The passenger pigeon. Volume 30, Number 2 Summer 1968

Madison, Wis.: Wisconsin Society for Ornithology, Summer 1968

A MAGAZINE OF WISCONSIN BIRD STUDY

The Passenger Pigeon

Summer 1968

VOLUME 30 NUMBER 2

PUBLISHED
QUARTERLY
BY
THE WISCONSIN SOCIETY FOR ORNITHOLOGY, INC.

BALD EAGLE
AT NEST

PHOTO BY
COURTESY OF BUREAU OF
SPORTS FISHERIES AND WILDLIFE

IN THIS ISSUE

Volume XXX, Number 6 **Summer (Apr.-Jul.) 1968**

THE PASSENGER PIGEON, official publication of the Wisconsin Society for Ornithology, Inc., is published quarterly at 821 Williamson Street, Madison, Wisconsin 53703. Classes of membership and annual dues: Active $3.00 (Students $2.00). Husband-and-Wife $4.00. Sustaining $5.00 or more. Life $75.00. Patron $100.00 or more. Library $2.00. At least $1.75 of each annual membership ($1.50 in case of a student membership and Wisconsin Library subscriptions) is set aside to cover subscription to The Passenger Pigeon. Send membership dues to the membership chairman, Mrs. LeRoy Mattern, 404 Fern Lane, Wausau, Wisconsin 54401. Send change of address to the membership chairman. Manuscripts are invited. Send them to the editor, Charles A. Kemper, 733 Maple Street, Chippewa Falls, Wisconsin 54729.

Our Changing Environment

By PROFESSOR JACOB SHAPIRO

Wis. State University, Oshkosh

Talk given May 18, 1968 at the 29th Annual WSO Convention at Green Bay, Wisconsin.

Everyone today is conscious of the deterioration of our environment, as even our newspapers give us such words as Eutrophication, Biocides, Conurbation, Ecology, Biological Oxygen Demand and Radioactive Contaminants. There is emphasis on environment in state and federal policies through such programs as Beautification, Pollution Abatement, Anti-Litter Campaigns, Regional Planning and Conservation Education. The public is beginning to face the reality that we must decide what kind of environment we want in the future. We must choose whether we would rather limit the number of people who want the materials of the affluent society, or whether we want to lower the standard of living in order to accommodate more people. There has to be a balance between man and land; harmony between population and environment.

Scientists are telling us that the natural systems of which we are a part, are not only more complex than we think, but they are more complex than we **can** think. They are talking about ECOSYSTEMS. This is not a new word, just a word that is now popular as is escalation. "Eco" comes from the Greek word OIKOS meaning home. We are acquainted with it in Ecology, which is the study of mutual relations between organisms and their environment and economics which is the relation of money with home. An ecosystem is the system which ecology studies. That is, an ecosystem is a self-sustaining community of organisms—plants and animals—taken together with its inorganic environment. The interaction of community and environment constitutes the ecosystem.

An ecosystem is very intricate, and minor change may create major disturbance often felt throughout the entire system similar to a "run" in a nylon stocking. For example the Canadian Wildlife Service is now faced with the task of saving the Ipswich Sparrow. This sparrow is endemic and breeds only on foggy, stormy Sable Island. Some time ago man introduced rabbits to the island. The rabbits ate up much of the vegetation. The loss of vegetation incresaed erosion. To control the rabbits, man introduced the cat. The cats ate some of the rabbits and lots of the sparrows. To control the cats, man introduced foxes. In one season the foxes wiped out both the rabbits and the cats. Some of the

sparrows survived. Now the birds are facing two new perils, oil drilling on the island, and erosion of the land itself. The Canadian Wildlife Service has a real problem.

Another attempt to improve an ecosystem began in 1520 when the Spaniards took sugar to Jamaica. The sugar prospered so well that most of the native flora was dug up to make room for plantations. Rats were attracted to the sugar cane and thrived at the expense of the plantation owner. The snakes would have kept the rat population down, but unfortunately the slaves working in the fields were afraid of snakes and killed all they could find. Rat bounties were tried, and helped a little. One bounty collector destroyed 20,000 rats in a single field. But still the rats abounded. Cuban ants were brought in because they were reputed to destroy young rats in the nest. The rats multiplied in spite of the ants, and the ants multiplied too. Ferrets were introducd to control the rats, but chiggers quickly eliminated them. Large meat-eating toads were tried in 1844 and they settled down to enjoy themselves. They dined primarily on the Jamaican insects. By this time the Jamaicans were ready to welcome any assistance against the rats, and in 1870 mongooses were brought in from Calcutta. In 10 years the mongoose attacked the rats so ferociously that most of the Norway rats were destroyed, and all the native spiny rats. The black rats saved themselves by living in tree nests and in houses. The mongoose began to ravage the native animals and domestic stock and even took to eating sugar cane. They killed the lizards which ate the white grubs that attacked the sugar cane, and the resulting increase in the beetle population caused more damage to the sugar cane than the rats had inflicted in the first place. Now the planters are dousing the island with insecticides, and they still have the mongoose which has killed off all small animals and all birds on the ground level. The government is now using the deadly poison 1080 sodium thallamate on the mongoose. We have abandoned this poison as being too dangerous and non-discriminatory. Let us hope that the Jamaicans do not have side effects from this program that is equal in damage to the mongoose.

Fortunately people are waking up to the dangers of making changes in the environment without first studying the ecosystem and calculating the effects. Changes made by bulldozers and draglines can be just as disastrous as the introduction of new species. Such dramatic books as Rachel Carlson's **Silent Spring,** Udall's **The Quiet Crisis** and Vogt's **Road to Survival** are sounding the alarm. Our whole future is at stake. Are we going to let desecration of the air, water, and soil destroy mankind? It is as great a danger as the atom bomb except that it works more slowly.

I was talking to a landscape planner recently about his idea for a Green Corridor to be formed by a road which he wanted to build so that it would follow the river highlands to afford a beautiful view. He was unaware that cutting down the trees for such a highway would affect the cold-water stream; that salt used for removing snow on the highway would wash into the water; that the drainage ditches dug for the road would have a permanent effect; that the traffic with its fumes and noise would bring changes in the fauna and flora. Not only was he unaware,

he seemed unconcerned. He was still living with the erroneous idea that we now know is incorrect: that human population is one side of a coin and the environment is the other. We humans are egocentric. We think the universe revolves around us. Actually that coin is a solid unit called the ecosystem—people are biological organisms and are part and parcel of the entire Biosphere. The Biosphere is the collective totality of living creatures on earth and all the ecosystem on it. Man has tended to ignore that he is entirely dependent on the biosphere: a vast web of interlacing processes and organisms that form the rhythmic cycles and food chains in which one part of the living environment feeds on another.

Some critics claim that conditions are no worse now than they were in the good old days. They point out that insecticides have virtually eliminated malaria in this country, that hardly anyone dies of typhoid fever and in spite of the outcry over water and water shortages we are able to water our lawns; have private swimming pools in the backyard, and can irrigate the deserts of the southwest. There is no projection of this increase of water use into the future and when this is mentioned the answer is that we will desalt the oceans! There is no concern on how to repair the irreparable damage to the aquifer, how to remove the non-degradable poisons from the environment or how to reclaim a once beautiful, turbulent, clean and clear trout stream with its community of birds and insects.

The biggest offenders are the local government units, both municipal and village. They state that marshes are for sanitary fill and housing units are a future tax base for better schools, roads and public facilities. They ignore that these marshes are natural catch basins that arrest floods, are spawning areas for game fish that entice people to the area to spend their tourist dollars and enrich the lives of the resident, they overlook the marsh as a nesting ground for birds that are natural controls for insects and makes the Spring as well as Summer and Fall interesting and even exciting. The marsh is the only winter cover for upland game birds yet every sportsman wants to pheasant hunt and demands more stocking.

Let us consider some paradoxes confronting us at this moment. Private wealth exists alongside public squalor. Medical services for the individual sets high standards and the nation is thrilled at the success of transplanted hearts, artificial kidneys and iron lungs. The public's concern for **the health of the environment** is almost nonexistent yet this is where we live. An individual suffering from smog attempts to migrate from the area rather than demand that it be cleaned, the same is true of the noisy city, or littered neighborhood. The most modern, sophisticated apartment house in N. Y., I read dumps raw sewage into the East River where slum children swim. New York every day dumps 200 million gallons of raw sewage into the Hudson River, this in addition to 375,000 lbs. of waste per day per square mile plus millions of cars spewing out their deadly fumes. I have been told that the Maumee River of Ohio is classified as a fire hazard because of the inflamable oil floating on its surface.

We need more "soft-heared alarmists" to present facts to the knowledge-starved public. Scientists tend to be ivory-towered and silent. We

can count on them for the facts but few of them can present them so that Mr. John Q. Public will understand their significance. At the recent Wildlife Federation meetings in Houston, it was stated that 7 out of 10 people miss conservation education entirely and those 7 live in the cities. That is 3 out of 10 people in the U. S. are given a course of sorts in conservation and none of them in the cities. So the cities are particularly in need of information. Groups like yours must push the ecological education of both children and adults. Your services are needed and some of you are already working with a vengeance.

The future of environmental improvement depends on our ability to achieve a rational, self-sustaining balance (homcostosis) in the ecosystem. The substances which constitute air, water, and land cannot be destroyed. They are consumed. They are utilized. They change form but remain. So the way to improve the environment is to recycle the troublesome substances. Piecemeal changes do not work, whether they are trying to grow sugar cane or save sparrows, or whether you are building a highway. Perhaps the systems approach is needed, that is, a computer analysis of everything in the total environment both intake and outgo. Then a city or region can make cost-benefits choices and balance the system. Such a study I understand is now being undertaken in Los Angeles. We have to look at the entire problem from the point of view of whole ecosystem. We must relate our population to our resources and keep these resources flowing through the biogeochemical cycles. It is a challenge. It is a challenge greater than landing a man on the moon!

Landscape architects draw on the findings of the social sciences in planning landscapes. And the new cities being planned and built before anyone moves in like Columbia, Maryland with its diversity of homes, stores, churches, parks and theaters, are based on sound social principle. But what about the natural sciences? Are planners aware that organisms are united as part of the Biosphere, and that people are organisms. Loren Eisely tells the parable of the Biosphere, which runs like this: . . . Man in space is empowered to see the earth, a rotating sphere; he sees it to be green, green from the verdure of the land, the algae in the sea, a green celestial fruit. Upon this celestial fruit he sees blemishes, gray, brown, black, from which extend dynamic tentacles. He perceives them to be works of man and asks, **Is man a planetary disease?**

There is argument today among scientists, laymen, and students over the word "overpopulation". Some demographers claim that the world can sustain 50 billion persons and others state that we have already overreached the limits of the earth with 3 billion and calamity is ahead. The problem is whether people, enterprises, and government are able to develop agriculture, industries and services to supply the growing numbers of people with a higher standard of living. **The world needs a double emphasis on fertility: increased fertility of the soil and a decreased fertility of human beings.** We have the know-how for both. All we need is the motivation.

How can the ecological view of dynamic equilibrium be applied to the planning process? If we want to change the environment, what in-

formation do we need to enable us to work with nature than against? I see five areas for investigation: Ecological inventory, Historical review, Natural processes, Limiting factors, and Relative values. Now let's see what information we would gather in each of these categories.

1. Ecological inventory – kinds of soil, analysis of water, type of physiography; species of plants and animals.
2. Historical review – the changes that have occurred in the area through man's activities and their apparent effects, such as mining, damming, plowing, flooding and burning.
3. Natural processes – occurrence of natural floods & droughts, direction and velocity of winds, depths and nature of ground water, stages of succession, climax community, prevailing disease.
4. Limiting factors – number of frost-free days, height and depth of snow and ice, low and high rainfall and its occurrence, drainage pattern, exposure to sun, soil fertility, predators and parasites, alkalinity or acidity.
5. Relative values – value of forest to surrounding land, value of minerals, value of wildlife for recreation, scavengers, predators, cash crops, pollinators, esthetics, social and historical values.

Having gathered these five kinds of information about any given piece of land, the planner can identify the major resources of the area, and see the links between the fundamental natural processes. Then he can balance the factors and make his plans. If our planners had utilized these criteria I'm sure such an enterprise as that of trying to make a trout lake, hills and create wooded borders in a former flat pasture field would not be undertaken. But such is on the planning board for Winnebago County not over a mile or so from the Lake.

Man has a wider pattern of ecological behavior than other animals His greater intelligence allows him to adapt to living on the bottom of the ocean or in a space ship 100 miles above the earth, in the heat of the jungle, or cold of Antarctica. But human adaptability depends on balance in the ecosystem just as surely as it does for other living creatures. When we disturb the ecosystem with atomic radiation or smog, extensive drainage or denuded landscape, we suffer from the resulting imbalance. This is as true for people as it is for micro-organisms. There is a necessary numerical relationship between plants, herbivores and carnivores—and man is both a herbivore and carnivore. It is stated by scientists that CO_2 will start preventing heat from escaping into space. They foresee a hotter earth that could melt the polar ice caps, raise the oceans as much as 400 feet and drown many cities. Others think the smog collecting in the atmosphere will block the heat from the sun and create a colder earth with more rain and hail and thus increasing the polar ice caps and curtailing food production. In either event a disastrous condition.

