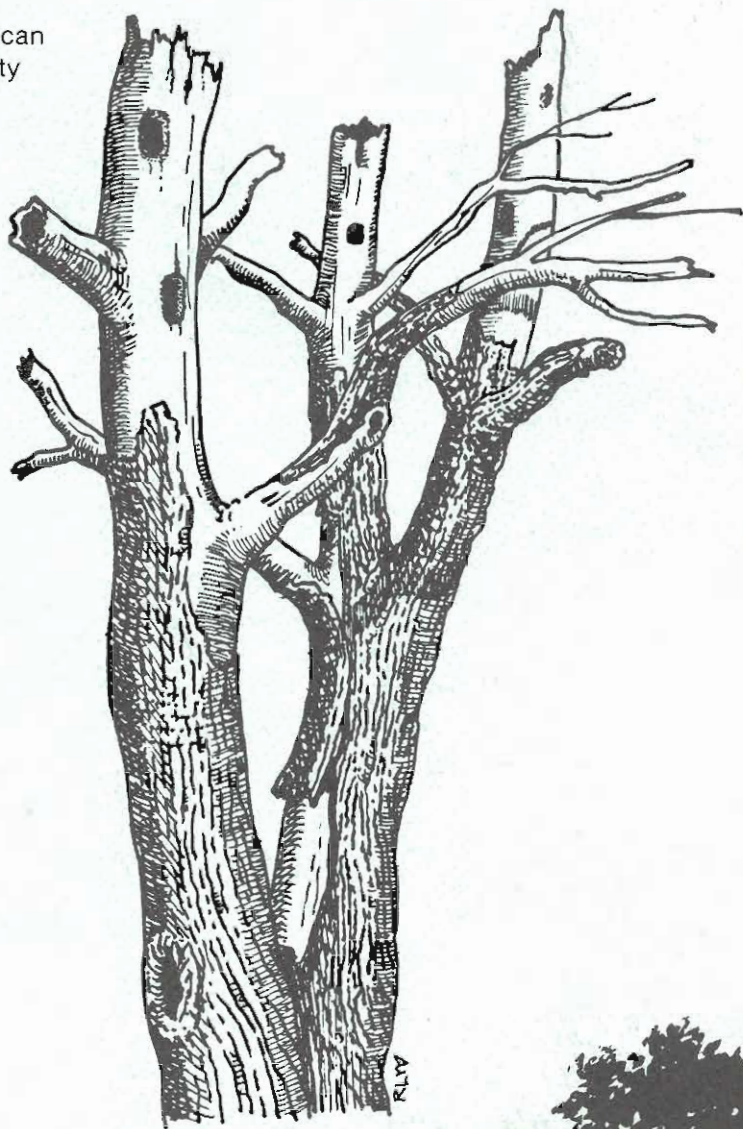


Sialia

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Summer 1985
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Index

The Quarterly Journal
Of
The North American
Bluebird Society



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Sialia means bluebirds. Hence the title of this journal. Technically, *sialia* is the Latinized, neuter plural version of the Greek word *sialis*, a noun meaning a "kind of bird." Since the Eastern Bluebird was the first bluebird classified by Carolus Linnaeus (1707-1778), he gave it the species name *sialis*, though he placed it in the genus *Motacilla* which is now reserved for the wagtails. It was William Swainson (1789-1855), who, in 1827, decided that the bluebirds needed a genus of their own within the thrush family (*Turdidae*). He selected the generic name *Sialia* which he simply adapted from the species name *sialis* which Linnaeus had used. Therefore, the scientific name for the Eastern Bluebird is *Sialia sialis* (pronounced see-ahl'-ee-ah see'-ahl-iss). Similarly, the Western Bluebird and Mountain Bluebird, the two other species within the genus, were named *Sialia mexicana* and *Sialia currucoides* (coo-roo-coy-dees) respectively. Their species names are descriptive of their locations. All three bluebird species are native only to the North American continent, although each inhabits different regions generally separated by the Rocky Mountains and by altitudinal preferences.

While the adult birds all show differing plumages, the young of all three species look remarkably alike, prominently displaying spotted breasts and large white eye rings. This similarity in plumage was the principal reason the Society chose the juvenal bluebird for its logo. Since bluebirds almost always choose to raise their young in small enclosed cavities, a young bluebird sitting near a nesting box seemed to symbolize our mission. The hope of any species resides in its young. Because of bluebird nesting preferences, the survival of their young may depend on the nesting box, especially since natural cavities, for a variety of reasons, are disappearing rapidly. The theme of bluebird young nurtured in man-made structures will be a recurring one in our art and literature. We hope that this theme will remind all about the plight of the bluebird, and will stimulate action which will allow this beautiful creature to prosper.

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Sialia

The Quarterly Journal
About Bluebirds

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COVER

Snags are an extremely valuable resource and benefit dozens of species of cavity nesting birds. Jerry W. Davis describes their importance in "Snags Are For Wildlife," pp. 83-90. The cover is by Art Editor Richard L. Woodward.

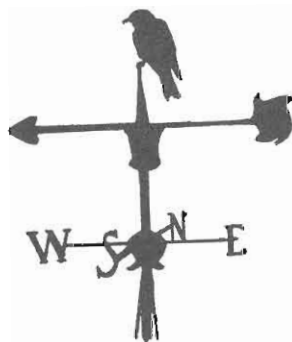
Sialia welcomes original articles, art and photographs for publication. Although this journal is named for the bluebird, material relating to all native cavity nesting species will be considered. Manuscripts should be typed neatly and double-spaced. All material submitted is subject to editing or rewriting. Submit the original manuscript plus a duplicate copy if you wish to proof the material before publication. If the article has been submitted elsewhere (or previously published) that fact must be stated at the time of submission. All manuscripts will be acknowledged. Black and white glossy photographs are preferred. Print the subject, names of individuals pictured, photographer and return address on the back of each photograph. Art is welcome and should be in black pen-and-ink. We do not assume responsibility for manuscripts, photographs or art submitted. The editor's address is 10617 Graeloch Road, Laurel, Maryland 20707.

Presidential Points

Sadie Dorber

Though the Eastern Bluebird has been New York's State Bird since 1970, many residents aren't aware that we have a state bird, or if they are, they confuse the bluebird with the Blue Jay.

Realizing the decline of our state bird (listed in New York as a species of special concern) and the urgency of making New York State residents aware of the bluebird's problems,



Senator Warren Anderson undertook the role of promoting bluebird conservation. In 1984, Senator Anderson ar-
(Continued on page 109)



DEC photo

NABS President Sadie Dorber (right) is shown receiving from Commissioner Henry G. Williams of the NYSDEC a proclamation declaring March 12-17, 1985, as Bluebird Week in New York State.

Snags Are For Wildlife

Jerry W. Davis

This paper was presented at the Snag Habitat Management Symposium, Flagstaff, Arizona, 7-9 June 1983.

The statement "snags are for wildlife" may bring several thoughts and impressions to mind.

To some it may appear argumentative or threatening. Others may perceive it as wishful thinking, as a condition that should be but is not, or as a biological fact. Regardless of the point of view, snags provide essential habitat for wildlife and perform a vital role in the ecosystem.

A Snag in the System

My first thought in writing this paper was to use data from the many papers in my files to prove beyond a doubt, to anyone with an open mind, that snag habitat and snag-dependent species are valuable and worth saving. The proof of purpose and value of snags and wildlife in the system, however, has been well-documented already.

Snags provide essential habitat for 85 species of North American birds that either excavate holes, use natural cavities, or use holes created by other species (Scott et al. 1977). Additional bird species use the external portions of snags to meet habitat needs.

Mammals, reptiles, amphibians, and invertebrates also need snags. A limited review of Burt and Grossenheider (1964) and Davis (1960) supplemented by personal knowledge indicates a minimum of 49 species of mammals that use natural and created cavities in snags. The dependence of these species on snag habitat may not be as well-documented as that of cavity-dependent birds, but this does not diminish the fact that snags are important to mammals.

Snags provide habitat for wildlife to meet basic behavioral and physiological needs. Such needs include, but are not limited to, the following activities:

Singing	Viewing
Pecking	Seeking
Drumming	Grooming
Excavating	Incubating
Reproducing	Hibernating

Hunting	Landing
Loafing	Regulating
Nesting	Constructing
Resting	Enticing
Courting	Competing
Preening	Escaping
Wedging	Communicating
Hiding	Observing
Storing	Climbing
Hawking	Capturing
Perching	Brooding
Roosting	Feeding
Gleaning	Estivating
Plucking	Defending
Rearing	Raking

Snag habitat and cavity nesters are as necessary to the forest as the trees.

Some people believe that a forest can exist without these components, but I am not one of those individuals. Little do they understand the intricacy of the system, and those that cannot understand will eventually eliminate these components and the forest.

Reflections on Progress

In preparation for this symposium, it was only natural for me to reflect on the progress that has been made in the past 10 years. In these reflections, I could not help but have mixed feelings.

When I transferred to the West in 1972, I, like maybe some of you, had not really given much thought to the value of snags as wildlife habitat. Yes, I had grown up observing standing dead trees in the forest. They were the trees that one could tap in order to

watch owls, bats, rats, woodpeckers, bluebirds, and flying squirrels come out of the holes. On occasion, unexpected occupants including lizards, bees, wasps, and mosquitos would emerge. Many of the squirrels that the dog treed were in hollows while the old trees with a hole at the base seemed to be the place where a rabbit would take cover when chased by a dog.

Dead trees were present and were considered part of the forest. When they fell, the logs were also accepted. Logs were turned over by curious boys to find rodents, snakes, lizards, and invertebrates. Logs produced "wood sawyers" and other insect forms that were used to catch the fish lying under the logs in the river.

All of these stages—the dead tree, log, and large woody debris—were accepted as an important and functional part of the system to which they contributed.

In 1972, I was surprised to find that snags and logs were not being accepted as part of the forest, although data indicated that more than 60 species of wildlife on the Kaibab National Forest used snag habitat. There was (and had been for many years) a conscious effort to remove snags from the system. Timber sale contracts required the purchaser to fell a specified number of snags; he was given purchaser credit to do so. Salvage sales scheduled between timber sales insured that fewer trees "went to waste." Fire management called snags "lightning rods" and perceived them as standing beacons to attract fire. Other professional disciplines viewed the presence of snags as a disgrace and a waste.

It was during the early 1970's that a forester proudly announced that the last snag had been removed from one of the national forests in Arizona. Decades of snag removal had effectively removed them from accessible areas of other forests as well.

In July 1973, snag management began to improve with the approval of a Regional Snag Management Supplement (USDA 1973). It required that a snag determine its own value by re-

taining those being used by wildlife. In addition to snag protection in timber sales, it requested Forest Supervisors to issue manual supplements protecting them from woodcutters.

Forest snag management supplements did follow in time. In July 1974, the Kaibab National Forest had an approved supplement which provided snag retention except in clear cuts, fuel breaks, recreation areas, travel influence zones, and where hazardous snags, by virtue of their position, posed a hazard to fire protection. Timber markers were required to designate with paint those snags to be removed rather than mark the snags to be retained (USDA 1974).

Some may not see this as progress, especially with all of the exceptions, but in the early days of snag habitat recognition, it was progress. It was also progress to later reduce salvage sales, protect snags in timber sale contracts, and reduce the size of fuelbreaks from 48 percent of the total area for some sales, to 8 percent or less. Management data and improved awareness and attitudes seemed slow in happening. But they did happen and so did the improvement of regional and forest snag management policies.

The evolution of data was also necessary. It was not enough for a wildlife biologist to identify the problem and request snag habitat. Published data were needed to support answers to even the most basic questions of how many and what kind of snags should be retained.

Balda (1975) and Scott (1978) provided some of the answers. Balda, working with secondary cavity nesters in natural Ponderosa Pine forests, supported maintaining 268 snags per 100 acres. Scott's research supported 2.5 snags per acre as the lower rather than the upper limit. Scott also supported retaining snags greater than 15 inches dbh, taller than 75 feet, and with more than 40 percent bark cover.

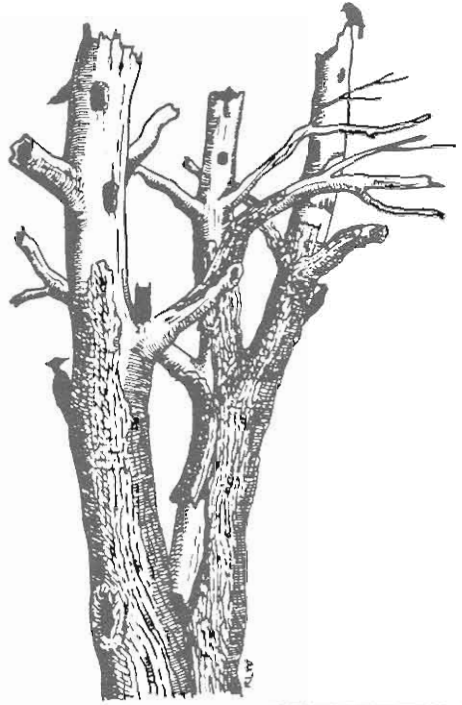
Cunningham, Balda, and Gaud (1980) revised Balda's 1975 data to support densities of 5.2 snags per hectare, emphasized the importance of bark, and determined a relationship

between the number of nest sites to snag density. The value of snags as winter roosts and the importance of size and height were also determined.

