



QUARTERLY

WINTER.1982

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1982 Acres Winter Program

BRING THE FAMILY

Jan. 31

WINTER HIKE along the old Feeder Canal in
Fort Wayne
Meet at: Red Cross Parking lot off Coliseum
Blvd. and North Clinton
Time: 1:00 Sunday afternoon
Wear: Warm clothing and boots



Angie Derheimer, Fort Wayne Park Dept. Staff,
will lead the hike.

Feb. 13



SUNSHINE, SHADOWS AND SNOW, Winter Nature
Photography Workshop sponsored by the
Fort Wayne Chapter IWLA with helps and
hints and a camera hike.

Place: IWLA Chapter House, 17100 Griffin Rd.
in Cedar Canyons area.

Time: 8:30 a.m. to 4:30 p.m.

Bring: Sack lunch, camera if you have one.
There will be a \$2.00 fee.

Be prepared to hike trails in the snow.

John McCory, FWCC Science teacher, in charge.

Mar. 14



Joint meeting with Stockbridge Audubon to hear
Mark Weldon, staff of the Fort Wayne
Zoo, present his NATURE TRAVEL
EXPERIENCES IN AFRICA

Place: Public Library Auditorium, Wayne and
Webster Streets (Park on Wayne St.;
enter building through West door)

Time: 2:00 Sunday afternoon

Mar. 26

ECOLOGY AND THE STARS program by Mary Jane
Griggs, FWCC Science teacher and ACRES
member.

Place: Planetarium, Wayne High School, 9100
Winchester Road at Dunkelberg Road
(Enter building from front directly
into Planetarium)

Time: 7:30 Friday evening.



Great Lakes' Bird of Fire

By Harold F. Mayfield

Fire is a terrifying force of nature. The shouted word raises householders from their sleep. Wild animals flee before it. Our fear of fire was reinforced in childhood by the story of Bambi and the injunctions of Smokey the Bear, and it is confirmed every year by headlines like those about the recent fire in the Kirtland's warbler areas of Michigan.

This deep-rooted view of forest fire as a calamity was shared by biologists until modern times. As late as 1926, Norman Wood, the ornithologist who had discovered the nesting ground of the Kirtland's warbler in 1903, saw fire only as a threat to this rare species, not yet realizing that without fire there would be no Kirtland's warbler.

Only in recent decades have we come to understand that fire, which destroys, also creates. It is hard to comprehend that many violent forces of nature, terrifying at the moment of impact, have creative aspects. Flood, lightning, hurricane, tornado, landslide, bank erosion, and volcanic eruption have all helped create the landscape we cherish, and yet intuitively we tend to think of them as disturbances of the natural system. Every wildfire tends to set back understanding in the minds of government officials and public.

Who has not experienced awe in the presence of the stately trunks and deep shadows of a mature forest? Yet, how few appreciate the complex interplay of forces that produce it—the geological and bacterial actions that form the soil, the flow of moisture and minerals that nourish the roots, the parting of the canopy by violent winds, the pruning of limbs by insects and disease, and the renewing of it all by fire. The virgin forest is in dynamic equilibrium with all these forces.

The Kirtland's warbler is a classic example of a fire-dependent creature (Mayfield, 1960). This beautiful little warbler nests only in a small part of northern Lower Michigan where fire has perpetuated exactly the right combination of circumstances for thousands of years. Although there are many essential elements to this habitat, the most conspicuous is the jack pine tree. Although this species of tree grows almost the width of the continent, the special circumstances for the Kirtland's warbler occur

on only one Michigan soil type, Grayling Sand. After forest fire it is often the first tree to clothe the land, sometimes densely for miles on the "jack pine plains."

When the stand is thick and extensive, and the pines are still small enough to hug the ground in thickets, the warbler nests here. Concealed by low vegetation, the nest is embedded in the sandy soil. However, the bird will tolerate no change. As the trees grow and their limbs interlace to form shade, the lower branches die and the ground cover shrinks until it is no longer suitable to the warbler. The bird occupies only those tracts of pines about 8-20 years old, and under natural conditions these are renewed only by the return of fire.

Fire clears the land for new growth, but it does much more. It pops open the tightly-clenched cones of the jack pine, scatter-

ing seeds produced in past years. Ash spread on the ground makes available minerals brought up from deep below by the sap of living plants. Combustible litter is removed and woody shrubs are scorched back to ground level, allowing all vegetation a fresh, even start. Fire-scoured sand keeps its porosity, assuring drainage in summer downpours that might otherwise flood sunken nests.

At one time we thought the bird would live only among pines regenerated naturally after forest fire. Then we learned the bird would accept pines planted in rows according to standard forestry practice. So when areas were set aside for the warbler some 20 years ago in state and national forests, the management plans called for customary planting methods, with only slight concessions to the bird's need for generous openings between thickets. Thus, trees on Kirtland

preserves can be carried on to ultimate harvest as in other public forests, bringing a measure of harmony between the aims of the forester and the protectionist.