A long life, rapid growth and good health comes from meeting the requirements of the environment. If we meet them, we can achieve what Julian Huxley calls the ultimate goal. To quote Huxley: "Fulfillment

is probably the embracing word; more fulfillment and less frustration for more human beings. We want more varied and fuller achievements in human societies, as against drabness and shrinkage. We want more variety as against monotony. We want more enjoyment and less suffering and disciplined freedom, as against routine and slavishness. We want more knowledge, more interest, more wonders as against ignorance and apathy." So it seems that man's fulfillment depends on putting maximum diversity into man's ecosystems. This concept, however, is contrary to efficiency. The urban developers conceive of a city with high rise apartments in geometric designs which can be planned for traffic flow, water accommodation and sewage disposal plus maximum parking in multistories parking plazas between the buildings. The parks must be those which can handle high density and the multi-use of all ages. The shopping complex is strategically placed and offers all needs of our complex society in a compact unit reached by car. There is no room for idle space, large trees, open lakes or ponds or unclipped and informal flower oasis which are not nurtured by artificial fertilizer, watering and insecticides. Why can't we have miniparks in each neighborhood, underground telephone wires and overhead trees along the streets? Why can't cemeteries be made into green areas for contemplation and shopping areas diversified with walking malls and no cars? Why can't apartment houses be built after the pattern of those exhibited at Expos 67 with each apartment a self-contained unit built into the entire unit with various views, gardens, trees, and maximum interest?

Without diversity life is drab. A monotonous, uniform biological world would be very dull. But uniformity is more than dull—it is dangerous. The danger arises where disease organisms evolve new and virulent forms which can wipe out an entire species which has no biological resistance to the attack. If the area is covered by that one species the land would be denuded. That is what happened in the potato blight in Ireland for example. Charles Elton in his **Ecology of Invasion** suggests that the very complexity of the tropical forest, with its great numbers of species occupying all sorts of ecological niches, tends to keep one species from outbreaks which could disrupt the system. Insect outbreaks or epidemics are almost unknown because there are always so many enemies and parasites ready to utilize the new food supply. This is in contrast to our own plagues of Spruce Budworm, Pine Blister Rust, Root Collar Weevil and Dutch Elm Disease. Further evidence on the effect of biological heterogenity in maintaining stability or balance can be found in **Plants, Man and Life** by Edgar Anderson. He describes the causal and randomly planted Indian gardens of Central America which are made up of many kinds of plants, trees, shrubs, vines and herbs all growing together in a hit or miss fashion. There are no insects or weed problems in such a garden. The American Indian planted his garden of corn that way with Lima beans growing as a vine and pumpkins spread between the corn hills. He kept the weeds down and got three crops at the same time.

Of course, I am not advocating that we farm in that fashion today. Tractors, combines, pea pickers, potato diggers, hay balers, etc. could never handle such a mixture of plants. But these gardens illustrate that

diversity must be one of our goals. As greater numbers of species occupy an environment, they utilize more and more pathways, and opportunities for new undesirable inhabitants diminish. The product of complexity is stability. Evolution proceeds from unicellular organisms to multicellular organisms and from one species to many species, and from simplicity to complexity. We must understand that the one maxim of nature is change and that diversity is that goal.

If we are to have maximum diversity, we must preserve genetic stocks of rare species of plants and animals. They have possible usefulness in the breeding of new varieties of plants and animals and are of scientific value for that reason. Once the genetic stocks are gone, there is little chance of getting them back. I am concerned when the Fisheries Biologist reclaims a lake that is purported to be out-of-balance. He chemically treats and kills all fish life and starts over by restocking with a desirable population of two or three species. Little concern, if any, is given to possible endemic species of fish, amphibians, and reptiles being extirpated completely from the area, some of which may be relics from a long long heritage occupying a unique niche. Such species can never be returned. Then again the flagrant use of DDT worldwide to maintain unstable pupulations of food crops may threaten a far removed species such as the Bermuda Petrel. Legend has it that St. Peter named the bird because it seemed to walk on water. It is now in trouble because it is suffering from DDT in the eggs rendering them infertile. They are restricted to one island and the entire Atlantic Ocean surrounding the island is contaminated with DDT—where can it migrate? Perhaps the same can be said for the Kirtland's Warbler restricted to a particular habitat of jackpine that is being changed by man. Are these species worth our efforts to save?

When a species becomes extinct because it failed to adjust to a changing environment like an ice age, that is one thing. But it is another when man, the only intelligent inhabitant of the earth, comes along and helps annihilate birds like the Carolina Auk, Dodo, Kiwi, Passenger Pigeon and possibly the Ivory-billed Woodpecker and California Condor. The same thing happened to plants. Scarcely any of the plants mentioned in the Bible, for instance, can be identified today. Man with his highways and cities has eliminated variety after variety.

There is another reason for leaving some land and lakes in an undisturbed state, also. That is to learn how natural ecosystems work. We know very little really, about the intricacies of ecosystems. If we destroy them all, in the name of progress, we will never get the information needed. There will be no place to send a scientific team to study them. **We must educate the public, particularly local government officials who decide on the deposition of public lands, to understand that the existence of natural areas for study is essential.** This is the place where the WSO can help. If **you** understand the situation and if you share this information with your friends, neighbors and congressmen, we will have the chance ao enjoy our changing environment as nature intended.

To summarize my views, I would like to point out that the environment is changing every minute, of every hour, of every day, of

every year. We cannot keep it from changing, but we can direct the changes. The key words that I want to leave with you are ECOSYSTEM and DIVERSITY. The whole ecosystem must be considered when we plan any change whatsoever, because the effects will be far-reaching whether we like it or not. And the emphasis in our planning must be on diversity. Variety gives us a richer life and we need it to reach our own fulfillment. In addition, variety is a requirement for healthful living. Diversity is the key to successful balance in the ecosystem. In the depression of the 30's, the boys in the CCC camps were put to work planting white pine trees in reforestation projects. Miles and miles of solid white pines. It looked beautiful when young. But now it is 30 years later and what has happened? Disease has struck. Since the trees are all alike, only a few kinds of birds were attracted, only a few kinds of animals. So who has the upper hand? Insects and disease organisms. The trees are dying, and we are searching for more potent insecticides. The landscape is monotonous; our vacation trips are extended into Canada, Alaska, and Mexico. The bird population is reduced, but only a few are alarmed. A bird is a bird.

We do the same kind of thing in cities. We let slums develop where the preponderant populations are men, lice, and rats. The only birds are pigeons and starlings. Do we want this kind of monotony in unhealthy surroundings? I call on all of you to push for intelligent planning to conserve our natural resources and to provide healthy living for our people. Let's keep some non-useful marsh areas so that we can study natural ecosystems for our own understanding and guidance, to preserve genetic stocks, and to keep ourselves healthy. And let's use our heads as well as our hearts when we plan improvements in this wonderful and glorious changing environment of ours. **Let's build an ecological receptivity in the minds of our fellow man.**

I thank you.

Discourage the use of

All Harmful insecticides.

Mary and Charlie Nelson

In Memoriam

Many members of the WSO were saddened by the death of Francis Zirrer of Hayward and Milwaukee on May 30, 1968 at the age of 82. He had been a member since 1942. He was the widower of Clara Kullmann Zirrer, who died in 1944, and the brother of Miss Louise Jiric of Yugoslavia.

Mr. Zirrer was a very shy, retiring, gentle person of a sort who had few close personal friends. He was a very reliable observer and a gifted writer. No finer nature writing, in this editor's opinion, has ever appeared in any publication than the contributions of this humble man. It had been my hope to have him contribute additional articles. A list of his articles in the **Passenger Pigeon** follows:

Bittern, Vol. VI, No. 2, April, 1944, pp. 44-46

Wisconsin's Smallest Owl, Vol. VI, No. 2, pp. 62-64

The Ring-necked Duck, Vol. VII, No. 2, April 1945, pp. 41-45

The Raven, Vol. VII, No. 3, July, 1945, pp. 61-67

The Goshawk, Vol. 1, No. 3, July, 1947, pp. 79-94

The Great Blue Heron, Vol. XIII, No. 3, July, 1951, pp. 92-100

The "Great" Pileated Woodpecker, Vol. XIV, No. 1, Spring, 1952, pp. 9-15

The Great Horned Owl, Vol. XVIII, No. 3, Autumn, 1956, pp. 99-109

Someday it would be most fitting to gather these articles in one volume and republish them. The WSO has lost a good man. He will not be forgotten.

The **Passenger Pigeon** notes with regret just as this issue goes to print, the death of Ernest Swift. Thus Wisconsin has lost one of its most eminent conservationists. We hope to have an obituary later.

Also we wish to acknowledge the death of William J. P. Aberg, former chairman of the Wisconsin Conservation Commission, on March 18, 1968. He was a longtime member of the W.S.O. and a supporter of sound conservation programs beneficial to wildlife.

Plans are being made to use all Aberg Memorial Fund Contributions for a scholarship and educational program for personnel in the Department of Natural Resources. Anyone wishing to make such a memorial gift should send it to his son, Robert K. Aberg at 16 N. Carroll St., Madison, Wisconsin 53703.

WSO Silver Passenger Pigeon Award

To . . .

Nils

P.

Dahlstrand

Your twenty-four years as a member of The Wisconsin Society for Ornithology is a fine record in itself, but your unselfish and generous gifts of time, talent, and energy to the purposes and specific projects of the Society are even greater.

Your work as an active bird bander; as a leader in establishing the Oneida Wildlife Society and its subsequent participation in WSO Bird Counts; as an advocate of the preservation of avian environment through your writing, speaking, and radio programs; and as a contributor to at least five major research projects has made you an outstanding member of the Society.

In addition to this, you accepted the duties of vice president in charge of the WSO convention at Rhinelander in 1962. Following this, you were appointed to the Board of Directors as Publicity Chairman, and in 1963 you were elected to the office of Editor of the **Passenger Pigeon.** Your promise, as editor, to bring this publication up to date was fulfilled completely. In 1968 you were elected President of WSO.

It is with sincere gratitude that The Wisconsin Society for Ornithology, Inc., presents to you the **Silver Passenger Pigeon Award for Outstanding Service to the Society** and with it goes the genuine appreciation of the entire membership, its officers and directors.

The Wisconsin Society for
Ornithology, Inc.

May 18, 1968

THRILLS OF THE WOODLANDS

Gerald E. Lindsay

There are many people, and countless ways in which each person may find a thrill; that which thrills one person might make no impression on someone else. Nature-lovers thrill at the things they find in forests, marshes, deserts or other out-of-the-way places. Botonists thrill at the discovery of a plant or flower; some are taken with the beautiful mosses and ferns of a swamp-land or marsh, some (I included) feel a sense of achievement when finding that delicate and beautiful vine, the Creeping Snowberry.

Bird lovers have their pets too. I like them all, but to me there is no greater thrill than spying on the Ruffed Grouse, better known as the Partridge.

Just as so many beautiful things in nature (as well as the weeds) have the beginning in the spring let us begin there also.

We hear a sound in the distance that one can associate with a small gas motor in need of timing or a clean carburetor; it is the drumming of a male grouse proclaiming to the world that he has taken over a certain territory, and announcing to his harem his location.

Somewhere within hearing are the females on their nests between the roots of a stump or tree, or under a clump of small brush or heavy grass—usually not too far from a reasonably good water supply, but often it is too close.

What a challenge it is for one to approach this drummer to watch his performance! Catching the beat of his drumming, you move forward only during the time he is so occupied. It is best to become motionless just before the last beat, for then he becomes very watchful for either enemies or amorous company. Once he is located and you wish to get quite close, try to line up behind a tree, a stump, a clump of brush or a log. I repeat: continue to move only while he is drumming; once you reach your "blind" you can relax a bit and watch or even photograph the performance.

Then a few weeks later, what a thrill it is to scout the area and come upon a mother Partridge with her brood of little ones (like brown tufts of downy feathers) cavorting and dusting in some sunny spot in the forest! When your presence is noted by the mother grouse, she will give a danger signal and those little brown tufts will disappear as if by magic. Yet they haven't gone far, just under some leaves or grass or maybe under a log or other handy cover. Then follows an act by the mother. Feigning injury, she attempts to lead you away from the young ones; and if you play the game, avoid the area where the little ones disappeared, for you may step on one in its hiding place. Follow the mother as far as it is necessary, so when breaking off the game you can beat her back to the dusting area for another interesting scene when she returns (if you are well hidden). She will give an "All Clear" signal and several clucks to call her little ones to her from their several places of hiding.

Several weeks later it is an enjoyable experience to go back to this general area and come upon a family of these partridge when the little ones have their wings.

The first indication that you have been seen will come when you hear a highly pitched whistle which is the "alert" from the mother partridge. (You will hear this only when there are more than one partridge in the area.) If you continue to move there may be a couple of "peeps" (but not always) and you can expect action from any direction.

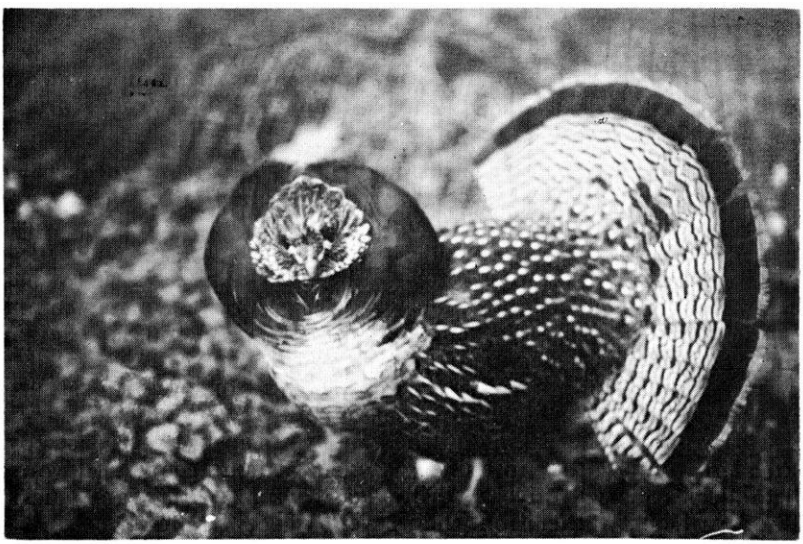
These little ones will "freeze" at the danger signal and fly up into a tree or brush at any time. Unlike their close relatives the Spruce Grouse, they are not foolish enough to stay put.