Since the mid-1970's there have been numerous papers providing data on snag habitat and cavity dependent species. Most of these papers have been published in the past few years. Classification terminology including hard and soft snags, as well as primary and secondary cavity nesters was once seldom heard. Today, these terms are commonly used and recognized.

It is exciting to be a part of the first snag management symposium. Letters and telephone calls of support have been received from throughout this nation, Canada, and Australia. The Reston [VA] Home Owners' Association sent a copy of the guidelines that are used to manage 1,000 acres of open space to protect snags and encourage cavity users.¹ A letter received from the Connecticut Department of Environmental Protection explained that their personnel were unable to attend the symposium but enclosed a copy of the state's guidelines for snag management. These guidelines included criteria for snag selection, size, distribution, management density (3-7 snags per acre), and future snag production.²

Exciting things are happening in snag habitat management and progress has been made. Many people seem to be extending their ideas beyond the utilitarian philosophy. They are saying that wildlife and other elements of the ecosystem have an important purpose whether we have justified their existence economically or not. Society is expressing discontent with the management of our forests as wholesale warehouses for commodity shoppers, and is supporting the right



to existence for wildlife and plant species.

With so many positive things happening, it is easy to become dazzled by our own fancy footwork and assume that the problem is solved. Progress has been and continues to be made, but we are not there yet.

Problem Recognition

The first step to solving a problem is to realize that a problem exists. Problem recognition is not always easy and may be blurred by personal values, underlying philosophies, insensitivity, and limited knowledge.

When I was growing up in East Texas, my father had a farm adjoining Davy Crockett National Forest. One day when we were working, he pointed out a Red-headed Woodpecker (*Melanerpes erythrocephalus*) constructing a nest cavity in a Texas Power and Light Company utility pole. "That woodpecker is my fence builder," he said. "Woodpeckers need a place to nest and since there are not many dead trees anymore, they build their nests in utility poles. When the com-

¹Thompson, C. 1983. Personal correspondence. Reston Home Owners' Association, Reston, VA.

²Lutz, K.J. 1983. Personal correspondence. State of Connecticut Department of Environmental Protection, Marlborough, CT.

pany replaces the poles, I buy the damaged poles for fence posts."

Today, woodpeckers are still using utility poles. Continental Telephone of Texas reports that 12.5 percent (204) of the poles replaced in 1981 were because of woodpecker damage.³

Texas Power and Light Company reports that in the past four years, pole damage has been due to decay below ground, damage by vehicles, lightning strikes, and woodpecker damage, in that order. L.S. Huntsinger, Division Superintendent, said, "We do have many poles that sustain woodpecker damage that are not replaced. In our transmission lines which are generally taller we have a large percent of woodpecker damage; however, this has been offset to a great degree because we now wrap one-quarter inch wire mesh around these poles."⁴

In the 1950's there were reports of a decline in Wood Duck (*Aix sponsa*) and Eastern Bluebird (*Sialia sialis*) populations. A milk company tried to improve the nest habitat for bluebirds by producing milk cartons with instructions on how to convert them into nest boxes. Many people responded and there seemed to be a temporary increase in bluebirds.

I spent hours fishing on lakes constructed by the Corps of Engineers and amused myself watching cavity nesters using the few snags standing above the water surface. Little did I think at the time that these few snags were token remnants of a forest that would never provide a self-sustained supply of snags again.

These and other examples illustrate symptoms of the problem. The problem is a rapidly declining habitat for snag and cavity dependent species. This problem has many symptoms and many causes which are not unique to this nation, but are worldwide. It is a problem that can be recognized, whether it be by the use of nest boxes

in the intensively-managed forests of Europe or by the rapidly disappearing forests of countries that are mining timber resources to meet world trade and balance of payment demands. Symptoms of this problem can even be observed at your local zoo by noting the cavity nesting species that are in trouble all over the world.

There are many causes contributing to the problem. One has only to think about the diverse influences altering the composition, density, and existence of our forests. Causes can be as obvious as extensive conversions for the development of agricultural lands, urban expansion, or the establishment of short rotation monoculture tree farms. They can be as subtle as the change in forest age classes, species composition and rotation, or as quiet as the almost indiscernible effect of grazing livestock on cottonwood and sycamore regeneration.

Although most causes of the problem are obvious, some may still fail to be recognized because of a limited knowledge. Some people, however, do not recognize the problem and its causes because, for one reason or another, they choose to believe that everything is still O.K. They could be compared to a man jumping off of Hermit's Rest on the rim of the Grand Canyon to the Colorado River a mile below. As he falls, he can be heard saying as he passes each 300 foot mark, "Everything is still O.K., everything is still O.K..." It is that sudden realization at the end of the line that is going to have the impact and then it will be too late.

Everything is not O.K. and the sooner we realize that a problem exists and start working toward resolving the causes of the problem, the better off all resources and non-resources will be.

Some of the causes of the problem are unique to localized areas, whereas others, such as fuelwood demand, both legal and illegal, and timber management practices have a common thread nationwide.

Fuelwood demand has developed
(Text continued on p. 88)

³Fryer, J. 1982. Personal correspondence. Continental Telephone of Dallas. Dallas, TX.

⁴Huntsinger, L.S. 1982. Personal correspondence. Texas Power and Light Company, Tyler, TX.



Wildlife Tree metal signs (full size shown) are used by the U.S. Forest Service as an educational tool. They are placed on prominent snags for some of the following purposes:

- 1. To increase public awareness of snags*
- 2. To reduce the illegal taking of snags by fuelwood poachers*
- 3. As an educational and training device for timber markers and cutters*
- 4. As a means of protecting squirrel nest trees*
- 5. To identify raptor nest trees*
- 6. As a way to identify trees to be retained in a timber stand for future snags*
- 7. Posted on selected snags along nature trails they help the public realize that a dead tree is valuable and is not "going to waste"*

at a significant rate since the 1974 oil embargo. It is possible that much of the fuelwood problem was self-inflicted due to improper planning, inadequate funding, and an eagerness to advertise free fuelwood to encourage everyone to save fossil fuels. During this period of energy crisis, to burn fuelwood was not only patriotic but was supported by economic motivation.

Americans responded by installing fireplaces and woodburning stoves. These not only were thought to be essential to save energy but became a status symbol as well. This cultivated the Paul Bunyan syndrome. Forest dead and down fuelwood was not enough; the budding Paul Bunyans had to cut and to watch their own trees fall. Forests and private landowners who had, just a few years before, paid to have trees pushed, piled, and burned were now faced with a limited supply.

Demand continues to increase and so does the fuelwood support industry. Baker (1983) reports that this nation burns over 40 million cords of wood per year to meet about one percent of our energy needs. He estimates that this will triple in the next decade.

Forty million cords of wood represent a stack of wood 4 x 8 feet, 30,303 miles high. If this use triples as projected it will take this nation less than three years to use a stack of fuelwood 4 x 8 feet extending from the earth to the moon.

Fuelwood use has been re-ingrained in the American lifestyle and continues even if it is not economical. Fuelwood users in the Phoenix area may pay \$100-\$140 per cord. In an improved fireplace, they will receive only \$20 of natural gas BTU equivalents.⁵

Fuelwood demands are real, and so are the adverse impacts that rampant illegal cutting is incurring on the management efforts to replace and maintain snag habitat.

The management of forested lands with emphasis on the production of commodity products also adds to the

problem of snag habitat management. Increasing demands are being made to produce more wood products from a renewable yet finite timber resource.

The same land and forest base must provide wildlife habitat for indigenous species. The unequal balance between commodity and noncommodity output poses questions that need answers.

I see intensified timber management and harvest through shorter rotations, even-aged management, fire suppression and fuels control, optimum spacing, frequent re-entries, and aggressive insect and disease control. I watch the final removal of mature timber from the last stands. Even those areas that were once inaccessible and not economically feasible to harvest (which were said to be left for wildlife) are now being harvested.

With more intensive management, shorter rotations, and healthier forests, I question if we are prepared mentally and will support financially and with research data, efforts to create adequate snag habitat. Under these conditions, it may be unrealistic to expect adequate snag habitat through natural mortality.

Timber management policy and practices have the greatest potential to contribute to or resolve the causes of the problem of inadequate snag habitat.

Problem Recognition—Now What?

I do not have great words of wisdom that I can give you to solve the problem. I believe, however, that by recognizing the problem and identifying causes and concerns, the solutions can be implemented. The problem cannot be solved by wildlife biologists alone; it will take a multifaceted, multi-disciplined approach.

I am hopeful that the papers and data presented at this symposium will be a turning point in solving the problem. It should provide an opportunity to exchange information and ideas, while the published proceedings will provide a reference for professionals of all disciplines. We cannot, however,

⁵Davis, J.W. 1980. Unpublished Paper. Fuelwood cents. Phoenix, AZ.

be content with these efforts and brief exchanges.

After this symposium, we do not need to continue talking to ourselves. We are not the ones that need to be convinced that snag habitat and its dependent species are of value and worth saving. If there is one person in this nation who is not aware of the values of snag habitat, that is one too many.

There must be an improvement in attitudes, awareness, and sensitivity. We need to reassess our management purpose and revive our land ethic. I do not feel that the true intent of multiple use can be met unless all are willing to adjust the way that it has been applied. The reason that snag habitat is in trouble is that its value has not been generally perceived although the value is there. All need to be advocates for total resource management.

Researchers must remember that decisions are being made every day, whether data and answers are available or not. This obligation goes beyond getting data into print. You are in the position and have the background to be most sensitive to resource needs, to provide data, and to help integrate the multiple needs and demands that are made on finite resources.

Researchers and managers alike must be careful not to get trapped on the data carousel or use the lack of data as an excuse for inaction. Data alone will not solve the problem. We must be careful not to be a society which though it has volumes of data in print, loses the resource because the solutions were never implemented.

Resource managers should support the concept that this habitat and its species are not just for the wildlife biologists but are everyone's resource and everyone's management responsibility. Wildlife biologists do not need snag habitat any more than the manager, forester, recreationist, educator, or commodity interest. Snag habitat should be managed as intensively and with as much enthusiasm, dedication, and commitment as other resources.

Concern should be as great for the illegal removal of snags as it is or would be for the illegal removal of commodity species.

The managers of public lands and industry alike should reassess the abilities of these lands to produce commodity products with equal consideration for other resource needs. We must face on-the-ground production realism versus unrealistic production figures.

Every discipline must realize that it is our obligation to relinquish the land resources to future generations with nothing less than its inherent potential to produce and not in a diminished, but in an enhanced condition. To do anything less than this means that we have been a failure in managing the resource and meeting the intent of our purposes.

John McGuire (1982), past Chief of the Forest Service, said that the National Forest System began as an experiment in public land ownership with the aim to insure a nondeclining, even flow, decade by decade, forest by forest, in perpetuity. This policy, he said, was not specifically written into the law, but was an agency interpretation. This interpretation was controversial, so Congress adopted as law the even flow interpretation of sustained-yield policy.

To manage resources on an even flow, sustained yield, in perpetuity means that we should manage them on a non-declining basis through eternity. Snag habitat and its associated wildlife species are such resources.

I am proud of the leadership that the Forest Service has taken in the past to recognize the special habitat values of riparian habitat, the management of nongame birds, and the co-sponsorship of this symposium. I think that it would be appropriate to have another symposium in the fall of 1985 to pull together data on the management of wildlife species requiring

special habitat components. The symposium should include data on snags, hollow trees, cavities, logs, forest litter, and woody debris as they relate to terrestrial and aquatic systems.

Conclusion

Snags provide essential habitat for wildlife; their value to the forest system is irrefutable. We have made progress in the past decade, but the problem of inadequate snag habitat persists. If we are going to solve the problem, everyone must realize that a problem exists and be willing to implement solutions. Professionals from all disciplines must maintain an acute sense of resource awareness and urgency. We must remember that published data alone will not solve the problem.

As we work toward problem solutions, we should keep in mind the work and resource ethics of a forester who walked the forests of the Southwest six decades ago. Aldo Leopold (1966) said, "A system of conservation based solely on economic self-interest is hopelessly lopsided. It tends to ignore, and thus eventually to eliminate, many elements in the land community that lack commercial value, but that are (as far as we know) essential to its healthy functioning. It assumes, falsely, I think, that the economic parts of the biotic clock will function without the uneconomic parts."

Leopold also said, "The outstanding scientific discovery of the Twentieth Century is not television or radio, but rather the complexity of the land organism. Only those who know the most about it can appreciate how little is known about it. The last word in ignorance is the man who says of an animal or plant: What good is it? If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering."

That is our job as resource managers and professionals. It involves saving all of the pieces in adequate quantities to maintain an efficient and viable ecosystem on a sustained-yield for the present and for the future.

