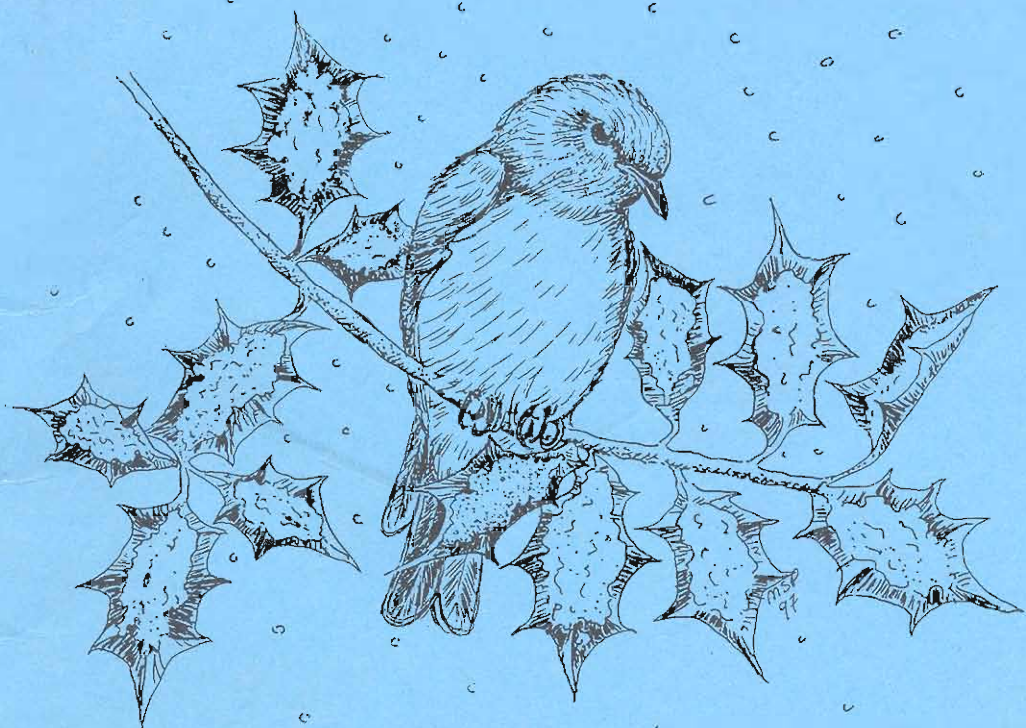


Sialia

Volume 20, Number 1
Winter 1998
Pages 1-40

The Quarterly Journal
Of
The North American
Bluebird Society



NORTH AMERICAN BLUEBIRD SOCIETY

Founder

Lawrence Zeleny

President

Charlotte Jernigan

Vice President

Carol McDaniel

Treasurer

William R. Davis

Recording Secretary

Douglas LeVasseur

Corresponding Secretary

Joseph Tait

Directors

Martha Chestem 1998
Maryland

Dean E. Sheldon, Jr. 1998
Ohio

Richard Hjort 1998
Minnesota

Barbara Stinson 1998
Virginia

Steve Eno 1999
Nebraska

Edwina S. Hahn 1999
Georgia

R. David Shiels 1999
Texas

William Wheeler 1999
Tennessee

David L. Eastman 2000
New Hampshire

Ray Harris 2000
Alberta

Robert M. Niebuhr 2000
Montana

Stan Reed 2000
Arkansas

Co-Executive Directors

John D. Ivanko

Lisa Kivirist

Editor

Joanne K. Solem

Executive Director Emeritus

Mary D. Janetatos

NABS AFFILIATES

*Calgary Area Bluebird Trail Monitors
(Alberta)*

California Bluebird Recovery Program

Indiana Bluebird Society

Johnson County Songbird Project (Iowa)

Bluebird Association of Maine

Bluebird Recovery Program (Minnesota)

Bluebirds Across Nebraska

New York State Bluebird Society

*Schoharie County Bluebird Society
(New York)*

Ohio Bluebird Society

Oklahoma Bluebird Society

*Hubert Prescott Western Bluebird
Recovery Project (Oregon)*

*Bluebird Restoration Association of
Wisconsin*

*Lafayette County Bluebird Society
(Wisconsin)*

Sialia (ISSN 0890-7021) is published quarterly by the North American Bluebird Society, P.O. Box 74, Darlington, WI 53530-0074. Subscription price is included in annual membership dues. Single copies: \$2.50. Write for information about bulk quantities. Checks and money orders should be made payable to North American Bluebird Society and should be in United States funds. Issues are dated Winter, Spring, Summer and Autumn and appear approximately on the fifteenth of January, April, July and October. Deadline for submission of material is three months prior to date of publication.



Sialia

The Quarterly Journal
About Bluebirds

Volume 20, Number 1
Winter 1998
Pages 1-40

EDITOR

Joanne K. Solem

ART EDITOR

M. Suzanne Probst

TECHNICAL ADVISORY COMMITTEE

Kevin Berner

Carol McDaniel

Myrna Pearman

Dorene Scriven

James Walters

CONTENTS

Presidential Points	2
Charlotte Jernigan	
Effect of Predation on Clutch Size in Prothonotary Warblers	3
Charles R. Blem, Karen L. Rossignol and Natasha N. Bundick	
Prothonotary Warbler Nest Box Program in Northern Virginia, 1997 Results	8
Larry Cartwright	
Yellow Jackets Take Over Montana Box	9
In Search of...a New <i>Sialia</i> Editor and Art Editor	10
Dissecting the Peterson Nest Box	11
Kevin L. Berner	
Calendar	13
Should You Add a Wooden Predator Guard to a Nest Box?	14
Wayne H. Davis	
An Unusual Cavity Nest for the Eastern Bluebird in Oklahoma	15
Hope McCaha and Michael D. Bay	
NABS 1998 Annual Meeting in Regina, Saskatchewan	17
Entrance Slot Attitude Preference of Eastern Bluebirds	18
Conley C. Black	
Cavity Nester License Plates	20
1996 Speakers' Bureau Report	22
Ron Kingston	
Exchange	28
NABS: Taking Off	34
Lisa Kivirist and John D. Ivanko	
Bluebird Express	36
Bluebird Tales	38
Lisa Kivirist and John D. Ivanko	
Financial Statement	39

COVER

An Eastern Bluebird perching among snow-covered holly leaves is the subject chosen by Art Editor M. Suzanne Probst.

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 20723.

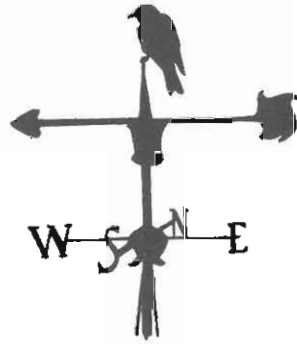
Presidential Points

Charlotte Jernigan

NABS is embarking upon a new year, and we're mobilizing our conservation actions to take them to another height. As we head toward the millennium, we hope our efforts will enable us to give an even greater gift back to the earth. This past year the North American Bluebird Society opted to make some changes. Knowing that growth is a natural process and essential for expansion, we discussed the past 20 years (filled with many memories and much gratitude) and concluded that ours had been a story of success that we can point to with pride. Membership unity and participation are the key to this story that united North America and Bermuda in a campaign to "save the bluebird."

We turned our love of nature into a commitment to protect it, and we have sustained and expanded our efforts to teach the importance of conservation. Twenty years of history have prevailed, and today we do have a healthy organization because two decades ago our organization was undergirded by selfless, dedicated individuals who knew the importance of working together in a compatible way to solve a problem and reach for a dream. This is not to say that there has never been spirited debate. A time or two it would have been easier to hold back stampeding buffalo than to prevent discussion on matters of importance. But that's healthy!

NABS is now in the process of encouraging all states and provinces to pick up the pace. We're hoping that each will organize its own individual society, become a non-profit organization, and affiliate with NABS. We are offering guidance and help; we urge all of you to check out the possibilities in your area. If you are interested in forming a group, write for a starter packet or send questions our way. We feel that this will



strengthen the movement continentwide and will create bonds of friendship within each organization that will be a plus for what we're trying to do. Regional or state groups from Alberta, Minnesota, Ohio, Nebraska, Indiana, California, Iowa, Wisconsin, Oregon and Oklahoma have affiliated. Let's keep the momentum going. Don't wait for someone to call you; instead, take the initiative to contact active bluebirders known to you and start discussing the advantages for your area. (There is no substitute for the spirit of camaraderie that you find among your fellow bluebirders.)

We still have so much to do. When you start to contemplate the next steps on your trail, remember that we have a commitment to all cavity nesters. None of us is so blessed as to have all of them in our own area, but generally speaking each of us has a few to concentrate on. Let's have an impact on the decline of some of these birds that need help.

We're looking forward to seeing you in Saskatchewan, Canada in June 1998.

NABS NUMBERS

North American Bluebird Society
P.O. Box 74
Darlington, WI 53530-0074

E-mail: nabluebird@aol.com

Website:

<http://www.cobleskill.edu/nabs/>

Fax: 608-329-7057

Effect of Predation on Clutch Size in Prothonotary Warblers

Charles R. Blem, Karen L. Rossignol and Natasha N. Bundick

Introduction

There have been numerous long-term studies of clutch size of cavity-nesting birds using man-made nest boxes (see Møller 1989). These typically have been done with uniform wooden bird boxes placed at intervals along a transect or on a grid. Data from such studies appear to be valuable in understanding environmental and evolutionary control of clutch size, although Møller (1992) has identified some potentially confounding factors associated with studies conducted using nest boxes.

In 1987, Blem and Blem (1991, 1994) began a long-term study of annual variation in clutch size of Prothonotary Warblers (*Protonotaria citrea*). They established a 18.6-mile (30-km) nest-box transect of approximately 300 boxes (Blem and Blem 1991) in tidal swamps along the James River near Richmond, Virginia. During this study they and their collaborators have monitored more than 1,000 nests and have banded more than 2,000 warblers. In the first eight years of their study, all boxes were attached to trees where the rate of predation sometimes exceeded 30% per year. Between the 1994 and 1995 breeding seasons, all boxes were moved to metal poles to restrict access by various predators. The following study analyzes the effects of the resulting decrease in predation on nest initiation and clutch size in this species.

Methods

Beginning in March 1987, the Blems placed wooden nest boxes along tidal creeks in swamp forest on the James River on and near Presquile National Wildlife Refuge near Hopewell, Virginia

(37° 20'N, 77° 15'W). The habitat of the study area is tidal swamp in which the dominant tree species are black gum (*Nyssa sylvatica*), red maple (*Acer rubrum*), and ash (*Fraxinus* sp.). Tidal amplitude in the swamp during spring tides may be >3' (1.5 m) from high to low tide. The nest boxes were made of 1" (2 cm) salt-treated pine or red cedar. Box dimensions were 8" H X 4" W X 4" D (20 X 10 X 10 cm) and the entrance hole was 1.5" (3.8 cm) in diameter (see Blem and Blem 1991). Boxes were placed every 100 m in an 18.6-mile (30-km) transect along creek banks. Variables determining optimal nest box sites were determined during the first two years of the study (Blem and Blem 1991), and boxes were positioned accordingly to maximize use by warblers in subsequent years. Boxes placed over or near water and in shaded locations appear to be optimal, and proximity of moss for nest material also may be important. Direction of the entrance hole appeared to have no effect on warbler preference (Blem and Blem 1991), so boxes were not oriented toward any particular compass heading. The number of nest boxes used in the study was increased from 141 to 300 from 1987 to 1996. The sample size included in the analyses varied not only because of differences in boxes placed in the field, but also because of the loss of some to storms.

We documented the contents of boxes 8 to 10 times during each breeding season. All boxes typically were cleaned prior to the breeding season, although tests indicate that the presence of old nests have no effect on clutch size,

Results

probability of the boxes' use by warblers, or success of nestlings (Blem et al., unpubl. data). Over the ten years of research we recorded dates of first eggs and clutch sizes only for those nests visited often enough that we could be certain of laying dates. We converted first egg (nest start) dates into Julian days for purposes of analysis.

Because it has been noted that Prothonotary Warblers commonly produce two clutches each season (Petit 1989), we divided nests with eggs into two groups: "first clutches" in which first eggs were laid from 25 April through 20 May and "second clutches" in which first eggs were laid after 20 May. Many of the second clutches probably have been replacements for predated first nests (Blem and Blem, unpubl. data). We used 20 May as the separation date because it is the length of time necessary for Prothonotary Warblers to complete one nesting cycle (approximately 25 days) after a potential starting date of 25 April (Blem and Blem 1992), and because it is the date after which few first clutches have been laid.

Prior to the 1995 breeding season, all boxes were removed from trees and attached to 10' (3-m) lengths of metal conduit that were placed upright in the mud along tidal creeks in swamp forest. Heights of boxes varied from 0.5-2.0 m above water level, depending upon the stage of tide and the location of the box.

The Blems and/or collaborators visited each box at sufficient intervals to determine clutch sizes (Blem and Blem 1992). Whenever there was uncertainty about the clutch size because of predation or abandonment, the data were excluded. Nest initiation dates were defined as the day on which the first egg was laid. We divided the results of nest box examination into the intervals 1987-1993, when all boxes were on trees, and 1995-1996, when all boxes were on poles. All data were tested for normality (Proc Univariate, SAS 1990) and for homogeneity of variances (Proc Discrim).

Prothonotary Warblers readily used our nest boxes and, over 10 years, warblers constructed 1,246 nests in which at least one egg was deposited (Table 1). However, many of these were predated and others were abandoned, reducing our sample to 860 measurements of complete clutch size. Success rates, particularly as defined as nests/box, rose dramatically after boxes were moved to poles (Table 1). The conduit used in this study was effective in preventing predators from entering boxes. In the two years since we have moved the boxes, we have observed only three instances of disappearance of young from active nests, possibly because of removal by avian predators or by large black rat snakes (*Elaphe obsoleta*). There have been no instances of mammalian predation, as indicated by nest destruction. Other species using the boxes were Eastern Bluebird (*Sialia sialis*; 29), Carolina Chickadee (*Parus carolinensis*; 14), Tufted Titmouse (*P. bicolor*; 3), and Carolina Wren (*Thryothorus ludovicianus*; 20). Brown-headed Cowbirds (*Molothrus ater*) also parasitized Prothonotary Warbler nests, but we have only recorded 26 cowbird eggs (24 after boxes were moved to poles) over the entire study.

The mean date of first eggs in pole-nests was significantly earlier (7 May) than that in tree-nests (14 May; $P < 0.0001$; Wilcoxon 2-sample test). Nests in pole boxes also appeared to be more synchronized, with fewer late nests (Fig. 1). Throughout our studies, clutch size declined as the breeding season progressed (Blem and Blem 1994); therefore, first broods always have been larger than second (Fig. 2). Mean clutch size of first broods in nest boxes on trees (4.75 ± 0.75 ; mean \pm SD; $N = 345$) differed significantly from that in nest boxes on poles (5.16 ± 0.65 ; $N = 196$). Second clutches (trees: 3.83 ± 0.68 ; poles 3.89 ± 0.63) did not differ significantly between attachment categories.

Table 1 Contents of nest boxes in Presquile Swamp and Four Mile Creek.