A little later comes the bird season, which saddens the bird lovers and brings quick death and often a useless one for many birds.

On October 1st, 1967, two beautiful ruffed grouse were blasted into eternity by a shotgun at close range. Then because they were so shattered as to be useless they were thrown behind a clump of evergreens at a picnic ground at the end of the road going around the south end of Upson Lake in Iron County.

Another was blasted to worthless bits by a shotgun fired from the left side of a car that was driving crossways of the road less than 20 feet away from where the bird was standing. This "Big Game Hunter" didn't even get out of the car for he no doubt could see there was nothing but feathers to pick up. This happened on Vogues Road about a mile east of State Trunk 169 in the town of Gurney, Iron County. Judging from the "modus operandi" an identical incident happened on a dirt road north of U. S. 2 going between Cedar and Saxon Harbor in Iron County.

It is one thing to harvest our game birds, but it is another thing to blow them to bits and have to leave what is left for lack of enough meat to be cooked. Do some people call that "sport"?



Just as deer hunters are restricted from hunting from the roadways so should the bird hunters for reasons that are very obvious.

There is still another chapter in the life of a partridge if it has been lucky enough to escape the gunning season. A long cold winter lies ahead but as it approaches, the partridge quickly adapts itself to a change of diet and shelter. Through much of the year it fed on clover, grass and certain leaves, a few insects and worms along with numerous berries; now it switches to the buds of alder, maple and birch with occasionally some partridge berries or wintergreen berries uncovered by wind or sun on a hillside. The grit needed by a bird that formerly found it just about anywhere must now be sought where it is exposed: on the face of a cliff, streambanks or the roots of overturned trees, but most always the talus of steep banks can be seen at the foot of the bank on the snow after having been loosened by wind or ice.

At night and during extreme cold they will plunge into the snow in the forest, leaving only a mark like a falling lump of snow. After entering the snow they will work themselves a bit deeper to be away from the entry and insure more protection from predators as well as the elements. They do not walk around near the entrance but will do so when they emerge if they have not been alarmed. When this happens they will practically explode out of the snow and are out of danger before the surprised intruder can act. They don't always get away, though, as many a winter traveler has come upon the scene where a partridge was caught in the retreat, and only a few feathers amongs a predator's tracks are left to tell the story.

However, we can be thankful, as there always seems to be a few lucky ones that survive the many perils to begin again that wondrous cycle of life that so interests the many lovers of wildlife.

3745 N. 83rd St.
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Winter Distribution of Red-Headed Woodpeckers In Wisconsin

(An Analysis of Christmas Bird Counts)

JOHN L. MOE
Biology Department
Wisconsin State University
La Crosse, Wisconsin

Wisconsin Christmas Census records for 27 years (1939-1965), as published in **The Passenger Pigeon,** have been used to gain some basic information about the winter distribution and relative abundance of the Red-headed Woodpecker (**Melanerpes erythrocephalus erythrocephalus**) throughout the state. The information is summarized in Table 1.

This is one of the more easily identifiable of the Woodpeckers; it is improbable that it would be confused with any other species, and winter reports can be accepted with confidence.

The greatest number of birds-per-man-hour was 2.8 recorded from Marquette County, where the frequency was 66% (3 reports, 15 man-hours of observation).

Eight counties have recorded the Red-headed Woodpecker on every report. Of these, Trempeleau had the greatest number of birds-per-man-hour: 1.07 (2 reports, 7.5 man hours of observation).

Separate distributional maps prepared by plotting first frequency of occurrence (% of reports with Red-headed Woodpeckers) and then birds-per-man-hour showed little correlation. These conflicting results were apparently due to chance variations, particularly in those counties where few censuses have been made.

Therefore it was decided to prepare a simple index combining both census measurements (frequency x birds-per-man-hour) and to utilize only those areas where the species was relatively abundant, i.e., had a frequency of .50 or better and a birds-per-man-hour rate of .10 or better. Figure 1 shows the map derived by this technique.

The two lines extending across Figure 1 enclose the "tension zone" (Curtis 1959). Northern hardwoods lie mostly north of this zone, southern hardwoods are primarily south of it, and the two types of hardwoods intergrade within the zone.

Using the index as a guide to relative abundance it can be seen that the Red-headed Woodpecker's winter distribution lies largely south of the "tension zone", and to the west of the more populous southeastern counties.

Of the counties lying north of the "tension zone' 'none qualify for inclusion in the index. With the exception of Walworth County, the (marked O on Fig. 1) have never reported Red-headed Woodpeckers on same is true for those in the eastern third of the state. Eighteen counties

*This study was supported with funds provided by the Institutional Studies Committee, Wisconsin State Universities.

a Christmas census. In total they represent 109 reports and 1627 man-hours. Note that 13 of the 18 lie north of the "tension zone".

However, since neither birds-per-man-hour or frequency by themselves gave clear pictures when plotted on a map, it should be emphasized that an index derived from these data provides only a rough approximation of distribution and density.

Certain counties require special comments in this respect:

Pepin – There is only 1 report (1957). Eleven birds were observed, but the man-hours were not recorded, so an index value could not be computed.

Monroe – Three reports (1954, 1955 and 1965), all of which listed Red-headed Woodpeckers. Inconsistency in reporting man-hours resulted in a depression of the calculated index.

Iowa – Another poorly covered area, the only report being for 1953, with no sighting of the Red-headed Woodpecker.

Since the majority of the census takers live in the heavily populated

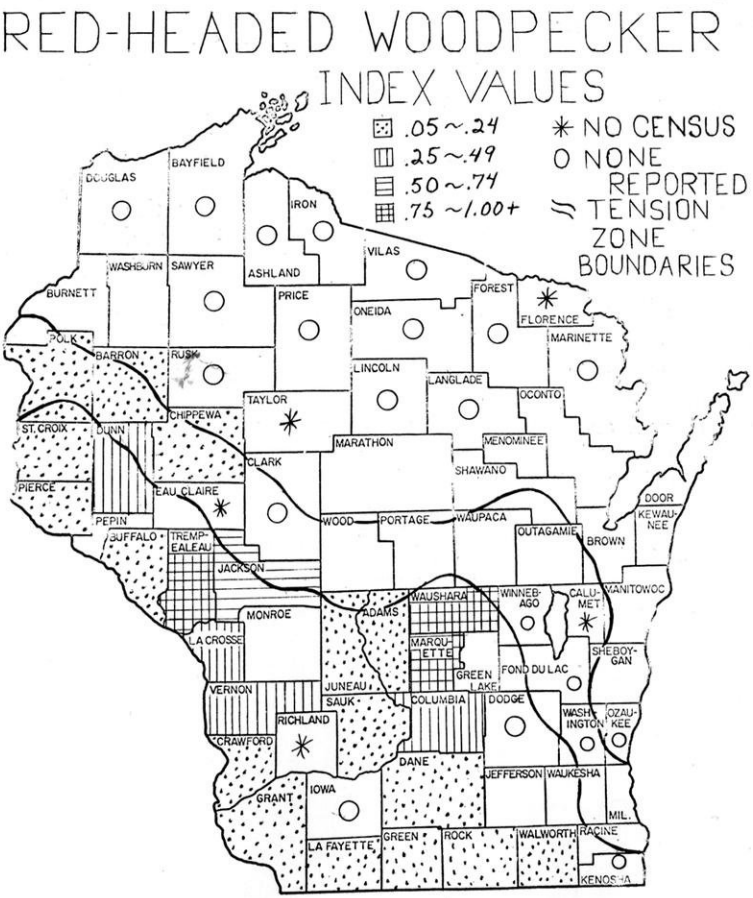


FIGURE 1

Distribution of Wintering Red-headed Woodpeckers in Wisconsin

southeastern corner of Wisconsin, this is where the greatest number of counts are held. The apparent high density in Dunn, Trempeleau, Marquette and Jackson Counties are based on only 5, 2, 3 and 3 reports respectively.

TABLE 1

Christmas Census Data For the Red-headed Woodpecker

Total Man-hours Observation	Number of Individuals Reported	Number per Man-hour	Counties Reporting Species Present #	Counties Reporting Species Present %	Reports* Showing Species Present #	Reports* Showing Species Present %
13,934	1,250	.09	202	33	49	68

*A report represents one or more censuses from a given county for a given year. In computing birds-per-man-hour, censuses which did not list hours afield were not used.

TABLE 2

Christmas Census Data on Red-headed Woodpeckers for Index Counties

Total Man-hours Observation	Number of Individuals Reported	Number per Man-hour	Reports* Showing Species Present #	Reports* Showing Species Present %
5089	1012	.196	166	70.6

Table 2 summarizes the data for the "index" counties. Despite shortcomings in the records, it is evident that they contain the heaviest concentrations of this species. With 40% of the total reports and 37% of the total man-hours, they have recorded 81% of all wintering Red-headed Woodpeckers.

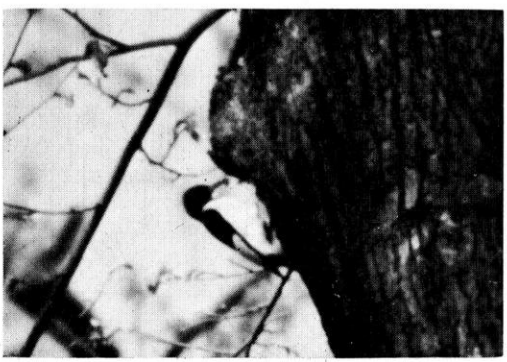
Six counties have had censuses every year for the past 12 years (1954-1965 inclusive). Examination of birds-per-man-hour and frequency with reference to these counties did not reveal any consistent population trends.

A considerable number of Christmas censuses cannot be used in a study like this because the observers fail to indicate the number of individuals of an observed species, or the number of hours afield. Members are urged to keep careful records in this respect.

Continued coverage where counts are established, and additional counts in the north would then make more detailed analysis of winter bird life possible.

References Cited

Curtis, J. T., 1959 **The Vegetation of Wisconsin,** University Wisconsin Press, 657 pp.



Letters To The Editor . . .

Rhinelander WI 54501
814 Birch Street
May 28, 1968

To: Mr. Harold Mathiak, Vice President
Mrs. David J. Cox, Secretary
Mrs. Alfred O. Holz, Treasurer
Dr. Charles A. Kemper, Editor
Mrs. LeRoy Mattern, Memberships
Mr. Frederick M. Baumgartner, Conservation
Mr. Alfred O. Holz, Publications
Mrs. Clara Hussong, Education
Mr. Donald J. Hendricks, Publicity
Mr. Carl G. Hayssen, Endowments & Advertising
Mr. H. Lowell Hall, Legal Counsel
Mr. Howard Bast, Legal Counsel
Mr. Edward Peartree, Field Trips
Mr. Walter E. Scott, Custodian
Dr. and Mrs. Frederick Hamerstrom, Research
Mr. and Mrs. Harold Kruse, Supply Department

I didn't have a chance to talk to each of you at the Green Bay convention about continuing for another year in the important tasks that you have been doing for WSO for the past year or more. To those of you to whom I did speak, I am gratified that you agreed to continue for the 1968-69 year. To you with whom I haven't had a chance to speak, I hope you will continue for the coming year.

There will be only one change in the appointments to the Board of Directors—and this isn't really a change—it's an addition. We can now claim that we have a battery of lawyers as our legal counsel. Howard Bast, Delafield, will be working with Lowell Hall on legal matters. Welcome aboard, Howard!

Now, for an unpleasant announcement.

I'm afraid that I will not be able to actively fulfill the office of president for the coming year. I am transferring to San Francisco sometime around the middle of July. At the time of the convention I discussed this possibility with the nominating committee. However, they decided that we should proceed with the committee's recommendations with the hope that this event would not come to pass. Since it has, it seems that I should humbly tender my resignation as president. I am extremely sorry to have to do this because I certainly would have enjoyed working with you during the next year. From the way things look, I will not be able to attend the Board meeting that is scheduled on July 13 at Stevens Point.

Sincerely,

Nils P. Dahlstrand

Dear Dr. Kemper:

I'm very sorry to have to do this, but—

I have to point up another error in the **Pass. Pig.**

The "Mockingbird" paper was co-authored by Sindelar & Follen, and the "Crow Predation" paper was written by Sindelar.

It is unfortunate that authorship was reversed on these two papers as they appeared in **Pass. Pig.,** Vol. 30, No. 1.

Sincerely,
Chuck Sindelar

Ed. Note: Thank you and my apologies to you and Mr. Follen.

Dear Sir:

In the fall edition of the **Passenger Pigeon** was an article of interest to me. It concerned what was called an "Unusual Goose". Here in Sturgeon Bay we have a pond or small lake (19 acres) in which are many mallards, two adult blue geese, two immature blue geese which stopped in last fall and stayed, and a goose which to me greatly resembles the goose in the article. I have enclosed a couple of prints and a slide of the goose showing also the blues, both adult and immature. If you project the slide on a screen I believe you will see how similar it is.

The goose was purchased from the Green Bay sanctuary and they called it a barnacle goose.

Perhaps I'm not even close on this but in any event I would appreciate hearing from you.

Thank you
Adrian Freitag
Sturgeon Bay, Wis. 59235

P. S. I enjoy the magazine very much. Wish it was monthly.

Unusual Hybrid Geese were observed, photographed, and reported in the **Jack Pine Warbler,** Vol. 45, No. 3, p. 95 by Richard Mortemore, Park Naturalist, at Kensington Metropolitan Park, Michigan. This began with one sighting on June 8, 1967. It was captured on July 5, photographed, banded, and released. A second hybrid goose with similar markings was found in the same area. Both remained until the second week of August. Photographs however show this goose to be considerably different from the hybrid goose described and painted by Rockne Knuth on the cover of our Fall, 1967 **Passenger Pigeon.**

Unfortunately, the photos submitted by Mr. Freitag are not of good enough quality to be reproduced in our magazine.

