Production of Eastern Bluebirds in Monitored Houses

Annual Report - 2013

Brice Prairie Conservation Association
By Leif L. Marking, Project Manager

Introduction: Bluebirds are cavity-nesting songbirds that are unable to create their own nesting cavities. Natural cavity availability declined significantly when non-native House Sparrows and European Starlings were introduced to this country over 150 years ago because they were victorious competitors for nest cavities and vicious predators of bluebird eggs and young. However, bluebird populations have been increasing since the birth of the North American Bluebird Society (NABS) in 1978 followed by many state chapters such as the Bluebird Restoration Association of Wisconsin (BRAW). Our Brice Prairie Conservation Association (BPCA) members have recorded our bluebird production activities since 1992 and annually reported the numbers to the above organizations. Technical information and instructions for producing bluebirds are available from websites of NABS (www.nabluebirdsociety.org), BRAW (www.BRAW.org), and BPCA (www.briceprairieconservation.org). The purpose of this report is to summarize the numbers of bluebirds produced by club members this year, recognize increases or decreases over last year, identify problems that influenced production, and evaluate procedures to increase future production.

Procedures: We have selected the NABS-style house to promote bluebird production because the design is practical, they are easy to construct, maintain, and clean, and bluebirds readily occupy them. These cedar houses are mounted on 7-foot steel T-type fence posts that are covered with a 5 ft. section of PVC pipe (1 ½") for mammalian predator control. The houses are usually placed 200 yards or more apart to respect the territorial nature of bluebirds and to encourage maximum production of bluebirds. New houses are built with convertible air vents, and vents are covered on existing houses to reduce mortality of eggs and young during sustained cold spells in early nesting and to prevent black fly mortality during second nesting. Site and habitat selection favors bluebird ecology with large, open, grazed or mowed areas where bluebirds can forage for insects. House Sparrow competition was diminished appreciably by avoiding active farm and livestock feeding operations. Houses were placed at least 200 feet from woods and thickets to minimize House Wren competition. Weekly observations were recorded in notebooks of choice, and those results were transferred to spreadsheets for calculations, evaluations, and presentations. These spreadsheets accumulate numbers of eggs, numbers hatched, and count of bluebirds and other cavity- nesting songbirds fledged. Finally, the numbers are consolidated for each member's totals as well as individual and total production rates for all club members and bluebird associates.

Results and Discussion: We monitored 796 bluebird boxes this year, 66 fewer than last year. These boxes produced 2,884 bluebird fledglings, a decrease of 1,795 (38%) compared to the previous year. Our bluebird production rate decreased this year to 3.6 fledglings

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Consolidated Nest Box Summary 2013

Monitor's Name	Nest Boxes	Bluebirds Fledged	Bluebird Production Rate	Other Species Fledged			Total Other Species	Total Birds Fledged	Overall Production Rate
				TS	CH	WR			
John Adank	19	51	2.68	4			4	55	2.89
Iler Anderson	118	300	2.54	149	31		180	480	4.07
Steve Anderson	2	4	2.00				0	4	2.00
Bill Balmer	13	39	3.00				0	39	3.00
Fred Craig	95	561	5.91	28	14	33	75	636	6.69
Gail Filzen	10	39	3.90				0	39	3.90
Dave Fonger	71	259	3.65	30	6	14	50	309	4.35
Brad Foss	5	4	0.80				0	4	0.80
Jason Ludwigson	13	29	2.23				0	29	2.23
Dick Marco	10	54	5.40	11			11	65	6.50
Amanda Marco	11	32	2.91	10			10	42	3.82
Leif Marking	150	553	3.69	25		7	32	585	3.90
Kent Stephen	33	75	2.27				0	75	2.27
Pete Tabor	1	9	9.00				0	9	9.00
Leif Tolokken	42	206	4.90	4			4	210	5.00
John Wetzel	1	2	2.00	4			4	6	6.00
John Wiggert	22	80	3.64	11		23	34	114	5.18
Associates	180	587	3.26	47	23	9	79	666	3.70
	796	2,884	3.62	323	74	86	483	3,367	4.23

Brice Prairie Conservation Association – Individuals

Species Key: TS - Tree Swallow, CH - Chickadee, WR – Wren

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Consolidated Nest Box Summary 2013

Leif Marking Bluebird Associates

Associate's Name	Nest Boxes	Bluebirds Fledged	Bluebird Production Rate	Other Species Fledged			Total Other Species	Total Birds Fledged	Overall Production Rate
				TS	CH	WR			
Jan and Jim Brady	10	46	4.60	6			6	52	5.20
Louis Benchina	29	88	3.03	6			9	94	3.24
Harry & Ellen Caulum	25	78	3.12	4			4	82	3.28
Verdel Dawson	14	54	3.86		23		23	77	5.50
Lloyd Hoff	11	35	3.18				0	35	3.71
Morgan Jostad	14	42	3.00				0	42	3.00
Tim Knudson	10	20	2.00	10			10	30	3.00
Stephanie Lubinsky	14	55	3.93	5		3	8	63	4.50
John Leary	8	22	2.75				0	22	2.75
Gordon Romskog	22	77	3.50	16		6	22	99	4.50
Jean Ruhser	9	22	2.44				0	22	2.44
Fred Shaldach	14	48	3.43				0	48	3.43
	180	587	3.26	47	23	9	79	666	3.70

Species Key: TS - Tree Swallow, CH - Chickadee, WR - Wren

per box, primarily due to the late spring season that delayed nesting activity and discouraged third nesting later in the year. Cold temperatures in early spring interfered with first nesting that resulted in poor hatch rates and nestling mortality. This delay offered competitive House Sparrows, Tree Swallows, and wrens opportunities to dominate boxes normally used by bluebirds. Some nestling mortality was due to black fly gnat infestations. A dilute solution of Permethrin spray was used with good success to combat the black flies.