Year	Total boxes	Warbler nests ^a	Empty boxes	Nests of other species	Percent success ^b	Percent success ^c
1987	141	51 (0)	70	1	36.2	36.2
1988	214	109 (5)	69	3	48.6	50.9
1989	241	114 (7)	77	5	44.4	47.3
1990	247	95 (2)	108	5	37.7	36.5
1991	238	102 (3)	84	9	41.6	42.9
1992	254	123 (1)	100	9	48.0	48.4
1993	262	134 (6)	76	6	48.9	51.2
1994	283	129 (14)	113	7	40.6	45.6
1995	294	181 (86)	84	8	32.3	61.6
1996	300	208 (53)	58	13	51.7	69.3
Totals	2474	1246 (177)	845	66	43.2	50.3

^a All nests containing at least one egg; number in parentheses are boxes with two nests in one year.

^b 100 X boxes with warbler nests/total boxes.

^c 100 X total warbler nests/total boxes.

Discussion

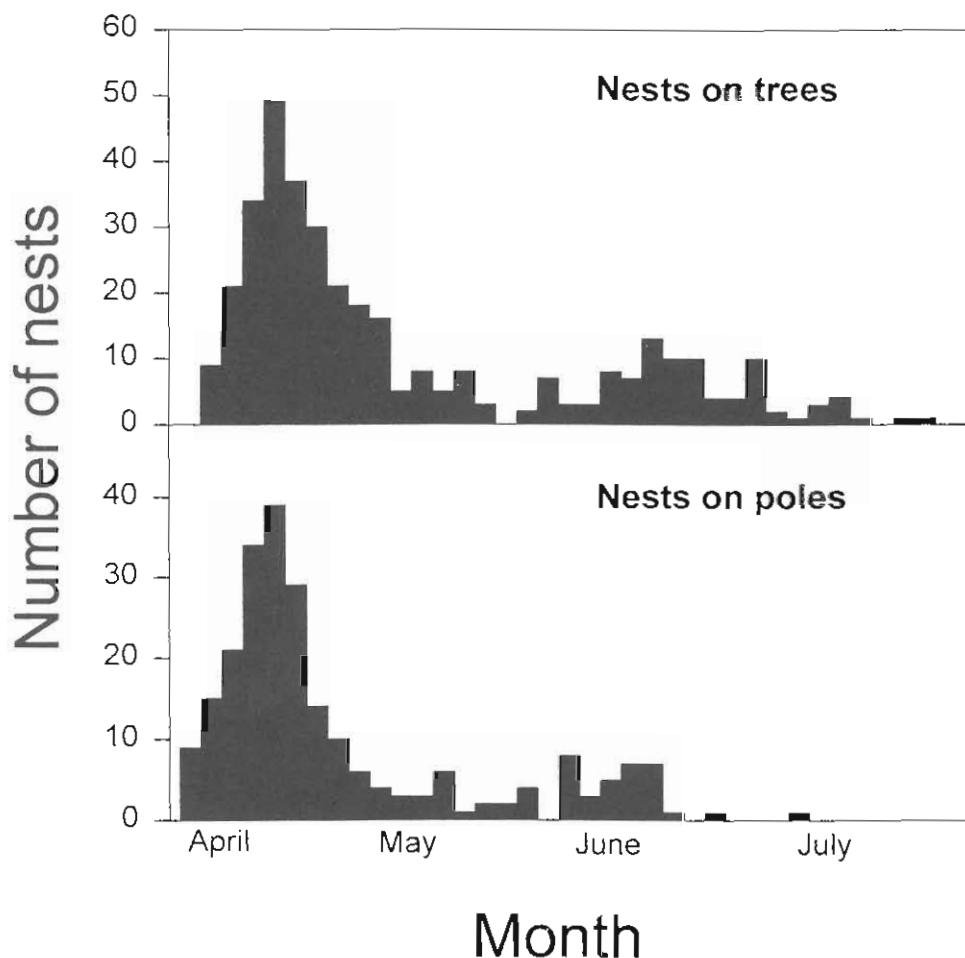
Only two species of wood warblers nest in tree cavities--Lucy's Warbler (*Vermivora luciae*) in southwestern United States and the Prothonotary Warbler in eastern United States. Prothonotary Warblers are common in swamps and along streams where they usually nest in cavities excavated by several species of woodpeckers. They commonly occupy man-made nest boxes where, from all available indications, they lay clutches typical of natural nests (see Flaspohler 1996). In fact, it appears that they prefer nest boxes over natural cavities, possibly because of the decreased incidence of predation.

Attaching nest boxes to metal poles almost completely eliminated predation, and, secondarily, resulted in a significant increase in the rate of nest-box use by Prothonotary Warblers (Table 1). Furthermore, it appears that lack of disturbance by predators encouraged birds to use boxes for both broods (Table 1), and led to an increase in clutch size. Elimination of predation synchronized nesting and resulted in an earlier average nest-initiation date. We believe that this increase results from a reduction in re-nesting attempts. Clutch size of nests

begun in the first week of the breeding season (5.25 ± 0.67 ; $N = 195$) are larger than those of any other week of the mating season. This means that warblers attempting to re-nest after their nests were predated will, on the average, produce smaller clutches than in the original nest. As rate of predation increases, mean clutch size decreases.

The results of this study have significance in the determination of clutch size of the Prothonotary Warbler. Numerous authors have discussed clutch size and have emphasized the concept of "natural" clutch size or of biases that arise in measuring clutch sizes in uniform nest boxes. The degree of variation evident in the present study, however, casts doubt on exactly what a "natural" clutch size might be. Without standardization of the date of the measurement, variation in predation rates may cause significant differences in average clutch size that is not a function of genetic and evolutionary controls of clutch size. Furthermore, if the point of constructing nest boxes is to enhance reproduction of the bird, preventing predation has a double effect. Not only are more young produced when predators cannot get them, but average clutch sizes will be larger because they

Figure 1. Seasonal distribution of first eggs in Prothonotary Warbler nests in Virginia.



never include smaller replacement clutches. ■

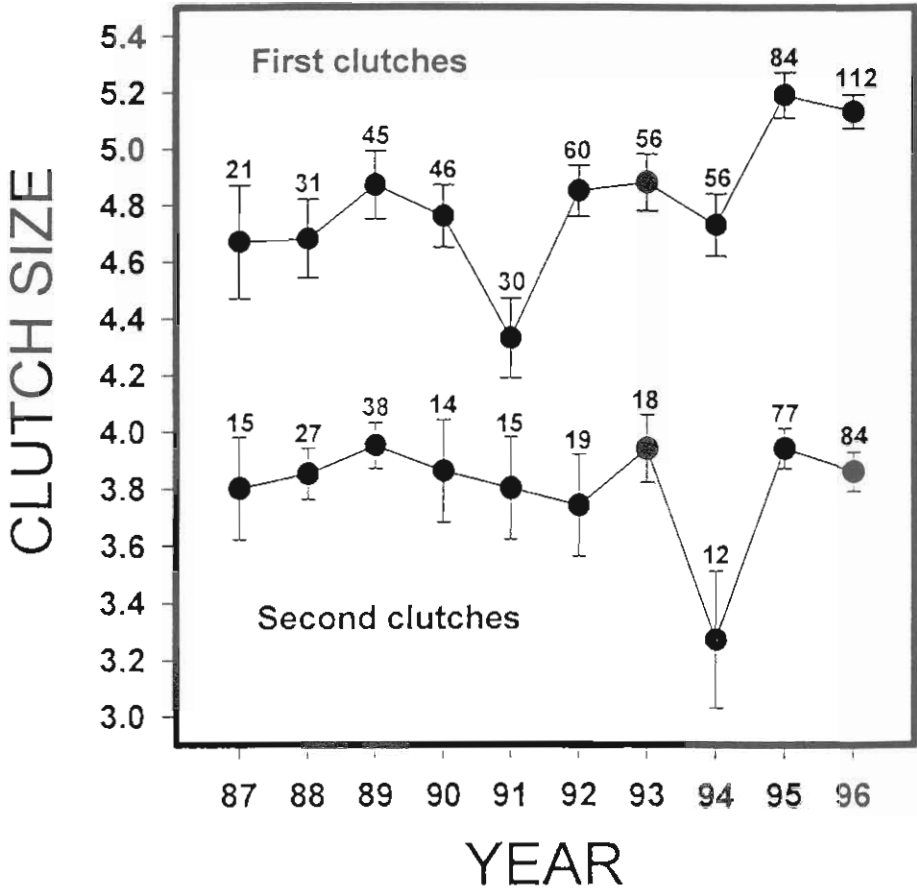
Literature Cited

Acknowledgments

We are deeply grateful to the North American Bluebird Society for financial support necessary to put nest boxes on poles. We thank Leann Blem for critically reviewing the manuscript and for providing a decade of partnership in the field. We thank Arthur and Kay Seidenberg and James and Robert Reilly for extensive help in monitoring nest boxes. Mr. Barry Brady, refuge manager of Presquile National Wildlife Refuge, has provided access to the study area for a decade.

- Blem, C.R. and L.B. Blem. 1991. Nest-box selection by Prothonotary Warblers. *J. Field Ornithol.* 62:29-307.
- Blem, C.R. and L.B. Blem. 1992. Prothonotary Warblers nesting in nest boxes: Clutch size and timing in Virginia. *Raven* 63:15-20.
- Blem, C.R. and L.B. Blem. 1994. Composition and microclimate of Prothonotary Warbler nests. *Auk* 111:197-200.
- Flaspohler, D.J. 1996. Nesting success of the Prothonotary Warbler in the upper Mississippi River bottomlands. *Wilson Bull.* 108:457-466.

Figure 2. Annual variation in clutch size of Prothonotary Warblers in Virginia.



Møller, A.P. 1989. Parasites, predators and nest boxes: facts and artefacts in nest box studies of birds? *Oikos* 56:421-423.

Møller, A.P. 1992. Nest boxes and the scientific rigour of experimental studies. *Oikos* 63:309-311.

Petit, L.J. 1989. Breeding biology of Prothonotary Warblers in riverine habitat in Tennessee. *Wilson Bull.* 101:51-61.

SAS Institute, Inc. 1990. SAS/STAT user's guide. Version 6, 4th ed., SAS Institute, Cary, North Carolina.

Virginia Commonwealth University
 Department of Biology
 816 Park Avenue
 Richmond, VA 23284-2012

Back Issues Needed

The following issues of *Sialia* are in short supply. If there are any listed that you do not intend to keep, please mail them to headquarters. For tax purposes they can be treated as a donation to a non-profit organization to the extent allowed by law. Please send listed issues only: volume 1 (numbers 1,2,3,4); volume 3 (2,4); volume 4 (2); volume 9 (1,2); volume 10 (1,2); and volume 17 (1,2,3,4).

Send any of the issues listed above to NABS, P.O. Box 74, Darlington, WI 53530-0074.

Prothonotary Warbler Nest Box Program in Northern Virginia, 1997 Results

Larry Cartwright

In the Spring 1997 issue of *Sialia* (19(2):43-48), I reported on the inaugural year of the Prothonotary Warbler Nest Box Program at Huntley Meadows Park and Dyke Marsh in northern Virginia. During March and April 1996, boxes were erected in appropriate Prothonotary Warbler habitat to compensate for the large number of snags which had fallen since the late 1980s. Populations of Prothonotary Warblers had declined sharply due to the loss of available nesting cavities. The boxes were placed around the periphery of three marshes (one marsh several hundred acres in size and two smaller secondary marshes) at Huntley Meadows and at four suitable locations near the tidal marsh at Dyke Marsh. To reduce expenses, most of the boxes were constructed from milk cartons. Two broods fledged from boxes at one of the secondary marshes at Huntley Meadows while a clutch of Prothonotary Warbler eggs found in a box at Dyke Marsh was consumed, presumably by a mammalian predator. For additional details, see my original article referenced above.

The 1997 breeding season started off on an optimistic note. Male Prothonotary Warblers established territories around boxes at Huntley Meadows and Dyke Marsh by the second week in May. Unfortunately, precipitation was light this year and both secondary marshes were practically devoid of standing water by the end of the month, rendering the habitat unsuitable for breeding by Prothonotary Warblers. All was not lost, however. Standing water was still present in the primary marsh and one male persisted on territory throughout May. On 31 May, he was observed

carrying bits of moss into one of the boxes. The bird continued singing until 15 June, and then stopped. Volunteers were unable to find the bird during the following week; we feared that he had abandoned his territory and that there would be no Prothonotary Warblers breeding at Huntley Meadows in 1997.

Nest box monitor Tim Presso continued searching for the missing male and on 28 June discovered a pair of Prothonotary Warblers delivering insects to a cavity in a four-foot (1.2 m) tall snag. The cavity, partially obscured by overhanging vegetation, was located about six inches (15 cm) from the top of the snag. Interestingly, the snag was located approximately 30 feet (9.1 m) from two of our nest boxes. Another row of seven boxes was situated about 200 feet (61 m) away. It was into one of these seven boxes that a male delivered moss offerings on 31 May, presumably the same male now carrying insects to the snag.

At a time when the adult Prothonotaries were absent, Tim investigated the cavity and found three nestlings estimated to be two days old. Tim continued to monitor the cavity at four to five day intervals. Although his inspection on 12 July revealed an empty cavity, he soon located the male gathering insects for his vocal offspring. This was the first time since 1991 that Prothonotary Warblers successfully fledged youngsters in the primary marsh. (A volunteer did locate a Prothonotary Warbler pair feeding nestlings in a natural cavity beside a major tributary to the marsh in 1996, but we have no evidence that the young fledged.)

At least six Prothonotary Warblers

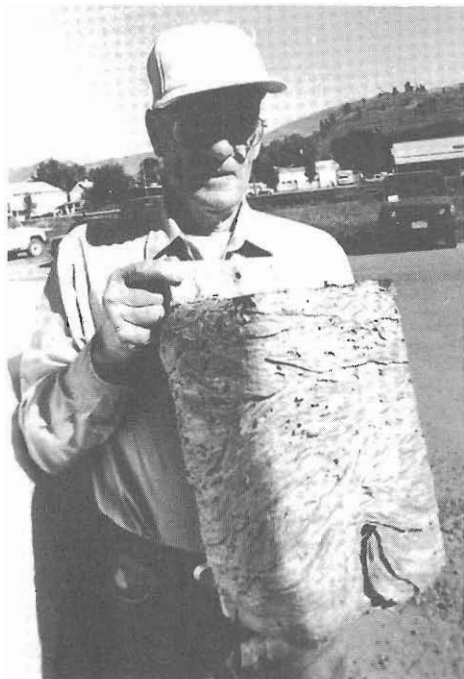
were present at Dyke Marsh during May and June 1997. As at Huntley Meadows, males were attracted to the 16 boxes placed along the tidal marsh, but did not nest in them. Just as we were ready to call it quits for the summer, a volunteer participating in the annual Dyke Marsh Breeding Bird Survey reported that on 29 June he spotted a Prothonotary Warbler pair accompanied by three fledglings in the southern portion of the marsh. This was the first documentation of successful breeding by this species at Dyke Marsh since 1992. Although the nest was not located, the Prothonotary youngsters, like their Huntley Meadows counterparts, were obviously raised in a natural cavity.

