



## Patuxent Wildlife Research Center

Breeding Bird Survey  
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### Memorandum to Cooperators

### SUMMER 2004

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#### NEW TO THE BBS?

Actually this is information that every BBS participant should know, whether you joined this year or are a 30-year veteran! But this section is especially geared to BBS fledglings. First let me thank you for joining the flock of thousands who make the BBS a success! Through your efforts the U.S. Fish and Wildlife Service, the North American Bird Conservation Initiative, Partners in Flight, state conservation agencies, and many others have reliable bird population information on which to base sound conservation and management decisions. Secondly, we want your BBS experience to be as enjoyable and meaningful as possible. To help achieve these goals we have many resources available to you via the BBS web site. For example, you can download previous years' species lists for your route, see where neighboring routes are located in the state, map the location of species found in the region using the NBII mapping application, and view population trend maps. Or we can loan you a bird song CD-ROM to help you brush up on you identification skills during the winter months. Just contact me ([keith\\_pardieck@usgs.gov](mailto:keith_pardieck@usgs.gov)) to request a CD. And remember, if you ever have questions or problems regarding the BBS, feel free to contact your state or national coordinator.

Then there are things you can do to make the experience more enjoyable and meaningful: 1) complete the BBS Methodology Training course (It is required of all new participants or we can't use your data.), 2) read and understand the instructions, 3) scout your route for potential problems prior to conducting the survey, 4) submit your data electronically for faster feedback, 5) return your completed forms and maps to us in a timely manner, and most importantly 6) HAVE FUN (take pictures, share the adventure with a friend, introduce the next generation to the BBS — take a niece, nephew, son, daughter or student, incorporate it into a camping trip, you get the idea. . .)! Thank you again for participating and we look forward to hearing about your adventures with the BBS.

#### ROUTE MAPS

**Please return your route maps each year!** Over 400 maps were not returned after the 2003 BBS season, causing weeks of wasted effort copying new maps and re-highlighting route paths in preparation for the 2004 season. Many think they are doing us a favor by keeping their maps since they intend to run the route again. But plans change and the route may need to be assigned to another observer, who will need the map that you kept. Moreover, we often do not know and do not have the resources to track whether someone kept the map intentionally or if it was lost. In order to prepare for the next BBS season and update our permanent map records we need you to return the maps with your data in a timely manner each year! Thank you for your cooperation.

### **BBS ERROR RATES**

In 1997, the BBS program adopted new methods (see below) for entering and managing data. After a rough first year, it quickly became apparent that the new system was an improvement in terms of data throughput and accessibility since it has allowed us to process ten times more data in the same time frame with fewer resources, and make BBS data readily available on the Internet. But the question remained -- does the new data management system compromise the integrity of the data by allowing more errors to slip into the final product than the old system?

**Methods** -- To help answer this question we randomly selected 50 routes from both 1972 and 1992 and compared the original data sheets against the database for errors. We also randomly selected 50 routes that were entered via the web and 50 routes that were entered via scanning from each of the following years: 2000, 2001, 2002, and 2003, and had the participant compare the original data sheets to the database records. Errors detected during the comparisons were tallied by route within each year, routes were grouped into one of three categories, those with: 0, 1, 2, or >2 errors, and then data were statistically compared among years and methods using Chi-square tests.

Before presenting the results it would probably be useful to outline the old and new data management systems that we are comparing. As many of you may remember, for the first 30 years of the BBS we used five field sheets and one summary sheet to collect and report data. The bird count data from the 50 stops were collected on the five data sheets. Page sub-totals were then hand-calculated by the participant for each species. These sub-totals were then transcribed to a summary sheet where grand totals and stop count totals for each species were calculated and recorded by the participant. The summary sheet was then double-keypunched into the computer system at the BBS office. Once entered the data were subjected to various editing routines to identify errors. The errors were corrected, the data were released to the participant for verification, and then the data were released to the public.

The new data management methods include the BBS office scanning data from customized data sheets, the participant entering the data over the web. Both of these data entry methods allow collection of individual stop data instead of just page totals. Once entered the data are subjected to various editing routines to identify errors. The errors are corrected, the data are released to the participant for verification, and then the data are released to the public. In 2003, approximately 40% of the data were entered via the web and the remaining 60% were scanned at the BBS office.

**Results** — On average two or fewer errors per processed BBS route were detected regardless of the year or data processing method examined (Table 1), indicating a high accuracy rate for all data

management methods. In fact, all data entry methods had error rates < 0.52%. No significant differences in numbers of errors were found between the summary method and the scanned data, indicating that scanning has not biased the data towards more errors. In fact, web-entered data were found to be significantly more accurate than summary-entered data. No statistically significant differences in numbers of errors were found between the web-entered and scanned data.