Snag habitat and its associated wildlife are important pieces that we must retain.

Snags are for wildlife. ■

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A Starling-Proof Winter Feeding Station For Bluebirds

Morris M. Green, Jr.

When I received my Autumn 1984 issue of *Sialia*, I read with great interest Carol Harmon's article "Miracle Meal for Bluebirds" (Harmon 1984). Some bluebirds winter over in the river bottoms and marshes in our part of central Maryland (Frederick County). During that season, they are erratic visitors to our residence and the nest boxes there.

Following Harmon's recipe, my wife Rose mixed up some of the "Miracle Meal" which we stuffed into the holes of a small log similar to the one illustrated in the article. I then attached it, in a vertical position, to the back of a nesting box. But the bluebirds ignored it, and the starlings soon devoured every particle of the meal.

In mid-February (1985), I refilled the log and attached it, in a *horizontal* position, to the top of the same nest box. When the bluebirds perched on the log, they sampled the meal and were soon eating it regularly. From 14 February on, the bluebirds visited our residence every day, but the starlings consumed a very large proportion of the "Miracle Meal" we provided.

During a personal brainstorming session one day in early March, an idea suddenly came to me: if I built an oversized nesting box with a 1½ inch entrance hole and placed "Miracle Meal" in it, would the bluebirds find that meal and become regular visitors? If so, the meal would be accessible to the bluebirds but not the starlings.

I could hardly wait to get to my workshop to build an experimental model. I finished it late in the afternoon and mounted it on a 4 x 4 inch post in our back yard. A pair of bluebirds found it the next morning. They seemed puzzled by this strange, new nesting box. For a day or two, they perched atop but hesitated to enter it. The female was bolder (or less cau-

tious) than her mate, so finally we saw her enter. When she came out with a lump of "Miracle Meal" in her beak, our day was made!

The next day the male entered the box, also. Soon both birds were going in and out at regular intervals throughout the day. When I put a topping of finely chopped raisins on the "Miracle Meal," the birds seemed especially pleased.

This feeding station has been a dramatic success for us; this is the first time we have ever been able to persuade bluebirds to accept food from us at any season.

Besides being starling-proof, this feeder has another, even greater, virtue: *snow and ice cannot cover the food*. In his classic book *The Bluebird*, Dr. Lawrence Zeleny states on page 27, "These birds frequently perish if heavy snow or ice covers their food supply" (Zeleny 1976). If feeding stations of this type, well-stocked with "Miracle Meal," were placed in bluebird wintering areas, they could be life-savers during severe snow or ice storms.

Some bluebirders might want to set up *winter* bluebird trails in rural areas where bluebirds are known to winter. The feeding stations would be resupplied with "Miracle Meal" at regular intervals. Feeding boxes on such trails should have food troughs deeper than the one in my model.

We hope our feeder will attract bluebirds to our residence next winter on an almost daily basis. It would certainly be thrilling to see a *flock* of bluebirds visiting our feeder during or immediately after a severe snow storm.

The feeder should be mounted with its entrance hole facing away from the prevailing winter winds. It

would be best to put it up in the early fall; mid-September would not be too early. This would give roving flocks of bluebirds, during the warm sunny days of October, a chance to become acquainted with the location of the box and the "goodies" therein.

CONSTRUCTION DETAILS

I decided to construct my experimental model mostly from a board of 1 x 8 inch No. 2 grade shelving. (The actual dimensions of such a board are $\frac{3}{4}$ x 7 $\frac{1}{4}$ inches because it has been through a planing mill.) You will need almost 10 feet of this lumber if you use two 18 $\frac{1}{2}$ inch pieces for the roof. If you use plywood for the roof, as I did, you will need only about 7 feet of 1 x 8 inch shelving.

From the board, I cut two pieces each 14 inches long. I nailed the two together (Fig. 1) to make a floor and left hand side wall. For access to the interior, I planned to have a removable side cover on the opposite (right) side.

Next, I cut two pieces, each 8 inches long, from the board. These became end pieces for the box. In the

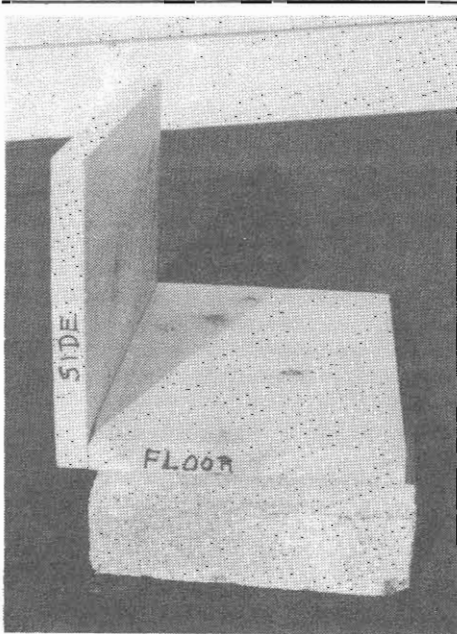


Figure 1. Left side wall nailed to floor of feeder box.

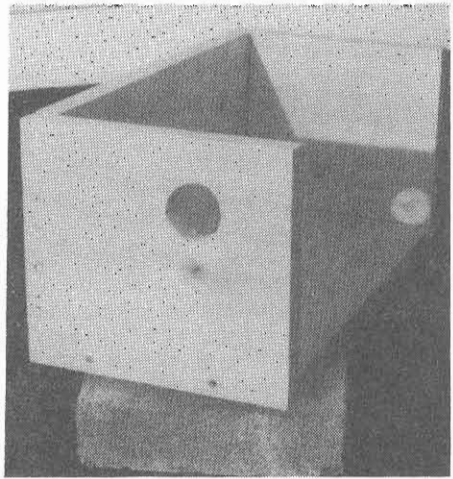


Figure 2. End pieces added and entrance hole drilled.

front end, I drilled a 1 $\frac{1}{2}$ inch entrance hole (Fig. 2). That can be done in either of two ways: (1) an expansion bit in a carpenter's brace, or (2) a 1 $\frac{1}{2}$ inch spade-type wood bit in a $\frac{3}{8}$ inch electric drill. If the latter method is used, I would advise the use of safety goggles.

On this experimental model, I located the center of the entrance hole 2 inches from the upper edge and 3 inches from the right side of the end board. Experience may suggest a better location.

To make a removable food trough, I cut from the board a piece 13- $\frac{3}{4}$ inches long, and ripped from it one piece 2- $\frac{3}{4}$ inches wide, and another 3 inches wide. These two were then nailed together (Fig. 3). With the 3 inch floor piece horizontal, I inserted the trough inside against the left wall securing it at each end with a 1 $\frac{1}{2}$ inch wood screw coming through each end wall of the feeder (Fig. 4).

Before adding a side cover, I drilled three holes along the vertical center line of the left side. These enable me to fasten this feeding station to a post. (They are not necessary if the feeder is going to be set directly on the top of a post.) The upper hole,

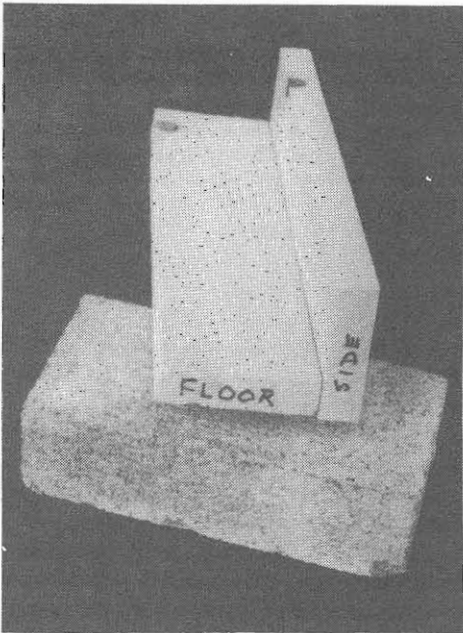


Figure 3. Side and floor of trough nailed together.

3/8 inch in diameter and 3/4 inch from the top, is for initially hanging the feeder on a nail. Below it are two 3/16 inch holes to accommodate 1 1/2 inch Number 8 round-headed wood screws for permanent mounting. These three holes are 3/4 inch apart (Fig. 4).

Next, from the remainder of the 1 x 8 inch board, I cut a piece 15 1/2 inches long for the side cover. I fastened it in place with three 1 1/2 inch wood screws, one at each end and one at the bottom (Fig. 5).

Then I made a roof from 1/2 inch exterior plywood. To allow an overhang of 2 inches at the front (entrance) end and 1 inch at each side and the back end, I cut the plywood to 18 1/2 x 10 3/4 inches (Fig. 6). The roof can be made of two 1 x 8 x 18 1/2 inch boards, cut to size, but the joint between them should be sealed with a sealant.

Next, I attached the feeder log which is like the one illustrated in Harmon's article. Using 1/4 inch bolts, I bolted this log to the feeder box after

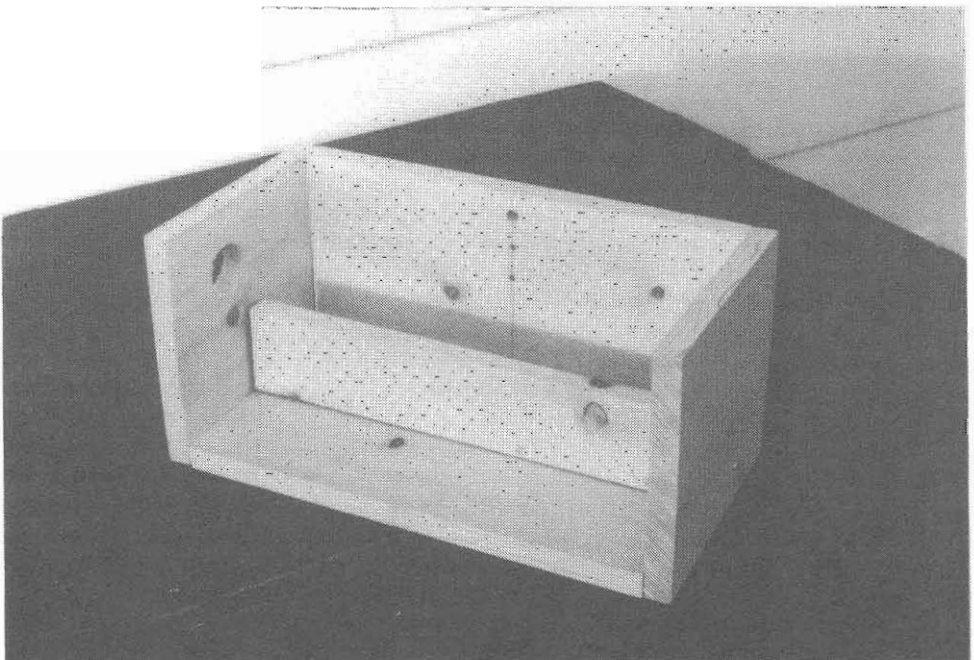


Figure 4. Trough inserted in feeder box and holes for supporting nail and screws drilled in left side.

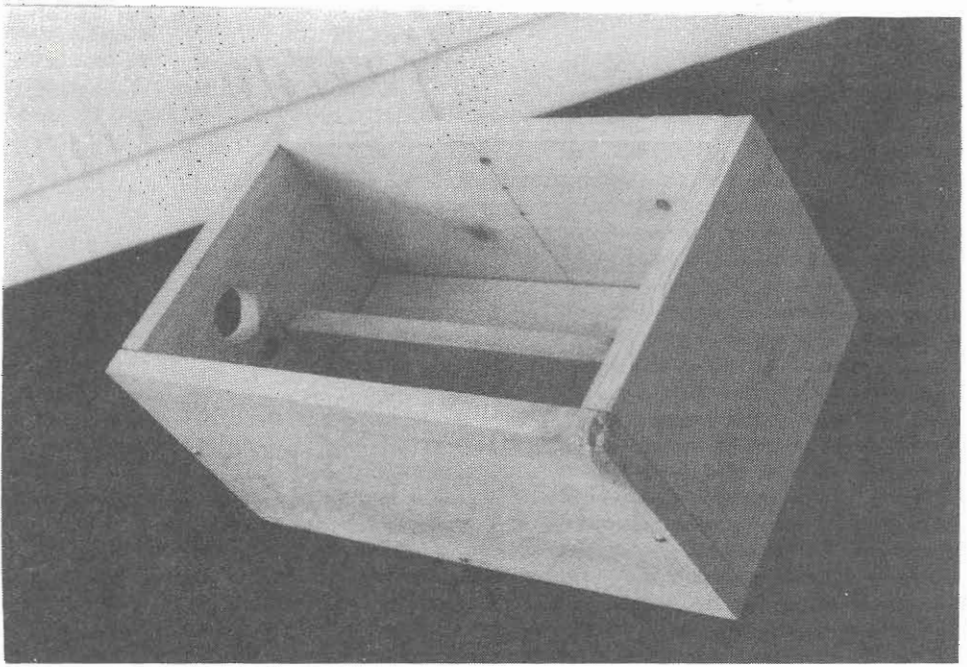


Figure 5. Side cover added to feeder box.