— Editor

Wautoma, Wisconsin 54982
July 22, 1968
re: correction White-winged Scoter
R. B. Dryers

Dear Dr. Kemper:

R. B. Dryers would like a correction put in the **Passenger Pigeon** in regard to an observation of a White-winged Scoter in Columbia County on April 14, 1967. He did not see that bird. I had it listed on my records but also checked with the file keeper and it was on his report. It was erroneously listed.

Sincerely,
Irma Chipman

Dear Editor and Fellow W. S. O. 'ers:

Regarding Mourning Doves. I am a hunter (I can hear the groans and growls already). During my boyhood days in western Minnesota we looked forward with excitement and anticipation to the Mourning Dove season. For my money, it is the most challenging and difficult pass shooting in the world. I don't feel we have the right to ask that this unique sport be denied our fellow Wisconsinites. Especially when it is presently legal in 31 of our United States.

As to setting gun toting hooligans afield earlier . . . well that's just pure balderdash. Percentage-wise, we probably have just as many vandals within our own ranks. (Though we don't kill by gun; our presence alone around nervous nesters does the job just as irrevocably through abandoned nests. And of course, we all know none of us would dream of stealing a few eggs now and then.???). So calling the kettle black gains little in joining others to our struggle for an awareness and preservation of our wildlife and its habitats and problems. I maintain that if we don't like these good-for-nothings, let's DO SOMETHING ABOUT IT! For instance. How many of us take the time to prepare a short, concise, unemotional discourse on the importance of Raptors in nature's grand strategem of checks and balances; and then present it to a young hunter's clinic of which hundreds are conducted every year in Wisconsin? Or what are you going to do about the little brat next door that plinks off your nesting Tree Swallows and ambushes your feeders for passing Passerines? Shoot him? Call the police? Get in a fight with his old man? Does this really settle the issue? Why not instead, consider taking this misguided young fellow on a birding trip? Observe as he sees his first closeup Redwing through your 7x50's (but watch it kid, those B & L's set me back plenty). One hour and you will find the metamorphosis complete . . . from vandal to conservationist. Rewarding? You said it!

But anyway. Getting back to Mourning Doves, please refer to Birds In Our Lives and the chapter by Ernest Swift and Charles H. Lawrence, pp. 475: "WHY ARE MOURNING DOVES PERMITTED TO BE HUNTED? Mourning doves are the most abundant and widely distributed game birds in our country. Of all the doves frequenting our country in August, 70 percent will die before spring because of disease, accident, or predation, or at the hands of the hunter. Of the millions of doves that die each year from all causes, hunters harvest only 20 percent. In view of the present status of the resource, the lack of evidence that hunting has an adverse effect on dove populations, and the great amount of recreation afforded by hunting, prohibiting dove hunting is not only unnecessary but is not in the public interest."

Doesn't this answer the question and settle the issue, **finally?** If we of the W. S. O. could object to the proposed Mourning Dove season on any grounds OTHER than emotional, I would say let's go to it. But face it! We haven't a ghost of a case.

Now, as you suggested Mr. Editor, let us move on to more important issues.

Sincerely,
Gayle O. Tryggeseth

Dr. Charles A. Kemper
Editor, **Passenger Pigeon**
733 Maple Street
Chippewa Falls, Wisconsin 54729

Dear Dr. Kemper:

Here at Cornell's Laboratory of Ornithology we read with great interest in the Spring 1968 issue the tribute to John Emlen, when he was made an Honorary Life Member of the Wisconsin Society for Ornithology. It was delightful, and no one deserves this more than Johnny.

But **we** have a complaint. Nowhere did you indicate **where** he got that Ornithological Ph.D.! Johnny received his degree from Cornell's Laboratory of Ornithology under the late professor Arthur A. Allen, who considered him one of the finest students he ever had. His son, Dr. Stephen Emlen, following in his father's ornithological footsteps, is Assistant Professor of Zoology at Cornell, and a faculty affiliate of the Laboratory of Ornithology. We take considerable pride in John Emlen —and are sorry that Cornell's role in his ornithological training was not mentioned.

Sincerely,
(Mrs.) Sally Hoyt Spofford

* * * * *

A Study of Dunn's Marsh Near Madison

By ELIZABETH H. SANDBURG

In the spring of 1967, while I was looking for an area to study for the Audubon Field Notes Breeding-Bird Ceusus, I began to realize that I really knew very little about the marsh birds, and that Dunn's Marsh, just outside the city limits of Madison, held very interesting possibilities. During the spring, my husband and I had seen a number of migrating ducks there, as well as both bitterns and two of the rails. The results of this census turned out to be far beyond expectations. My study has led me to believe that Wisconsin marshes are much richer in bird life than most people suspect. This in turn has made me very concerned about the future of Wisconsin marshes in general, and this marsh in particular.

Dunn's Marsh has been well known to Madison birders for some time. Rev. Robbins has written me that this was the first place he was taken to be introduced to Wisconsin birds. Many people have mentioned that a few Yellow-headed Blackbirds used to nest there, although they only passed through this year.

The marsh is located south of the city, along Seminole Highway south of the "Beltline". It almost touches the southwest corner of the University of Wisconsin Arboretum. Since there is a railroad track along the north side of the marsh, it is easily accessible to birders. Open water in the corner permits exploration by boat. It occupies a basin among rolling hills of glacial drift, and is one of many Wisconsin marshes which exist as the result of glacial action. Since this basin is well above and separated from the Madison lakes and the Yahara River, it has not been invaded by carp, and chemical pollution is slight or nonexistent. Although there is agricultural land to the south of the marsh, there are uncultivated areas to the east and west. There is a line of trees along the south side, and a woodlot beyond the meadow on the west.

In the center of the marsh are fifteen acres of open water, about half of which becomes filled with stiff wapato after the nesting season. This area is used extensively for feeding by Soras, Least Bitterns, coots, and dabbling ducks, but does not provide enough cover or structural material for nesting. The surrounding edge, which varies in width from 100 feet to 450 feet, is primarily made up of common cattail, bur reed, and river bulrush, with a good mixture of many other species, such as softstem bulrush, smartweeds, bittersweet nightshade, scouring rush, sweet flag, and arrowheads. In certain areas of shallow water there are several species of **Carex** sedges. All of these plants are well distributed in Wisconsin marshes. Duckweeds and pondweeds are abundant floating plants. Wet weather kept the water level high throughout the summer of 1967.

There is abundant microscopic life, as well as insects, insect larvae, and crayfish. Fish, amphibians, reptiles, and mammals which have been seen are listed in the table below.

Table 1

Fish
- Blunt-nosed minnow
- Fat-head minnow
- Black bullhead
- Green sunfish
- Brook stickleback

Amphibians
- American toad
- Leopard frog
- Green frog
- Spring peeper
- Blanchard's cricket frog
- Western chorus frog
- Gray tree frog
- Tiger Salamander

Reptiles
- Common garter snake
- Painted turtle
- Blanding's turtle
- Snapping turtle

Mammals
- Meadow vole
- Deer mouse
- Muskrat
- Eastern mole
- Cinereous shrew
- Short-tailed shrew
- Little brown bat
- Opossum
- Skunk
- Raccoon
- Mink
- Red fox

Although some of these species are inhabitants of the edge, they probably all have a close connection with the marsh. It is also possible that the Great Plains narrow-mouthed toad is present. The insect life includes deerflies, mosquitoes, damselflies, and at least three kinds of dragonflies. Mosquitoes turned out not to be much of a problem, since they rarely ventured out into the marsh during the day. Deerflies, on the other hand, were persistent pests in the late summer, especially over the open water.

The census began on May 26, and ran through June into early July. In late July and early August a few more days were spent observing young birds. During September a great deal of time was spent studying Least Bitterns as well as getting migration dates for various species.

The count of nesting pairs in the thirteen acres of cattail and sedge is given below.

Table 2

Red-winged Blackbird	47	Pied-billed Grebe	3
Long-billed Marsh Wren	23	Common Gallinule	2
Virginia Rail	7	Common Grackle	2
Sora	6	Common Bittern	1
Black Tern	6	King Rail	1
Least Bittern	4	Swamp Sparrow	1
American Coot	4		

Most of the count was based on actual nests found. In the case of the Long-billed Marsh Wren, 57 dummy nests and only seven active nests were found. However, 23 territorial males were counted. The rails were well advanced in their nesting by June, and again territorial birds had to be counted. Broods of Pied-billed Grebes, Common Gallinules, and King Rails were seen, but their nests were not found.

In addition, the regular visitors were the Green Heron, Mallard, Black Duck, Blue-winged Teal, Wood Duck, Traill's Flycatcher (fitz-bew), Robin, Yellow Warbler, Yellowthroat, American Goldfinch, and Song Sparrow. During the summer a Great Blue Heron, Killdeer, a pair of Spotted Sandpipers, a few Lesser Yellowlegs, Chimney Swifts, Belted Kingfishers, Yellow-shafted Flickers, Eastern Kingbirds, Tree Swallows, Bank Swallows, Barn Swallows, Purple Martins, Black-capped Chickadees, and Cedar Waxwings were seen occasionally. A Lesser Scaup remained through June 2. Twice Yellow-headed Blackbirds were seen, but they were chased away by the very aggressive red-wings. One Woodcock was discovered under the trees near the water's edge.

It was never established whether the ducks seen regularly nested in or near the marsh, despite several searches. Twenty-four adult Coots were counted before and again after the mating season, which raises some question as to where all their nests were. It was impossible to count Coot broods accurately. The rails nested quite early. The last nest found with eggs was discovered on June 15. However, the first Least Bittern nest was found June 10, with only two eggs laid, and bittern nests were watched well into July. The first gallinule brood was seen July 28. This points up the fact that a nesting bird census must last several weeks to be complete.

The big attraction this summer was the family of King Rails. They were discovered on July 3, walking along the railroad track very early in the morning. Their nest had not been found because the appropriate area was searched too late, and we had no idea the species was even present in the marsh. Their morning walk on the track was repeated often during the next few weeks, and was observed by many people. Sometimes a Virginia Rail family would also appear, making a vivid impression of the size difference. The King Rails had six young. On

one occasion an adult was seen to bring a crayfish out of the marsh and open it for one of the young. Both birds then finished it.

Crayfish remains were also found at an abandoned Virginia Rail nest. On June 8 Chauncey Wood, my husband Richard, and I had the opportunity of observing a hatching Virginia Rail in a sedge tussock. These birds get off the nest as soon as they have rested from hatching, and take cover in the vegetation. They will return to the nest, however, if the coast appears to be clear.

On June 28 a male Least Bittern was surprised on the nest, and instead of fleeing, flattened himself, opened his wings, and made a noise much like a Bronx cheer. It was quite clear that he would attack if I came closer than my distance of three feet. I decided he was best left alone and the eggs uncounted. One of the Least Bittern nests was watched from a blind. The young used the nest for resting and preening, but spent less and less time there as they grew older. They would often leave the nest to be fed and return to sleep. By August the young birds began to appear along the edge of the cattails. They do not normally stand in the water, but grasp the stems of plants just above the waterline. Only once did we see a Least Bittern wade, and this was a sick one trying to escape our canoe.

In September some of the visitors were the Pintail, Ring-necked Duck, Ruddy Duck, Common Snipe, and Palm Warbler. The two kingfishers which had been seen occasionally during the summer were found shot, two weeks apart, in late September. The poaching problem was serious all summer, and it is a wonder so many birds survived. The near absence of blackbirds in the cattails nearest the track was noted, however. Coots and Soras were found dead on the track in the spring.

Three King Rails, two adults and an immature, were seen on September 3. The last two of these birds were seen on September 4. Presumably this was the same family that had been seen in July. The other rails remained much longer. Some of the last dates are Sora, Least Bittern, and Common Gallinule, September 21; Long-billed Marsh Wren and Virginia Rail, September 22. During September an adult Virginia Rail was discovered which had lost half of one leg. We did not know whether it would migrate or not, since it was still there on October 25. No Common Bitterns were seen during the fall. In fact, we were surprised to find their nest, because we saw them very rarely during the summer. Least Bitterns, aside from being more common, was easier to see. The Black Terns departed in August.

Muskrats and turtles were more in evidence in the late summer and early fall than during nesting season. At the end of September the muskrats suddenly began furious activity in house-building. Muskrats contribute substantially to the control of marsh vegetation. They work against the natural plant succession by opening leads in the cattails, clearing spaces around their houses, and uprooting and eating the vegetation. Often an opening made by a muskrat figures prominently in the choosing of a nest site for a marsh bird, which needs easy but safe access to its nest.

My study of Dunn's Marsh was made at first by wading and later by canoe. In the beginning I tried wading with shorts and sneakers, but the leeches were such a problem that waders had to be used. These made

for comparative comfort, but it was harder to wade in the deep water where the cattail root system was floating and had to be stepped over. Nest hunting by boat, however, would have been impossible. On the other hand, the existence of open water in the center of the marsh made it easy to observe both adult and young birds during the late summer.

Attempts have been made by various people in the past to secure the future of Dunn's Marsh, but nothing much has come of this. Many marshes near Madison are being seriously threatened right now. In addition to the obvious problems of filling and draining, dumping and building, there are also the problems of chemical pollution, algae blooms, poaching, heavy motorboat use, and destruction of habitat by carp. Carp stir up the bottom and disturb other fish. They are not a natural link in the food chain. If there is an algae bloom, that is, an uncontrolled growth of a few species of algae due to chemical pollution, copper sulfate is often used as a control. This is a poison which kills a variety of microscopic organisms and cuts off the bottom of the food chain. By an accident of location and ownership, Dunn's Marsh is not affected by many of these problems, and it therefore is still very much alive and especially worth preserving. Furthermore, it is one of the few places left where a citizen of Madison can easily go to observe the plants, animals, and birds of a natural marsh.