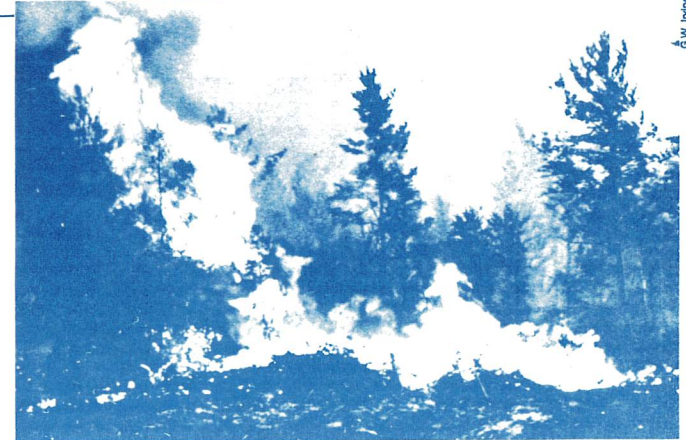
We know Kirtland's warblers will accept the first generation of planted pines on burned-over lands, but we are not sure they will continue to use lands clear-cut and replanted again and again. Without the intervening agency of fire, there may be unacceptable transformations in the soil quality and ground cover. We have the example before us of pines growing on tree farms in the South that, like cornfields, are biological deserts. This is not an attractive prospect in the light of our modern recognition of the recreational value of forests.

The Indians that preceded us on this continent, with little or no permanent property at risk, did not share our fear of fire, and they did not hesitate to use the torch to shape the forests and grasslands for their purposes (Day, 1973). The earliest white settlers on the Eastern seaboard said the Indians burned the land regularly in spring and fall to improve the hunting, to drive game, to encourage the growth of berries, and to make traveling easier. This persistent clearing by fire created open park-like woods and grassy savannahs found in many localities by our ancestors.

At last we have come to realize more fully the wide range of benefits from fire (Wright, 1974). Studies in the Northwoods have revealed striking increases in game species after major fires. Browse plants have proved superior both in quality and quantity, and deer, moose, and snowshoe hare have responded accordingly. Ruffed and sharp-tailed grouse are other beneficiaries.

Most people recognize the close connection between jack pine and fire, but few realize that the entire character of the

Photos Courtesy Michigan Audubon Society



Every five years a square mile of mature jack pine is burned so there will be new stands of suitable height for the Kirtland's warbler.

forest we call "The Northwoods" derives from a history of fire. The giant white pines and red pines also are monuments to fires past. Indeed, there would be no pine forests in the Great Lakes region if there had not been fire. Pine is not climax forest here; left alone, vegetation decays, enriching the soil until pine seedlings lose out in competition with hardwoods that can sprout and grow in their own shade. Without fire, the various species of pines would cling in patchy footholds where the ground had been laid bare by windstorm, landslide, or bank erosion.

Pine forests in the Great Lakes region date back about 9,000 years when they replaced the spruces of the boreal forest following the retreat of the Wisconsin Ice Sheet. In the period since then, except for the interference of man, the forest has stabilized through the agencies of rainfall and soil, and by the steady application of fire (Heinselman, 1973).

Studies of tree rings and pollen residues in the half-million-acre virgin forest of the Boundary Waters Canoe Area show that fires occurred somewhere in that tract about once every six years in the 400 years between 1542 and 1972. The average "recycling time" to bring

the stand back approximately to its normal state was 100 years; that is, a typical segment has burned about 90 times since the forest became predominantly pine. Red and white pine tracts remained intact sometimes 150-350 years, but the jack pine tracts rarely as long as 50 years, and some tracts burned much more frequently.

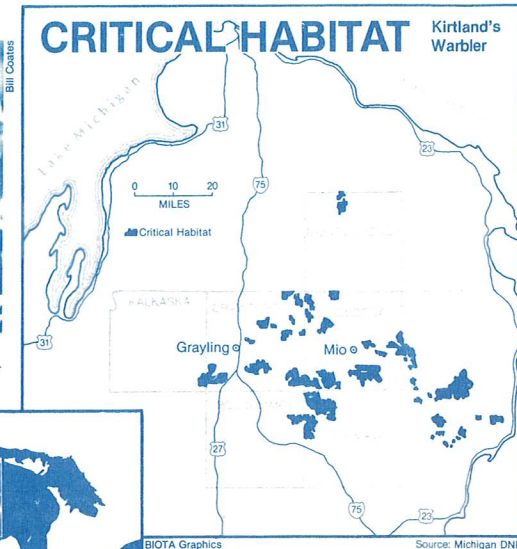
Today so many fires are set by human hands that we tend to think of man as the only important source of fire, and thus lose sight of the inevitability of fire in pinelands through natural causes. Even today in the virgin wilderness of northern Minnesota 27 percent of forest fires are caused by lightning, and this is enough to burn every inch of land sooner or later. Plant ecologists have shown that dead wood, lichens, and other litter increase steadily on the ground as timber ages, becoming more and more hazardous with time until lightning-caused fire becomes a virtual certainty.