All photographs by Morris M. Green, Jr.

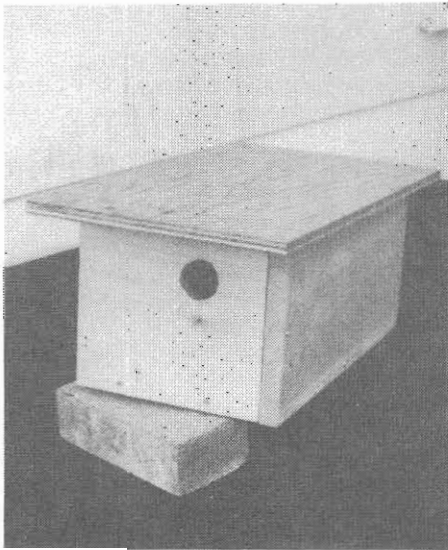


Figure 6. Plywood roof added to feeder.

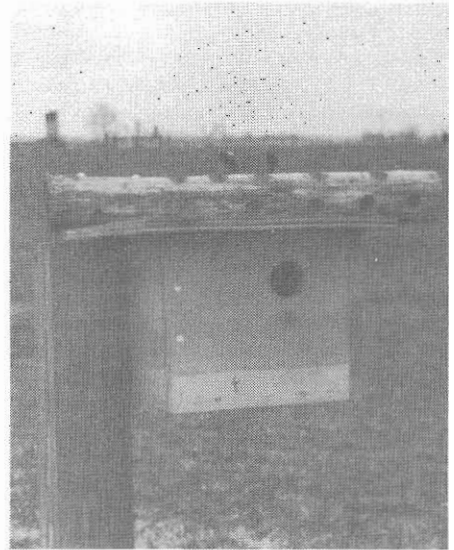


Figure 7. Feeder log bolted to rear overhang of roof.

drilling 3/8 inch holes through the log and the rear overhanging edge of the roof (Fig. 7).

If a few perches made of 1/2 inch dowels were placed along the upper half, on the inside of the side cover, some bluebirds might roost on them during stormy winter nights. ■

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Zeleny, L. 1976. *The Bluebird*. Indiana University Press, Bloomington.

8407 East Lassie Court
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Television Commercial Available for Loan

A 30 second public service announcement (PSA) TV commercial promoting bluebird conservation has been produced by NABS. Copies of the tape are available for loan to members.

Six copies of the 3/4-inch video tape cassette are available for a small charge to cover postage, mailer, and handling. In order to obtain a copy of the commercial, write to Richard J. Dolesh, 17800 Croom Road, Brandywine, MD 20613. Enclose a check to NABS for \$2.50. The tape should be returned in the enclosed self-addressed mailer within 10 days. Loan is on a first-come, first-served basis.

NABS RESEARCH GRANT AWARDS

The North American Bluebird Society is proud to announce the presentation of the second annual research grant awards. The 1985 recipients are as follows:

BLUEBIRD GRANT—Patrick J. Mock
Topic: Reproductive Energetics in Relation to Brood Size in Western Bluebirds.

GENERAL GRANT—Gregg M. Zuberbier
Topic: The Physiological Effects of *Protocalliphora* sp. Larvae on Nestling Growth.

STUDENT GRANT—Monica J. Schwalbach
Topic: Site Selection in the Eastern Bluebird.

The North American Bluebird Society annually provides research grants in aid for ornithological research directed toward cavity nesting species of North America with an emphasis on the genus *Sialia*. Information and application materials are available from Theodore W. Gutzke, Research Committee Chairman, P.O. Box 121, Kenmare, North Dakota, 58746.

QUESTION CORNER

Lawrence Zeleny

Do nesting boxes have to be cleaned or will the birds take care of that?

Robert Lenox
Colonia, New Jersey



It is good practice to remove nests and any other material from nesting boxes as soon as the young birds have flown or if the nests have been abandoned for any other reason. Thorough cleaning of the box at this time may be done but is not really essential. Bluebirds will not use a nest a second time. If an old nest is not removed, they will build a new nest over the old one, raising the level to a point where the nest will be more vulnerable to predators. Bluebirds will often remove loose material from their box before building a nest, but they are not able to remove an intact old nest.

Do you think it is possible to overrun an area with bluebirds, considering all the boxes we are putting out? Do you think there is a limit to the number of bluebirds we should try to achieve?

Don Stiles
Calgary, Alberta

There is, of course, an upper limit to the population of any species that a given area can support. This limit usually depends largely on the food supply and may vary from year to year with varying weather conditions and other factors.

In the case of bluebirds the theoretical population limit of an area based on food supply is sel-

dom reached because of a shortage of nesting sites, competition from other species, predation, adverse weather, and the territorial behavior of the birds themselves during the nesting season. In limited areas where intensive bluebird conservation efforts are made by supplying sufficient nesting boxes and protecting the birds from predators and competitors, it is quite possible for the population to reach the limit that can be supported. Nature presumably takes care of such situations by causing any surplus bluebirds to move into nearby underpopulated areas. This is one of the ways we hope to help maintain a safe bluebird population throughout the continent for future generations to enjoy.

Do raccoons generally work from the top of the nesting box? If so, I hope to come up with a metal raccoon guard.

J. Robert Gibney
Green Lake, Wisconsin

Raccoons often, but not always, reach into a nesting box entrance hole from the top of the box. They are agile, strong, and intelligent animals and will do their work from almost any possible angle. They will sometimes even tear open a box that is not substantially constructed. ■

Pesticide Use in Nest Boxes: Another Viewpoint

Steven M. Kruger

The following comments were received in response to the article in the Winter 1985 issue of Sialia by Jerome A. Jackson entitled "On the Control of Parasites in Nest Boxes and the Use of Pesticides Near Birds" 7(1):17-25. Dr. Jackson's reply follows Mr. Kruger's remarks.

I was somewhat disappointed with the article on the use of pesticides in nest boxes in the Winter issue of *Sialia* (Jackson 1985). The article was well-written and presented many important points, but the issue of alternative methods, I feel, merits further discussion.

Throughout the article Jackson warned against taking the advice of others when it concerned the use of pesticides in the nest box, while only briefly discussing alternative parasite control methods. First, I would like to point out that cavity nesting species such as the bluebird coexisted naturally with parasites long before man became interested in bluebird conservation. Secondly, haven't we learned from our past experiences with pesticides and chemicals? Are we to endorse the use of pesticides and chemicals within the very nest of a bluebird, and then take up arms when pesticides are used in the bluebird's habitat for the production of food or weed control? The author stated that he was not endorsing the use of such chemicals, but what does he think people are going to do with this information? Surely, some readers will look to chemicals for a solution to parasites in their nest boxes.

No mention was made in the article about the possible symbiotic relationship between the parasite and its host. All parasites are not harmful. Without understanding the total story of this relationship, it would be a mistake to control a "problem" which might not exist.

In many areas, predators have been blamed for the reduced numbers of some game species. Similar to the parasite-bluebird relationship, predator-prey relationships existed long before the intervention of man. In

the former situation, over-hunting and habitat loss are often to blame for the reduced abundance of game species, not predators. In the latter case, exotic avian species, habitat loss, and pesticides are probable causes for the bluebird's decline, not parasites.

The above does not imply that parasites are not a problem in some situations. What it is meant to do is put the parasite "problem" in its proper perspective. Unfortunately, the public is often led astray by the voice which preaches an easy cure-all solution to the complex bluebird problem. Such band-aid approaches to the bluebird problem often confuse the situation by taking the emphasis away from the real problems.

As an alternative to the pesticide route for controlling parasites in nest boxes, I would like to offer the following suggestions for nest box monitors. During your weekly nest box checks, gently lift the nesting material and check the floor of the nest box for blowfly larvae. If larvae are present, scrape them out with a credit card or similar device. If larvae are present throughout the nesting material, remove the old nest and rebuild a new nest from grasses growing in the vicinity of the nest box. (This should not be attempted unless the eggs have hatched and the young are about seven days old.) I have used this technique repeatedly with no problems of abandonment by the parents. Finally, removal of the nest after each nesting attempt will eliminate the opportunity for parasite build-up in a nest box.

In summary, I want to acknowledge Dr. Jackson's fine coverage of a difficult subject. I do not challenge the material in his paper, rather I present the information from another point of

view and provide the reader with alternative methods of parasite control in nesting boxes. Perhaps such a rebuttal indicates the need for additional research on this topic using carefully designed experimental procedures. Such an experiment was suggested by the North American Bluebird Society through its new "special box monitoring project" (Dolesh 1985). ■

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Rt. 1, Box 216
Bangor, WI 54614

On the Role of Arthropods in Bird Nests and the Need for Parasite Control in Bird Nest Boxes

Jerome A. Jackson

My recent article on the use of pesticides in nest boxes and near birds (Jackson 1985) prompted a response from Steven Kruger which merits consideration and comment. Mr. Kruger takes issue with the article because he felt it failed to consider alternatives to pesticides. His comments are well-stated, and well-intended, but seem to have missed the main point of the article. I began the article with an account of a disaster in a Purple Martin (*Progne subis*) colony that resulted from the use of chemicals, and I know of many nest box caretakers who do feel that they have a parasite problem and do use chemicals. My evaluation of the various pesticides available was for their benefit with the hope of possibly preventing the serious misuse of chemicals.

I note in the beginning (p. 17) that "the first line of defense should be cleanliness and tight-fitting construction that does not allow crevices as refuge for the parasites." I further stated (p. 19) that "The information presented..." was "not intended to recommend or endorse the use of any chemical, but merely to present commentary on what has been recommended for control of bird ectoparasites." Further, I stated (p. 20) that "In the final analysis, control methods other than chemical pesticides may be the more desirable approach." Follow-

ing that I again stressed cleanliness. I believe that a careful reading of the hazards associated with most of the chemicals would (and should!) dissuade nest box proprietors from using the chemicals. I personally continue to dust boxes lightly with sulfur when mites are so prevalent that they seem to be a problem.

I agree completely with Mr. Kruger's comments suggesting the possibility that parasites may play a positive role in the ecology of birds. Such a role has not been demonstrated for the parasites discussed, but the intricacies of host-parasite relationships among wild birds and their parasites are poorly known. However, an important word used throughout my article is "control." I did not suggest nor advocate attempts to "eradicate" the parasites in question, but rather to keep their populations at relatively low levels. Mr. Kruger comments "that cavity-nesting species such as the bluebird have coexisted naturally with parasites long before man became interested in bluebird conservation." What he fails to acknowledge is that under natural conditions a cavity may be excavated one year by a woodpecker and perhaps be used the next by a bluebird. Under exceptional circumstances it might be used a third

year or more before it deteriorated to the point of not being an acceptable nest site. Nest boxes, by contrast, are generally built to be of use to the birds for many years, thus allowing for the potential of an unnatural buildup of parasites. While acknowledging the potential positive interactions between birds and arthropods we presently consider parasites, we cannot ignore the data which document negative effects of excessive numbers of parasites (e.g., Kenaga 1961, Moss and Camin 1970, Pinkowski 1977).

Natural cavities have the advantage of hosting a very diverse arthropod fauna which includes predators such as pseudoscorpions and small spiders which prey on mites and other bird ectoparasites in the nest. These live under the bark of trees and soon become established in any woodpecker cavity. Hicks (1959) and Rothschild and Clay (1957) document the diversity of the arthropod fauna often associated with bird nests. The association of some of these arthropods with the birds might well be a mutualistic one, the birds providing a home for them and the arthropods providing some protection against a buildup of external parasites. For example, Pinkowski (1977) found a significantly lower incidence of parasitic blowfly larvae (*Apaulina* sp.) in Eastern Bluebird (*Sialia sialis*) nests in natural sites as opposed to those in nest boxes, although he attributed those differences to nest and cavity sizes. He did not consider the possibility of the partial control of parasites by predaceous arthropods in natural nest sites. The nest boxes that we provide for the birds are clean, dry, and without the attendant natural arthropod fauna of tree cavities. By cleaning them out each year we prevent the buildup of the "friendly fauna," while allowing parasites to arrive each spring among the feathers of their hosts. Thus, the crux of the matter is that by providing clean nest boxes, man is providing an optimally appearing nest site—one that is very attractive to the birds—but one which in at least one respect may

not always be in the best interest of the birds. By excluding the natural predators that might control the birds' external parasites, man has altered the natural scheme of things. By good sanitation and the possible use of low-toxicity pesticides or chemicals that provide an unfriendly environment for pests (particularly such natural substances as sulfur), man may be able to shift the balance back in the birds' favor. The chemicals will usually affect the friendly fauna in the same way that they affect the parasites. Thus, unless a parasite problem is noted, the use of any pesticide is probably not justified.