Just north of the railroadtrack a housing project is underway. This means the end of the small marshy area north of the track, although the marsh proper appears to be protected by the track itself. The development also means more and more people will be shooting and throwing things into the marsh. The uselessness of marshland, in most people's eyes, is becoming an ever more serious problem. Possibly a drainage line will be run through the marsh in the future, which would mean siltation and a fluctuating water level, with resultant destruction of nests and food supply. Dunn's Marsh, however, is only one example of the conservation problem facing everyone. We are in grave danger of losing most of our wetlands.

The Dunn's Marsh project, although sometimes trying, was a great deal of fun and very educational. It brought increased bird watching activity for many people. Hopefully, it will also add to the increasing awareness and concern over wetland problems.

I want especially to thank my husband Richard, who spent many happy hours with me wading and paddling, and Dr. James H. Zimmerman of the University of Wisconsin Arboretum, who gave me a great deal of information and encouragement. I also wish to thank Donald Samuelsen for the use of his list of fauna found in Dunn's Marsh.

Battle To Death—
Our Changing Aquatic Environment

(Highlights from a talk given May 18, 1968, at the 29th Annual Convention of the Wisconsin Society for Ornithology at Green Bay, Wisconsin)

George Becker
Wisconsin State University
Stevens Point

One inevitable cycle involves that great commodity—water. When we take a drink we are drawing water which has passed through the bodies of a wierd assortment of plants and animals. These organisms defy description, many of them such as snakes and poisonous puffer fish are enough to make us shudder. For the water we drink here in Green Bay has in large measure come from the Gulf of Mexico. It was carried here under the force of the south wind and dropped just to the north of us. Some of this water seeps into the ground and we tap this with our wells; some replenishes our lakes, fills our reservoirs and then flows down the Great Lakes Basin to the Atlantic. At any rate, all water seeks its lowest level—the sea. On the way it is used and reused in many organisms, in man, in machines, in factories, in community after community. Water is our life blood, and its pump is the sun lifting it from the sea and driving it landward again.

The water to the ocean bears an enormous load. Rains wash the nitrogen, silicon, calcium and phosphorous compounds from the rocks and soil. Man helps this along by loosening the soil, by spreading salt on winter streets and highways. He dumps treated and untreated municipal wastes into our rivers, lakes and seas. Where he doesn't dump, seepage eventually does the trick. Rich in nutrients, these wastes are responsible for the blooms of foul-smelling blue-green algae; they close our swimming beaches, they warm our waters.

The steady march of chemicals, effluent and salt seaward is pretty much a one-way proposition. Yes, these freeloaders may tarry some along the way—befouling Lake Mendota, tainting Green Bay and destroying Lake Erie. Eventually, however, currents will carry their load to the Great Sink, paraphrased by one as The Ultimate Sewer. Once in the ocean, these materials have no other place to go. Increased and continued contamination of our oceans is foreordained.

During this march, problems arise affecting all of us. Let us consider these items:

Madison, Wisconsin – A United States Geological Survey spokesman says that the flow of the Yahara River (outlet of Lake Mendota) is half that of ten years ago. The deep wells with which the City of Madison has ringed Lake Mendota may be responsible for this decrease.

Madison, Wisconsin – Oxygen depletion, caused in part by paper mill wastes has resulted in a substantial fish kill in Lake Wisconsin and the Wisconsin River from Wisconsin Rapids, downstream to Sauk City . . . the kill included sturgeon in the 75 to 100 pound class.

Biloxi, Mississippi – The United States Board of Health has closed the rich oyster fishery in Biloxi Bay. "Contamination of this large estuary with **E. coli** bacteria", said one official, "has made this action necessary. The oysters are thriving, but they may be reservoirs of human diseases and dangerous to man's health."

Beloit, Wisconsin – Pollution of the oceans along American shores may get so bad that using them as a source of food may not be safe, the Director of Major Research at the Marine Biological Laboratory in Woods Hole, Massachusetts said here Thursday.

Oil and other industrial filth sullies the shore shallows all the way from Baltimore to Boston, he declared. "This is part of the price of the crowding of the planet by humans," he said.

Stevens Point, Wisconsin – Walleyes and northerns are abundant in the Wisconsin River and provide keen sport for the fisherman and outdoorsman. However, because of the paper mill wastes, these fish are not usable for the table. Even smoking or soaking in brine does not help.

Madison, Wisconsin – A special committee of the Water Resources Center, Madison, gives priority to research directed toward improving the taste of fish from certain Wisconsin rivers.

Washington, D.C. – Interior Secretary Steward Udall's program and timetable for cleaning up Lake Michigan calls for the dumping of polluted dredging materials in the lake to stop. The state's and the Army Engineers are to report what they are doing about it. Then the conferees will consider setting up a program to deal with the problem.

Milwaukee, Wisconsin – Harbor officials maintain that the open lake should continue to be used as dumping grounds for dredging materials. "We have dumped dredging materials into the lake for years," said one unidentified official, "and there are more fish than ever."

Milwaukee, Wisconsin – An outdoor editor reports a new fishing bonanza in rainbow trout off the Wisconsin shores of Lake Michigan. "Large rainbows in the 10 to 15 pound class are being taken off Algoma," he said, "and we are expecting new records this year, probably reaching 20 pounds. The phenomenal growth exhibited by these trout and the coho salmon is due to the ubiquitous alewife which are consumed in enormous quantities.' '

Madison, Wisconsin – "The yearly bloom of noxious blue-green algae in Lake Mendota is getting worse," said a Wisconsin State University professor who asked that his name be withheld. "Much of this is due to the run-off of fertilizers into Lake Mendota, particularly through Pheasant Branch Creek. Lake Mendota has become a cesspool soaked in nutrients which will quickly drive the lake to extinction."

Madison, Wisconsin – A recent article appearing in the Transactions of the Wisconsin Academy of Sciences, Arts and Letters disclosed that the cisco, formerly an important fishery resource of Lake Mendota, is almost gone. This species grew to the three- to four-pound size, and at one time it provided brood stock for hatcheries throughout the state. It is believed that warming of Lake Mendota coupled with an oxygen deficit makes it difficult for this cold-water species to survive.

The foregoing items point up that changes for good or bad are rapidly seizing our state waters. What is an acceptable change to one interest group may be rejected by another. For instance, the rainbow-coho success satisfied the sportsman but it is rejected indirectly by the shoreline owner and the general citizenry. For both are related to the alewife irruption; the sportsman enjoys fine fishing because the alewife constitutes the breadbasket for giant rainbows and cohos, but alewife surpluses die off and windrows of these along our beaches cause discomfort, distress, and expense to thousands of Wisconsinites.

Within our waters are complex food chains. One simple chain proceeds from the one-celled alga, eaten by small crustaceans barely visible to the naked eye. A minnow gobbles up the crustaceans and the minnow in turn serves as a meal to the bass. You go after the bass. Man, a fish out of water, sits at the top of the food chain. Somewhere along the line the fish duck, cormorant, osprey and gull have a lunch. It is remarkable how dependent each food level is on the level directly beneath. A radical alteration of any step in the chain will result in significant changes at the high levels. By adding nutrients to the water, we get significantly higher algal cultures making **more** food for the crustaceans. These quickly respond by stepping up reproduction providing enough Daphnia and Cyclops to satisfy all the minnows and so on and on.

But there is a saturation point to which these fertilizers can be assimilated without changing radically the nature of the environment. Without going into the mechanics, overly-fertilized waters often result in increased water temperatures and oxygen depletion, accounting for the extinction of the cisco mentioned above and responsible for drastic turnovers in species composition. Lake Erie thirty years ago provided the commercial fisherman with the delectable blue pike and a fine table cisco. These are now gone. In their place are rough fish, including large goldfish. On the geological timetable this phenomenal change occurred in less than a second.

Other disruptive forces have only recently entered the picture. Non-degradable hydrocarbon pesticides attack the food chain by destroying one or more levels. Food chains in the aquatic environment are especially vulnerable to pesticides sprayed directly on them. Researchers fear that great kills of plankton could be caused by pesticides and not be noticed. Its absence, however, could mean the loss of an entire crop of fish dependent on it for food. In laboratory tests, scientists learned that most of the chlorinated hydrocarbons, at a concentration of 1 ppm in water for 4 hours, will decrease plankton growth and reproduction by 50 to 90%.

Laboratory tests reveal that some pesticides in fantastically small amounts kill crabs and shrimp. One part of DDT in a billion parts of water will kill blue crabs in 8 days. (One part per billion is about the relationship 1 ounce of chocolate syrup would bear to 1,000 tank cars of milk.)

Shrimp, the most valuable commercial fishery resource in the United States, spend part of their lives in estuarine areas susceptible to pesticide pollution. Since they are rather closely related to insects, the insecticides are particularly toxic to them.

In Wisconsin, tests have now been conducted on over 2,300 fish collected from 88 inland lakes and streams during 1965 and 1966. Every sample of fish analyzed contained DDT.

Two ominous facts should be placed side by side. First is the rapid increase in pesticide use. Second is the fact that certain pesticides such as DDT can now be found in tissues of animals from the sea.

You are all aware that birds have for years been used by man as indicators of change in the environment. The story of the caged canary taken into the depths of mines for detecting presence of gas is an old one. Recently a number of fish-eating birds are running into trouble. Hard pesticides are suspected.

A classic example of how this operates in the food chain comes from Clear Lake, California. To control a troublesome flying insect that hatches in the lake, the water was treated with the insecticide DDD to yield a concentration of 0.02 ppm. Plankton accumulated residues at 5 ppm. Fish that ate the plankton concentrated the DDD in their fat to levels ranging from hundreds to upward of 2,000 parts per million. Grebes fed on the fish and died. The highest concentration of DDD found in grebe tissue was 1,600 ppm.

It is evident that some of what is happening to the aquatic environment is only indirectly under man's control. Natural objects, from dust through boulders, from phosphates through metal oxides will seek the lowest gradient. Sooner or later they will drop into the sea and add to its contamination. Man, however, with his high resource use, his consumption of 50 to 200 gallons of water per day, his quantities of junk, refuse and poisons, adds in a year what it would take nature over a hundred years to do on her own. Regardless of man's guilt, THE PROCESS IS INEVITABLE. The extinction of many aquatic forms that we know today is as sure as death and taxes. Our only alternative in this process is to slow it down.

The price we would have to pay in order to preserve our aquatic heritage is one which we, in our present state of mind, are unwilling to pay. The actual cost is only 11 cents per day per person. The biggest sacrifice calls on our restraint and wisdom, qualities which we hesitate to exercise.

When, I wonder, will we come to accept that we must live in harmony with our environment rather than beating it into submission? When will we learn that with the death of our waters, we too will perish?

Larkie . . .

By MARY H. STAEGE

One morning early in June of 1958 a friend brought us a tiny orphaned meadowlark. She had had no experience with birds and did not know what to do with the helpless, unlovely creature. Knowing of my interest in birds and of my various experiences with them she hoped I might relieve her of this responsibility.

The neighbor who gave the bird to her had found it in the field with no trace of the mother or other nestlings around. She could not keep the lark because she had an unfriendly dog and a cat with hungry kittens. I realized that the rearing of a baby bird would be a time consuming job, but to refuse to take it would put my friend in a difficult situation. So Larkie was adopted into the family of two 'bachelor girls" and their German Shepherd, Duna.

Since Larkie could neither fly nor feed himeslf he was very dependent upon us. He soon learned my voice as that of his foster mother. As soon as he heard me in the morning he would say "peep" and immediately I would take him up and feed him. He was never fed during the night but he thrived, never-the-less, and was never sick.

His first food consisted of bread moistened with milk, also cottage cheese and banana. A little later, berries and other fruit, cooked vegetables and dog meal were added to his diet. I had to force feed him as he did not know how to eat. Even after he was able to feed himself he wanted me to stand by and give him his food bit by bit. But when we gave Duna her serving of dog meal Larkie would run to the dish, hop in and help herself. Duna would back away, whining softly or giving one sharp bark to indicate her displeasure.

Larkie's bed was a box of dry grass or pine needles with a thin wool coverlet draped over it. On sunny days we would put him out of doors for a short time in his covered box. One day while I was away he hopped out and became lost. My sister could not find him and it was nearly dark when I came home, so rescue then was hopeless. Early the next morning Duna and I started out to look for him. It seemed useless, so I finally went to work in the garden while Duna continued the search. In a few minutes I heard an exultant "woof" and looking up I saw Duna sitting in the tall timothy not far from the garden. As I went to her she put her note down in the grass, and there sat Larkie.

Larkie was never caged or deprived of his freedom. He had the run of the house, and run it was, on our part as well as his. With plastic covers and towels in the more vulnerable areas, and with the assistance of Duna, we did get some time for household duties.

After Larkie had been with us for a while we began taking him out of doors daily with Duna as birdie-sitter, under our supervision. From puppy days she had been taught to be kind to birds.

Larkie had a favorite place in the wildflower garden where he entertained himself by pulling on the stems of plants and flowers until he

fell over. He would hop up, run in circles and occasionally rush at Duna, giving her a peck on her persuasive nose. She did not retaliate, but dutifully minded her charge. When Larkie strayed too far away she carefully rounded him up and herded him back to safety. In the flower garden Larkie liked to probe the earth for worms or insects. When he saw a bird or an airplane fly over he would stretch up to full height, head on one side scanning the heavens, or crouch to the ground, making a quick dive for cover. It was not unusual for Duna to look after Larkie when he was out of doors. She would lie down near him as he searched for insects. When he moved to another place she would follow him in her protective role. One day Larkie was in the rose garden near the house when a squirrel appeared on the scene and frightened him. Half running, half flying, he went to Duna for protection.