<b>Table 1. Error Comparison Results</b>				<b>Chi-Square Table Values</b>			
<b>Year</b>	<b>Method</b>	<b>N</b>	<b>Ave. # Errors / Rte</b>	<b>Rtes with 0 Errors</b>	<b>Rtes with 1 Error</b>	<b>Rtes with 2 Errors</b>	<b>Rtes with &gt;2 Errors</b>
1972	Summary	50	1.92	20	6	9	15
1992	Summary	50	1.72	16	12	10	12
2000	Web	50	1.58	31	8	2	9
2001	Web	50	1.56	27	9	4	10
2002	Web	50	1.00	35	6	4	5
2003	Web	50	1.36	26	13	5	6
2000	Scan	50	1.56	24	10	5	11
2001	Scan	50	1.18	21	17	6	6
2002	Scan	50	2.00	21	11	7	11
2003	Scan	50	1.16	26	10	7	7

These results suggest that we have not biased BBS data towards more errors in recent years with the adoption of new data management methods. In fact, the opposite appears more likely for web-entered data.

Further examination of the 1972 and 1992 data revealed that the majority of errors found were due to incorrect addition. For example, 77% of the 1972 errors were the result of incorrect addition of sub-totals and grand totals, as were 52% of 1992 errors. The remaining errors were primarily due to incorrect transcription of numeric values from field sheets to summary sheets. Both of these processes were eliminated with the adoption of scan and web entry systems. Then where are today's errors coming from? They are primarily the result of mis-readings by the scanner or mis-entries by the participant. So even though BBS error rates are low, it is still very important that all participants check their verification reports for errors each year after their data have been processed by the BBS office.

## **STATE COORDINATORS**

After co-coordinating the BBS in Virginia for the past two years, Rick Reynolds and Jeff Cooper, have turned their BBS responsibilities over to Michael Wilson. In Rhode Island, Scott Comings has graciously filled the coordinator vacancy left by the retirement of Rick Enser from the position several years ago. Ours thanks to Rick, Jeff, and Rick for their support of the program during their years of coordination. Also please join me in welcoming Michael Wilson and Scott Comings to the BBS coordination staff!

On a similar note Richard Peterson, the South Dakota BBS coordinator, has announced his intention to retire from the position in the near future. If interested in helping out the South Dakota BBS in this capacity please contact Richard (605-842-2017) or Keith Pardieck (keith\_pardieck@usgs.gov). Thank you.

**Rhode Island**

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Current state coordinator contact information is always available on the BBS web page via the “Contact Us” link.

**2003 ROUTE COVERAGE**

Our thanks to everyone who participated in the 2003 BBS season! A total of 2835 routes have been returned so far. That’s only 38 fewer routes than in 2002 (Table 2, page 5). In the U.S. we broke even, while in Canada 8.8% fewer routes were returned by the time of this writing. Seven states showed promising increases in coverage by 7 or more routes. They were California, Colorado, Minnesota, Ohio, Oklahoma, Texas, and Utah. Our special thanks to the coordinators and participants of those states!

Five states still lag behind in participation. More than 50% of available routes are not being sampled in Louisiana, Michigan, Mississippi, New York, and Rhode Island! We need to get more birders out of their “nests” and on BBS routes this year. If you hail from any of these states, please help your coordinator by enlisting some of your qualified birder friends into the ranks of the BBS. Other states that are in need of new recruits include: Arizona, California, Connecticut, Nevada, and Wyoming. If you know of someone capable of conducting a BBS route, please have them contact your state coordinator.

To get a better idea of your state’s route coverage compare the “Available Routes” column to the “2003” column in Table 1. If the difference between the two numbers is large, we need more participants in the state. If this appears to be the case in your state, please help by enlisting some friends or picking up another route. Contact your state coordinator via the BBS web page to see how you can help. Thank you.