Finally, Mr. Kruger has suggested that during weekly nest box visits nest material could be checked for blowfly larvae and the larvae removed. He further suggests that the whole nest could be replaced (after the young have hatched) if badly infested with larvae. I do not doubt that such efforts can be helpful, but they can also be as lethal as any chemical. Human activities at nests attract predators and can cause abandonment. Except in the case of specific research activities that might require such efforts, the risks involved may not be justified. ■

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PLANTINGS FOR BLUEBIRDS AND OTHER WILDLIFE

Japanese Honeysuckle: A Versatile Vine

Karen Blackburn

When selecting plants for wildlife use, there is a tendency to rule out the many species of vines which are attractive to wildlife. Vines evoke images of tangled masses of unmanageable growth and are, therefore, frequently considered undesirable. Yet the dense growth exhibited by many vining species not only attracts a variety of wild creatures, but can also be used to advantage in the landscape. Planted on steep banks, vines such as Japanese Honeysuckle provide quick cover and effective erosion control. The use of vines in concealing eyesores such as stumps and brushpiles at the same time creates excellent shelter for birds and small mammals. With their showy flowers and fruits, a number of vines are regarded as ornamentals and are particularly attractive when allowed to ramble over fences and trellises.

Japanese Honeysuckle is a twining vine which was introduced from Asia in the early 1800's. Since that time, it has become well established in open areas throughout the eastern United States. Originally planted as an ornamental, the Japanese Honeysuckle also possesses several characteristics that contribute to its wildlife value. The nectar of its fragrant, tubular flowers attracts hummingbirds, while its dark fruits provide food for many other birds, including the Eastern Bluebird. As a ground-cover, the vines form dense tangled mats which offer shelter for wildlife.

A Word of Caution

Although Japanese Honeysuckle is a versatile vine with many attractive features, a word of caution is in order before introducing this plant into the



landscape. *Because it is an aggressive species capable of spreading to adjacent property, Japanese Honeysuckle should only be planted where it will not interfere with other wildlife plantings, crops or desirable native vegetation.* In some parts of its adopted range, particularly in the South, this species has become a pest, crowding out more valuable native species such as brambles, cherries, dogwoods, and numerous species of wildflowers. As noted earlier, there are situations where aggressive growth is desired, but plantings of Japanese Honeysuckle should always be carefully planned with this characteristic in mind.

Japanese Honeysuckle (*Lonicera japonica*)

Native Range—Introduced from Asia. Escaped from cultivation and now established throughout much of the eastern United States.

Hardiness—From Zones 5 to 10.

Habitat—Prefers open areas along roadsides, fencerows and in woodland clearings.

Habit—An aggressive woody vine often forming dense tangled mats. Evergreen where winters are mild, but tops die back in northern winters. Grows rapidly.

Fruit and Flowers—Tubular flowers are white, fading to yellow with age. Very fragrant and showy. Black berries ripen from August to November and may remain on the plant through much of the winter.

Landscape Value—Often planted as an ornamental and trained over fences and trellises. Because it provides quick cover, it is also successfully used as a groundcover to stabilize steep banks.

Culture—Adapted to a wide range of soil types. Requires full sun for best

fruiting. Easily propagated by layering tips of vines.

Sources—Many mail-order nurseries offer "Hall's" Japanese Honeysuckle.

Undesirable Traits—Vigorous growth habit may be undesirable on some sites.

Wildlife Value—Offers excellent protective cover for many birds as well as rabbits and other small mammals. Tangled vines also provide nest sites for a number of small birds. Ruby-throated Hummingbirds are attracted to the flowers, and berries are eaten by the Purple Finch, Pine Grosbeak, *Eastern Bluebird*, American Goldfinch, American Robin and Hermit Thrush. Deer browse on all parts of the plant.

Special Uses—Stems are used for basket weaving. ■

P.O. Box 5017
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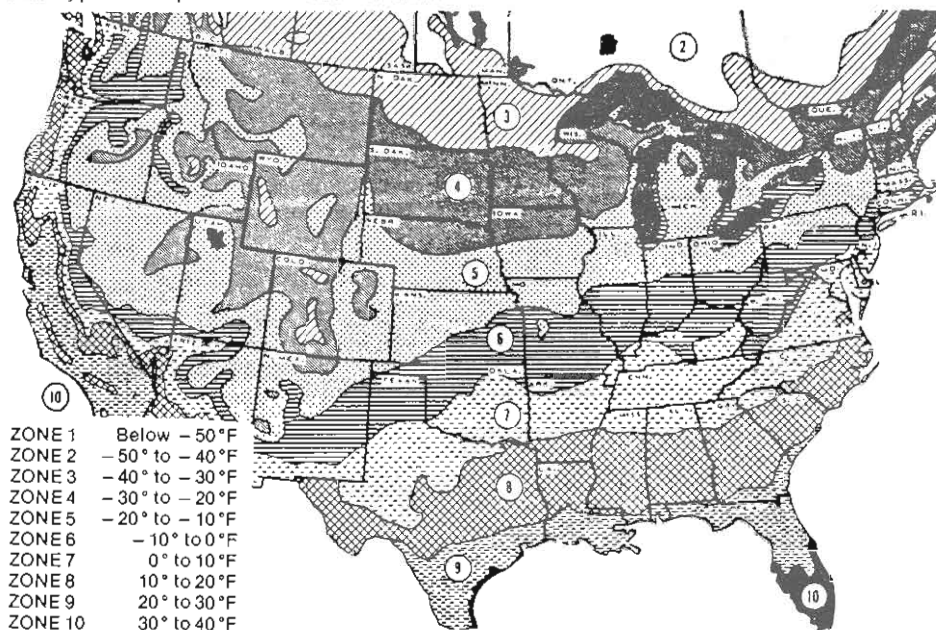
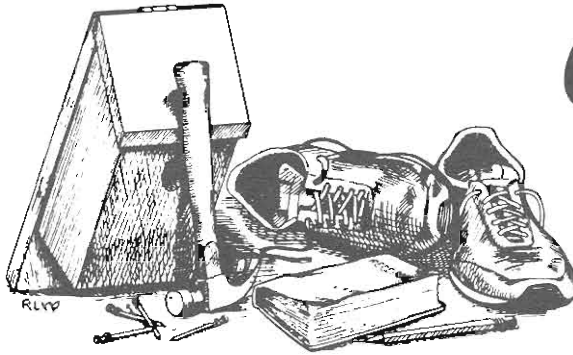


Figure 1. Hardiness Zones for the United States and southern Canada. Temperatures for each zone are the average annual minimum temperatures. When no zones are mentioned with the plant description, plants are hardy anywhere. If a zone is given, it indicates that plants are hardy within the zone and in all areas south of it. Factors within zones such as altitude, exposure, soil type, moisture, etc. can create variations. This map was developed by the Agricultural Research Service of the U.S. Department of Agriculture.



ON THE TRAIL

CATAWBA, SOUTH CAROLINA—Ed Haws of the Bowater Carolina Corporation, edited the March 1985 Bowater Bluebird Notes containing the 1984 bluebird results. Forty-one percent of the boxholders responded. It was a record year with 6,582 bluebirds fledged from 3,402 boxes. Results came from 18 different states. (Bowater donates the nesting boxes to the users and follows up with a pledge to repair them throughout the lifetime of the box.)

OMEMEE, ONTARIO—Rob Braley, NABS Ontario coordinator, has started a bluebird trail in Victoria County, Emily Township. His move to the area within the last year meant leaving the Lanark County trail he helped establish in 1980 which grew from 25 boxes to 446 boxes by 1984. Rob and his wife hope to link the new trail to some already in existence.

BREWERTON, NEW YORK—The very active Upstate New York Bluebird Society reports in their March 1985 newsletter that they are taking an active part in cooperating with Cornell University's Nest Record Card Program, the New York Breeding Bird Atlas Project, a biology student's blowfly parasitism study, and the "New York Nest Box Network" to protect their state bird. Some of their members are testing the commercial food pellets that were available at NABS' last annual meeting. The newsletter notes, "Reportedly, pine tar, a rosin used by baseball players and sold in sporting goods stores will keep ants out of nest boxes if applied to the pipe or post below the box. 'Tanglefoot' was once suggested but birds have been known to become entangled in it and so we do not recommend its use."

GREAT FALLS, MONTANA—Gladys H. Galli, Secretary of Mountain Bluebird Trails, reports that that organization is "excited with the outstanding fledge results for the year." Their trails cover southern Alberta, north-central and western Montana, Idaho, and Nevada. Totals for 1984 included 7,108 Mountain Bluebirds fledged (an increase of almost 63 percent over 1983), 995 Western Bluebirds, and an estimated 865 Tree Swallows.

BIRMINGHAM, ALABAMA—John Findlay, III, established bluebird trails six years ago at Oak Mountain State Park and now has more than 150 nesting boxes in the area. Alabama has had a Non-game Wildlife Fund since 1982 funded by income tax check-offs. Although these voluntary donations are helping many species of wildlife, the program is helping to fund a bluebird management program which has already placed approximately 500 nesting boxes at Alabama Welcome Centers, highway rest areas, state parks, and state owned and operated public fishing lakes. ■

CANADIAN NESTING BOX REPORT, 1984

Calgary Area Bluebird Trails

The 1984 breeding season was a banner year for bluebirds in the Calgary area due primarily to an early spring and an unseasonably warm May. This allowed early bluebird nesting which resulted in a dramatic increase in bluebird first broods from 214 in 1983 to 328 in 1984. Total bluebirds fledged numbered 1906.

Part of this increase was accounted for by a 15 percent increase in boxes to 939. Tree Swallows showed a modest 10 percent increase in number of nests which was less than the increase in the number of boxes. On several of the trails, clutch size for Tree Swallows was less than that of bluebirds. The Elkton area, for example, had a bluebird clutch size of 5.61 while the Tree Swallows averaged 5.47. Similar figures of 5.46 and 5.32 occurred for East Didsbury. Normally, Tree Swallows have slightly larger clutch sizes than bluebirds. Harold Pinel's records, for example, from 1973-1978 show a bluebird clutch size of 5.26 and that of the Tree Swallow as 5.71.

The 1984 breeding season marked the beginning of Project Nestbox Alberta, a federally funded summer project sponsored by the Ellis Bird Farm. Bryan Shantz applied for the grant and hired seven students to

cover the province listing data on nest box dimensions, habitat, and occupancy.

Two pairs of Western Bluebirds were reported nesting in the foothills. This is the first known breeding of this species in Alberta. (Details published in *Alberta Naturalist*, Sept. 1984:97.)

Kay Morck reported a pair of Violet-green Swallows nesting at a farmer's place she visits near Springbank. These swallows are occasionally seen nearer the mountains but this record was within 15 miles of Calgary. Their breeding records in Alberta are uncertain.

Blake Stillings reported one section of trail with occupation of 52 out of 56 boxes by bluebirds; of those, 45 had successful nests. Because the habitat appeared to be almost identical to that on other trail loops, it was not apparent why these boxes should have been so successful.

Nancy Murray reported nests of one Black-capped Chickadee and two Mountain Chickadees. Garry Ziegenhagel also reported a Black-capped Chickadee nest for the first time although it was not successful.

This report was compiled by Donald Stiles.

Fifth Annual Mountain Bluebird Trail Report Lethbridge, Alberta

Nesting boxes in almost all areas within Mountain Bluebird Trail territory in southwestern Alberta were occupied by bluebirds this year for the first time in five years. Due to severe storms farther south on the migration route, Tree Swallows were late arriving which left the entire trail free of competition for bluebirds. Consequently, first broods were excellent. Second broods were few compared to last year. Because the food supply was abundant we can only assume that the hot, dry weather

prevented their attempting second broods. One pair fledged a brood of eight while another pair fledged three broods of five, seven and five. This was a first for our territory.

Thirty-three monitors maintain the trail which is partly financed by Fish and Wildlife as well as Recreation, Parks and Wildlife Foundation. Such grants make possible the operation of this large trail.

This report was compiled by Duncan J. Mackintosh.

Table 1. Occupancy of Nesting Boxes on the Mountain Bluebird Trail, Lethbridge, Alberta, 1984

Nesting boxes available	1390
Boxes used by bluebirds	304
Bluebird eggs laid	1931
Bluebirds fledged	1797
Bluebird nestlings banded	1293
Bluebird adults banded	58
Sterile eggs	133
Tree Swallow nests	161
Tree Swallow eggs	1119*
Tree Swallow young fledged	576*
Wren nests	11
Total number of boxes used	473

*estimated

Saskatoon Area Saskatchewan Report:

Mountain Bluebird and Tree Swallow nesting returned to more normal timing this year after the disruption of their schedule the last two years. Mountain Bluebird nestling numbers peaked at the end of May for the first nesting (May 29: 16 young; May 31: 21 young) and late July for the second nesting (July 24: 20 young; July 25: 28 young). Second nestings this year were very successful—unlike last year when no double nestings were attempted. This year there were 10 with healthy broods of normal numbers. Mountain Bluebird young that were

banded increased to 179 over last year's 100. This was an average of 4.2 young per successful nest. Altogether, there were 57 bluebird nesting attempts, 14 of which were unsuccessful.