Larkie loved to be with us but was afraid of strangers. When two friends came to see him he was frightened and disappeared into a thicket. I told Duna to find him, then realized that only the day before she had killed a pine snake in that very place, and that she might hurt hurt Larkie, thinking he was another snake. In desperation I tried to call her off, but she already had him in her mouth and was carrying him out to the lawn where she deposited him without injury. Had she been a retriever it would be conceivable, but for a police dog, bred for the offensive, it was past understanding.

At the corner of the house there was a puddle of water left by a sudden shower. We noticed Larkie taking advantage of it, so we supplied him with a "bathtub" which he used regularly. When in the house the urge to bathe possessed him, he ran to the little bathroom off the kitchen and utilized Duna's drinking dish. One day his desire for a bath nearly ended in tragedy. I heard a vigorous fluttering and splashing in the bathroom and rushed in to find Larkie in the toilet. He was quickly rescued, unharmed. After bathing he would shake himself and go on the hop, skip and run to his box where he cuddled down to dry off.

Larkie liked to play as well as a little kitten, and in much the same manner. He would seize a piece of crumpled tissue with his claws and lie on his side kicking it and tossing it up. A sheet of folded newspaper was another source of amusement for him. He would boost it up to form a canopy where he would sit looking out at us. Often he would hop up on my sister's bed and cuddle up to her face or under her arm where he would sit contentedly. At other times he would have a regular tug-of-war with anything at hand, kicking and skipping until he occasionally rolled off onto the floor. If the door of my sister's room was closed and he wanted to get in he would patiently stand beside it, waiting for it to be opened.

As I lay down to take a nap one afternoon Larkie hopped onto the bed and began to pick me. I put him off repeatedly, but he immediately returned. Finally he cuddled up close to my face and I began to relax. Just as I started to doze, a sharp stab in my ear resulted in Larkie finding himself at the foot of the bed. In less time than it takes to tell it he was back again, ready for another onslaught. This time it was in my nose. Once he crawled into a sweater pocket where he was unable to turn around or get out, and had to be forcibly extricated.

Nothing escaped Larkie's attention. One morning I picked some marigolds and placed them in a bowl on the dining room table. A few minutes later I returned to the room to find my carefully arranged flowers scattered all over the table and Larkie busily disecting the heads.

Larkie seemed to enjoy being with me. He would perch on my hand as I carried him around the yard and down the road for walks. I was reminded of my sister's words when he first came to us. She said she doubted that a meadowlark could ever be tamed as young robins are, but Larkie demonstrated that he could not only be tamed but could become an affectionate and lovable pet.

Larkie early became quite an accomplished singer. We could scarcely believe it the first time we heard him imitating the birds outside. One could easily recognize the song of the indigo bunting, goldfinch, wren and catbird in his repertoire. He sang nearly every day, usually standing in the window, but often he sang while sitting or playing. Sometimes he would run around the kitchen singing while I was preparing breakfast. After the birds outside stopped singing he no longer imitated them but had a sweet little song all his own, very unlike the usual song of the meadowlark. During the latter part of his stay with us he sang a great deal. He would stand on a chairback or even on our hand or head and sing. Once we discovered him standing on a chair before the radio singing in harmony with the music. When that stopped he flew to another room; then as the program continued he again took his place before the radio and joined in as before. He always sang with his bill closed. During this period he began giving the typical call of the adult of his species.

On the 8th of July Larkie made his first flight. It was a short flight and he soon returned to continue his search for grasshoppers and other insects. Whether in the house or out of doors, when I put my hand down and said "hop on" he would step up on my hand and "ride."

Larkie's ability to protect himself as might be necessary in the wild state was amusingly demonstrated in one of his playful moods. One day as I was washing the floor he rushed up to me, gripped the flesh of my forearm with his powerful beak and followed the motion of my arm, "singing" all the while with his beak closed, as usual. He hung on so tenaciously that I repeatedly lifted him off the floor without his once letting go. This was apparently more fun for him than for me. His sword-like beak could be used as a formidable weapon upon occasion.

The 18th of September was a memorable day, for Larkie was banded. And fortunate it was, because the next morning he took his departure. Workmen were here that day, and the pounding and other strange noises terrified him. When I took him out of doors he flew across the road to a little wooded swamp beyond an open field. Duna and I searched in vain for him and nally had to give up. The next day as I walked down to the mailbox with Duna I said "Can't you find Larkie?" Coming back I noticed she was tracking something in the clover field where I had often taken Larkie to hunt grasshoppers. Then, to my amazement and great joy I saw Larkie standing straight and tall—the sun shining on his golden breast—and with a song in my heart I went to him, put my hand down and said "hop on" and he stepped up on my hand and was carried to the house.

As Larkie was feeding on the lawn one morning he suddenly flew across the road and was lost in a growth of small trees and shrubs. A storm was approaching and we were concerned for his safety. Not finding him, we returned to the house in the rain. A little later I started out again with Duna. She ran on ahead and as I rounded the big cedar tree at the corner of the yard she lay with forepaws outstretched, facing Larkie, her expression telling me the lost was found. As usual, Larkie stepped up on my outstretched hand and accompanied us to the house.

On October 8th as Larkie was hunting insects at the edge of the garden he suddenly took flight, soaring above the treetops and across the fields. Then he came down to the very place from which he had taken off. This was the longest flight he had made, but it was followed by many others. The next morning there were three meadowlarks in an elm tree beside the garage. Larkie, standing in an open window, heard them singing. Soon afterward we heard him singing the typical meadowlark song for the first time. Until we heard this, and his previous call note, we thought he might be a Western meadowlark because they are heard in this locality every spring, sometimes before the Eastern lark arrives. My first experience with the former was a mystery. It sounded like a wood thrush but its song came from the field or the top of a telephone pole. Not until I later saw and heard them in California did I discover the real source of the song. Now they are quite common here and nest in our fields.

An article in a nature magazine some years ago stated that experiments with hand-raised larks would indicate that their song is learned, rather than inherited. This would seem to be true in Larkie's case.

After hearing the three meadowlarks our Larkie seemed more restless, flying from room to room, and when out of doors would make several flights a day but he always came back promptly.

On the morning of October 17th he seemed to feel an urgent desire to get out of doors, as though instinct told him it was time to be on the way south. He flew excitedly about the house, giving his characteristic call of two or three notes followed by a string of notes in rapid succession. He also uttered some harsh, scolding kind of notes in marked contrast to his usual sweet warble. When I took him outside he began hunting insects on the lawn, then made a short flight and returned. A little later I saw him winging his way to the southwest until he was lost to view.

Larkie had been so happy and contended with us here that his sudden departure is understandable only in the light of his migrating instinct. We are hoping that this natural impulse would bring him back to us with the coming of spring.

* * * * *

Yes, bringing up Larkie had taken much time, work and patience but it was a rewarding experience. His songs and his endearing ways repaid us for all our effort and brought us joy and satisfaction.

FIELD NOTES

By NANCY and HAL ROBERTS

Summer Season **June 1 - August 15, 1967**

The summer season started off with record June rainfall throughout the state; there were few days without rain during the month. Temperatures were low through June and into the first week of July. The remainder of July had brief periods of heat and drought. Early August continued cool with near normal rainfall.

The cool, wet June had its effect on nesting. Writing about waterfowl nesting, James March, Waterfowl Research Biologist with the Wisconsin Division of Conservation, said, "Below normal spring temperatures apparently delayed the nesting season seven to ten days, especially for Teal. Some of the early clutches may have been destroyed by the cold weather; some nests may have been flooded out by high water. Re-nesting efforts plus the surplus of water appear to have made up for most losses and Mallard and Blue-winged Teal production is equal to or higher than 1966. Many late broods have been reported." Mr. March notes that Wood Duck and Ring-necked Duck numbers are well below those of 1966, while the number of Redheads showed an increase.

In Waushara county, Irma Chipman felt the cool, wet weather had an adverse effect on nesting; "I have seen fewer young birds this year than any other year. I feel that the first nestings of birds were lost either due to the cold late spring or bad storms in June.

Another indication of the effect of the weather was reported by Ed Cleary who said that a bee-keeper friend had to purchase 59 sacks of sugar to feed his bees until July 8.

Many observers noted that it was a poor year for swallows in general and Purple Martins in particular. However, there was agreement by nearly all observers that it was a good year for Dickcissels. The following is a quotation from John Emlen, commenting on the results of his Dickcissel survey: "One hundred and seven farmland roadside counts made by 26 cooperators in the 1967 Dickcissel survey show that the birds arrived late (May 25-28) but flooded Wisconsin in large numbers for the fourth consecutive year. The counts were the highest yet recorded at 11 of the 21 areas for which complete four-year records are available; Dickcissels outnumbered the combined counts of Meadowlarks at three of these areas. They were more widely dispersed and in general penetrated farther north than in any previous year, with "colonies" reported from Washburn, Langlade and Door counties. Counts were generally up in

southeastern and western regions, down in the southwestern regions and variable in the south-central region."

A total of 61 observers contributed to our knowledge of the 1967 summer season—a record number. All sections of the state were quite well covered; reports came from 62 of the 72 counties.

The season held its share of highlights but few out-and-out rarities. A few cases of albinism were reported; a Flicker in Wood county by Don Follen Sr., and a Tree Swallow by Mrs. Eugene Schmeck. Following are some of the more interesting observations of the season.

Common Loon: Two adults and two young in Manitowoc on June 25 suggest nesting there although it has not previously been known to nest in the area (Bernard Brouchoud). A group of 51 in Superior June 1 (Richard F. Bernard).

Red-throated Loon: Three with the large group of Common Loons in Superior on June 1 (Bernard).

White Pelican: A group of 35 at Stoddard, Vernon county, remained from June 28 to July 4 (F. Z. Lesher).

Double-crested Cormorant: One pair believed to have nested in Crex Meadows, Burnett county (N. R. Stone). Other sightings in Douglas county June 1 (Bernard) and five in Marinette county (Harold Lindberg).

Common Egret: Noted in Brown county (C. H. Richter, Ed Cleary and Ed Paulson); numbers up in the Necedah Refuge (Ed Collins). Also found in Marinette (Lindberg), Vernon (Viratine E. Weber) and Dodge counties (Mr. and Mrs. Richard Sandburg).

Little Blue Heron: An adult observed at close range in Winnebago county on June 15 (Daryl Tessen and Sam Robbins).

Yellow-crowned Night Heron: A pair nested in Greenfield Park, Milwaukee, where three young were observed until July 23 (Dennis Gustafson, Mary Donald). Two in Wyalusing Park, Grant county on July 2 (Sandburgs).

Least Bittern: Out of the expected area for summer observations were two at La-Crosse on June 10 (Lesher) and one in St. Croix county on July 4 (Robbins).

Whistling Swan: Eight in Bayfield county on June 2 (David A. Bratley) and one in Oconto county June 18 (Richter).

Canada Goose: 40 broods in Crex Meadows (Stone), 26 downy young with six adults in Brown county June 3 (Richter). 72 birds were raised at Necedah (Collins) and two pairs nested successfully in St. Croix county (Robbins).

Blue Goose: One remained in St. Croix county until June 12 (Robbins) and one at Goose Pond, Columbia county until late July (Chauncey Wood).

Gadwall: In Brown county (Cleary and Paulson); one in Horicon Marsh July 15 and one in Racine August 4 (Gustafson). A pair in Dane county June 18 (Sandburgs).

Pintail: Late migrants in St. Croix county to June 19 and Columbia county June 2 (Robbins). A July 15 observation in Horicon (Gustafson).

American Widgeon: Two broods of eight each were raised in Crex Meadows (Stone); other observations include migrants June 2 in Columbia county (Robbins) and June 3 in Winnebago county (Tessen). Found until July 1 in St. Croix county and six were at Goose Pond, Columbia county on July 8 (Gustafson).

Redhead: A female with six young at Horicon on July 28 (Gustafson). Also in Dodge county, two females on August 5 (Rockne Knuth). Two present at Goose Pond on July 8 (Gustafson).

Ring-necked Duck: Nesting seems to be down from last year: In Crex Meadows, Stone found 34 broods, compared with 70 in 1966. None found nesting in St. Croix county where they had been in previous years. Remained there until June 19 (Robbins). Other observations include Polk county to June 19 (Robbins), a male in Winnebago county July 11 (Tessen) and one in Waukesha county July 17 (Gustafson).

Canvasback: One report—one in Milwaukee June 19 (Gustafson).

Scaup: Remained for the summer in fair numbers in Superior where 36 Lesser and six Greater were found in one spot on July 9 (Bernard).

Common Goldeneye: One male summered in St. Croix county (Robbins); one noted in Winnebago county on June 3 and 12 (Tessen).

Bufflehead: A straggler in Columbia county June 2 (Robbins).

White-winged Scoter: One noted June 1 to July 4 at Wisconsin Point, Superior (Bernard).

Common Scoter: One on June 9 at Wisconsin Point, Superior, is a rarity (Bernard).

Ruddy Duck: 30 at Goose Pond through July (Gustafson).

Hooded Merganser: Unusually far south is the female found in Rock county June 21 (Virginia Anderson). Also noted in Douglas county June 19 (Robbins), with young in Iron county on July 13 (David J. Snarski) and in Price county (Alice Vincent).

Common Merganser: Also far south is the one in Milwaukee from June 29 to July 6 (Gustafson). Young were seen July 5 in Iron county (Snarski).