After reviewing this article, the reader might be prompted to ask if the boxes serve any useful function. I believe the answer is still "yes." Before the 1997 breeding season, Prothonotary Warblers

had not successfully raised youngsters at Huntley Meadows's primary marsh or at Dyke Marsh for at least five years. Prothonotary Warblers were not even present at the primary marsh between 1993 and 1995. Perhaps the boxes, even if they are not used, provide Prothonotary Warblers with a greater selection of nesting sites, especially in a cavity-poor or cavity-diminished environment. Also, there may have been more birds present at Huntley Meadows this year, especially in the secondary marshes, had there been more rain during April and May. There is no way to know and we certainly can't discuss trends after only two years. It may take several more years before healthy breeding populations of this beautiful bird can be reestablished at Huntley Meadows and Dyke Marsh. ■

3532 S. Stafford St.
Arlington, VA 22206

Yellow Jackets Take Over Montana Box



Leo Benson holds a standard Western Bluebird nest box usurped by yellow jackets. The top, sides, and bottom of the box were covered. The notch in the bottom front gave the insects access to the nest box entrance under the wrapping. The interior was filled and was a reproductive hive. This occurred on Leo's trail in Plains, Montana.

Art Aylesworth, who submitted the photograph, commented that 1997 was "the worst year we have seen for these types of insects in Montana."

Instructions to Authors

Authors planning to submit articles for publication in *Sialia* are encouraged to obtain "Instructions to Authors," a page which summarizes manuscript requirements.

Address requests to the editor at 10617 Graeoch Rd., Laurel, MD 20723.



In Search of...a new Sialia Editor and Art Editor

Editor of Sialia

NABS is seeking an Editor for its quarterly journal, *Sialia*. This part-time position is effective July 1998. The following describes the position and the skills needed.

EDUCATION/EXPERIENCE:

1. B.A. or B.S. degree, or equivalent experience.
2. Background in English or journalism. The ability to edit, write, and rewrite is essential.
3. Publication experience (from soliciting and receiving manuscripts through editing, layout, and production of camera-ready copy).
4. Computer literacy strongly desirable, though not a necessity.

PERSONAL TRAITS & SKILLS NEEDED

1. Detail-oriented with demonstrated ability to meet deadlines.
2. Ability to work with a minimum of direction.
3. Capable of synthesizing all details of publishing a 40 page quarterly journal; provide advice for other society publications as needed.
4. A problem solver with a high degree of responsibility.
5. Strong conservation ethic; eager to learn about bluebirds and native cavity-nesting birds.

Relocation to Wisconsin is not necessary. A modest salary is offered, plus expenses paid to the annual meeting. This part-time position requires 125 to 150 hours per quarter. The Editor bears the sole responsibility for getting the camera-ready copy to the printer each quarter.

Art Editor of Sialia

Produce four black ink cover drawings per year of bluebirds and other native cavity-nesting birds. Provide advice and minimal graphics support as requested. No salary, but opportunity to obtain wide circulation of drawings.

Application Process

Candidates should send resumes and writing/art samples for either position to NABS, P.O. Box 74, Darlington WI 53530-0074. If the materials must be returned, please include SASE with sufficient postage. A follow-up interview will be made with the most qualified candidates. Applications must be postmarked no later than 1 March 1998.

Art Credits

Jon E. Boone 2, 36
Suzanne Pennell 38

Dissecting the Peterson Nest Box

Kevin L. Berner

Abstract

Field studies were conducted in 1996 and 1997 using standard-shaped (NABS) boxes and Peterson-shaped nest boxes. Both styles had equal numbers of boxes with oval and round entry holes. Eastern Bluebirds (*Sialia sialis*) showed a strong preference for standard boxes with oval holes. Tree Swallows (*Tachycineta bicolor*) used Peterson-shaped boxes with round holes the most in both years. Minimal House Wren (*Troglodytes aedon*) and House Sparrow (*Passer domesticus*) use was observed.

Introduction

My field tests over six years indicated that Eastern Bluebirds preferred Peterson-style boxes over standard (NABS), PVC, slot, and other style boxes (Berner 1995; Berner and Pleines 1993). In these tests, swallows showed a similar but less dramatic preference for Peterson boxes. Several other studies (Davis 1995; Davis and Kalisz 1995; Palahniuk and Bakko 1995) have confirmed bluebird preference for this oval-holed, wedge-shaped box. I wanted to determine what feature of these boxes was being selected by bluebirds and swallows: the box shape or the hole shape.

Study Area

My research was conducted within Schoharie County in east-central New York. Five study sites (New York Power Authority Blenheim-Gilboa Pumped Storage Facility [NYPA], SUNY Cobleskill, Myers Road, Cobleskill Cemetery, and my own property) were described in Berner 1990; Berner and Pleines 1993; and Berner 1995. Two additional local sites were added in 1997. All seven sites have consistently had bluebird use for many years.

Methods

In recent years my study sites had equal numbers of NABS, Peterson, PVC,

and slot boxes (NYPA, SUNY, and Myers Rd.) or Peterson and tree-branch boxes (Cobleskill Cemetery and my farm). After several years of research, I felt that I had identified which cavity-nesting species prefer/avoid each of these box styles. Bluebirds showed a preference for Peterson boxes.

Therefore, starting in 1996, all boxes in this study were either standard-shaped or Peterson-shaped. Oval 1 3/8 in. x 2 1/4 in. (3.5 cm x 5.7 cm) and round 1 1/2 in. (3.8 cm) entrance holes were used in both box styles. Twenty-four of each hole/box shape combination (96 total boxes) were placed in the field in pairs. In each pair only one feature (hole or box shape) differed. Four pairings were possible using this criterion. Box pairs were systematically chosen and placed in the field in 1996 at the former box sites, regardless of the styles that had previously been at the site. This was done to avoid biases due to familiarity with the box styles previously used at each site. Sites with prior use by House Sparrows and House Wrens were eliminated. In 1997, many unproductive boxes from the NYPA and SUNY sites were moved to two new study sites. They were placed on established bluebird trails in the same manner as at the other sites the previous year.

The Peterson-shaped boxes used in this test had the dimensions described by Grooms and Peterson (1991) with only the hole shape differing. The hole to floor

distance was 5 3/4 in. (14.6 cm) in all of these boxes. In 1996, the NABS boxes with oval holes were slightly taller boxes than those with the round holes. The holes were 6 in. (15.2 cm) above the floor in the oval-holed boxes and 5 1/4 in. (13.3 cm) above the floor in the round-holed boxes. A 3/4 in. (1.9 cm) block of wood was added to the bottom of oval-holed boxes in 1997 to make all the NABS boxes the same depth. Each NABS box had a 4 in. x 4 1/2 in. (10.2 x 11.4 cm) floor.

Results

In 1996, 14 of 18 bluebird nesting attempts were in NABS-shaped boxes with an oval hole, with only minimal use of the other box styles. Tree Swallows showed a greater acceptance of all box styles, but nested most frequently in Peterson boxes with round holes, and least often in the box style preferred by bluebirds. Swallows nested at intermediate levels in the other two box types. House Sparrows used no oval-holed NABS boxes and low numbers of each other box design. Due to removal of boxes at most sites where wrens nested in the past, House Wren use was minimal with only three nesting attempts.

In 1997, bluebirds continued to show a strong preference for the oval-holed NABS boxes using them for 20 of 37 nesting attempts. Tree Swallows used the two Peterson-shaped box styles for 33 of their 49 attempts. House Wrens and House Sparrows used only round-holed boxes for their limited number of nesting attempts.

When both years were combined, 34 of 55 bluebird nests were in the oval-holed NABS box. Only five nesting attempts were found in the more traditional round-holed NABS boxes (See Table 1). The round-holed NABS boxes were the nest box style most often left unused by any species.

Discussion

It is apparent from these results that

high levels of use of Peterson boxes by bluebirds is more the result of the hole shape than the box shape. This test would indicate that the NABS box shape actually is more preferred by bluebirds than the wedge-shape of the Peterson box. Swallows used the Peterson-shaped boxes more often than the NABS-shaped boxes. Due to the elimination of most past sites used by wrens and sparrows, box occupancy by these species was minimal, but they both appeared to prefer the round-holed boxes.

Concern has been expressed over the possible use of oval-holed boxes by European Starlings (*Sturnus vulgaris*). Large numbers of Peterson boxes are used in Minnesota and statewide surveys have indicated that starlings do not readily enter them (Scriven 1995). In most cases where starlings do enter Peterson boxes, it was because other species had enlarged the hole or the holes were improperly cut. I have never had any starlings attempt a nest in any Peterson boxes on my trails, but I have seen them enter boxes with oval holes on a few occasions. Lehmann (1997) found that starlings can readily enter a Peterson opening. Regional variation in the size of starlings may allow them to use the oval hole of a Peterson box in some areas and not others. I believe that although starlings may be able to pass through an oval entrance such as found in the Peterson box, they would rarely use such small boxes. The standard 1 1/2 in. round hole is known to effectively exclude starlings throughout their range. Bluebirds, however, apparently prefer the oval entrance; therefore, if you do use them they should be monitored regularly to be certain that starlings are not also using them. This regular monitoring should be a part of any responsible bluebird management. ■

Acknowledgments

All NABS boxes used in this research were

Table 1. Summary of box use by style in 1996 and 1997.

Box style	No. of boxes	No. of nesting attempts				No. of unused boxes
		EB	TS	HW	HS	
NABS/round	48	5	20	4	5	19
NABS/oval	48	34	18	1	0	9
Peterson/oval	48	9	29	1	2	11
Peterson/round	48	7	37	3	2	6

constructed by Herman Bressler. Peterson boxes with round holes were built and donated by Robert McCullough. My wife, Nancy Niles, reviewed this manuscript.

Literature Cited

Berner, K.L. 1990. Field Tests of predator-deterrent nest box devices for acceptance by cavity nesting birds. *Sialia* 12(4):123-128.

Berner, K.L. 1995. Comparison of use of several styles of nest boxes by cavity nesting birds: An update. *Sialia* 17(4):127-135.

Berner, K.L. and V.A. Pleines. 1993. Field tests of several styles of bluebird nest boxes. *Sialia* 15(1):3-11.

Davis, W.H. 1995. Testing the features of the Peterson box. *Sialia* 17(4):135-136.

Davis, W.H. and P. Kalisz. 1995. Tests of the Peterson box and Zuern's tree branch box. *Sialia* 17(1):18-19.

Grooms, S. and D. Peterson. 1991. *Bluebirds!* NorthWood Press, Inc., Minocqua, Wisc. 164pp.

Lehmann, D.M. 1997. Controlled tests to determine if European Starlings can pass through various hole sizes. *Sialia* 19(4):125-131.

Palahniuk, D.P. and E.B. Bakko. 1995. Nesting activity on a box-paired trail. *Sialia* 17(1):3-6.

Scriven, D.H. 1995. Do Peterson boxes "readily admit" starlings? *Sialia* 17(3):98-99.

Associate Professor Kevin L. Berner, SUNY-Cobleskill, is the Research Committee Chairman for the North American Bluebird Society.

Calendar

If your organization wishes to have annual meetings or festivals listed in this calendar, please provide information to headquarters or the editor as far in advance as possible.

- MARCH 14-15, 1998**--Bluebird Festival and Wildlife Art Show, Jackson Community College. Thomas Blodgett, Director, Dahlem Environmental Education Center, 7117 So. Jackson Rd., Jackson, MI 49201.
- APRIL 4, 1998**--Bluebirds Across Nebraska Annual Bluebird Conference, in Nebraska City. Pres. Steve Eno, 2500 W. James Dr., Raymond, NE 68428.
- APRIL 18, 1998**--Minnesota Bluebird Recovery Program Annual Bluebird Conference. National Guard Training Grounds, Camp Ripley, Little Falls. Bluebird Recovery Program, Audubon Chapter of Minneapolis, P.O. Box 3801, Minneapolis, MN 55403.
- APRIL 1998**--Bluebirds Over Georgia, Inc. Spring Festival. Pres. Frances Sawyer, 5858 Silver Ridge Rd., Stone Mountain, GA 30087.
- JUNE 26-28, 1998**--NABS Twenty-First Annual Meeting. Regina, Saskatchewan. Information in this issue.
- SEPTEMBER 12, 1998**--Indiana Bluebird Society Second Annual Conference. (tentative date). Indiana Bluebird Society, P.O. Box 356, Leesburg, IN 46538.
- JUNE 17-19, 1999**--NABS Twenty-Second Annual Meeting. Great Falls, Montana. Bob Niebuhr, 373 Beth Dr., Great Falls, MT 59405.

Should You Add a Wooden Predator Guard to a Nest Box?

Wayne H. Davis

The addition of a wooden predator guard over a standard nest box entrance hole is a practice that is recommended frequently in the bluebird literature. The extra piece of wood doubles the distance (to 1 1/2 inches or 38 mm) a bird must negotiate to enter the box. The rationale for the guard's use is that a raccoon would have trouble reaching in and then down to get to the nest.

Berner et al. (1990) found, however, that a raccoon had no trouble getting dog food from the bottom of a box that was 8 in. (20 cm) deep and had a predator guard. O'Halloran (1995) found that even deeper boxes (12 in. or 30 cm) with wooden predator guards are rarely used by bluebirds. Even those deep boxes are raided by raccoons (Kumbier 1997). Apparently the only box that deters a raccoon is Zuern's even deeper box which is mounted horizontally (Davis and Kalisz 1995). I know of no evidence that the wooden predator guard is of any benefit in preventing raccoon predation.

I have wondered what effect the wooden predator guard might have on bluebirds and House Sparrows (*Passer domesticus*). I suspected that bluebirds might not like to squeeze into a tunnel. Scriven (1993) writes that bluebirds will usually avoid a box with an entrance thickness greater than 1 1/2 in. if a thinner entrance is available. On the other hand, House Sparrows like to get into deep dark crevices and might favor boxes equipped with a predator guard.

To test the effects of the wooden predator guard, I designed an experiment for the 1997 nesting season. I built 100 boxes with the standard circular entrance of 1 1/2 in. The boxes are 4 in. (10 cm) deep below the entrance and have floors 4 in. by 3 1/2 in. On 50 of the boxes I

added standard wooden predator guards. I mounted the boxes in pairs on electrical conduit facing opposite directions in good bluebird habitat at the University of Kentucky agricultural experiment farms. To minimize the variable of compass directions, I alternated the type of box on the left and the right. For monitoring, I divided the stations with University of Kentucky student volunteer Amy Sohner. We checked the boxes weekly beginning the first of April and continued until each station had been used by a bird. A box was recorded as used when a nest and one or more eggs appeared.

The predator guards apparently had no effect on the bluebirds. Bluebirds used eight boxes with guards and seven without. House Sparrows, however, had a strong preference for boxes with the predator guards, using 25 of those boxes and only one of the controls.

It is not surprising that sparrows like the predator guards. A bluebird box mounted out in the open and no higher than eye level is a marginal nest site for a House Sparrow. They would much rather get in behind a sign at a shopping center or up in the rafters of a barn. A bluebird box is too low and too exposed for their liking. The thinner the wall of the front the less likely that sparrows will use it. Among the hundreds of paper milk cartons and plastic bottles and jugs that I have tried, I have had Eastern Bluebirds, House Wrens, Carolina Chickadees and Tree Swallows nest, but never a House Sparrow. Among the numerous styles that we have tested at the University of Kentucky in trying to develop a good sparrow-inhibiting box that bluebirds like, the only real winner is Steve Gilbertson's PVC box (Davis and Mack 1994). Its thin wall is probably an important factor. ■

Table 1. Usage by Eastern Bluebirds and House Sparrows of nest boxes with wooden predator guards.

	with guard	without guard
used by bluebirds	8	7
used by sparrows	25	1

Literature Cited

Berner, K.L., D. McGettigan and S. Krieger. 1990. Testing a raccoon's ability to raid a nest box. *Sialia* 12:83-87.