Tree Swallows were much less successful. Only 433 young were banded compared to 525 last year. There were 132 attempted nestings of which 97 were successful for an average of 4.4 young banded per successful nest.

This report was compiled by Mary I. Houston.

Ontario Trails

Also reported were results from two trails in Ontario. Robert J. Byers in Bruce County (Allenford) fledged 6 Eastern Bluebirds and 5 Tree Swallows from 12 boxes. Of Frederick R. Bickel's 6 boxes in Kent County, 2 were used by Tree Swallows and 1 by House Wrens.

NOH 1A0 (Byers); 4843 Somerset, Detroit, MI 48224 (Bickel).

Attention Canadian Trail Monitors: Reports intended for the 1985 summary should reach the editor of this journal at 10617 Grae Loch Rd., Laurel, MD 20707, no later than 15 April 1986. You may send them as early as the end of the 1985 breeding season. All reports are welcome. Several major Canadian trails or segments were not included in the 1984 compilation because reports were not received. ■

20 Lake Wapta Rise SE, Calgary, Alberta T2J 2M9 (Stiles); 1719 - 9th Ave., S., Lethbridge, Alberta T1J 1W4 (Mackintosh); 863 University Drive, Saskatoon, Saskatchewan S7N 0J8 (Houston); RR 3, Allenford, Ontario

Enemies of the Bluebird

Lawrence Zeleny

The delicate balance of nature is a wondrous thing that few people understand or appreciate. Most living creatures are so prolific that they would soon overrun the country or even the world unless checked. Nature, however, has her way of controlling the population of each species within certain broad limits. As bird lovers we are sometimes misled into looking upon predatory animals and birds as undesirable forms of life that should be eliminated in order to protect the particular birds that we cherish. We must stop to realize that without natural controls, including predators, the populations of most species of birds and animals would quickly become unbearable and would be limited only by the available supply of food, perhaps even including that needed by man.

In many instances man has seriously upset the balance of nature by altering the environment and destroying the food supply or nesting habitat of many species. He has also introduced foreign species of birds and animals that compete with or prey upon the native species and against which the native species have little or no defense. Under these circumstances such foreign species can often properly be regarded as pests. A classical example is the introduction of the mongoose, a small carnivorous mammal, into many of the islands of the Caribbean as well as Hawaii. This pest has nearly annihilated many of the ground-nesting birds on these beautiful tropical islands.

Let us now consider the population of our bluebird and its control by natural enemies. Without control each pair of bluebirds would produce at least eight young each year. At this rate the progeny of a single pair of bluebirds in 25 years would amount to an incredible figure of *more than 2 quadrillion*. This would be more than 10 million bluebird for each man, woman, and child in the United States. Obviously any such massive population

explosion would be a major ecological disaster. What, then, prevents such a disaster from happening and why, indeed, are the bluebirds disappearing rather than increasing in number?

During the course of evolution in North America the bluebirds, unlike any other members of the thrush family, chose to build their nests in natural cavities, usually in dead trees. This choice of nesting site had the advantage of affording rather effective protection for the eggs and nestlings against most avian predators such as hawks, owls, crows, jays, and grackles, which sometimes take large tolls of nesting songbirds. Snakes and the four-legged predators such as raccoons, cats, and squirrels, however, were still able to prey upon the nesting bluebirds almost as easily as upon birds that nested in the open. Prior to the twentieth century the bluebirds were able to cope with their natural enemies well enough to maintain a sturdy population. Native predators and sometimes adverse weather conditions prevented any undesirable population explosion. Thus a beautiful balance was established that assured the perpetuation of all three of our bluebird species without the danger of overpopulation.

With the introduction of the House Sparrow (*Passer domesticus*) and later the European Starling (*Sturnus vulgaris*) into North America this balance of nature has been gradually destroyed. Both of these foreign birds are major enemies of the bluebird primarily as competitors for nesting sites and to a lesser degree as predators. When the House Sparrow spread in large numbers over the country the bluebird population suffered a severe setback. A new balance appeared to have been established, however, allowing for a greatly reduced but reasonably stable bluebird population. This was possible since bluebirds are sometimes able to defend their nesting sites against the sparrows. Also the House Sparrows tend to stay

fairly close to human habitations so that the more open areas may often be used by bluebirds for nesting without serious sparrow competition.

The starling invasion of the country during the past 40 years has proved to be a far greater threat to the bluebird than was the somewhat earlier House Sparrow invasion. The starling population is still rapidly increasing and relentlessly spreading to nearly all rural areas. Bluebirds can never successfully defend their natural nesting sites against starlings except in the case of the relatively few natural cavities that the bluebirds can enter but that have openings too small for starlings. Bluebirds have almost disappeared from most areas where there is a heavy population of starlings during the nesting season. Here again a new balance of nature will eventually be established, but unless man intervenes effectively there will be no place in it for our lovely bluebirds.

It has been very well demonstrated that the bluebird population can be restored in local areas by proper management, and it is reasonable to suppose that this can be done on a national scale with sufficient interest and public participation. This is why we are urging all interested people to supply starling-proof bluebird nesting boxes and to give the bluebirds that may use them the needed protection against House Sparrows and other enemies.

Those natural enemies of the blue-

bird which are native to this country serve a useful purpose and should not be destroyed. These include all native birds of prey, snakes, raccoons, squirrels, chipmunks, etc. as well as those native birds that compete with bluebirds for nesting cavities. Starlings, House Sparrows, and stray house cats fall into a different category since they are not native to this country and often seriously upset the balance of nature.

Protection of bluebirds against both their native and imported enemies to the greatest extent practicable is important. Bluebird houses with entrance holes 1½ inches in diameter and 6 inches above the floor offer almost complete protection against starlings. Placing the houses as far as possible from buildings, removing House Sparrow nests repeatedly, and trapping adults are measures that are often necessary in dealing with these sparrows. Wherever snakes or four-legged predators are likely to be a problem, mounting the bluebird houses on smooth metal posts or pipes and keeping these coated with soft automobile grease provides the best possible protection. When these various protective measures are employed, efforts to increase the bluebird population are usually successful. Widespread cooperation in this effort will be necessary to save the bluebird. ■

This article was first published in Purple Martin Capital News (now Nature Society News) May 27, 1970. It is reprinted with permission.

BLUEBIRD BIBLIOGRAPHY AVAILABLE

The North American Bluebird Society announces the recent publication of a bluebird bibliography entitled "A Bibliography on the Technical Literature of the Bluebird Genus *Sialia*." Compiled by Tedd Gutzke, NABS Research Committee Chairman, the 29-page publication includes a list of most technical articles published up to the year 1983. The bibliography fills a void that has existed for a long time, providing interested researchers, students, trail operators and more a source for information on past bluebird studies in a single publication. The bibliography is available from NABS headquarters, Box 6295, Silver Spring, Maryland 20906-0295. The cost is \$2.50.

The Battle Continues

Frances Hanes

My attitude toward House Sparrows (*Passer domesticus*) changed rapidly and radically the day four years ago when I went up into a pasture to check my nesting boxes. One box which had produced six young bluebirds had been cleaned so I was confidently expecting to find a second nest started, but, to my horror, on opening the box I found a dead, male bluebird. His wings were spread and his bloody head had missing feathers. I stood there in disbelief. With tears streaming down my cheeks I picked up the poor bluebird which had been killed by a House Sparrow clinging to his back and pecking him to death as he was defending his box. Carrying "my" bird I walked down through the pasture cursing and crying. By the time I arrived at my car I vowed that if I ever got my hands on a House Sparrow he would not live long. I feel the same strong emotion today.

Two birding friends offered to shoot House Sparrows with their 22's so I went with them on two separate occasions. From the car we could see the sparrows at a box and once watched them throw a bluebird egg from the box, but attempts to shoot them were unsuccessful.

Fortunately, I read of Joe Huber's trap in a letter he wrote to *Nature Society News* so I wrote Joe about my battle. He sent me traps and boxes with permanent traps built into them. Now, as I monitor my 50 boxes I carry traps of various sizes.

Whenever a House Sparrow builds a nest in one of my boxes I remove the nest, attach the trap, and leave the scene to monitor other boxes. When I return in about one-half hour, I have a sparrow trapped in the box. If it is the female I dispose of her, reset the trap, and again leave the area because House Sparrows are very suspicious. I usually get the male and, if not, he gives up the box. Sometimes I wait until their eggs are laid since the attachment is stronger; however, I have no

answer for the sparrow that does not want the box for nesting but just sits in the opening keeping all birds from using the box.

My boxes are both top and front opening so I can slide the top over carefully when the trap is sprung and reach in and pick up the sparrow. My first execution attempt was a disaster, but I was determined to finish the job. Because gasoline was priced at a premium I would not drive a sparrow anywhere to allow him to continue killing. Some fellow bluebirders had demonstrated how to do the deed. I'm an expert now and my dead sparrows are often taken to the local zoo where they benefit some of the residents.

Since I frequently present my bluebird slide program, I also demonstrate the Huber trap; it provides an excellent opportunity to tell the audience exactly how I feel. If anyone would have told me 10 years ago that I was capable of killing a bird, I would have said that it was impossible. Today, I am convinced that the House Sparrow should be treated as any other pest we have. A friend of mine who shares this view points out that since we kill mice and ants that enter our homes, why not House Sparrows. I don't have time to remove sparrow nests repeatedly to attempt to discourage them. I honestly feel it is much simpler to just trap and dispose of these killer pests. ■

138 Melrose Ave.
Utice, NY 13502



Martha Watts

Plastic nesting boxes have drawbacks. A major problem is overheating. Martha Watts of Mount Airy, Maryland, in her own words, details her solution to the problem in Elinor Miller's column entitled "As the crow flies..." which appeared in the July 20, 1984, issue of the Frederick (MD) Post. We appreciate permission to reprint this novel solution to a bluebird problem and especially thank artist Meredith Springer for furnishing an "improved" version of his original drawing.

A plastic house is not a very good nesting box to be put in the sun because it gets so very hot and causes trouble for the eggs and the young that happen to hatch. That summer it was hot, spelled with a capital "H." I was sure these eggs literally fried in the heat of the plastic house and only one hatched. By this time I became very protective and maternal of this tiny bit of life. I had to do something to cool the house down when I wondered if the parents would accept my interference.

Well, I did and they did! This is how I solved my problem.

The plastic house had a peaked roof so I put together a peaked roof of wood larger than the plastic one. I tacked a strip of wood to the underside and the lower edge of the wooden roof so it would rest on the plastic one but leave air space between the two roofs.

Each morning and once or twice during the day I placed a small plastic bag filled with two or three ice cubes in the area between the two roofs. Even as the ice melted, the cold water stayed cool for some time and this air-conditioned the little house. I removed the extra roof in the late evening just in case a strong wind came up at night and replaced it the next morning unless it rained.

Those two sweet trusting birds accepted my help and even recognized me. They would dive

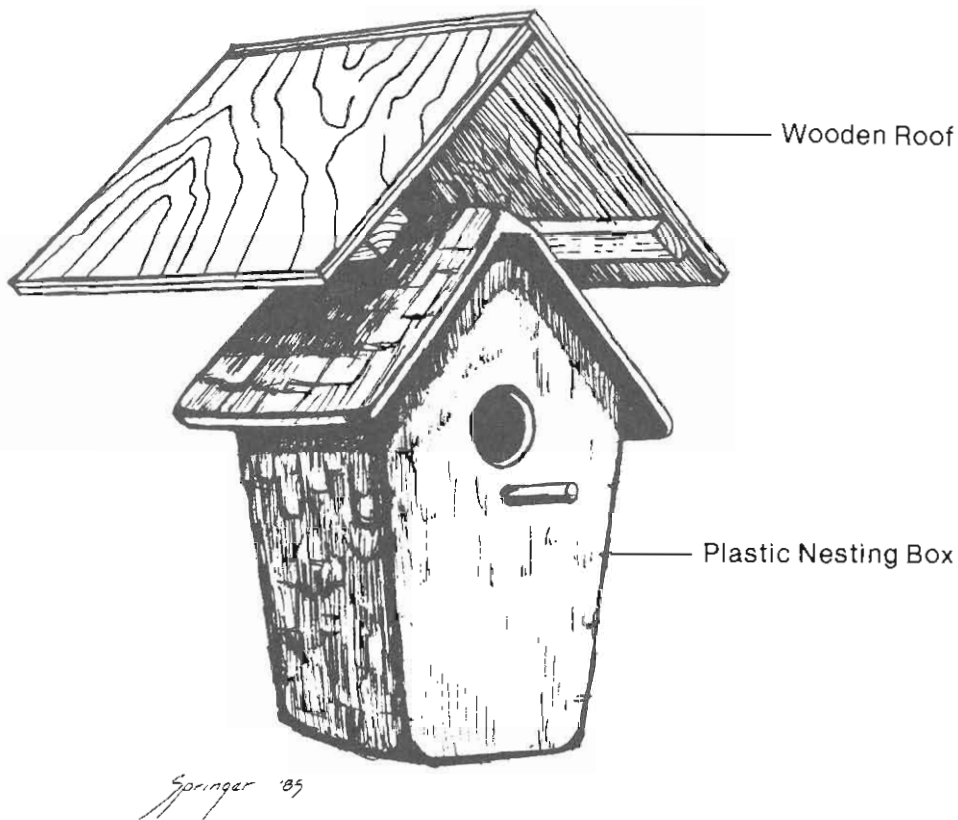
bomb my husband but not me. The baby survived and what a thrill to watch it poke its head out of the entrance. The parents sat on the antenna in front of a tree and called encouragement. It (a little male) burst out of the house and I ran out to seek where it had gone. I was quick enough to see the baby flying across the back yard to the woods and both parents along side making a great deal of noise. I could almost hear them shouting, "Atta boy, keep going, you'll make it and we're with you."