Red-breasted Merganser: 32 pairs were counted in Door county islands by Henry W. Pelzl. One was in Milwaukee from June 19 to 22 (Gustafson).

Turkey Vulture: Noted in most of the state including one in Vilas county July 7 (Tessen).

Goshawk: Three young in nest discovered June 12 in Douglas county (Bernard, Charles Sindelar, Allen Jacobson). One bird in Forest county on July 5 (Robbins).

Pigeon Hawk: A first positive nesting record for the state; a nest with two very small young and one egg was found at Rainbow Flowage, Oneida county on June 25 (Sindelar).

Sparrow Hawk: Several observers commented on the increase in numbers. Frank Renn says large groups moved into the Buena Vista marsh area, Portage county, in August.

Sharp-shinned Hawk: South of the expected range was a nest near Hamerstrom's house, Portage county (Renn). Also found in Douglas county June 4 and July 25 (Bernard) and in Bayfield county August 10 (Robbins).

Cooper's Hawk: Three reports—Douglas county from July 28 on (Bernard), Vilas county July 19 (Alfred S. Bradford) and one in Sawyer county August 17 (Tessen).

Bald Eagle: Reports from Douglas, Bayfield, Iron, Vilas, Oneida and Forest counties. The Oneida county observation was of a nest with two young (LeRoy Mattern). One adult was seen in Necedah, Juneau county, on July 14 (Gustafson).

Osprey: Two young birds were exercising their wings in the nest in Marathon county on July 31 (Mrs. Art Hundhausen). One observed in Outagamie county August 10 (Tessen), one in Brown county August 13 (Cleary and Paulson). Four active nests were found in the Flambeau Flowage area (Sandburgs).

Sandhill Crane: Numbers were up on the Buena Vista and Leola marshes, Portage and Waushara counties (Renn). A pair and one young bird were seen in Crex Meadows (Stone). Four in Racine county June 1 were presumed nesting by Louise Erickson.

King Rail: A family of four young and two adults was observed in Madison on July 3 and 4 (Ralph Mancke, Wood, Sandburgs). Found in Brown county July 8 (Melvin Wierzbicki), two in Waukesha county on June 4 (Gustafson) and one in Milwaukee on June 12 (Donald).

Piping Plover: A nesting on Barker's Island, Douglas county. Bernard first discovered them on July 3 when he saw two birds. An adult and four young were found by him on July 31. Three birds were still there August 8 (Robbins).

Snowy Plover: A second record of this species; one in Douglas county at the mouth of the Brule River on June 4. Carefully observed and all field marks noted (Bernard).

Black-bellied Plover: Last spring birds in Douglas county to June 9 (Bernard). First fall migrants in Racine on July 9 (Gustafson).

Ruddy Turnstone: One present in Douglas county from June 1 to July 3 is most unusual (Bernard). Migrants noted in St. Croix county to June 5 (Robbins) and had returned to Racine by July 28 (Gustafson).

Common Snipe: 18 were found at the Genoa Fish Hatchery, Vernon county, on July 28 (Margaret Morse). One was heard displaying at dusk in Monroe county (Sandburgs).

Solitary Sandpiper: First fall migrants on July 4 in St. Croix county (Robbins) and July 11 in Winnebago county (Tessen).

Willet: One at Wisconsin Point, Superior on June 1 (Bernard).

Greater Yellowlegs: Had returned to Goose Pond, Columbia county, by July 8 (Gustafson).

Lesser Yellowlegs: First fall birds in Brown county July 8 (Wierzbicki) and at Goose Pond same date (Gustafson).

Knot: One was observed June 4 with Black-bellied Plovers in Marinette county (Richter) and one in Milwaukee August 10 and 11 (Gustafson).

Pectoral Sandpiper: First fall birds in Racine on July 9 (Gustafson). Spring birds lingered in St. Croix county until June 8 (Robbins).

White-rumped Sandpiper: Latest spring date was June 16, Fond du Lac county (Knuth).

Baird's Sandpiper: Last note in Racine on June 2 (Gustafson), in St. Croix county on June 5 (Robbins) and Douglas county June 9 (Bernard). First fall bird in Fond du Lac county on July 25 (Knuth).

Least Sandpiper: Only June date is of four in Dodge county June 3 (Gustafson). Had returned to Racine by July 9 (Gustafson).

Dunlin: One in Fond du Lac county June 13 is latest spring date. No July or August reports.

Dowitcher: One in Dodge county June 3 (Gustafson); three in Brown county on July 8 with buff on breast still in evidence (Wierzbicki).

Stilt Sandpiper: Two were found August 14 and four August 15 in St. Croix county (Robbins). Two in Dane county July 30 (Wood).

Semipalmated Sandpiper: One spring bird in Fond du Lac county until June 28 (Knuth). Two had returned to Goose Pond by July 14 (Gustafson).

Western Sandpiper: Found at two locations; one in Belgium Ponds, Ozaukee county, on July 17 (Donald) and one in Douglas county on August 8 (Robbins).

Buff-breasted Sandpiper: One found in St. Croix county on July 31 was the first record of the species in that county (Robbins).

Wilson's Phalarope: Spring transients lingered until June 3 in Dodge county (Gustafson) and St. Croix county (Robbins). 10 to 12 were present at each of two locations in Winnebago county and were known to have nested in one (Tessen). Harold Lindberg found none in Marinette county where he usually finds three or four pairs.

Northern Phalarope: Two were seen in Columbia county on June 2 (Robbins).

Ring-billed Gull: Transients present in Douglas county from June 1 to July 3. On June 7, Henry Pelzl found an estimated 2500 breeding pairs on an unnamed island in Door county and another 300 pairs on nearby Spider Island on June 9.

Bonaparte's Gull: Hundreds summered in Manitowoc where over 1000 were present by August 1 (Brouchoud). At least 50 were present all summer in Milwaukee (Gustafson).

Forster's Tern: Two at Goose Pond on June 1 (Sandburgs). Found in Outagamie county from July 20 on (Tessen) and five were spotted in Horicon on July 15 (Gus-

Common Tern: Found in Douglas, Brown, Winnebago, Dodge and Milwaukee counties. 180 pairs on a Door county island June 7 (Pelzl).

Caspian Tern: 12 found at Maiden Rock, Pierce county in mid-July (Richard Behrens); one summered in Milwaukee from June 16 to July 25 (Gustafson).

Barn Owl: One banded in Outagamie county on July 18 and released in the barn where it was found (Wierzbicki). This is one of the most northerly sightings for the state.

Screech Owl: Two immature birds in thes Lakeside Park zoo were taken from a nest in Fond du Lac county (Knuth). Found also in Waukesha county (Mrs. Paul Hoffman), Milwaukee (Donald) and Rock county (Mrs. Joseph Mahlum).

Long-eared Owl: Found in three locations; on July 4 a nest with four young was found in Bayfield county (Bernard), three were found in Whitnall Park, Milwaukee, from June 12 to 18 (Elmer Strehlow) and in Rock county on June 29 and July 11 (Mrs. John H. Brakefield).

Yellow-bellied Sapsucker: One found in Grant county on July 7 is out of the usual range for that date (Gustafson).

Black-backed Three-toed Woodpecker: Two reports—Seen briefly and heard calling near Brule, Douglas county, on June 19 (Robbins) and found near a stream in Bayfield county on August 1 (Mr. and Mrs. Ralph Buckstaff).

Western Kingbird: Found at two locations in St. Croix county; nest was found by Tom Soulen at one of the locations (Robbins).

Yellow-bellied Flycatcher: Four in Douglas county June 19, one in Bayfield county August 10 (Robbins). Found in Sawyer county June 30 (Bernard), Sheboygan county June 3 (Gustafson), in St. Croix county until June 8 (Robbins).

Acadian Flycatcher: One banded at Chippewa Falls on June 2 (C. A. Kemper). Found in Sauk county by Gustafson and H. A. Hespenheide. The latter found four nests and at least eight singing males. Up to eight singing males also at Wyalusing, Grant county (Gustafson, Hespenheide).

Olive-sided Flycatcher: Several unusually far south reports; Waukesha county to June 4 (Bielefeldt), Milwaukee June 1 (Gustafson) and June 6 (Donald) and in Rock county June 11 may have all been transients, but what about the one found in Racine on July 16 (Erickson)?

Boreal Chickadee: Sam Robbins made the only reports; two at Sugarbush and one at Three Lakes, Oneida county, on June 24.

Tufted Titmouse: Only three reports; in Vernon county from two observers (Lesher, Weber) and in Wyalusing Park, Grant county July 7 (Gustafson).

Brown Creeper: Two were found in the Mullet Creek area, Fond du Lac county, on July 4 (Knuth).

Winter Wren: Present in Douglas county from June 1 to July 28 (Bernard), found singing in Bayfield county August 9 (Robbins) and common in mid-July in Iron county (Snarski).

Mockingbird: One in the Glendale area of Milwaukee on June 12 (Donald).

Bluebird: Mixed reports; Tessen found 10 in Shawano county, five each in Langlade and Price counties and notes that they were very common in the Weyauwega area of Waupaca county. Noted more common in Rock county (Brakefield). However, Robbins found the numbers down in St. Croix county. Breeding Bird Survey totals showed numbers down.

Blue-gray Gnatcatcher: Three at Wyalusing, one at Honey Creek (Gustafson). One building a nest June 13 in Waukesha county (Bielefeldt).

Ruby-crowned Kinglet: One in Bayfield county July 3 (Roy H. Lound), three at different locations in Iron county on July 3, 5, and 6 (Snarski), and one in Oneida county June 24 and July 1 in the area where a nest was found in 1965.

Loggerheaded Shrike: A family of six young birds was observed in Sauk county on June 11 (Tom Ashman).

White-eyed Vireo: One at Mazomanie, Dane county, until June 11 (Ashman, Barger, Mancke, Sandburgs, Wood). Another singing at Fox Point, Milwaukee, on June 14 (Donald).

Bell's Vireo: Three were singing in Monroe county June 22 (Sandburgs). Found in Vernon county and LaCrosse in June (Lesher), in Dane county at Mazomanie to July 7 (Ashman, Barger, Gustafson, Wood) and in the Madison Arboretum until July 16 (Sandburgs). Two nests located in Beloit, Rock county, on June 11 (Thomas Ellis).

Prothonotary Warbler: Found in June in LaCrosse and in July at Wyalusing (Gustafson). The Sandburgs found 10 singing at Wyalusing July 2.

Brewster's Warbler: Birds were banded at Chippewa Falls August 3 and 4 (Kemper).

Tennessee Warbler: Spring transients lingered in Ozaukee county to June 3 (Gustafson) and in St. Croix county until June 6 (Robbins). One found in Ashland July 7 (Tessen) is unusual.

Nashville Warbler: Sam Robbins recorded the first summer date for St. Croix county on July 4. He also found individuals in Jackson and Monroe counties on June 2.

Black-throated Blue Warbler: One in Racine on June 5 reported by Louise Erickkson.

Cerulean Warbler: Found as far north as Pierce county on June 5 (Robbins) and Marinette county on June 13 (Lindberg) for the third year.

Bay-breasted Warbler: Found in Jackson county June 2 and returned to Bayfield county August 10 (Robbins).

Palm Warbler: Found in Douglas county on June 9 (Bernard).

Northern Waterthrush: Two reports; in Bayfield county August 9 (Robbins) and in Clintonville, Waupaca county same date (Katherine Rill).

Louisiana Waterthrush: Again two reports; one in Jackson county June 2 (Robbins) and two at Honey Creek, Sauk county July 8 (Gustafson).

Kentucky Warbler: Found in two places near Mazomanie, Dane county (Barger). 10 singing at Wyalusing on July 2 (Sandburgs).

Connecticut Warbler: Four found singing in Douglas county on June 19, one singing in Brown county on June 5 (Wierzbicki).

Mourning Warbler: A nest with three eggs and one cowbird egg on June 21, Oconto county (Richter).

Yellow-breasted Chat: One at Mazomanie on June 11 (Ashman, Barger).

Wilson's Warbler: The earliest fall arrival date was August 12 in Milwaukee (Gustafson).

Orchard Oriole: One in St. Croix county on July 3 (Robbins) is farther north than would be expected.

Dickcissel: Found in increased numbers quite generally throughout the state.

Evening Grosbeak: Reported in seven northern counties throughout the summer period.

Pine Siskin: Observed in Douglas county on June 25 and July 23 (Bernard) and one was in Milwaukee on June 3 (Donald).

Red Crossbill: Bernard found 26 in Sawyer county on June 30. Also noted in Bayfield county on August 10 (Robbins) and in Vilas county on June 10 (G. W. Foster).

White-winged Crossbill: Pairs were found in Douglas county on July 19 and Bayfield county on August 9 (Robbins).

LeConte's Sparrow: Found in Oconto county on June 18 (Richter) and August 8 in Burnett county (Robbins).

Lark Sparrow: Dennis Gustafson found two in Grant county on July 7 and four in Saukc ounty the same day.

Clay-colored Sparrow: One in Shawano county on June 11 (Bielefeldt).

White-throated Sparrow: One in Madison June 14 (Charles Sontag) is far south for this date.

Lincoln's Sparrow: On July 1, one was located singing in the Three Lakes bog, Oneida county, where it was also found the previous year. Another found in Taylor county on June 29 (Hilsenhoff).

By the Wayside . . .

Bear Predation on Robin Nests. On June 6, 1968, predation of a robin's nest by a "medium-sized" black bear (sex unknown) was observed in Rusk County by the Chippewa River, Thonapple Township, T35N, R7W, Sec. 16. About 10:15 A. M., the bear approached the cabin apparently attracted by odor of food. It moved directly from cabin to a robin's nest situated in a white spruce 3 feet from the ground about 50 feet from the cabin. The bear was not frightened by me and the location of the nest was not a random search. The nest was ripped out of the tree, and the eggs (number unknown) consumed on the ground. I was about 5 feet from the bear at this observation. The bear returned to the cabin with me at a leisurely pace (my 12-gauge shotgun may have deterred his entrance). After about 20 minutes of searching the immediate area of the cabin (including the outdoor toilet), the bear left the area.