Wildfire gives us no chance to select the time and intensity of fire. For most human purposes this is intolerable. The alternative is the deliberate use of controlled fire as a management tool.

Harold F. Mayfield is a noted conservationist and ornithologist. His publications number more than 100 in this field, including a definitive book on the Kirtland's warbler that brought him the highest honor in American ornithology, the Brewster Memorial Award for "the most important recent work on the birds of the Western Hemisphere." In addition, he has received the Conservation Award of the Detroit Audubon Society and the W.E. Clyde Todd Award of the Audubon Society of Western Pennsylvania for initiating steps to preserve the Kirtland's warbler. He remains active in this effort, serving on the Kirtland's Warbler Recovery Team.



Kirtland's Warbler



Every nest of the Kirtland's warbler has been found on Grayling Sand and 90% of them are located in the watershed of the Au Sable River.

QUARTERLY COVER ART - "Winter Wetlands" by Carolyn McNagny of Columbia City. Crooked Lake enthusiast, Carolyn has a degree in biology from Wittenberg University and is preparing an illustrated guide to understanding wetlands which will be published in January.

KNOWING THE VALUE OF YOUR WETLAND

ACRES cover art, "Winter Wetlands" shows the snowy version of a forthcoming wetland publication, KNOWING THE VALUE OF YOUR WETLAND. Dealing with summer wetlands, the booklet-written and illustrated by Carolyn McNagny-is designed to help wetland owners learn the intertwining dependency of shore and water plants and animals . . . and to understand their vital functions in preserving water quality and the diversity of wildlife forms - from tiny plankton to snails, to turtles, ducks and Great Blue Herons.

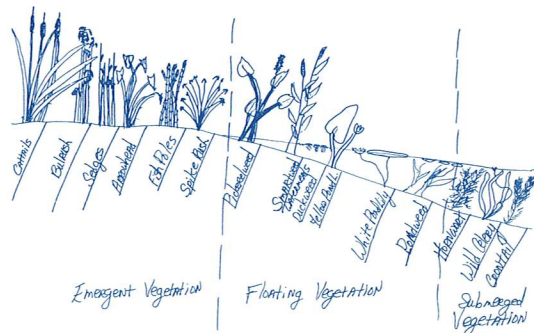
Carolyn, a trained biologist, says she has surprised herself with how fascinating the plant/animal community of shoreline wetlands are. "I looked at them initially as soggy and sort of slimey", says Carolyn, "but I tried snorkeling and discovered an intriguing world of life forms all interlaced into a living community".

In simple terms, Carolyn has created a "thumb-nail" understanding of shore and water plants so that wetland owners can easily identify the most common ones AND each plant is assigned an important function it serves - as food supply, as nesting site, as shelter, as pollution filter, etc.

"The importance and appreciation of WETLANDS has to be promoted", says Carolyn, "so that every wetland owner, large or tiny, understands that the quality of water and life on Indiana lakes depends on their wetland stewardship."

"Enjoying having this diverse plant/animal community at your doorstep, exploring it, appreciating its importance - wanting to protect it - that's what KNOWING THE VALUE OF YOUR WETLAND hopes to accomplish."

ACRES plans to publish the booklet and have it available by the end of January. Contact us for review copies or quantities to distribute.



Indian's new year

Welcome my slumbering sons to the noblest bed man can sleep upon! The warm face of mother earth; man's first home; the precious gift of great heart to all mankind. Walk with me and I will show you how man has overlooked golden treasures. Walk with me and I will show you many special places - places that man has forgotten to love.... while reaching for the silver of distant stars.

Many seasons ago this land was blessed with greater abundance than man could dream of. The tall trees, fertile land, and clear waters gave life to every living creature. The proud eagle soared across skies that were clear and blue. The forest and woodlands were alive with creatures of every description, and man was at peace with his world. Slowly man forgot how to love the earth and how to protect its gifts. Many of the creatures who shared his earth with him have disappeared. The proud eagle now gasps its last ragged breath. The once blue sky he glided across hangs heavy and dark.

Your heart asks what can I do; I am but one man.

It is true my son. You are but one man. One act by one man or one child can be a beginning just as one stone thrown in a pool can create many ripples. Your act can make others aware of what must be done to renew this earth.

Man must hear in his heart that the land must be loved, that as draws life from the fertile soil and great waters, he must put new life in its place. When he does this, the earth and the great heart will smile again, and it will truly be man's golden hour.

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