The baby survived and I saw them from time to time on the antenna of my house.

The plastic house served its purpose at the time, but I now have five bluebird houses, which my husband made, scattered around my front and back yard. I have at least two nestings per season. I love these little creatures, but I do sometimes wish they would become a little more aggressive when finding and protecting their nests.

I have mentioned the air-conditioned bluebird house to a few people and they have either laughed or thought I was nuts. For myself, it was so satisfying to have saved that one little bit of fluff for two very desperate little birds.

Hope you found this story interesting because it is true. This was my first encounter with bluebirds. ■



Martha Watts designed a wooden roof with an air space between it and the easily overheated plastic nesting box so that a bag with ice cubes could be placed between the roofs to "air-condition" the plastic box. (Drawing by and used with the consent of Meredith Springer.)

PRESIDENTIAL POINTS—(Continued from page 82) ranged to schedule the first Bluebird Week in New York State and to have funds from "Return A Gift To Wildlife" appropriated to educate the public of the bluebird's plight. The 1984 efforts resulted in the establishment of the New York Nest Box Network, a combined effort of the New York State Department of Environmental Conservation (NYSDEC) and the Albany Audubon Society to map existing bluebird trails and encourage residents to establish new trails. NYSDEC "Return A Gift To Wildlife" funds also appropriated \$500.00 to the NABS for the printing of our new brochure to help insure that the Society can continue its role in helping the

bluebird.

The spring of 1985 carried bluebird conservation even further starting with a reception at the Legislative Office Building in Albany on 12 March. The reception acknowledged Bluebird Week, National Wildlife Week, and the 200th anniversary of the birth of John James Audubon. A very special guest at the reception was New York's traveling eagle. This bird cannot be returned to the wild due to wing injuries and is used to educate the public on raptor management.

Although New York was the last state to acquire an official state bird, it may soon be the leader of the bluebird movement in North America. ■

A Lesson Learned

Linda K. Lang

On 6 June 1984, I checked a box in the yard that contained four eggs the last of which had been laid on 31 May. I had been monitoring the box every day and had greased the pole heavily with STP. The female had been incubating the eggs. When I raised the lid, the eggs, to my horror, were gone. I figured that a two-legged bandit must have taken them. Deciding that the box had to be moved so that the birds might start anew, I removed the box from the pole and laid it down. I then found a suitable spot and re-installed the pole. With a screwdriver I started removing the nest while shaking the box while it was turned upside down. Imagine my surprise when four very small blue eggs fell from within the nest onto the grass. One was broken in the fall, but the other three were uncracked. With tears of frustration I grabbed the nest and placed it back in the box and put the three eggs in it. When I had returned the box to its original site, I went inside the house to watch through the kitchen window for the return of the bluebird pair.

They soon came and checked the situation. The female went inside the box to incubate—or so I thought. The next day when I checked the box it contained four eggs. Every day thereafter there was a new egg next to the original three until there were seven. Only four hatched. I'm confident, of course, that they were the last four laid. Two days after the brood fledged, the male perched on the top of the box carrying a huge green caterpillar. He called to the female and then went inside the box. She soon appeared and went inside, also. Later that same morning, nest building began and six days later the first egg of a new clutch was laid. ■

216 E. 118th St., So.
Jenks, OK 74037

Bluebird Slide Show

The NABS slide show is available for rental at \$10.00 or purchase at \$55.00. The show consists of 141 collated, cardboard-framed 35 mm slides and a printed script (no slide tray). If a cassette narration is desired add \$5.00 to the purchase price.

To rent or purchase the bluebird slide show, write to the following address: NABS Slides, Box 6295, Silver Spring, MD 20906-0295. Please allow a month for delivery and, if possible, specify several dates.

WANTED: Back Issues of *Sialia*

Don't discard back issues of *Sialia*! If, for any reason, you cannot keep past copies of the bluebird journal return them and claim a tax deduction of \$2.50 for each.

Many new members desire complete sets of back issues which we are unable to supply. Copies of Volume 1:1,2 and Volume 3:2 are particularly needed. Mail back issues to headquarters:

North American Bluebird Society
Box 6295
Silver Spring, MD 20906-0295

A Bluebird Trail

Arlene Kunkel

The bluebirds are making a comeback. It is so thrilling to see those beautiful bluebirds sitting on the wires in February waiting for us to put up their houses.

So I get busy some nice sunny afternoon and load up 15 or 20 boxes and start out on my trail. The trail is 12 miles long. I go east from Ankenytown on the Greenville Treaty Line to Grubb's Corners, turn right and make a circle back to Ankenytown.

I take the boxes down in winter because the mice build nests in them and the severe winter weather is hard on them. Last year my trail consisted of 54 boxes from which 148 bluebirds fledged along with 12 Tree Swallows and 4 flying squirrels.

Several garden club members wanted to see my trail so I made a few more trips last year than in the preceding year. Some people were amazed that I could tap lightly on a box, open it, reach in, pick up the incubating female, count her eggs and put her back without her flying away. I was even able to hold her carefully while showing her to observers who had never seen a bluebird.

One evening I removed a nestling from a box to show a group of people. I saw a blowfly larva fastened to its foot. After examining each nestling carefully (and removing a total of two or three blowflies) I handed each nestling to a different person. I then raised the nest and brushed out the remaining larvae which were in the bottom of the box. All five nestlings were returned to the nest and eventually fledged.

Some of the bluebirds on my

trail lay as many as six eggs in the first clutch and may raise as many as three broods during the breeding season. After the young have left the box, the nesting material is removed and a teaspoon of powdered sulfur is sprinkled on the nest box floor for control of blowflies. All boxes are, of course, carefully monitored and complete records kept.

Bluebirds like to build a new nest for each brood; however, if a nest is not removed promptly after the young have fledged, they will reconstruct an old nest or build a new one on top of the old. This raises the nest and nestlings much closer to the entrance hole so that predators can then reach the contents more easily.

The North Liberty Garden Club started a trail in 1971. We got the idea from the Howard Club in southeastern Knox County. Harold Freshwater, the husband of one of our members, sawed parts for more than 50 boxes. Our group then met at a local church and nailed them together. Each member put up several boxes near her home. After we sold our farm and moved to Ankenytown, I added more boxes and started the 12 mile trail.

In the autumn after the breeding season has ended, our group tallies the results. During 1984 our club of 36 members raised 306 bluebirds. We would like to encourage others to erect nesting boxes in our state in order to bring the lovely "bluebird of happiness" back to Ohio. ■

11440 Yankey St.
Fredericktown, OH

BLUEBIRD EXPRESS

SIALIA welcomes the correspondence of its membership. Bluebird Express should become a forum for all who are interested in communicating their ideas and actions concerning bluebird conservation. We will attempt to publish a wide range of views in a responsible manner. Keep your letters coming!

Dear Editor:

I read with great interest the article by Art Aylesworth on the merits of enlarging entrance holes in bluebird boxes to 1-9/16 inches. I decided to incorporate the larger holes in future boxes but had just recently completed a number of boxes with 1-1/2 inch holes.

I purchased a readily available 1-1/4 inch drum rasp for about \$3.00 and found it well-suited to enlarging the holes using an electric drill (3/8 inch variable speed type preferred but not essential).

Anyone wishing to follow this suggestion will find the use of a tapered wood gauge very helpful. I used a piece of 3/16 inch cedar about 5 inches long. Start with a width of 1-9/16 and then taper the first 3 inches down to 1-1/2 inches. Round off the edges. It is better than a cylindrical gauge because it indicates where to remove material.

The drum rasp is so easy to use that I plan to continue to enlarge 1-1/2 inch holes rather than purchase a special 1-9/16 inch hole saw.

Harold S. Pollock
Victoria, British Columbia

Dear Editor:

The slide program on bluebirds which your organization furnished for the Catesby Bird Club was the most beautiful we have ever had. Thanks for a wonderful program.

Mrs. J.E. Horney
High Point, North Carolina



Dear Editor:

L.A. Smith of Ontario (*Sialia* 7(1):36) stated he would need 200 feet of string on his manual trap to catch the "skittish" pest birds in his area. A blind is the solution to that problem. Drive three 5 foot stakes into the ground about three feet apart and hang an old blanket or tarpaulin between them.

To obtain a strong string for your manual trap, go to a hardware store that carries masons' supplies and ask for heavy-duty "masons' line." Some braided nylon masons' line I bought recently has a tensile strength of 160 pounds! It is green in color which camouflages it well when it is lying in the grass. If you can't find masons' line locally, write Goldblatt Tool Co., 511 Osage, Kansas City, Kansas 66110 for their masons' supplies catalog.

In late April 1985, I caught a male House Sparrow in a manual trap which was 170 feet from where I watched with my 8 x 40 mm binoculars.

Morris Green
Walkersville, Maryland

Dear Editor:

A few weeks ago I ordered four cedar nest boxes from your society.

They are the best boxes I have seen or used in my lifetime and I've been up and down the highway a good many years. I have purchased and built nest boxes but yours are by far the best....

I'm ordering four for my grandchildren. Please rush for this season!

Gordon J. Caldwell
Cummington, Massachusetts

Dear Editor:

TO BIRDERS ENJOYING RETIREMENT. I would like to devote some of my energy as a free lance writer to the bluebird cause. One of my current projects is an article about how involvement in the nesting box program has enriched the lives of retired people. Past articles in *Sialia* indicate that the free time older folks enjoy can be very beneficial to bluebirds....

The effect involvement has on people is sometimes overlooked. I would like my article to focus on how participation has benefitted you as well as wildlife....

I am interested in hearing about your special bluebird experiences since you have stopped working. Perhaps you have found that your commitment to bluebirds has meant getting outdoors, working with your hands, keeping busy, communing with nature, or something else special that you did not expect. Perhaps there is a single event that has been especially meaningful.... Be sure to include details like your age, your past occupation, where you live, etc. How you became interested in the nesting box program and how that commitment has evolved is also important. I am appreciative of any specifics you can share with me.

Petra de Groot
Diastole Ranch
1390 Rock Creek Road
Philipsburg, MT 59858
(406) 859-3369

Dear Editor:

On April 26th two bluebirds started building their nest in one of our boxes next to the back porch. Due to the fact that there was no way to open the box and the extreme wariness of these particular birds, we did not count the eggs but later did observe two little heads while feeding. Then, only one little head. After a few days we saw flies entering so assumed that one had died. This proved to be true for I found it when I cleaned the box after the remaining bird had fledged on June 4th.

On June 12th the parents were back building again in another box about 15

feet away from the other located on a clothesline pole. Sometimes the first fledged baby sat on the line while the female worked. She laid five eggs this time and was still sitting on them when we left on a trip July 2nd. When we returned three weeks later, the nest was empty, except for a lone blue egg which had failed to hatch. We saw several young birds around from time to time so assume that some of them made it.

Stan Lierman
Cuba, Alabama

Dear Stan Lierman:

Good to hear you had some success in fledging bluebirds. Your experience with the dead nestling illustrates one reason why we urge that boxes be constructed in some manner that allows for easy monitoring.

Dear Editor:

I have been using Morris Green's sparrow trap (*Sialia* 6(1):8-11) on our bluebird houses with great success. I have a suggestion, however, which may make using the trap easier for some readers. Rather than detaching the box from the pole and dunking it to drown the sparrow, my wife came up with a simple idea. When the pest is trapped inside the house, slowly open the trap door and slide a one quart or one-half gallon plastic milk "bottle" over the opening. Since it is translucent, light will come through it making the sparrow think the entrance is now open. If he hesitates to come out, tapping on the back of the house will usually encourage him to leave the way he came, and then you have him in the bottle. From there it is easy to dispose of him.

Louis Soule
Mount Airy, Maryland

Correction

In "Success with paired boxes in Alberta" 7(2):55, the Mountain Bluebird should have been identified as *Sialia currucoides* rather than *S. mexicana* which is the Western Bluebird.

Bluebird Tales

Mary D. Janetatos

Sarah Funkhauser, NABS' new office administrative assistant, phoned me and announced, "The babies are born! The Killdeer, I mean!" Off I went to Sarah and Glenn's nearby Fulton, MD, home. The Killdeer young were tiny replicas of their parents, with two black bands around their necks and heads that resembled dandelion seed clusters. As the male Killdeer frantically went through his pathetic "broken wing" act, we also watched the female Killdeer, who fanned her wings and tail revealing her burnt-orange rump patch while covering three downy youngsters.