On May 23, I had observed another robin nest, with 3 eggs in a white spruce 50 feet from the above site. On May 29, this nest was torn down, and the eggs were absent. My presumption now is that the bear had destroyed this nest also on a visit between May 25 and May 29. There wert signs of such a visit to back up this assumption (toilet door ripped off hinges, garbage bag torn to bits, ripped plastic sheeting and screen on porch).—R. J. Dicke, Department of Entomology, University of Wisconsin, Madison.

Burrowing Owl at La Crosse. On May 28, 1968, I flushed an owl from short grass near a landing strip of the La Crosse airport. When flushed, it uttered two low "chucks" and flew a more or less direct flight, but with some dips and turns. Twice, it hovered in flight, then descended nearly vertically to the ground in helicopter fashion.

My initial thought was that this was a Short-eared Owl very late in migration, but I did not see the black at the elbow of the wing from beneath (which both Long-eared and Short-eared have). Also, the bird was grey, not brown, and as best I could see, lacked the yellow facial disc of the Short-eared. Furthermore, the flight was not "moth-like," and erratic, but more direct. Finally, the bird was smaller than a Short-eared Owl.

I suspect the possibility of a Burrowing Owl. The habitat of fairly low cut prairie, ungrazed, is similar to that preferred by Burrowing Owls. The soil is sandy, and several burrows of unknown origin were found. Some pellets were collected from the entrance to one burrow, but at this writing have not been identified.

Bent compares the landing of the Burrowing Owl to the manner in which a Woodcock descends after courtship fllight. I noted this descent also. Bent describes the alarm note as "cack-cack-cack-cack." The only sound I have heard Short-eared Owls make resemble the bark of a small dog.

Careful search on May 29, 30, and 31 failed to flush another owl. Of course this is not a firm record, but is substantial enough to suggest that Wisconsin bird watchers should be alert for the Burrowing Owl in suitable habitat.—Fred Lesher.

Black-legged Kittiwake Observed at La Crosse. On April 14, 1968 I observed an immature Black-legged Kittiwake at Clinton Street (County B) and the Black River, in the northwest corner of La Crosse. At first I identified the bird as an immature Bonapartes' Gull; there were several in the area. The bird had a small black spot (dime-size) behind and slightly above the eye, as does the immature Bonapartes'. Upon closer examination with 7 x 35 binoculars and 20X scope, I noted the following:

1. A black band across the nape.
2. A black band running diagonally backward across the top of the wing from the elbow to the rear of the proximal secondary feathers.
3. A black triangle on the anterior portion of the wing, from elbow to wingtip.
4. The tip of the tail black, and tail slightly and broadly notched.

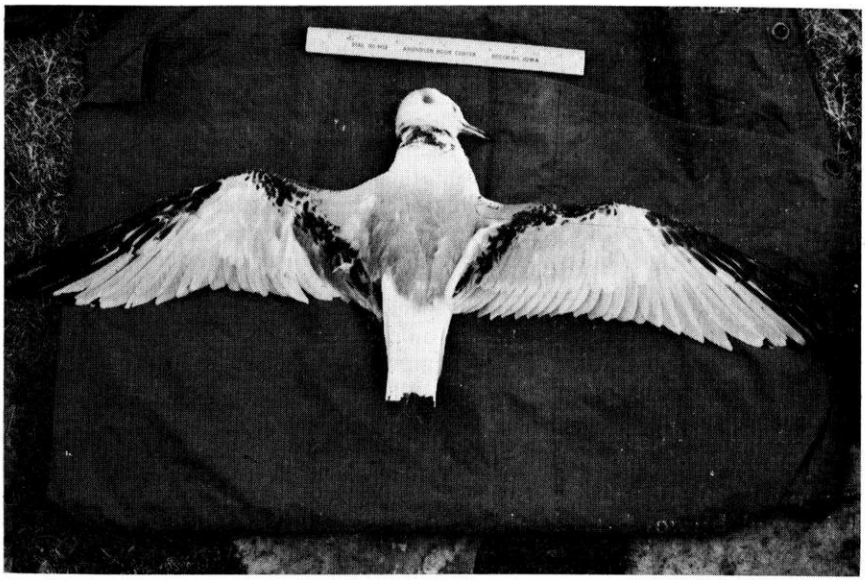
Having made my identification, I called Dr. Howard Young, who was able to confirm the identification. Late in the afternoon the specimen was collected, and is now in the study skin collection of the biology dept. at Wisconsin State University, La Crosse.

The body measurements were as follows: body length—16¼ inches; wing chord—12 15/16 inches; middle tarsus—50 mm; wingspread, tip to tip—36 inches; wing length, body to tip—17 inches; bill, nare to tip—20mm; tail—122 mm.

Physical description: bill, yellowish grey, tip black and upper mandible along ridge also black; dusky feathers in front of eye; ash colored patch behind eye; black nape or hind neck, grey between crown and nape; grey back; primaries black with white hind edges (white hidden in flight); secondaries grey and white; under coverts and wing feathers white; legs black; eight tail feathers tipped with 20 mm. black.

Previous Wisconsin Kittiwake records:

1. Sight record, Racine, March 1884
2. Specimen, Milwaukee, February 1938
3. Sight record, Milwaukee, February 1937
4. Sight record, Door County, November 1939
5. Sight record, Milwaukee, December 1957
6. Specimen, Cedar Grove, November 1967



The La Crosse record is the only state record not from Lake Michigan. Also, it is an interesting note that a well photographed sight record was made at Davenport, Iowa, in December, 1967.—Fred Lesher.

Ancient Murrelet in Dane County. On April 2, 1967, an Ancient Murrelet (**Synthliborhamphus antiquus**) was found floating in Lake Monona at Madison, Dane County, by Nicki Russos. She gave the bird to G. C. Myhre, Conservation Warden for the Wisconsin Conservation Division, who brought it to me for identification. The Murrelet, in winter plumage, was alive but too weak to fly when found and died soon after being picked up. The skin was placed in the collection of the Department of Wildlife Ecology at the University of Wisconsin.

This is the third specimen and fourth record of the Ancient Murrelet for Wisconsin. G. B. Sennett (**Auk** 1(1):98-100), 1884) described the first specimen, a bird shot by the Rev. G. E. Gordon at Lake Koshkonong in October 1882. On December 9, 1940, H. L. Van Ness of Lodi, Columbia County, identified an Ancient Murrelet caught near his home; he released it after taking notes aind making drawings (**Pass. Pigeon** 3(11):102, 1941). The second specimen was obtained in Rusk County on November 10, 1964, by L. C. Tiews (**Pass. Pigeon** 27(4):146-147, 1964); it was originally identified as a Dovekie (**Plautus alle**), but later was found by J. J. Hickey (personal communication) to be an Ancient Murrelet.

The 1967 specimen was the first to be taken during the spring months.—James B. Hale, Wisconsin Conservation Division, Madison.

Huge Passerine Migration at Honey Island. It was May 2nd, 1968 and the time, about 1900 c.s.t., near the vicinity of Honey Island in the George Mead Wildlife Area located some 23 miles east of Spencer, Wisconsin (Marathon County). As I glassed the area of open marsh I

was first surprised. As I continued from left to right, astonishment gave way to open-mouthed awe.

Never before had I witnessed such a spring migration of swallows. Stretched befoire me from the southeast to northwest was a huge undulating flock numbering some two to five thousand individuals. Possibly there were more and think my estimate conservative. The swallows were apparently feeding and at times the flock was elongated to more than one quarter mile in length. Because of darkness, identification was nearly impossible but their calls indicated that most were tree swallows.

At about 1920 c.s.t., the flight began to congeal into an incredibly thick ball-like swarm that wheeled and circled over the marsh for about five minutes. Whereupon, and very suddenly, a spout of birds broke downward from the main congealed mass and alsmost as one bird, each followed the other downward. Within the space of ten seconds, the entire swarm had plummeted into the marsh to roost.

The next morning (3 May), I returned hoping to watch them leave. I arrived at 0435 c.s.t. Noted many tree swallows but no mass fflock. I suspected they must have left in smaller groups or possibly the main flock departed before my arrival. However, I did witness a huge mass departure of approximately 3,000 starlings and trebled that number of various species of blackbirds. In all, the one hundred acres of marsh which was under my observation must have hosted some 14,000 migrant passerines the night of May 2nd/3rd.—Gayle O. Tryggeseth.

BOOK REVIEWS

EXTINCT AND VANISHING BIRDS OF THE WORLD – James C. Greenway, Jr.–Dover Publications, New York–520 p., 86 illustrations–1967–$3.50–paperbound.

This excellent book was first published in 1958 by the American Committee for International Wildlife Protection as Special Publication No. 13. During the thirteen years since the first manuscript was finished, six species of birds that have been thought to be extinct have been found to still be alive. They are the Eskimo Curlew, the Eyrean Grass Wren of Australia, the Puerto Rican Blue Pigeon, the Puerto Rican Nighthawk, Darwin's Ground Finch, and of special interest to readers of **The Passenger Pigeon** (see "The Day I Held the Scrub-Bird, by R. H. Stranger, **Passenger Pigeon,** Vol. XXIX, No. 4, Winter, 1967, p. 99-106) the Scrub-Bird of far western Australia. On the other side of the ledger, one species, the Wattlebird of New Zealand, and four subspecies, the Seedsnipe of Barrier Island off New Zealand, the Canada Goose of the Commander Islands in the Northwestern Pacific, the Scops Owl of Anjouan Island (Indian Ocean), and the Maré Island Thrush of the Loyalties off New Caledonia.

This work is perhaps the best reference on extinct and threatened birds. It supplies the known information and reasons for their disappearances as can be ascertained at this date.

One etiological factor not mentioned in this work, but being currently studied in Hawaii, is the introduction of avian diseases by man. (See **Condor,** Vol. 70, No. 2, 101-120). In time no doubt other factors not known today may come to light. Human blight, sad to say, is the underlying denominator for almost all the reasons.

There is a very long discussion on the geography of extinction which makes most interesting reading. Accounts include the common name, scientific name, original source, description, present status, range, habitat, and habits. All but one of the line drawings are excellently done by D. M. Reid-Henry. Also given are localities of specimens, and a list of museums where extinct birds are found.

This is a fine addition for every serious bird student and conservationist's library. I thoroughly recommend it. Editor.

FROM OUR EXCHANGE JOURNALS

A. W. Schorger, in the **Wilson Bulletin,** June 1968, Vol. 80, No. 2, pp. 228-229, records additional historical evidence documenting the breeding of the Trumpeter Swan at Lakes Waubesa and Kegonsa in the Madison, Wis. area. From the same journal some additional avifaunal records are given. The Mottled Ducks, a species which seldom is found far from the coast (particularly the Gulf Coast) and has been re-

ported as sedentary, was recorded in the Cheyenne Bottoms marsh in Kansas as a breeding resident by McHenry. (pp. 229-230). It behooves close scrutiny of dark-colored ducks in the midwest. A Mottled Duck might easily be mistaken in the field for a Black Duck. T. E. Musselman reports the presence of the Chuck-will's-widow north of Liberty, Illinois which nested. This is 150 miles farther north than previous nesting occurrences. He also records the presence on 11 September, 1966 of two Wood Ibis. These are the first records for central or northern Illinois since 1905. On p. 233, Walter Nickell records the outdoor survival of a parakeet from early October, 1966 to March 25, 1967 at a feeding station in Detroit, Michigan.

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Two ornithologists, Dr. Charles H. Blake, and Andrew Paterson, criticize the introduction of the Scarlet Ibis into the United States in Letters to the Editor of the **Florida Naturalist,** Vol. 41, No. 2, p. 84.

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The obituary of Arthur A. Allen, 1885-1964, by Olin Sewall Pittingill, Jr. is written in the **Auk,** 85:192-202, April, 1968. It is with sadness that we note the passage of this great man from the American ornithological scene. His students included Ludlow Griscom, Francis Harper, Herbert Friedman, Claude Leister, Harrison Lewis, Olin Pettingill, and John Emlen.

* * * * *

Richard E. Warner of the University of California reports in the **Condor,** Vol. 70, No. 2, 101-120, on the role of introduced diseases in the extinction of native Hawaiian birds. Apparently half the endemic avifauna was exterminated by avian malaria and birdpox, which were spread by introduced mosquitoes. In 1826, a "watering party from the ship **Wellington** had drained dregs alive with wrigglers into a pure stream, thereby blotting out one more blessing from the Hawaii that had been Eden."

Also in the **Condor,** same issue, pp. 149-153, is an article by WSO's own Dan Berger and James Enderson on the levels of pesticides in Peregrine Falcons, Peregrine eggs and in the prey species of Peregrines from western Canada. From studies done along the Peace, Slave, and Mackenzie rivers in Canada, data were gathered indicating high levels of organochlorine residues in their fatty tissuse. Their eggs bore about twice the levels found in eggs from the stricken British Peregrine population. However the Canadian Peregrines appear thus far to be reproducing normally.

Cade, White and Haugh in the same issue, pp. 170-177, made a similar investigation of Alaskan Peregrines. They were encouraged to find the Yukon population of Peregrines to be intact and reproducing at normal rates. But they also found pesticide residues at rather high levels in eggs and tissues. This brings concern that these birds may be perilously balanced near the threshold of beginning extinction. This bird already appears extinct as a breeding bird in the eastern United States and much of Ontario. They are also greatly reduced west of the Mississippi and all along the Pacific Coast, and in Europe and Great Britain.

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