Davis, W.H. and P.J. Kalisz. 1995. Tests of the Peterson box and Zuern's tree-branch box. *Sialia* 17:18-19.
 Davis, W.H. and K. Mack. 1994. Tests of sparrow-inhibiting boxes. *Sialia* 16:98-99.
 Kumbier, D. 1997. Nesting survey summary reports. *Wisconsin Bluebird* 12(1):10.
 O'Halloran, J. 1996. Box report for BRAW's 1995 season. *Wisconsin Bluebird* 11(1):1-5.
 Scriven, D.H. 1993. *Bluebird Trails: A Guide to Success*. Bluebird Recovery Committee of the Audubon Chapter of Minneapolis. 220 pp.

130 Jesselin Dr.
 Lexington, KY 40503

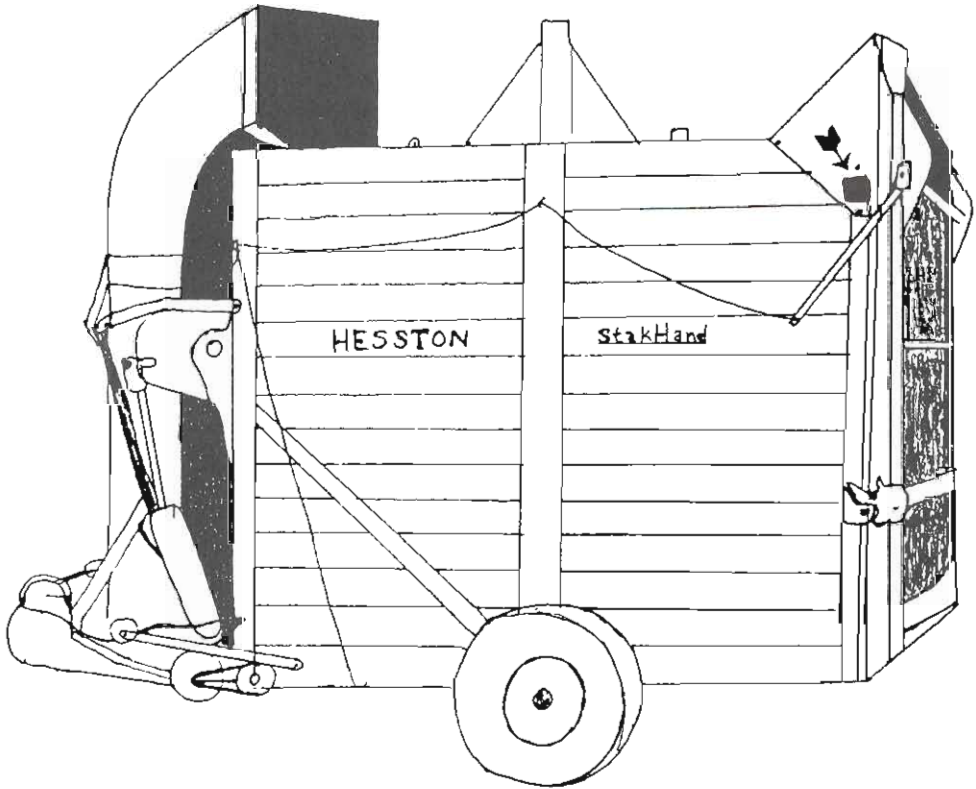
An Unusual Cavity Nest for the Eastern Bluebird in Oklahoma

Hope McCaha and Michael D. Bay

In Pottawatomie County, Oklahoma during the 1997 breeding season, we observed the breeding of what we believe to be one pair of Eastern Bluebirds (*Sialia sialis*) utilizing two different nest cavities in a large piece of farm machinery. The machine utilized was the Hesston Stakhand, which is used to stack loose hay into large rectangular squares. Although operational, the machine had not been used for hay stacking for several summers. The cavity on the machine in which the first nest was constructed is located 7.3 feet (2.2 m) above ground and is essentially a hollow bar or column that runs vertically along the end of both sides of the machine (see figure). The column has a total length of 8.2 feet (2.5 m) but the nest was at a depth of only 5 inches (12 cm) probably due to an abundance of debris inside the column. The entrance into the hollow bar was 3.3 inches (8 cm) tall and 3.0 inches (7.3

cm) wide. The first nest was discovered on the left side of the stacker on 12 May and it contained 5 eggs. All 5 eggs hatched on 16 May and each nestling was banded at 9 days of age (band numbers 76618-21). All nestlings successfully fledged on 29 May at 13 days old. A second nest was discovered on 7 June in a similar column on the right side of the stacker. The nest was located at a depth of 7.1 inches (17 cm) and it contained 3 eggs. An additional 2 eggs completed the clutch by 9 June. The female incubating this clutch was captured and banded (band number 76622) on 15 June. The first egg hatched on 21 June and all but one egg hatched by 24 June; however the oldest nestling disappeared sometime during this time period. On 28 June the unhatched egg was missing as was one other nestling, while one nestling was found dead. It is highly likely that the dead nestling succumbed to heat due to

Figure 1. Hay stacking machine in Pottawatomie County, Oklahoma, used by breeding Eastern Bluebirds. Note the cavity entrance in the upper righthand corner (arrow) of the machine in which the first nest was constructed.



the metal construction of the stacker and its exposure to the sun. The remaining nestling was banded (number 76623) at 14 days old and eventually fledged on 10 July at 18 days old.

A third nest was discovered on 8 July in the same cavity as the first nest. We suspect that this nest was constructed by the female of the pair utilizing the nest cavity on the right-hand side of the stacker. This observation is based upon the fact that only the male was observed feeding the single nestling in the right-side nest during the period in which the new nest was being constructed on the left. We have no conclusive evidence that this was the same pair that built the original left-side nest, but we suspect it to be. Furthermore, we were unable to

capture the female that constructed the third nest in order to confirm that she was the same female banded earlier. On 20 July, the stacker was inadvertently moved by other parties to approximately 5.5 yards (6 m) from its original position, causing the nest to be abandoned. On 23 July the female appeared to resume incubating the 4 eggs; however, the nest was totally abandoned by 30 July. It is possible that this same piece of farm machinery could have been used by bluebirds in previous summers because it was not being used regularly for farming. ■

Dept. of Biology (M.D. Bay)
East Central University
Ada, OK 74820
e-mail: mbay@mailclerk.ecok.edu

**TWENTY-FIRST
ANNUAL MEETING OF THE
NORTH AMERICAN BLUEBIRD SOCIETY**

The Twenty-first Annual Meeting of the North American Bluebird Society will be held in Regina, Saskatchewan, June 25-28, 1998.

Saskatchewan bluebirders are sponsoring the meeting.

NABS 1998 Annual Meeting in Regina, Saskatchewan

Saskatchewan bluebirders invite NABS members to put 25-28 June 1998 on their calendars for the Twenty-first Annual Meeting of the North American Bluebird Society to be held in Regina, Saskatchewan.

Anticipate the opportunity to hear about and see bluebirds and other cavity nesters, renew old acquaintances and make new friends, and learn about the natural history of part of the province during a day of outstanding field trips.

Registration begins late Thursday afternoon. That evening a program by local naturalist and author, Frank Roy, is scheduled introducing the birds and landscape of a unique area.

Friday has been set aside for field trips with three fascinating choices, all led by highly competent local birders. The Qu'Appelle Valley Nature Tour will focus on nesting grassland shorebirds and sparrows, also longspurs (up to 100 bird species in several habitats). It will, of course, include a visit to a bluebird trail. Trip number two will begin at Nicole Flats for birds of grasslands and marshes, continue on to Moose Jaw to see and band Burrowing Owls, and conclude at Chaplin Marsh, a Western Hemisphere Shorebird Reserve site. The third trip option, the Qu'Appelle Valley Geolog Tour, will focus on the striking geological features left by glaciers in the last ice age. Tour participants will return to Regina for a buffet supper at Saskatchewan's only natural history museum.

Saturday will feature eight presentations about bluebirds and cavity nesting birds as well as a history of bluebirding in Saskatchewan. The evening will be highlighted by a banquet, awards, and a program by local writer and conservationist Sharon Butala.

Registration materials are enclosed in this issue. If they are missing or you need extras, contact NABS, P.O. Box 74, Darlington, WI 53530.

Annual Nesting Box Summary Compiler Is Conley Clay Black

Research Chairman Kevin Berner recently announced that Conley Clay Black has volunteered to take over the annual nest box summary. Completed survey forms for the 1997 breeding season should be sent to headquarters as soon as totals are available.

The annual compilation article will continue to be published in the Summer issue of *Sialia* which means individual trail material must be received by 1 February, 1998, preferably earlier. The final date for regional or state summaries, which are more time consuming and complicated, is 20 March, earlier if possible. Mail all summaries to NABS Nest Box Summary, P.O. Box 74, Darlington, WI 53530-0074.

If you compile a state or regional summary which is printed in a state newsletter, do not depend on the newsletter article to reach Conley Black. As soon as you complete the totals, send a copy to headquarters. Significant numbers of fledged birds are missed each year because some states and regional compilers do not supply totals directly.

Entrance Slot Attitude Preferences of Eastern Bluebirds

Conley C. Black

Researchers have found that Eastern Bluebirds (*Sialia sialis*) prefer the Peterson box over standard or slot boxes (Berner 1995, Palahniuk and Bakko 1995). Although this preference has not been fully explained, Davis (1995) concluded that the species selected the Peterson box primarily for its entrance design. The Peterson entrance is a short, rounded, vertical slot, but whether the birds find the size, shape, or attitude of the opening most attractive has not been precisely determined.

A ten-station, paired box trail was established 17 February 1996, to test the slot attitude preference of bluebirds. The stations were located at intervals of 300 ft (91.5 m) along the perimeter fence of an office complex. Paired boxes were mounted 5 ft (1.5 m) high and 10 ft (3.0 m) apart. One box of each pair was equipped with a vertical slot entrance and the other with a horizontal slot entrance (see Figure 1). Slot dimensions were 3 1/2 in. (8.9 cm) by 1 3/8 in (3.5 cm). The boxes were constructed of paper milk cartons, modified from a design presented by Davis and Rocca (1995), and painted with two coats of white exterior latex. Individual boxes were monitored weekly when empty and more frequently after nest construction was observed. The first nest was started on 22 March and the first clutch was completed on 16

April. Table 1 provides results of the study.

Only one bluebird pair successfully fledged young. Raccoons (*Procyon lotor*) destroyed two nests and a July nest failed due to high box temperatures. House Sparrows (*Passer domesticus*) and European Starlings (*Sturnus vulgaris*) were not observed in the study area. A Carolina Wren (*Thryothorus ludovicianus*) constructed a false nest in an empty box but did not interfere with nesting bluebirds.

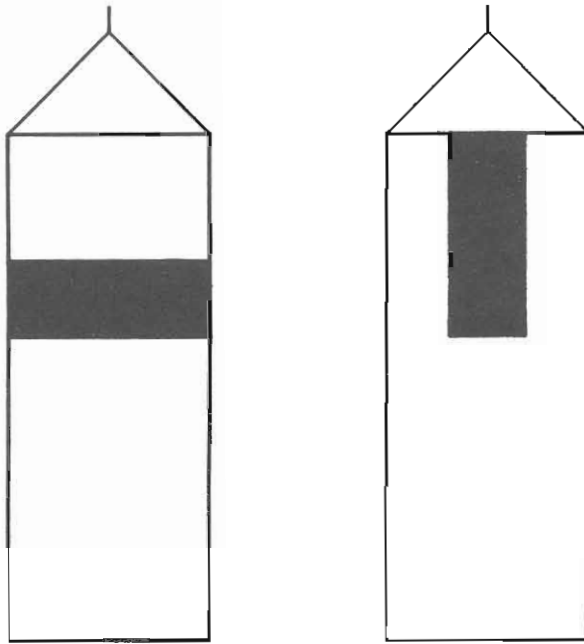
While conclusions drawn from such a small sample may not be valid, in this study it appears that Eastern Bluebirds showed a preference for vertical slots over horizontal slots. Vertical slots may allow easier access when carrying food or nest materials. Vertical slots also enable the birds to perch upright in the opening, which may be more comfortable than the stooping posture required by horizontal slot entrances. It is interesting to note that the Carolina Wren also favored the vertical slot entrance.

Although this was a simple project, it evolved into a vehicle for bluebird education. Several employees of the office complex became interested in the project and some eventually placed nest boxes on their own property. Bluebirders should develop and experiment with new ideas during the upcoming season. They will certainly enjoy themselves and the

Table 1. Bluebird nests in boxes with vertical and horizontal slot entrances.

	Boxes	Bluebird Nests	Bluebird Eggs	Young Fledged	Other
Vertical Slot	10	4	18	4	1 Carolina Wren Nest
Horizontal Slot	10	0	0	0	0

Figure 1. Horizontal and vertical slot entrances in bluebird boxes.



information they gather might prove valuable in designing the ultimate bluebird box. ■

Literature Cited

- Berner, K.L. 1995. Comparison of use of several styles of nest boxes by cavity nesting birds: an update. *Sialia* 17(4):127-135.
- Davis, W.H. 1995. Testing the features of the Peterson box. *Sialia* 17(4):135-136.
- Davis, W.H., and P. Rocca. 1995. *Bluebirds and Their Survival*. The University Press of Kentucky: Lexington KY.
- Palahniuk, D.P., and E.B. Bakko. 1995. Nesting activity on a box-paired trail. *Sialia* 17(1):3-6.
- 7377 Tarrytown Drive
Springhill, FL 34606

NABS Website

Nancy Niles has updated the NABS home page which is available on the World Wide Web at the following address: <http://www.cobleskill.edu/nabs>

Material will be changed from time to time to try to make the home page useful and interesting. If there are items that you would like to see added, contact NABS at one of the options listed on page 2.

Historian's Request

Please send newspaper and magazine articles about bluebirds to Historian Shirley Adams, 3484 Torch Club Rd., Alton, IL 62002. Be sure name and address of publication, volume and date are included. Photographs of members engaged in publicizing bluebirds are always welcome. These items will be added to scrapbooks kept as a permanent record of activity on behalf of bluebirds and other native cavity nesting birds.

Cavity Nester License Plates



Liz Morris of Catonsville has a special Maryland license plate which highlights conservation of the Chesapeake Bay as well as "BLUBRDS."



Photograph by John McDaniel

Wisconsin's striking sesquicentennial plate is the background for Sam Hanson to display his loyalty to "B BIRDS." Sam is a member of the Bluebird Restoration Association of Wisconsin (BRAW) and the Lafayette County Bluebird Society. A realtor by profession, Sam often gives new homeowners a bluebird nest box and informs them of good management practices.



Allen Bower, Britton, Michigan displays a cavity nester license plate on his Dakota (top). The non-official special plate (below) makes an additional statement. Both have helped him meet a lot of people who ask about flickers. Besides telling them about his success in attracting this woodpecker to a nest box, "the plates have helped me spread the word on birding in general."

Any other cavity nester boosters out there using vanity plates to advertise their enthusiasm? Send us a photo if you can or, if that isn't convenient, drop us a postcard indicating the state and the exact spelling of what appears on your license plate(s). We'll continue to print them from time to time. Send to Sialia, 10617 Graeoch Rd., Laurel, MD 20723.