**Table 2. 2002-2003 Coverage Summary**

State/ Prov.	# of Routes				State/ Prov.	# of Routes			
	Available Routes	2003	2002	Geo-ref. Routes*		Available Routes	2003	2002	Geo-ref. Routes*
AL	91	71	75	0	NB	31	17	22	7
AK	102	61	72	9	NF/LB	29	14	9	7
AB	181	81	80	6	NH	23	20	20	0
AZ	67	43	35	2	NJ	28	18	18	1
AR	33	30	30	5	NM	64	58	57	2
BC	135	70	79	11	NY	112	51	56	6
CA	230	143	129	7	NC	95	72	74	5
CO	135	113	106	5	ND	44	33	32	0
CT	16	8	8	0	NS	29	9	21	5
DE	10	9	8	0	OH	68	56	49	3
FL	91	78	84	5	OK	64	50	39	6
GA	60	33	48	2	ON	193	69	75	11
ID	58	47	42	8	OR	122	68	79	6
IL	101	87	85	83	PA	109	89	98	2
IN	61	46	51	8	PR	44	27	27	24
IA	33	27	20	1	PEI	4	3	3	0
KS	61	57	52	2	PQ	162	47	45	1
KY	47	28	30	1	RI	5	1	1	0
LA	68	33	36	0	SK	87	27	30	0
NWT	11	4	6	6	SC	34	22	29	2
ME	70	29	34	0	SD	62	40	42	1
MB	67	42	48	2	TN	47	34	41	1
MD	59	48	51	5	TX	193	140	128	6
MA	24	16	16	0	UT	100	92	81	6
MI	83	37	39	2	VT	23	11	13	1
MN	86	61	43	0	VA	70	44	54	2
MS	37	17	16	0	WA	93	67	66	4
MO	53	43	41	10	WV	57	48	41	7
MT	65	48	51	2	WI	92	76	79	0
NE	46	41	36	0	WY	108	57	59	2
NV	42	16	23	1	YT	34	8	11	0
<b>Can</b>	<b>962</b>	<b>391</b>	<b>429</b>	<b>56</b>					
<b>U.S.</b>	<b>3487</b>	<b>2444</b>	<b>2444</b>	<b>245</b>					
<b>Total</b>	<b>4449</b>	<b>2835</b>	<b>2873</b>	<b>301</b>					

\* Number of routes with geo-referenced stop locations.

## **BBS AWARDS**

With the completion of the 2003 BBS season 101 participants have earned the following BBS awards; the recipients names are listed below each award category in alphabetical order by last name. Congratulations to all and thank you again for your commitment to the BBS!

### **10-years (BBS lapel pin) — 66 recipients:**

Larry Allen, Benjamin Archer, Dennis Austin, Jerry Baker, Lorie Black, Duane Bright, Damian Fagan, Scott Fisher, Billy Funk, Robert Gard, Kathy Granillo, Christopher Harwood, Herbert Hendrickson, Melinda Hetrick, Diane Holsinger, David Jickling, Buddy Johnson, Steve Kelling, Steve Kistler, Richard Kleinleder, Denise Laberteaux, Gloria Lamer, Richard Lancia, Ellen Lawler, Clinton Ledford, Thomas Leskiw, John Lisek, John Lundsten, Jeff Mangum, Ron Mcdow, Terry Mcneely, James Miller, Nora Murdock, David Muth, Richard Myers, Cecily Nabors, Karen Osborne, Kathleen Paulin, Janet Peterson, Timothy Price, James Renfro, Rochelle Renken, Linda Riner, John Ritzenthaler, Tommie Rogers, Mike Rogers, James Rogers, Amy Russell, Rex Sallabanks, Clifford Shackelford, V. Smith, Laura Sommers, Dennis Southerland, John Sproul, Dale Stahlecker, June Summers, Gray Tappan, Cris Tomlinson, John Toolen, Nancy Vicars, Linda Vidal, Bruce Walgren, Donna Walgren, Nada Wareham, John Whittle, and Ronda Woodward.

### **20-years (BBS key chain) — 19 recipients:**

Jeffrey Baughman, Fred Blackburn, James Coleman, Jr., Nancy Corwin, Barbara Dowell, Paul Fellers, Anne Galli, Peter Gent, Sylvia Hein, Lawrence Herbert, Kathryn Hicks, Randy Hoffman, Paul Mckenzie, Jerry Mcwilliams, Daniel Sullivan, Mark Van Hoose, David Vogt, David Watts, and Linda Zempel.

### **30-years (BBS cap) — 12 recipients:**

Robert Bradley, William Carter, David Galinat, Edward Hopkins, Jarvis Hudson, Daniel Jacobson, David Junkin, Virginia Kingsolver, Charles Nicholson, Benjamin Parmeter, Donald Varner, and Jesse Ward.

### **50 Routes cumulative (*Birds of North America field guide*) — 4 recipients:**

Paul Fellers, Thomas Fox, David Galinat, and Robert Quinn.

## **PIGEONS ROCK!**

It is finally official. Pigeons rock! The Forty-fourth supplement to the AOU Check-list of North American Birds was released in the July 2003 issue of *The Auk* (Vol. 120, pp. 923-931), which means you can expect to see a few changes to the species listed on your data sheets. Perhaps the most notable change to this year's BBS forms will be the absence of Rock Dove; it is now listed as Rock Pigeon. The Check-list Committee also moved ducks and grouse from their present positions in the check-list sequence to a position in front of loons. However, the BBS will not adopt the sequence modification at this time since the committee predicts more sequence modifications in the near future. We will await the pending changes instead of incorporating piecemeal modifications each year. Hopefully one major change will cause less confusion than numerous smaller changes to the species list over the next several years.