We also produced 323 Tree Swallows, 86 House Wrens, and 74 Black Capped Chickadees. These cavity nesting species readily occupy the bluebird boxes, especially if they are located on the edge of bluebird habitat. We have found that Tree Swallows may dominate boxes placed near adjoining wetlands, so we get some relief for the bluebirds by avoiding those areas. The bluebirds prefer diversified agriculture, mowed, or grazed areas, and if the boxes are properly located and spaced the bluebirds will occupy them before the swallows (serious competitors) are capable of nesting in early spring.

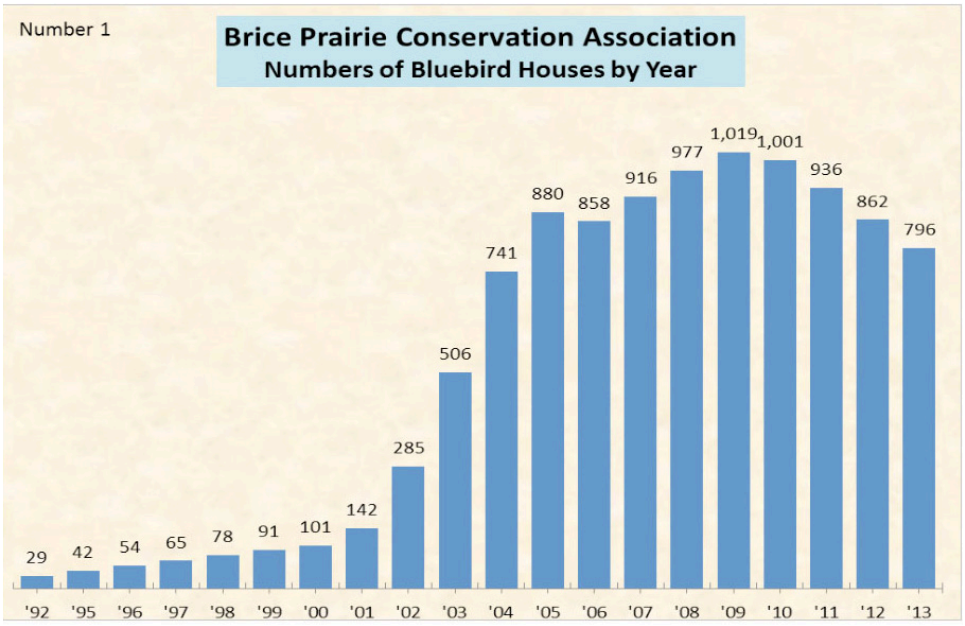
My 12 bluebird associates produced 587 bluebird fledglings, 47 Tree Swallows, and 23 chickadees as identified in the second table. These folks are not members of BPCA, but they like bluebirds and our technology for producing them, and they are willing to monitor and contribute to our efforts. Of course they realize their efforts also benefit the bluebird population so we are thankful. This associate concept encourages more people to get involved in serious monitoring and keeping good records. Only one associate had a bluebird production rate greater than 4.5.

We attribute our success for producing bluebirds to providing a box with a cavity size and shape that appeals to them, selection of ideal habitat for box location, spacing the boxes at least 200 yards, providing predator prevention for every box, moving boxes that fail to attract bluebirds after one year, and monitoring weekly to ensure the cavities are available to bluebirds that are searching for a home. House Sparrows interfered with bluebird nesting in limited locations, but wrens again were important predators and

Bluebird Production in Houses of Different Types

By Members of Brice Prairie Conservation Association

Year	Number		Production Rate	Predominant House Type
	Houses	Fledged		
1992	29	62	2.1	Hill Lake
1995	42	80	1.9	Hill Lake
1996	54	109	2.0	Tree Branch
1997	65	145	2.2	Tree Branch
1998	78	212	2.7	Tree Branch
1999	91	265	2.9	Herman Olson
2000	101	324	3.2	Herman Olson
2001	142	544	3.8	NABS
2002	285	1,138	4.0	NABS
2003	506	2,001	4.0	NABS
2004	741	3,066	4.1	NABS
2005	880	4,233	4.8	NABS
2006	858	4,756	5.5	NABS
2007	916	5,399	5.9	NABS
2008	977	4,228	4.3	NABS
2009	1,019	5,252	5.2	NABS
2010	1,001	4,915	4.9	NABS
2011	936	3,294	3.5	NABS
2012	862	4,679	5.4	NABS
2013	796	2,884	3.6	NABS
	Total	47,586		



competitors on some bluebird trails. Our technology for bluebird production is effective, and we feel satisfied and rewarded with the bluebird responses to our efforts and look forward to their return next spring.