1996 SPEAKERS' BUREAU REPORT

Ron Kingston

In January 1997, questionnaires were sent to the 329 members of the NABS Speakers' Bureau. In it I asked many questions including requesting a list of the programs they gave along with any comments and/or suggestions. One of my questions was, "Do you give programs at a commercial bird supply store?" Twenty-seven said, "Yes" which seems to be a growing trend these days. If you would like to become a member of the Speakers' Bureau, purchase a set of slides and an audio tape or a video. You definitely will be rewarded. You'll have the satisfaction of knowing that you have helped in the conservation of the bluebirds by getting the information out to many people in your area.

Comments made by some of the speakers which I thought were of interest are as follows:

Richard Wells of Springville, NY, has been speaking for more than 13 years and uses NABS' slides mixed with his own to speak to garden clubs and the Jamestown Audubon Society. In Godfrey, IL, Lloyd Wilson speaks to more than 500 people each year at the Corps of Engineering's "Wings of Spring" festival. He says that speaking at wild bird stores is becoming very popular. Ken Schar of Libertyville, IL, uses the old NABS slide program and along with others spoke to 150 attendees of the 1996 Special Park Districts Forum where people came from Canada and the U.S. He loves to display House Sparrow and European Starling eggs along with other props.

In northern Illinois, Joan Harmet gave 10 programs and says, "I have used NABS slides with my own presentation and that way I can change it for the kind of group." Also, in Metamora, IL, Marcy Hoepfner is really helping the bluebird effort not only in Illinois but across the country. She was featured in the Oct

1996 *Birds and Blooms* magazine and has answered more than 1,500 responses. She also does a column in the *Nature Society News* and states, "I have a deep feeling of satisfaction to know through my efforts the population of Blues should explode."

Last fall Jill Miller was filmed for an instructional video in Natick, MA. She says that she has just ordered the updated slide program and will use it along with several types of nest boxes, posters, and brochures to spread the word in New England.

Mary Reed of Village Mills, TX, and a member of the Wildwood Birdwatchers' Club has been speaking for over 16 years and had a nice coverage on bluebirds for the *Beaumont Enterprise*. She says, "My health is not good, but I love the speakers' program. After finishing the last one in '96, I sat down, (rather satisfied) and two minutes later had a heart attack." She is doing well now and continues to speak on behalf of bluebirds.

David Shiels of nearby Dallas, TX has a unique idea in that he uses nest boxes with painted wooden eggs in them. He displays the NABS, tree branch, and slot boxes and spoke to more than 120 interested future bluebirders last year. Just north of Dallas is Southlake where Francis Dorer, a Master Gardener, gives programs at commercial bird supply stores.

In Canada, Bob Lechner of Alberta gives programs to Brownies, other children, and a ladies group at work and helps Myrna Pearman of Ellis Bird Farm on weekends. He also sent along a Canadian postage stamp showing the beautiful Mountain Bluebird in flight. On the north side of Lake Superior is Thunder Bay where Jean Lister spoke to more than 80 people at a community recreation center and a greenhouse

nursery. At Owen Sound, Ontario, Lorne Smith is busy making bluebird boxes, bat shelters, toad shelters, and kestrel boxes, but when he has few kits to offer in his programs, he is asked less often. Also in Ontario, Gord Kingsmill says, "Our program is very hands-on. Students will construct nest boxes and put them up on our trail. Approximately 16 boxes in total."

Chuck Martin of Oxford Hills Middle School in South Paris, ME, uses the video *Jewels of Blue* along with handouts, worksheets and a slot box to inform his students and members of the nature club about ways to increase bluebirds in Maine. Stan Reed of Batesville, AR, gave nine programs including one at a family reunion and one at an Elderhostel in Savannah, GA. He sets up and provides displays at a commercial bird supply store. Tami Johnson has a nest display and is still looking for a wren nest. She gives programs at the Farragut Campground at the Farragut State Park in Athol, ID. Donna Legare of Tallahassee, FL, gave six programs at her own store and usually includes other cavity nesters in her program.

Alan Boulton writes, "I use blowfly larvae and a wasp nest in my program and have made more than 315 boxes this year." He likes the old slide program and gives programs at garden clubs and ornithology classes. In western Montana, Art Aylesworth spoke to 250 adults about Mountain Bluebirds and stated that Mountain Bluebird Trails fledged 17,276 bluebirds. At one program someone reported young elk rubbing their noses on nest boxes containing young bluebirds, then holding their ears next to the opening to hear the young birds' reactions. What a great picture that would make!

Donna Hagerman gives her programs at schools in Reno, NV, where she emphasizes the 5 x 5 inch bottom and 1 9/16 inch entrance hole for the Mountain Bluebirds in her area. Bruce Burdett of Sunapee, NH, 40 miles northwest of

Concord, is trying to set up the [Great] New Hampshire Bluebird Conspiracy (a bluebird society). He gave programs at the New Hampshire Audubon Society and the 4-H Leader Conference, which he says were very successful. Letters in the spring to six strategically-chosen New Hampshire newspapers were the key to success--329 bluebird packets requested in March alone.

Ken Karnas has been speaking on bluebirds for five years. In the spring he gave programs at two schools at Wantage, NJ, where students constructed nesting boxes of the modified Junius Birchard design. Mr. Birchard was both a mentor and an educator for the bluebirders of New Jersey. His legacy lives on.

Kevin McCurdy gave 12 programs last year, most of them at the Geronimo Road School near Fort Sill, OK. He helped the fifth graders monitor the local trail and gave a program on bats and bluebirds to the third graders.

In Catawba, SC, Barry Graden of Bowater, Inc. gave, among many, a program to the Catawba Indian Reservation School where he presented kits to the children. His company sends out kits and plans while trying to keep track of the bluebirds fledged in South Carolina. North of Nashville, Bill Wheeler of Lafayette wrote, "The article, 'The Blue Wings of a Songbird,' by Sandra Hire in the *Tennessee Magazine*, (more than 412,000 subscribers) was about the...story of my interest in bluebirds. The article still brings letters or phone calls from across the state with questions or comments. This avenue has generated more outreach and feedback than I ever imagined."

Angela Shambousky of Bluebirds Across Vermont, from Waitsfield, wrote that she gave five programs and was in need of a video for high school groups. There does not seem to be any.

In Forsyth, GA, Terry Johnson has been speaking on bluebirds for 20 years. He gave programs at the District Lions

Club and many other places. He uses a brochure that he wrote and a modified slide program for Georgia. They put the videos on free loan through their libraries. Also, in Atlanta, GA, Ed Gray gave many programs; significantly, he had a booth in a mall to demonstrate ways of starting trails and making nest boxes along with plans.

John Holm of Gothenburg, NE, gave four programs and is an area coordinator, as are many of our speakers. He uses old nests, pictures, eggs, and feathers. Note: *permit required*. He says, "I prefer the videos because of the action, but all the ones I have (5) are too long. I'm thinking about making up one with shorter sequences." In Seneca, KS, Oliver Russ has been speaking for one year and gave a much attended program to the Retired Teachers of Nemaha County. He needed more information on the updated slide program, which I supplied. I said, "Why not rent it to see if you like it"? Meanwhile in Emporia, Marvin Schwilling gave programs at two Audubon Chapters among other programs. One of those was to the Sertoma which is a local service organization.

Marilyn Campbell of the Illinois Audubon Society in Danville wrote, "None in '96. We moved our office location and were too busy with state-wide agenda. We are serving as a coordinator for bluebird data throughout Illinois in conjunction with three other agencies."

Charles Cooper gave programs at the Henry Rotary Club, a garden club, and a 4-H club in Henry, IL. He had a display at the Marshall County Fair and gave away 10 nest boxes. In New Salem, IL, Eleanor Dunham stated that out of her 15 programs, "Program number two was arranged by a 13 year old Boy Scout who chose to do bluebird conservation for his Eagle Scout project. It was approved and completed. He will have his Eagle Scout Court of Honor on 15 March 1997. I was pleased to be a part of this project."

Lesla McDonald-Chan gave programs at Scout meetings and an Earth Day Fair. She wrote, "What about more slides showing the impact of our lifestyles on birds, i.e., cat predation (domestic and feral) and Tubex® tree shelters?" She lives in Granite Bay, CA. Don Yoder, Walnut Creek, drove 2,098 miles to give 15 programs around California. Susan Yasuda and Jim Fletcher of Camino, CA stated that the connection of the Forest Service and the California Bluebird Recovery Program has been very successful and many private landowners are actively participating. Together, they gave a total of ten programs.

Alicia Craig-Lich wanted information to pass along about success of boxes on golf courses and who to approach about giving programs to golf course managers. She lives in Carmel, IN. Ken Jankowski of Valparaiso, IN, has been speaking on bluebirds for more than 13 years. Though he is working 59 hours a week, he still found time to give five programs and take interested people over his trail May through July. He tells everyone, "It's a lot easier checking 10 boxes than a large number especially because we have a big sparrow problem in this area."

Gail Barels of the Linn County Conservation Department in Marion, IA, wrote that she gave three well-received programs at Vernon Middle School where she used a bluebird nest box with a nest and one with House Sparrow eggs. She likes the new updated slide program. Albert Weikert, Villisca, IA, is still speaking enthusiastically on bluebirds of Iowa and loves the tree-branch nest box.

In Mechanicsburg, OH, Jean Rutan uses NABS brochures, "Hit the Trail for Bluebirds" of the Ohio Division of Wildlife, "Life History of Bluebirds" by ODW, a nest box, and plans from several sources in her programs. She also has recipes for bluebird food available. Elsie Eltzroth, a long time speaker in Corvallis, OR, wrote, "I use books, study skins, maps, graphs, slides, packets of information, brochure "The Western

Bluebird Survival Guide" which I helped draft and a combination of NABS slides and my own to tell the bluebird story." She uses the videos only for workshops.

In Greenville, PA, Ted Morus of the Greenville Area Leisure Services Association uses five different nest boxes, a natural cavity stump, predator guards, a box trap for sparrows, competitor nests for identification, and an overhead projector for box placement discussion. Larry Rohrbaugh gave six programs in May and wrote, "The company that I work for, Glatfelter Paper Company of Spring Grove, PA, had a real nice article about a number of its employees that are bluebird box monitors. It was in the company magazine, *The Barker*. It gave information on bluebirds and how to attract them." He put up seven boxes around Heidelberg Elementary School and had successful nestings there which attracted some very interested new young bluebirders.

Elaine Crossley spoke to 500 people at Conservation Days at Long Point State Park near Frewsburg, NY, where she lives. She used the *National Geographic* "Songbirds" video and says, "I taped the bluebird call over and over so that it alone is heard on the audio tape." Sam Phelps of Walden, NY, spoke to 80 kids at an elementary school and conducts Bluebird Field Day each year. He still enjoys being with the bluebirds and has been presenting the message for 35 years. Paul Wilson, Pulaski, NY, had a great idea. He wrote, "Each year in September, myself and a few other of our members hold our two day program at the Beaver Lake Harvest Festival. We spread the bluebird word to hundreds of interested people. Every year we receive feedback from people we had talked to the year before. It is a fun time for our club."

Scott Butterworth of Elkins, WV, had some good news in that the state of West Virginia now has regional biologists giving programs/workshops in different

areas of the state. A list of the individuals and addresses was enclosed. This is just one of many state divisions of natural resources that is doing an outstanding bluebird conservation job.

Deborah Delevan, a rehabilitator in Jarrettsville, MD, holds an "Eastern Bluebird Seminar" each year in Abingdon, MD, which includes free admission, lecture and slide presentation, and information about attracting bluebirds to your yard. She explains to everyone in person and in her handouts, "Reports indicate that most well-meaning people are doing more harm to our Eastern Bluebird population by putting up improperly designed nest boxes, placing boxes on trees or fences, and poor monitoring of nest activities. It is better *not* to put up a bluebird box if you don't have all the correct information." She uses live "unreleasable bluebirds" in her programs.

Jerry Newman of Rising Sun, MD, who started the NABS Speakers' Bureau in 1987 and headed it for two years, wrote, "Early in March, for the past 5 or 6 years, I write a bluebird article for the local newspaper (usually for 7 or 8 weeks). I also build nest boxes and sell them locally. The proceeds benefit our local library." He gives programs for home schoolers, at nature centers, and for fifth graders at a local school.

From Bismarck, ND, Natural Resources Biologist Chris Grondahl sent his questionnaire saying, "I use a Peterson and a one-board box for display, along with a *N.D. Bluebird Directory*, and information on both of our bluebird species in North Dakota, the Eastern and the Mountain." He hands out a beautiful publication called *Building Nest Structures, Feeders and Photo Blinds for North Dakota Wildlife*.

Diane Allison had some words of wisdom from Pipersville, PA, "It's been a great year. I keep thinking I must have saturated the area but groups keep turning up. The historical societies were a surprise this year. I went to one last

year which led to the two this year. The word just keeps spreading....so does the development. I just hope we'll continue to have a place for the bluebirds."

Julie Lee had a very interesting and rewarding story to tell. She lives in Downingtown, PA, which, for years, had programs in the schools put on by an electric company. Funds were cut last year and they could not support the programs any more. She wrote, "Mary Ann DiBenedetto and I were determined to continue presenting this program even if we had to do it ourselves! Our principal ordered the slide program for us and I adapted it to fit our needs. Mary Ann took the responsibility of purchasing the wood and getting it cut into the appropriate pieces. Last year was our first year on our own, and we couldn't have been more pleased with the results. The slides were perfect, and the accompanying information made it easy for me to write my own script. After I shared the slide program with our 105 fourth graders and 30 parents, Mary Ann took the group step-by-step through the building of a nesting box. We then broke

up into groups of four, and with a parent helper assigned to assist only when necessary, our students successfully built the boxes. We drew names to see who would get to take the boxes home. The remaining students left with blueprints to make their own. We are looking forward to March 20, 1997 as the day we present the program to this year's group of fourth graders. We are confident that it will be a success. Thank you for your interest."

All the speakers are doing an outstanding job, but because of space constraints not all comments could be printed. I try to feature different speakers and their comments/suggestions each year so their ideas and accomplishments can be shared by all. I hope new and tried ideas of communicating to the public about bluebirds and other cavity nesters will increase an awareness of the conservation of the bluebirds across North America and Bermuda; thus, more bluebirds for today and tomorrow.

A total of 599 programs were presented in 1996 by members of the NABS Speakers' Bureau.

The following individuals/organizations returned their 1996 Speakers' Questionnaire which helped the society to determine how the programs are being received and if they have any suggestions for improving the Speakers' Bureau. I want to thank all the speakers from Canada (two provinces) and the United States (36 states) for taking the time to fill out and return the form. A 1997 questionnaire will be sent in January 1998. If an individual speaks while an employee or as a representative of an organization, that association is listed in parens below the name.

CANADA

ALBERTA

Robert Leehner
Myrna Pearman
(Ellis Bird Farm Ltd.)