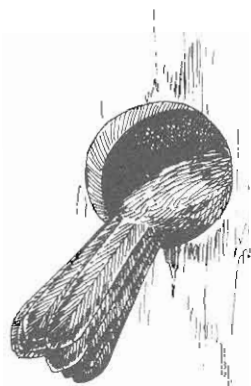
A fourth sat unperturbed and uncovered in front of his mother. The mother's concern for her young became alarm, so she arose. When she did so, the tiny puff balls seemed to run on toothpicks taking off in all directions. We distanced ourselves a bit as Sarah used her camera to record the event in snapshots. Then both parents herded the four youngsters back into the "nest" where they nested again safely underneath their mother.

One doesn't need to "do" much to aid Killdeer, as Sarah and Glenn know. They simply "provided" their stony driveway and Mama Killdeer deposited her spotted, stony eggs neatly just off the beaten path. Since she blended in well with the background she managed to escape the notice of the local predators and was watched appreciatively during the weeks of incubation by her human landlords. It does seem a great wonder that any Killdeer nestings succeed.

Needing far more human help, however, is our banner bird, the bluebird.

As the telephone messages unfold, there come tales of many bluebirds seen. The accounts differ little either registering incredulity at seeing a "first" bluebird, recounting with delight the fact that last year's pair is back again, or relating in anguish tales of sparrow interference.

The most innovative effort to thwart sparrows came from **Alice Brocouni** of Gaithersburg, MD. Alice had moved her bluebird box in the summer of 1984 from a fence post to a windsock pole in the middle of her yard. Immediately, the bluebirds built a nest and raised a brood of four with no sparrow interference! When **Lee Lowery** of Rockville, MD, told me an all-too-familiar tale of sparrow interference, I suggested she get a windsock, also. She enlisted the help of her mother who made one on her



sewing machine. At last report four bluebirds hatched successfully in that box. In the backyard at NABS headquarters (my home), the sparrows had a partially completed nest when I devised a variation of the windsock idea: streamers attached to a plant stake which was attached to the nest box. After I removed the sparrow nest, they never rebuilt. However, the bluebirds did build a nest, and the female bluebird laid five eggs which are due to hatch any day now. The bluebirds really seem to enjoy the pole. They perch on it to hunt insects on the ground. Other people report mixed results. **Rich Dofesh** (NABS Special Projects Chairman) is very interested in having it tried and results reported on a wide scale. The method can be, in my opinion, one component of a sparrow control program. It works as a scarecrow works. Call it a *scare-sparrow*?

Potential bluebirders continue to write to the Society for information. One such letter from **H. Moses** of Fairfax, VA, says: "Thank you very much for your quick mailing of the bluebird information. My Cub Scouts [each] made a bluebird house as their woodworking project. These nine houses will be hung with much pride in the next couple of weeks." Another letter written in February of 1985 tells about a roosting house, appropriately named the Blue Bird Inn. "Last night, which was very cold here in northern Ohio, we had 18 guests in the Inn." Also in February, **Mrs. Jesse C. Job** wrote and asked if NABS carried nest boxes with top and bottom openings. [We don't, but it would probably be a simple matter to drill a hole in the lower part of the box for winter roosting. **Frances Ehlers**, of Clarksville, MD, is another advocate of this approach.] Efforts to keep

bluebirds happy in winter met with different results by two bluebirders: **Ed Baker** of Saegertown, PA, and **Thomas Passamonte** of Mt. Morris, NY. Ed built two roosting boxes last year but no bluebirds used them. Although there was a rare bluebird stopping at the feeder, they did not eat anything. On the other hand, Thomas Passamonte mentions six bluebirds roosting in early fall in the backyard martin house, then all six using a hollowed log nest box when the upstate New York winter cold settled in.

In March of 1985 **Carolyn Johnston** wrote about having built nest boxes using NABS instructions which she sent for after reading the *Parade* magazine article in 1978!

As the spring mail comes in, we hear of territorial battles and nesting anecdotes. Right here in Silver Spring, MD, the backyard male bluebird defiantly chased a large gray and lemon-colored Great Crested Flycatcher away from a Laurance Sawyer log feeder.

Mrs. T.P. Shoemaker, of Sophia, NC, writes as she renews her NABS membership, "P.S. Last year the female bluebird would steal nest material from the robin's nest. Both were building their nest at the same time. The robin was away from her nest, of course." **David Barclay** of Talledega, AL, wrote, "...We have finally gotten two bluebird families to move in. I'm slowly making more houses out of red cedar grown on our own place."

NABS Founder, **Larry Zeleny**, travelled to Huntsville, TX, in early April and visited with the **John Grivich** family for a few days. Larry saw first hand what a "whale of a job" the Griviches are doing to promote bluebird conservation in their area of Texas.

On a continent-wide scale, the Bowater Carolina Company continues their bluebird campaign. NABS Board Member **Ed Haws** edited the March 1985 Bowater Bluebird Notes which described the 1984 Bowater bluebird results. Ed is extremely helpful to NABS, having arranged a substantial grant from Bowater to help finance the new edition of the popular color brochure "Where Have All The Bluebirds Gone?"

Other funding of the brochure came from **Art Aylesworth** and **Robert E. Lee** of Ronan, MT, the International Fund for Animal Welfare initiated by **Bob Braley** of Omernee, ONT, and the New York State Department of Environmental Conservation's "Return a Gift to Wildlife" fund through the good offices of NABS' President, **Mrs. Sadie Dorber** of Vestal, NY.

New York State residents, through its DEC and its National Audubon chapters, are becoming more and more active in

bluebird conservation. They join the pioneering efforts of the Upstate New York Bluebird Society directed by **Fran Hanes** of Utica and **John Rogers** of Brewerton. A "Nestbox Network" is being developed there to help the state bird.

Bluebird talks and other events were scheduled and reported from far flung places. **George Cummings**, of Warrenton, VA, showed the bluebird slide program to his men's group; **Pauline Kasserman** in Winesburg, OH, presented it to the Canton Garden Club; **Mark Martin**, of Warrenton, VA, gave the same program to the Francis Fauquier Garden Club. **Judy Daniel** of Gretna, NE, writes that she thought the slide program was excellent, "All in all, I am very happy and excited about the bluebird society and with what they have done. I will do everything I can to put bluebird nesting boxes up around the Omaha and Lincoln area..."

Cathy Reno, of Gainesville, FL, says, "Thank you so much for making this program available to us. It's so useful to me, especially since I'm a novice public speaker." And from Bettendorf, IA, **Orville G. Stow** writes, "This film presentation is really a good one!... Do you have instruction sheets of dimensions and procedure for making bluebird houses?" Yes, we do, and we'll supply all speakers with free instructional material upon request.

In the Washington, D.C. area, NABS has plans to join with old friends at the Audubon Naturalist Society in June for "Bluebird Recovery" featuring **Larry Zeleny** and **Andre Dion** coming from Quebec speaking about his book, *The Return of the Bluebird*. NABS also had local exhibits at the Northeastern Bird Banders' Association and Eastern Bird Banders' Association convention and at Marlboro Day in Prince Georges County (MD). At the March National Wildlife Federation (NWF) convention, I met charter Board Member **Ralph Shook** of Godfrey, IL. **Dave Pardoe** of NWF (and a NABS Board Member) had arranged the opportunity to show the Society's work there.

We seek to inspire the bluebird conservation efforts of large groups, as in our Eighth Annual Meeting in July in Red Deer, Alberta, hosted by Union Carbide of Canada, Ltd. We also continue to assist the lone individual, like **Wayne Johnson** of Newport News, VA, who wrote in April saying, "Thank you for your letter and I enjoyed hearing from you... The two boxes I got from you were perfect and well built.... Thanks again for everything ... Yours for Bluebirds."

And may you, dear reader, be blessed with many bluebirds!

Bluebirds—Bring Them Back

Early in September of 1985 a new 20 minute film entitled "Bluebirds—Bring Them Back," will be available from Berlet Films. After several years of planning, thousands of miles of travel, and countless hours of filming and editing, Walter and Myrna Berlet have produced an intimate close-up in the life history of all three species of bluebirds.

This bluebird movie is another of the "Great Animal Stories" filmed by the Berlets. Perhaps you have seen some or all of their films on the public television show, "Profiles of Nature." Nine of the 26 films shown in the current series were produced by Walter and Myrna, a team of dedicated educators who have been filming and producing wildlife conservation films for over 20 years. "The Remarkable Mountain Goat," "Two Little Owls," "Legacy for a Loon," "Seasons of the Elk," "Life of the Bighorn Sheep," and "The Greater Sandhill Crane Story," are some Berlet films that have been shown on television. These films have won four Cine Golden Eagle Awards and two Best Wildlife Documentary Awards.

The 20 minute, low-fade color, aster-base educational film with sound will be useful for nature adventures, science, language arts and social studies in the elementary grades. In high schools and colleges some uses would be for studies in biology, ecology, wildlife management, conservation, and ornithology. Nature club programs, nature centers, and libraries are other places where the film would spread the story of the plight of the bluebird.

Purchase price of the film is \$345.00. Video cassettes may be purchased for \$230.00. Either the film or the cassette may be rented for \$35.00. All purchases or rentals must be made directly from Berlet Films, 1646 Kimmel Road, Jackson, MI 49201.

There is no doubt that bluebirds, as well as other cavity nesting species, have benefited by the widespread publicity generated through newspaper and magazine articles, the bluebird slide show, and the NABS brochure. Now the added dimensions of action and sound will enhance future educational presentations. ■

Cavity Nester Slide Show

Plans are underway by the Society to produce a cavity nester slide show. Demand for the bluebird slide show far exceeded all expectations. Nature lovers from all over the continent have demonstrated their thirst for knowledge and interest in helping genuine conservation efforts. They become directly involved. Slide shows have been an excellent educational tool.

Bluebirds are only three of the eighty-six cavity nesting species found in North America. Not all can be helped to overcome the survival perils present in a rapidly diminishing habitat. The Ivory-billed Woodpecker has already become extinct; the Red-cockaded Woodpecker faces extinction due to loss of habitat. On the other hand, the Wood Duck, Purple Martin, and bluebird are a few of the species that have been helped by humans. Along the bluebird trails, over twenty species have been found nesting in boxes. Much has been learned about Tree Swallows, chickadees, and titmice, for example, but there is much more to learn.

You can become directly involved in the production of the new slide show by donating one or more slides of local cavity nesting species to NABS or by making a financial commitment. Please send duplicates only; we are not responsible for submissions. Please include a signed release giving NABS permission to use your slide(s). Send all donations to Cavity Nesters, c/o NABS, P.O. Box 6295, Silver Spring, MD 20906-0295.

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A Bluebird Story

In the month of April,
The nest box was found.
On the clothesline, sitting,
They sized up the ground.

Everything was right.
The two flew away.
They would gather grass bits
And feathers each day.

All too soon, disaster!
A cat was his fate.
Broken-hearted and sadly,
She searched for new mate.

In a week, she came back
With a second consort.
They'd go back to nesting,
That fate would cut short.

Blue Boy showed up—
Much older and wise.
From the nest, he called her
To feed at moonrise.

But, alas, a mishap,
Blue Boy, in dismay,
With a crippled, limp leg,
Would vanish one day.

Pretty Bird carried on,
Feeding, now, all alone.
One small fledgling appeared.
Soon, both will have flown.

And, the nest box is empty,
Once cozy and warm.
She'll return come springtime,
A cycle to form.

Kristin Warren

ART CREDITS

Jon E. Boone: 82, 112
Suzanne Pennell Turner: 96, 114

Richard L. Woodward: 85, 100,
102, 107 Black-eyed Susans

40.00 Rent
30.00 cash
120.00 20's
150.00 50¢

320.00
60.00 Stuba

260.00
50.00 Airport

210.00
14.00

196.00 Zoo
40.00 Fuel

156.00

Founded in 1978, THE NORTH AMERICAN BLUEBIRD SOCIETY is an incorporated non-profit organization determined to increase the populations of the three species of bluebirds on this continent. Inasmuch as the populations of these birds have diminished due to the maladroit actions of human beings, as well as other natural disasters, the primary objective of the SOCIETY is to educate all who will listen about the importance of preserving these singular creatures in their native environment.

Toward this end, the SOCIETY will work, within the bounds of effective conservation, to study those obstacles impeding bluebird recovery; to publish results of those studies; to promote ideas and actions which might reduce the effect of those obstacles; and to obtain a more complete knowledge about bluebird ecology, in the hope of learning more about the ecology of humankind.

Membership: Students (under 21) and Senior (over 60), \$7.50; Regular, \$10; Sustaining, \$30; Supporting, \$50; Contributing, \$100; Corporate, \$100; Donor, \$250. Amounts over \$5 are tax deductible.

Address:
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