**BBS WEB PAGE** ([www.mp2-pwrc.usgs.gov/bbs/](http://www.mp2-pwrc.usgs.gov/bbs/))

During the winter of '01 - '02 we conducted a customer satisfaction survey of users of the BBS web site. The sampling frame consisted of 278 raw data users, 1348 BBS participants, and 51 state coordinators. From these three pools, 50 raw data users, 40 participants and 10 coordinators were randomly chosen to take part in the survey. As you can see from the Table 3, most users were quite satisfied with the overall utility and presentation of the site. Nevertheless there is always room for improvement. Some improvements suggested by respondents were: making individual stop location data available, providing digital maps of the routes, and providing route habitat data. As many of you already know, we began collecting individual stop data in 2002 and

**Table 3. Reported Satisfaction With BBS Web Site**



hopefully with your help will soon have enough of this type of data to be useful at the large scale.

The most frequently used features of the web site were distribution maps (71%), raw data (60%), and trend estimates (60%). The complete survey results can be viewed at the BBS web site by clicking the “BBS News” link.

**Photo Gallery** — We thank Cyndie Browning and Phil Floyd for photos from their Oklahoma route, David Elwonger for a photo of his Colorado route, Mike Fialkovich for photos of his Pennsylvania route, Lawrence Filter for a photo of his Minnesota route, and Judy Jordan and Dean Mitchell for photos of their respective Utah BBS routes. To see their photos and many others, visit the Photo Gallery on the BBS web site by clicking the “BBS News” link.

**BETTER LATE THAN NEVER**

Do you have BBS data from previous years that were never sent in? Remember, it is never too late. Whether it is 1 or 25 years old, we can still use it. While we don't wish to promote late data submission, don't throw it out just because it's a year or two old. Send it to us!

**STORIES FROM THE FIELD**

Tina and Talfourd Kemper had a most unusual experience while sampling the Douthat, Virginia BBS route this year. Leaving stop one in the dark of early dawn, worsened by the deep forest surrounding them, Tina spied a huge light ahead. Not having had quite enough coffee yet, she wondered what the sun was doing sitting in the road. As they approached it became apparent that the light was a huge fire ball and in the midst of the flames was the frame of a car. They checked for survivors, as close as they dared, and called 911. Emergency personnel soon arrived and let Tina and Talfourd continue on their way. But their thrills were not over yet. At stop 38, a minute or two of the count had passed when a black bear ambled across the road a few feet from their car! They finished this count from inside the car. Oh, regarding the bonfire, they later found out that thankfully no one was injured or killed by the burning vehicle.

We've had many stories about folks who have not been too happy to have strangers pulling up in front of their property at daybreak with a pair of binoculars -- like we should expect them to believe we are only counting birds! And of course we have had many a helpful passerby check upon our safety and perhaps sanity, as we stand forlorn at 7:00 am along deserted roadsides staring into the brush -- like we should expect them to believe we are only counting birds! Here is a story of a similar, but more determined, ilk. On the Cheyenne, Wyoming BBS route Pat Diebert, Tyler Abbott, and Kathleen Erwin passed a road grader going in the opposite direction and then pulled their car over to conduct a count. The road grader stopped and then began backing up towards them. Thinking they had parked in his work area, Pat pulled ahead a bit further to get out of the way. But the grader continued to "chase" them in reverse for about a 0.5 mile at speeds of almost 10 m.p.h. They finally stopped and spoke to the grader operator who thought Pat had a flat tire and was just checking to see if they needed assistance!

Then there are the curious non-human observers such as the pronghorn antelope buck that accompanied Bart Stelman for three stop along the Clay Springs, Arizona BBS route. Bart writes that the buck kept his distance but was definitely watching his every move, even running parallel to the car as Bart traveled between stops.

Other non-avian wildlife sightings include a panther in Alabama by Claire and Ken Krusko, two brown bears and a red fox in Alaska by Kristine Sowl, black bears in Colorado, North Carolina, and Wisconsin by Mark Yeager, David Hughes and Ralph Keel, and Amber Roth, respectively.

## **ACKNOWLEDGMENTS**

Besides the thousands of you in the field, I would also like to thank Marc Hathaway, Eileen Hederman, and Alan Hedin for their outstanding help at the BBS office during the 2003 season.

*Good luck & good birding in 2004!*

*Keith Pardieck*

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