ONTARIO

Gord Kingsmill
(Pine River Outdoor Ed. Center)
Jean Lister
Lorne Smith

UNITED STATES

ARKANSAS

Stan Reed

CALIFORNIA

Jim Fleteher
(Eldorado National Forest)

Lesa McDonald-Chan
Viola Sampert
Donald Yoder
Susan Yasuda
(Eldorado National Forest)

CONNECTICUT

Constance Beason
Dalton Sayles
(Wheeler Middle School)

FLORIDA

Donna Legare
(Native Nurseries)

GEORGIA

LuAnn Craighton
(Callaway Gardens)
Nancy Duncan
Edward Gray
Edwina Hahn
Helen Hollis

Terry Johnson

(Nongame Endangered Wildlife Program)
Derrell Rush
(Dept. of Natural Resources)
Henderson Traylor

IDAHO

Tami Johnson
(Farragut State Park)

ILLINOIS

John Baxter
Marilyn Campbell
Pat and Rosa Campbell
Charles Cooper
Eleanor Dunham
Max Forbes
Joan Harmet
Marcy Hoepfner
David Miller

Phil Quintenz Kenneth Schar Chester Schmidt Richard Williams Lloyd Wilson	MINNESOTA Richard and Marlys Hjort Dorene Scriven	OKLAHOMA Charlotte Jernigan Kevin McCurdy <i>(Natural Resources Division)</i>
INDIANA Scott Andersen Alicia Craig-Lich <i>(Wild Birds Unlimited)</i> Mary Cutler <i>(Tippecanoe County Park)</i> Jerry Hunefeld Ken Jankowski Art Jeffries Chris Saiberg Dr. Robert Williams	MONTANA Art Aylesworth	OREGON Elsie Eitzroth Patricia Johnston Brenda McGowan
IOWA Gail Barels <i>(Linn County Conservation Dept.)</i> Jaclyn Hill Tom Lake Pat Schlarbaum <i>(Wildlife Research Station)</i> Jim Walters Albert Weikert	NEBRASKA Steve Eno John Holm	PENNSYLVANIA Diane Allison Patricia Andrascik Beatrice Broughton Julie Lee Richard and Karen Light Ted Morus <i>(Greenville Riverside Park)</i> Wilbur Peachey Larry Rohrbaugh
KANSAS Oliver Russ Marvin Schwilling	NEVADA Donna Hagerman	SOUTH CAROLINA Barry Graden <i>(Bowater, Inc.)</i>
KENTUCKY Wayne Davis	NEW HAMPSHIRE Bruce Burdett	TENNESSEE Bill Wheeler
MAINE Chuck Martin Wendy Howes Lisa Paige	NEW JERSEY Ken Karnas	TEXAS Francis Dorer Mary Reed David Shiels
MARYLAND Debbie Delevan <i>(Wildlife R. & R., Inc.)</i> Jerry Newman Elizabeth Nichols Jean Tierney <i>(Patuxent River Park)</i>	NEW YORK Kevin Berner Chris Case <i>(Point au Roche State Park)</i> Elaine Crossley David Heidenreich Sam Phelps Evelyn Rifenburg Ruth Shone Ed Tuthill Richard Wells Douglas Weeks <i>(Waterman Conservation Center)</i> Paul Wilson	VERMONT Warren King Angela Shambousky
MASSACHUSETTS Lillian Files Jill Miller	NORTH CAROLINA Christine Ammons	VIRGINIA Fred Sahl Barbara Stinson
MICHIGAN Alan Boulton	NORTH DAKOTA Chris Grondahl <i>(Game & Fish Dept.)</i>	WASHINGTON William Ryan
	OHIO William and Joan Davis Doug LeVasseur James Little <i>(Crawford Park District)</i> Tami Locher <i>(Geauga Park District)</i> Lynda Price <i>(Wilderness Center)</i> Jean Rutan	WEST VIRGINIA Scott Butterworth <i>(Division of Natural Resources)</i> Hobart Ellifritt
		WISCONSIN Carol McDaniel C.H. Schlauderaff Ernest and Delores Wendt

The following members of the NABS' Speakers' Bureau have died within the last few years. We remember them and are grateful for their devotion to bluebird conservation.

John Kiser, Virginia
Todd Fink, Illinois

Exchange

To help our readers form connections with state and regional bluebird/cavity nester organizations, the NABS board has requested that annually the addresses be published of those groups supplying material to this feature. Names and addresses listed below are those groups which were included in 1997. If your bluebird/cavity nester organization publishes a newsletter and it is not included, please make sure this editor or NABS is on the mailing list. For a complete list of all bluebird groups and contacts, consult the *Directory of Bluebird Conservation Programs: North America and Bermuda*, a cooperative project of Ellis Bird Farm, Ltd. and the North American Bluebird Society, published in 1997. Names followed by an asterisk indicate NABS affiliates.

ALBERTA

Calgary Arca Bluebird Trails*
c/o Don Stiles
20 Lake Wapta Risc SE
Calgary, Alberta T2J 2M9

Ellis Bird Farm, Ltd.
Box 5090
Lacombe, Alberta T4L 1W7

CALIFORNIA

California Bluebird Recovery Program*
2021 Ptarmigan Drive #1
Walnut Creek, CA 94595

COLORADO

The Bluebird Project
c/o Sherry Chapman
Colorado Division of Wildlife
6060 Broadway
Denver, CO 80216

GEORGIA

Bluebirds Over Georgia, Inc.
195 Hauteur Place
Lilburn, GA 30047

INDIANA

Indiana Bluebird Society*
7613 W 134th Place
Cedar Lake, IN 46303

IOWA

Johnson County Songbird Project*
2511 Hwy 1 SW
Iowa City, IA 52240

MARYLAND

Calvert Bluebird Council
c/o John Zyla
49476 Portnoy's Overlook Rd.
Ridge, MD 20680

MICHIGAN

Kalamazoo Nature Center
Michigan Nestbox Network
7000 N. Westnedge Ave.
P.O. Box 127
Kalamazoo, MI 49004

MINNESOTA

The Bluebird Recovery Program*
Audubon Chapter of Minnesota
P.O. Box 3801
Minneapolis, MN 55403

NEBRASKA

Bluebirds Across Nebraska*
P.O. Box 67157
Lincoln, NE 68506

NEW YORK

New York State Bluebird Society*
15 Bridle Lane
Dryden, NY 13053

Broome County Nestbox Network
1509 Buffalo St.
Endicott, NY 13760

Schoharic County Bluebird Society*
c/o Kevin Berner
SUNY Cobleskill
Cobleskill, NY 12043

NORTH CAROLINA

North Carolina Bluebird Society
834 Shamrock Rd.
Asheboro, NC 27203

OHIO

Ohio Bluebird Society*
20680 Twp. Rd., #120
Senecaville, OH 43780

OKLAHOMA

Oklahoma Nongame Wildlife Program
Oklahoma Dept. of Wildlife Conservation
1801 N. Lincoln Blvd.
Oklahoma City, OK 73105

ONTARIO

Ontario Eastern Bluebird Society
2-165 Green Valley Drive
Kitchener, Ontario N2P 1K3

OREGON

Hubert Prescott Western Bluebird
Recovery Project*
c/o Patricia Johnston
7717 S.W. 50th
Portland, OR 97219

TEXAS

North American Chimney Swift
 Nest Site Research Project
 Driftwood Wildlife Association
 1206 West 38th, Suite 1105
 Austin, TX 78706

WISCONSIN

Bluebird Restoration Association
 of Wisconsin *
 Rt. 1, Box 137, Akron Ave.
 Plainfield, WI 54966

CALIFORNIA--BLUEBIRDS FLY! Fall 1997

Orange County bluebirders met on 2 August in Irvine Regional Park, a site where James Cox has had success. This year his boxes had 65 nests and 237 fledglings, many in the park. Orange County enjoyed great success in 1997 fledging 1,783 Western Bluebirds; in addition, there were also 20 Ash-throated Flycatcher and 17 Tree Swallow nests. Swallows are increasing each year (the first county nesting was just five years ago).

Breeding Bird Survey (BBS) results for Western Bluebirds show a decline during the 1966-1994 period in California and Arizona. Although there have been cyclical changes in the population, the overall trend has been down in California during the survey period.

The article "House Wrens--Give 'em Room!" highlights results obtained by S. Pribil of the Department of Biology at the University of Ottawa, Ontario, Canada. "An effective trap for the House Wren" in the January-March 1997 (22(1) issue of *North American Bird Bander* provides some insights into wren activities. While trapping and relocating can only be done by licensed banders, research can often provide clues to activities that may produce strategies non-banders can use to reduce interactions between wrens and other cavity nesters. Destruction of eggs and nestlings of neighboring birds by House Wrens is well documented. Effectiveness of the author's trap was influenced by location of the trap within a wren's territory and the time of the breeding season. Boxes within 3 to 16 ft. (1 to 5 m) of an existing wren nest may be avoided by House Wrens. Probably wrens are inhibited from pecking eggs near their nest to prevent destruction of their own eggs; likewise, if the trapping box is placed more than 130 ft. (40 m) from the nest or outside the territory, the wrens may not find it or may not be motivated to visit it. The highest intensity of egg-pecking takes place early in the spring with all males and females pecking. When the female acquires a cavity she no longer pecks eggs while 26-35% of males continue to do so. Since most bluebirders are unlikely to risk placing bluebird boxes close to existing wren nests, this continues to mean placing bluebird boxes well away from wren habitat and nests. In many cases, later broods of bluebirds should be safer from House Wren attack than the early season brood.

--California Bluebird Recovery Program *

COLORADO--September 1997 Mailing

Coordinator Sherry Chapman reiterates the desire to have the location of all the nest boxes in Colorado in the Bluebird Project's records. Bluebirders in that state are asked to complete the annual nesting form and a Trail Location Form.

--The Bluebird Project

GEORGIA--THE GEORGIA BLUE LINE, Fall 1997

Lyn Davies volunteered to be the newsletter editor so once again members will receive timely information.

Vice President Joe Frey raised 20 bluebirds on the trail at the governor's mansion. Frey also provides a recipe for raising mealworms to feed bluebirds.

Publicity Chairs Tip and Betty Goza provided additional information in a separate mailing. The 18 October fall meeting was held at Jeanne and Jim Wagner's. A new treasurer, Alicia West, was inducted. The annual Spring Festival will be held in April 1998 at the president's home in Stone Mountain. Bluebirds Over Georgia is considering

the idea of establishing county coordinators following the successes of Ohio and Nebraska. Tip and Betty Goza demonstrated the group box assembly method they use successfully at workshops throughout the state. Afterward, John Hartrampf of Fulton County and Jeff Davies of DeKalb County agreed to return home and start their own workshop programs. All Georgia bluebirders are encouraged to start local building programs which may be the beginning of a county coordinator program on a statewide basis.

--*Bluebirds Over Georgia, Inc.*

MAINE--DOWNEAST BLUEBIRD, Fall 1997

An article from the *Erie* (Pennsylvania) *Times-News* 20 April 1997 was cited. It mentioned that some of the state parks trails are switching to slot-opening boxes. The editor asks that if readers try this box style, they provide some feedback on its success.

Despite decades of national publicity about bluebirds, some people "just don't get it." A writer for *Woman's Day* magazine spent a lot of time on the telephone with Lisa Paige last spring inquiring about bluebird recovery efforts in Maine. Lisa referred the individual to June Ficker. Eventually the magazine published a brief profile of June's experiences and her picture. Unfortunately, featured alongside the photograph of June is a reproduction of a postage stamp featuring--a Blue Jay!

Bluebirds, like humans, face an array of environmental perils, especially pesticides. Ron Webber, of Oakland, detailed his experience in 1996. In previous years a bluebird pair successfully fledged many young, but in 1996 the first brood of four hatched and all died at about one week. He realized it was the result of the pesticide he had sprayed on his apple trees and garden. After discussion with an entomologist he realized there are no safe pesticides so discontinued use. The bluebirds successfully raised a second brood in 1996 and nested again in 1997.

--*Bluebird Association of Maine* *

MINNESOTA--BLUEBIRD NEWS, August 1997

The Annual Bluebird Conference will be held at the National Guard Training Grounds, Camp Ripley, in Little Falls, 18 April 1998.

In an effort to establish the value of pairing boxes, monitors completing the annual report form are asked to comment on their experiences in pairing boxes and its effect on bluebird/Tree Swallow nesting.

Bluebird Trails, a Guide to Success by Dorene Scriven and published by The Bluebird Recovery Program (BBRP) appears heading for a third printing. The author is requesting suggestions for updating this valuable volume. Mail to BBRP, Audubon Chapter of Minneapolis, P.O. Box 3801, Minneapolis, MN 55403 or send an e-mail to scriv001@maroon.tc.umn.edu.

Russell Christensen, of International Falls, tends hundreds of area bluebird boxes, but has other cavity nesters, too. He has erected Wood Duck boxes near a gravel pit behind his house and had three boxes occupied by Common Goldeneyes. Patti Roggenkamp, a volunteer at Lake Marta State Park, had seven eggs hatch and fledge in one bluebird box. The second clutch also contained seven eggs, but all but one disappeared--probably taken by House Wrens. Steve Weston saw a female Mountain Bluebird at the entrance to Lake Byllesby Park near Cannon Falls on 1 June. A male Eastern Bluebird was observed nearby.

"Bluebirds at My Window" outlines some tips for people who are concerned about bluebirds (and other birds) pecking at or attacking windows (most frequently in the spring) and how to prevent birds being killed by flying into windows. Window pecking is territorial behavior. Some possible solutions are the following: soap the windows; pull down shades, blinds or curtains to diminish the reflection; or temporarily block the window outside with screen. For shiny car hubcaps, prop something against them when

the car is parked. For side mirrors, try tying an old sock over them while the car is parked--remembering to remove them before driving off. The second problem is more serious. Although many hawk silhouettes are sold, they do not work. A solution that does is to stretch taut netting across the windows on the outside; it is hardly visible from the inside. Less desirable is to put 1 inch wide strips of ribbon or tape about 4 in. apart across the glass. Birdbaths, feeders, and even berry-bearing plantings should be placed less than 3 feet or more than 35 ft. away from a building.

"A Major Increase in Bluebird Occupancy Per Site When Boxes Paired" summarizes Ron Bittner's and Bill Anaka's data from Abernathy, Saskatchewan, Canada. From 1984 through 1987 Ron had 12 unpaired boxes. Bluebird occupancy was 8% in 1985 and 1987, none in 1984 and 1986. In 1988 he began pairing all boxes as well as increasing box sites up to 36 pairs of boxes in 1996. The percentage of bluebird occupancy has risen to 42% to 71% each year since he started pairing. Bill Anaka's data were similar over the same 15 year period. Prior to pairing, the highest box occupancy of his 40 boxes was 10%. When he paired seven of his 41 boxes in 1988 occupancy rose to 22%. From 1989 to 1996, he increased the number of boxes and paired them all (108 total). Occupancy during that period ranged from 69% to 95%.

--*The Bluebird Recovery Program**

NEBRASKA--Bluebirds Across Nebraska Newsletter, Summer 1997

Bluebirds Across Nebraska's (BAN) current membership is 396. Dwane Zimmerman reported at the 4 May 1997 meeting on some publicity methods being used to promote BAN. Small newspapers in the Norfolk area were personally visited for placement of notices of the annual conference. News releases for that conference were mailed to all daily newspapers in the eastern half of Nebraska and to most weekly papers in southeastern and central Nebraska. Publicity releases regarding appointments of county coordinators were mailed to all newspapers in each county represented by a coordinator. Publicity in local newspapers may have generated the 30 walk-ins from the area at the 5 April 1997 conference in Norfolk. At the meeting Jackie Howe was named "Bluebirder of the Year."

