimes hears its corollary, "Since I am unable to feed regularly this winter, I'm not going to start." Continuous and regular feeding certainly facilitates winter foraging by the birds and gives one a larger and more satisfying following of birds, but they are all equipped to make it through life without you. In fact, most birds living in northern winters have evolved ways to exploit ever-changing food resources. There is no single, localized natural source—including your feeding station—which is guaranteed to last them all winter and they steadily

search out new sources—just as they were doing when they first found your feeder. As a matter of fact, food reserves do not have to run out for birds to look elsewhere; they will practically abandon a feeder when a period of unusually mild winter weather makes wild foods temporarily available again.

If you plan to be away from home and cannot find anyone to keep your feeder well stocked, then ease off on the quantities you feed in the weeks before you leave. Barring a coincidental heavy snowstorm and cold weather, birds will find other food sources and will locate your full feeders again when you return.

YES - EVEN WITH ALL THE CELEBRATING - THERE IS A
SAT. NOV. 8 **WORK DAY** SAT. NOV. 8
TIME: 8:30 AM MEET: Peoples Trust Gold Dome

Bank-Northcrest

In-Charge - Ted Heemstra -Call 484-4385

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