Connie and Chuck Finley had a bluebird booth at the Arbor Day Celebration in Nebraska City. Interest was high, several inquiries for outdoor tours or classroom presentations were received, and membership brochures given out. A suggestion by Carolyn Hall is one that other bluebird groups may want to adopt. Put a name, number, or letter combination in one corner of a brochure given away making it different for each event so there is easy feedback as to where memberships are coming from.

BAN has started a collection of different styles of nest boxes. The largest known collection is at the Ellis Bird Farm in Alberta, Canada where 65 boxes are on display. BAN has 26 and would be happy to receive more. Contact Steve Eno, 2500 West James Dr., Raymond, NE 68428 if you have a style that they might wish to add to their collection.

Steve and Cheryl Eno successfully use a bluebird perch/oriole feeder made from fiberglass rods used for electric fences. The design is a simple one and will be reprinted in a coming issue of *Sialia*.

--*Bluebirds Across Nebraska**

NEW YORK--Bluebird News, Fall '97

"The Black-capped Chickadee--Cheerful Backyard Visitor" is the featured cavity nester in this issue. Chickadees of several species are among birds that can be expected to use bluebird nest boxes at woodland edges or in open wooded situations in many parts of North America.

"Is Pairing Good or Bad for Bluebird Production?" visits this controversial topic by reviewing articles from both the Wisconsin and Minnesota newsletters. Members are

encouraged to report their experiences with paired versus single boxes. To test pairing in New York, the new Route 11 Bluebird Education Trail will be divided. The boxes on the trail will be paired in the northern half of each county and mounted singly in the southern half of each county. Trail records should show which half has the better bluebird or Tree Swallow ratio. If paired boxes have the better production, then another box can be added to the single ones. Oval-holed boxes will be paired with round-holed boxes; only ovals will be used at single box locations. The trail was begun in late spring 1997 and is progressing nicely. Oswego County is completed, thanks to monitor Paul Wilson. It is anticipated that nest box building and bluebird information programs will be held in at least two schools on or near Route 11 in each county, with media publicity along the way.

--*New York State Bluebird Society**

---*Broome County Nestbox Network, Fall 1997*

The 1997 survey form is enclosed. Results for 1996 from 35 members reporting included 324 Eastern Bluebirds fledged, 787 Tree Swallows, 143 House Wrens, 12 Black-capped Chickadees, 5 Wood Ducks, and 4 Hooded Mergansers. The box total was 523.

--*Broome County Nestbox Network*

NORTH CAROLINA--BLUEBIRD NOTES, June-August 1997

Each year Certificates of Recognition are awarded by the North Carolina Bluebird Society (NCBS) Board of Directors to members who show outstanding leadership and contributions in helping the bluebirds. Three Certificates of Recognition this year were presented to the following individuals: *Clyde Council*, of Southern Pines, for building more than 3,700 unique bird feeders dedicated to the memory of his wife. These feeders are donated with each bluebird box sold by Dick Pockmire on behalf of NCBS. *William Crow*, also of Southern Pines, who used donated wood to make nesting boxes. He and Tom Potter, of Whispering Woods, sold the boxes and donated the \$1,000 to Habitat for Humanity of Moore County. Both men continue to build boxes and promote the well-being of bluebirds. *Hobie and Nora Burleson*, of Greensboro, were recognized for their three year effort monitoring 113 bluebird boxes in Bryan Park in Greensboro. Each recipient was given a personalized mug and a certificate of recognition.

The NCBS Board of Directors voted at their August meeting to make Clyde Council, of Southern Pines, and Jack Finch, of Bailey, honorary board members. Their presence at board meetings will be welcomed, but not required. It is hoped that the organization will continue to draw on their experience and expertise in many aspects of bluebirding.

--*North Carolina Bluebird Society*

---*BLUEBIRDS, October/November 1997*

The Rutherford County Bluebird Club celebrated its first anniversary in August 1997.

Nest box results for 1997 from the 10 members reporting were 86 boxes monitored, 62 used by bluebirds, 426 bluebird eggs laid, 376 eggs hatched, and 348 bluebirds fledged. In addition, 25 Carolina Chickadees fledged, as well as 10 Tufted Titmice, and 8 Carolina Wrens.

--*Rutherford County Bluebird Club*

OHIO--Bluebird Monitor, Autumn 1997

President Doug LeVasseur uses his column to relate bluebird surprises that he has witnessed or heard about over the years. The one-quarter size bluebird egg that looked like a blue pearl, a weasel popping out of a nest box, and Tim Daniel's slide of a female

bluebird at a nest box entrance with a small leopard frog in her bill were all surprises. Every monitor knows that the unexpected is a part of trail work.

In this tenth anniversary year (1997), Joan D. Davis summarizes the highlights of the first decade in "Ohio Bluebird Society: Its Purpose and History." Jim Coffman, Dick Tuttle, Gil Trail, and Doug LeVasseur have served as president in the first 10 years. Under each man's leadership new programs were implemented to make this group a highly effective voice for bluebird and cavity-nester conservation.

Dean E. Sheldon, Jr.'s column details box construction describing the attributes of various types of wood from cedar and redwood to plywood. The author prefers tulip poplar (*Liriodendron tulipifera*) because it works easily, never needs a finish, weathers to a lovely, soft gray, and lasts indefinitely. Wooden pallets or crates are excellent sources of wood, of course, because they can usually be obtained without charge. It is necessary to be selective since they can be constructed of almost any wood.

The Tenth Annual Bluebird Sunday at Malabar Farm State Park was held on 8 June 1997. Numerous Ohio Bluebird Society (OBS) members were present with exhibits. The highlight of the day was a special presentation to Chris McQuillen and Gil Trail of a laser-engraved bluebird nesting box commemorating their years of work in re-establishing the Eastern Bluebird at this model conservation area in the state park system. The commemorative nest box, built by Mel Bolt, will be permanently displayed on the main floor of the new barn. This award ceremony was the first of several events planned by the OBS Board of Trustees to observe the tenth anniversary of the organization.

Bob Orthwein in "Double Nesting by Bluebirds at Paired and Triple Box Sites" raises a question about a potential problem for a few bluebird pairs. The author is well-known for his experiments with paired and triple box sites in order to better control House Sparrow competition. He details several instances in which a bluebird pair completed two nests in boxes five to seven yards apart and laid partial clutches in each. Typically, only one clutch hatched. He notes that all double nestings were at sites where the paired or triple boxes were identical in design and color. The double nestings at triple box sites have always been in the two closest boxes. Some bluebirds seem unable to cope with identical nesting boxes in close proximity. Although double nesting is not a common occurrence, it does happen. Not only does it waste time and energy during a critical period of the nesting season, but it reduces the number of young fledged.

To enable the birds to more easily differentiate the boxes, he painted some boxes a light tan and left the adjacent box the original light green. So far, no double nesting has occurred at these sites. From now on at triple box sites, he plans to paint the two outside boxes earth tone green and the center box tan. Where unpainted boxes are used, the front of one box could be painted green.

In addition to color differences, entrance hole shape may be used to avoid double nesting, especially in encouraging bluebirds to use one box and House Sparrows another (for more effective trapping).

Darlene Sillick, Franklin County coordinator, recently received a \$4,000.00 grant from the Columbus Zoo Conservation Fund. Her project is entitled "Establishment of Housing for the Studies and Research of Cavity Nesting Bird Species." The project is a partnership with the Columbus Zoo, Dublin School, Dublin Grounds and Facilities, Ohio Division of Wildlife, Ohio Bluebird Society, Metro Parks of Columbus, and Wild Birds Unlimited (Columbus and Westerville). A main focus of the grant is educational although nest boxes will be provided for a number of species and a variety of research carried out by Ohio State University and Ohio Wesleyan University. Darlene currently oversees a 300 box trail in and around Dublin.

—Ohio Bluebird Society*

NABS: *Taking Off*

This is the first of an on-going column seeking to better inform NABS membership of the activities, endeavors, and projects undertaken by the organization. Written by the new Co-Executive Directors, Lisa Kivirist and John D. Ivanko, as well as other members who've generously contributed time, hard work, and financial resources to the continued development of NABS, this column serves as a conduit for the future course of NABS as it takes flight into the next millennium.

We are continuing to build on NABS' 20 years of effective conservation success and take pride in the fact that--thanks to your enduring efforts--the bluebirds are returning once again. Let's keep them, and other native cavity-nesting species, flying high!

NABS' New Co-Executive Directors

Husband and wife team, John D. Ivanko and Lisa Kivirist, have joined NABS, following in the footsteps of Founding Executive Director, Mary Janetatos. Lisa and John possess diverse academic and professional training. They have worked at an advertising agency, served as founding members of non-profit organizations, managed several entrepreneurial endeavors, and remain active contributors to national magazines as freelance journalists. Their backgrounds include experience and responsibilities addressing the preservation and protection of the natural world, especially as it relates to human environments. John is an award-winning photographer and both are published authors. They are excited to be a part of NABS and to work with the Board, the NABS membership, and others committed to bluebird conservation to help guide the future of NABS and the bluebirding movement.

With the headquarters relocated to Darlington, Wisconsin, the new co-executive directors' immediate responsibilities will be to organize the new headquarters, computerize operations, and strengthen the organization from both a membership and financial standpoint.

Who's Doing What?

The 17 October 1997 Board Meeting held in Ohio brought about a refined organizational structure which provides an opportunity for both Board Members and regular members to become more active participants in NABS on one of its many committees. Input or ideas for any committee can be sent to headquarters where your suggestions will be forwarded to the appropriate committee for consideration.

NABS' Standing Committees

DEVELOPMENT COMMITTEE

Chair: Steve Eno

Purpose: The purpose of the Development Committee is (a) to provide strategic direction for increasing and maintaining NABS membership and (b) to assist in obtaining financial support for the Society through foundation/grant solicitation and membership fundraising campaigns.

EDUCATION COMMITTEE

Chair: Jim Walters

Purpose: The purpose of the Education Committee is to provide strategic direction, ideas, and input for promoting the educational mission of NABS in order to foster a greater understanding of bluebirds and other cavity-nesting species and the role the public can play in effective conservation efforts across the continent.

MERCHANDISE/CATALOG COMMITTEE

Chair: Bob Niebuhr

Purpose: The purpose of the Merchandise/Catalog Committee is to develop the purpose, role, function, and design for the catalog and assist with the infusion of new product ideas that offer ways to generate profits for the continued preservation of the bluebirds and other native cavity-nesting species.

NOMINATING COMMITTEE

Chair: Sadie Dorber

AWARDS COMMITTEE

Chair: Joan Harmet

RESEARCH COMMITTEE

Chair: Kevin Berner

AFFILIATION COMMITTEE (informal)

Chair: Carol McDaniel

We encourage you to contact us if you're interested in any of the committees and their goals. NABS is YOUR organization and we hope that you might consider becoming a contributing voice in the continuing bluebird/cavity-nester movement spearheaded by NABS as we head into our next 20 years of conservation work.

Sign-up a Friend?

We encourage members to consider giving a "gift membership" to a fellow bluebirder who might enjoy being a part of this conservation effort. NABS needs new members to help invigorate and keep the bluebirding movement strong across the continent. It's a gift that gives year-round. While the Eastern Bluebirds have made a great recovery, there is still more to be done; continued vigilance will keep the Mountain and Western Bluebird populations flourishing. Your friends in Canada, Mexico, and across the United States need to know their help is

needed. Contact NABS headquarters for a gift membership form.

Help Us Set Up Headquarters Right

While we have a new headquarters, moneys were not set aside to help make it sparkle. With the recent U.S. tax law changes, there rests a wonderful opportunity for members to make a stock or bond donation to NABS, offering needed financial support to the Society during its headquarters move and as it reinvigorates educational and communication programs fostering the growth of bluebird populations across the continent. With highly appreciated stocks and bonds resulting from the present bull stock and bond markets, a gift of stock or other appreciated securities provides you with the double benefit of making a significant tax deductible contribution to NABS while avoiding capital gains taxes on your appreciated assets. The securities transfer is accomplished easily, but it is important that your broker or mutual fund administrator NOT sell the stock or security first. Rather, the tax benefits are realized through the transfer of the security or stock to NABS. Please contact headquarters if we can send, in confidentiality, further information on this opportunity before the tax law changes once again. Consulting your financial advisor is also recommended. ■

--Lisa Kivistik and John D. Ivanko

CORRECTION

In the Autumn 1997 issue, p. 123, a reference to *The Bibliography of Literature and Research on the Genus Sialia* was incorrect. The *Bibliography* was updated in 1992 by Nancy Niles with a grant from the Minnesota Bluebird Recovery Program (BBRP). It was then published with an added index by BBRP and is still available from both BBRP and NABS. We regret the error.

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 don't know if you are aware of the story of my husband's and my involvement with the bluebirds which was published in the Oct/Nov 1996 issue of *Birds and Blooms*. I have now personally answered 1,585 letters from people from coast to coast and up into Canada! Believe me, that was not an easy task for one person, but I was determined to do it. I wanted to do my utmost to help the "Blues" all over the country before I leave this earth. I sure feel good to know that there must be many more bluebirds this year because I decided to go "way out on a limb."

Now, for some icing on the cake, so to speak. On 25 August 1997, the mailman handed me the mail. I glanced at it--and then checked the return address on a large manila envelope. I wasn't sure that I had read it correctly. When I got back into the kitchen, I put my reading glasses on--and went into shock! It was from Taiwan! Don and I both wondered who would know me from way over there. I could hardly wait to get to the contents.

The woman writing the letter said she was an author who had written 10 books. She and her husband and two children had just spent four years in Pennsylvania while he was completing graduate work. While there, she came across the magazine article and was quite impressed. She is now writing a

book for children about the importance of protecting habitat and preserving species. She asked me to send her some information about my work with bluebirds. Of course, I did.

She noted that it has only been during the past two years that the Taiwanese government passed its wildlife conservation law. Prior to that during migration, especially in October when many birds go through Taiwan, people put up nets to catch birds for food. With the new law, people can be fined or even jailed for catching or selling migrants. It will take time and lots of education to show people that it is important to preserve species.

Marcy Hoepfner
Route 7
Metamora, IL 61548

Marcy's efforts on behalf of bluebirding are amazing. Certainly her enthusiasm has personally touched hundreds of people with the desire to help her beloved "Blues." It is an interesting coincidence that her correspondent should be living in Taiwan. Long-time readers of this journal may remember that an article in the Autumn 1982 issue detailed a transfer of two pairs of Eastern Bluebirds to Taiwan. The birds were sent by the people of Prince George's County, Maryland to the people of Nantou County, Taiwan. They would

reside in the Phoenix Valley Birds Park which is a publicly owned aviary with a professional staff. Transferring native species to another country is an extremely complicated process requiring permits, licenses, and the cooperation of officials on many levels. The transfer was completed successfully. NABS President Marilyn Guerra provided a copy of the letter that was received by the Prince George's government from Mr. Liu Yue-Yas, Magistrate of Nantou County, Taiwan Government.

"Thank you for your cable of March 24, 1982. We received the four bluebirds day before yesterday. The colors of their feathers are so beautiful. Besides, they are healthy, fresh and lovely. They may well stand for the harmony of the society and the friendliness of the people of my sister county.

On behalf of Taiwan Provincial Government and the people of Nantou County I express my hearty thanks to you and your people. May we see each other in the near future!"

Dear Editor:

On Wednesday, 30 July 1997, I was monitoring some of my 500 nesting boxes and found feathers left by Tree Swallows in box 294 on Hamilton land in Mulmur Township. In cleaning out the box, a small bright object caught my eye. I picked it up and put it in the "ticket" pocket of my work pants.

When I got home, I measured the diameter with a micrometer. The ball bearing was 0.1745 inches (4.432 mm). Over the past 27 years I have found many bright objects in the nests of Tree Swallows: cellophane paper and aluminum foil, for example, but nothing so strange as a ball bearing, possibly from a child's bicycle.

Leo A. Smith
55 Memorial Drive
Brantford, Ontario
Canada N3R 5S2

Dear Editor:

This past summer I organized the Boy Scouts in my troop 429, Omaha, Nebraska, and we built 25 Peterson bluebird boxes.

The boxes were placed around Zorinsky Lake in the Millard/Omaha area. Five different trails were established (map enclosed). The scouts from my troop have agreed to monitor the boxes as part of a service project. We hope we are successful in helping the bluebirds return to Omaha, Nebraska.

Brent Sheldrake
4626 S. 163rd St.
Omaha, NE 68135

NABS SLIDE PROGRAM

The NABS bluebird slide program is available for rental at \$10.00 or for purchase at \$75.00 plus \$7.50 shipping and handling. The program consists of 110 collated, plastic-framed 35 mm slides and a printed script (no slide tray). If a cassette narration is desired, add \$10.00 plus \$1.50 shipping and handling to the purchase price.

To rent or purchase the bluebird slide show, write to the following address: NABS Slides, P.O. Box 74, Darlington, WI 53530. Please allow one to two weeks for delivery and, if possible, specify several dates for rental.

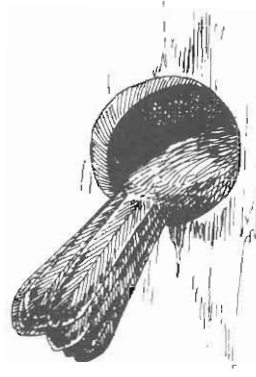
IN MEMORIAM

Each year Sialia carries a list of memorials and special gifts received by the North American Bluebird Society. Contributions can be undesignated or they can be specified for research or education. The Society welcomes gifts or bequests and thanks members and friends for their continuing care and deep commitment to the cause of bluebird and cavity nester conservation.

Bluebird Tales

Lisa Kivirist and John D. Ivanko

With the 5 October 1997 establishment of a "model bluebird trail" consisting of eight boxes of various types located in the Pecatonica River Trails Park in Darlington, Wisconsin, efforts are underway to attract the iridescent bluebirds to the nearby park outside NABS' new headquarters building. The trail was created through the collaborative efforts of the Lafayette County Bluebird Society, the Bluebird Restoration Association of Wisconsin (BRAW), the North American Bluebird Society, and the City of Darlington. The bluebird trail features a variety of nesting boxes donated by local bluebirders, including Harvey Hartwig's PVC box, Robert Clayton's modified Olson box, George Headley's experimental Headley box, and Joe O'Halloran's Peterson and Gilbertson boxes. The headquarters is adjacent to the 47 mile long Cheese Country Multiple-Use Recreation Trail and historic downtown of Darlington, Wisconsin, a recent member of the Main Street Program. This small bluebird trail



joins the list of thousands across the continent as we all work together to preserve and protect the bluebirds.

Less than a week later in the nearby community of New Glarus, Wisconsin, new NABS members Harvey and Shirley Hartwig staffed an information booth at the two day, 300 visitor Octoberfest event, sharing bluebird fledging success stories and stirring community interest in NABS, BRAW, and bluebirding.

The first postcard renewal reminders mailed from Darlington were made possible through the kind efforts of Bob and Della Clayton, Lucille Taylor, Harvey Hartwig, Marjorie Bucher, and Glenn Winslow. ■



Photograph by Lisa Kivirist

These bluebirders installed a nest box trail in the Pecatonica River Trails Park outside the new NABS headquarters in Darlington, Wisconsin. Those in the front row are Shirley Hartwig, Marjorie Bucher, and Richard Baldwin; back row: Bob Clayton, Steve Hubner, John Ivanko, Harvey Hartwig, Carol McDaniel, John McDaniel, Joan O'Halloran, and Glenn Winslow.

Call for Donation of Slides or Prints of Bluebirds and Bluebirding Activities

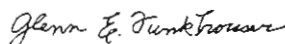
Are you a great photographer or have you captured just a few one-of-a-kind images? Consider making a donation of some of your photographs to help NABS continue its endeavors. We need your high-quality, sharply focused, color photographs (slides or very crisp prints) of bluebirds (all three species) and bluebird-related activities (building and monitoring nest boxes, working with youth groups, walking bluebird trails) as well as other related photos (i.e., the bluebird nemesis, the sparrows or raccoons, causing problems). CONTACT US FIRST so that we might forward detailed information on how you can contribute your photography to NABS in this way. Photo credit will be made for your images (where possible) and, whenever possible, a copy of materials in which your images are used will be sent to you. The donated (no licensing fees) images will be used by the North American Bluebird Society in promotional, marketing or fundraising efforts of the organization.

--John Ivanko and Lisa Kivirist

North American Bluebird Society, Inc
Statement of Cash Receipts and Disbursements
November 1, 1996 to October 31, 1997

Cash Balance - November 1, 1996		\$10,510.46
Cash Receipts.		
Sales of <i>SIALIA</i> journal	\$20,413.95	
Sales of merchandise	31,036.33	
Membership dues	20,248.99	
Contributions	16,810.53	
Miscellaneous	1,983.13	
Transfer from "Liquid Assets"	<u>33,327.67</u>	<u>123,820.60</u>
		134,331.06
Cash Disbursements.		
<i>SIALIA</i> Journal	27,789.72	
Merchandise and related costs	22,226.13	
Membership fulfillment	16,740.39	
Educational material and related costs	1,845.50	
Research	8,394.74	
Rent	12,000.00	
Salaries	13,443.65	
Payroll and other taxes	5,850.66	
Disbursements related solely to relocation	<u>4,747.46</u>	<u>113,038.25</u>
Cash Balance - October 31, 1997		<u>\$21,292.81</u>
Liquid Assets and Inventory		
Checking account		\$21,292.81
Investments with Dean Witter Reynolds		57,419.19
Common stock (at market value)		1,680.00
Inventory of merchandise		<u>17,435.23</u>
		<u>\$97,827.23</u>

Respectfully submitted,



Glenn E. Funkhouser, Treasurer

Registration materials for the twenty-first annual meeting of NABS were included as loose inserts in this issue. If they were not in your issue or if you would like additional applications, please contact NABS, P.O. Box 74, Darlington, WI 53530.

Listed on the inside front cover are those organizations which have chosen to affiliate with the North American Bluebird Society. The list reflects those that had formally affiliated as of 15 November 1997. Additions will be made as they are received. For information about how your group can become an affiliate, contact NABS headquarters.

BLUEBIRD BOOSTERS

Appearing on the inside back cover is a list of those individuals and groups who have made a financial commitment to bluebirds and cavity nesters over and above their annual dues. Such support is essential in maintaining a stable dues structure and provides funding for special projects. We thank the individuals, organizations, and corporations for their generosity. We are especially grateful for the long-term support symbolized by those who have become Life Members.

You, too, can become a Bluebird

Booster. For a donation of \$25.00 per single issue or \$75.00 per four issues, you can be designated as an Eastern, Western, or Mountain Bluebird Booster (choose one); for \$15.00 per issue or \$50.00 per four issues, be a Fledgling Booster; \$10.00 per issue or \$25.00 per four issues makes you a Nestling Booster.

All contributions are tax deductible to the extent allowed by law. Mail your check to NABS Boosters, P.O. Box 74, Darlington, WI 53530.

(BOOSTERS--Continued from inside back cover)

Mrs. Charles G. Rice
Grant C. Riggle
Roger E. Roberts
Mrs. Joan G. Rollins
Dr. William K. Roth, Jr.
Chester & Ruth Schmidt
Gretchen N. Schwartz
R.T. Scott
Mrs. E.B. Sheaff
Barbara K. Silver
Nelly Sirtori
John W. Skooglund
Pat Soehnen
Dr. & Mrs. Wayne Spiggle
Helen W. Swain
Thomas A. Temple, Jr.
Nancy C. Trevor, Jr.
Elizabeth Warnke
Judy Watson
Welcome Wagon Club
Roy L. Wellman
Jeannie Wright
Art Zimmer

Nestling

R.O. Asdourian
Richard Bach

W.J. Barton Family
Robert A. Benson
Birdsong Nature Center
Mr. & Mrs. James Breese
Dr. & Mrs. Juan A. Brown
J. William Bruner
Bruce Carlson
Mr. & Mrs. Frank Charlton
Amy A. Cox
Mr. & Mrs. William Davis
Dr. Dennis Dukes
Harry Espenscherd
Connie & Chuck Finley
Susan A. Fisher Family
Douglas Flood
Mrs. A.G. Furman, III
Delores Gilbreath
William S. Hallenbeck
Mr. & Mrs. Vic Harder
Joan Ten Hour
Ms. Sandra Howland
Fred Huykman
Ken & Caren Jankowski
Amy Jefferson
Kylie & J. King
Ms. Theresa Langevin
Brenda Majestic

Carol Marsillo
Katharine & Timothy Martin
Mrs. Bonnie L. McCormick
Don McNelly
Robert E. Mumford, Jr.
Ronald P. Olsen
Cyndy & Ervine Oney
Margaret E. Owens
Mr. & Mrs. Bill Palmer
Roger Peloquin
Mr. & Mrs. John Porter
Karen Poull
Paul L. Query
Mr. & Mrs. John Rutherford
The Sanders
Henry Schafermeyer Family
Bill & Sandy Seibert
Minneliese Shriver
Robert & Joan Siegele
Donald Simonson
Alan & Alice Sior
Mr. & Mrs. B.J. Stables
Stephen Tirrell
Dan & Anne Toohey
June VanCleave
Sue Wells
Mr. & Mrs. Oliver Gordon Young

BLUEBIRD BOOSTERS

LIFE MEMBERS

Charlotte Jernigan
Clark W. Hart
Katrina Renouf
Mrs. Irene S. Franz
John H. Rogers
Barbara L. Matlock
Lawrence Zeleny
Dr. Eugene Majerowicz
Lillian Lund Files
Stan Bleszinski
Laura Nielsen
Keith Kridler
Fred A. Huntress, Jr.
Gerald Edward Martin
Dr. Bill Keyes
Thomas J. O'Neil
Elizabeth Crispin
Dr. Robert F. Giddings
Haskell A. Duncan
T.L. Sanderson, M.D.
Mrs. William G. Lehr
Mark Ross
Stephen J. Garr
Lorne Scott
Sarkis Acopian
Clarence "Bud" Boone
Kevin Joseph McCarthy
Miss Georgia Hariton
Peter D. VanDuser
George K. Freeland, Jr.
Gertrude Dunn Davis
Eleanor G. Terzia
Leo F. Terzia, Jr.

Western Bluebird

Elizabeth Crispin
Marjorie S. Samples

Mountain Bluebird

Donna R. Hagerman

Eastern Bluebird

Mrs. Helen Margaret Agee
Leonard Angermeimer
Linda G. Baldauski
Nancy Baron
Bella Vista Bluebird Society
Joseph W. Bencloski
Philip J. Berg
Gary Black, Jr.
Bluebird Festival Association, TX
Karen & Mike Bosc
Bowater
A. Bruno
Lylia Bryant
Mr. & Mrs. Bill Bugert
William L. Carmines
Sue Cascio
G.R. Cook

Mary L. Contakos
Huong Do
Tim O. Donohue
Tryan & Kathy Early
Mr. & Mrs. E.C. Eisenhart
Harriet Findlay, III
Forest Garden Club
Dr. & Mrs. Robert Fry
Robert Fulcher
Patrick Givens
Tommye S. Givens
George N. Grant
Dr. Roberta Gray
Ted W. Hahn Family
George & Carol Harmon
Gerald L. Hartley
Mr. & Mrs. Steve Holliday
Houston Forest Products
Pamela S. Hugill
Pamela Isdell
Mrs. K.W. Jacobs, Jr.
Larry & Betty Jernigan
Pauline R. Kasserman
Laura J. Kirk
The Krusos Foundation, Inc.
Joan Lane
Aletha J. Lindstrom
William Logan
Mrs. F. Leslie Long
Mrs. George Luce
Mrs. James H. Marshall
McDuff Designs, Inc.
Audrey McGinnis
Richard McGovern
Douglas R. & Bonnie R. Merritt
National Federation of Garden Clubs
George P. O'Neil
Lillian D. Pennington
Art Reinhardt
Brenda Rewalt
Rosemary Z. Rittler
Chandler S. Robbins
Marvin & Mary Rubin
Mr. & Mrs. John Schier
Dean E. Sheldon, Jr.
Jocelyn Sladen
Susan L. Sloan
Chris Statton
Dr. Ken Stoffel
Mr. & Mrs. W.L. Sullivan, III
Stephen S. Thompson, Jr.
R. Tonkin
Mary Trewartha
Russ Valentine
Ms. Marcia VanHorn
Shirley VanProvien
Nancy E. Warner, M.D.
Richard Williams
Michael Owen Willson
Wills Point Wilderness Society
Mark E. Winslow

Fledgling

Sandy Albert
Eugene A. Armstrong
Augusta Bird Club
Janet R. Baksh
Carol Hee Barnett
Constance Benson
Dr. & Mrs. Thomas Boschen
Dr. Robert J. Bradley
Coburn Britton
William J. Broussard, M.D.
A. Bruno
Todd & Deb Burrus
Edith Camp
Ann Chiller
Amy A. Cox
Mr. & Mrs. James Davis
Mr. & Mrs. Richard Davis
Dr. Wayne H. Davis
Joanne Dixon
Susan Doyle
William Duryea
Theresa Filipiak
Dee & Odell Friar
Bill Garner
Betty Hamon Family
Don Harwood
Beatrice M. Hayward
Dana L. Heisey
Ms. Sandra Howland
Barbara A. Inzana
Mrs. R.N. Jespersen
Lee Jolly
Cathryn H. Kurtagh
Michele A. Kutner
Dorothy Lamoureux
Robert & Mary Lavell
Susy & Jack Ledgerwood
Louise Lehrman
Mrs. Marty V. Leonard
Doug & Ethel Marie LeVasseur
Carl & Anne Little
Becky Lomax
Dwight E. Lowell
J. Kent McNew
Barbara Mandot
Thomas H. Meyer
Mrs. Marilyn Michalski
Brian Miller
Barbara Moore
Leland M. Moss
Marjorie Mountjoy
Margaret Nemeč
Ohio Bluebird Society
Victor Pastor
Mr. & Mrs. Warren Pratt
Trish Quintenz
Mark & Jean Raabe
Catherine Reno
(Continued on page 40)

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 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: Student (under 21) \$10.00; Senior (over 60) \$10.00; Regular \$15; Family \$25; Sustaining \$30; Supporting \$50; Contributing \$100; Corporate \$100; Donor \$250; Life \$500. Three year rates: Student and Senior \$28.50; Regular \$42.00. Add \$2.00 per year for Canada and Mexico and \$3.00 per year for other countries (surface mail). U.S. funds only, please. In Canada, please use Canadian postal money order in U.S. funds. Do not use checks. Amounts over \$6.00 are tax deductible.

Address:

**North American Bluebird Society
P.O. Box 74
Darlington, WI 53530**

