

NJBBS 2013 Trail Results

NJBBS Overall

Collectively we are a very varied group and our individual nest box trails reflect that well. From golf courses, to farms, to water retention basins, to school yards, to local parks, to state parks, to a national wildlife refuge, to people's yards, to forest areas, to roadside fields we place our nest boxes and monitor them through the nesting season beginning in March and running through August. Our geography and methods vary somewhat but our goal is the same: To increase the Bluebird population. A side effect which might not be readily apparent is other cavity nesting birds also use the nest boxes such as Chickadee, Titmouse, Tree Swallow and House Wren which is fine since they are all protected species. Our collective results in 2013 again exceed 2,000 with 2,058 Bluebird young fledged. Individual trail reports are listed below however many more not named assist in this effort.

Individual Results

Shelly Cucugliello

Not the best this year, but will be tweaking my trail a little before next season.

Eastern Bluebird: 19, Tree Swallow: 12, Carolina Chickadee: 15

Nels Anderson - Franklin Parker Nest Box Trail 2013

Overall it was a good year for Bluebirds and more fledged with the same sixty boxes in place. Box relocation favoring Bluebirds seems to be working, The first Bluebird eggs were observed April 14 and the first to fledge did so by May 16. The last to fledge did so the week of August 15. An unusual occupant, Great Crested Flycatcher, took over a box with an enlarged entrance hole made so by a squirrel or a woodpecker and successfully raised a brood of four young. Predation was not a big factor although some nests were abandoned with eggs intact and no signs of wasps, hornets or foul play. The resident Bluebird population seems to be stable and doing well. The 102 Bluebirds fledged this year is the highest number to date at FPP.

Totals: Bluebird young fledged 102

Tree Swallow fledged - 82, Carolina Chickadee fledged - 29, Great Crested Flycatcher - 4

Frank V. Budney - 2013 Nestbox Report, Lenape Park, Cranford New Jersey, 9/1/2013

Friends of Lenape Park & New Jersey Bluebird Society

Fluctuating weather conditions during the season ranged from cool temperatures during March, wet and rainy in June and very high (95+°) temperatures through the middle of July. The weather conditions did produce one favorable result in the form of flying insects. The Tree Swallows were the benefactors of this bumper crop of bugs.

A total of twenty (20) nestboxes were monitored with four (4) of the boxes unused. Ninety-nine (99) eggs were laid of which sixty-three (63) eggs hatched, Twenty-nine (29) failed to hatch, Forty-four (44) fledged and Twenty-two (22) died. In addition, an adult female Eastern Bluebird was found dead on the nest with its young. Of the total eggs laid ten (10) was Eastern Bluebird of which seven survived and fledged. Tree Swallows accounted for the remainder with thirty-seven (37) fledglings.

English House Sparrow activity had a minimal impact on the nesting season since they began egg laying later than usual and after the Tree Swallow and Eastern Bluebird nesting was well under way. Unconfirmed loss of nestlings may have resulted in one or two Tree Swallow losses due to House Sparrow activity.

One unusual occurrence was observed in Box # 22 (Tree Swallow) from 6-May-13 to 9-July-13. The first eggs were laid on the former date and fledged on the later date. In between a total of nine (9) eggs were laid from 6-May-13 to 12-June-13 and hatched on or about 18-June-13. Five (5) of the nine (9) eggs went un-hatched, four (4) young survived but only three (3) fledged. The number of eggs (9) and the time span until hatching is atypical of normal breeding habits for Tree Swallow. This could be a cast of “Egg Dumping” by more than one female but this is not substantiated by observation.

Nesting Species	Nestlings	Fledglings
Eastern Bluebird	10	7
Tree Swallow	46	37
English House Sparrow	7	0

English House Sparrows

Only two (2) House Sparrow nest occurred in boxes # 3 and # 11. First eggs appeared on 18-June-13, two (2) in the former and five (5) in the latter. Nest and eggs were removed from Box # 3 on 19-June-13. Box # 11 hatched four (4) young with one (1) un-hatched egg on 2-July-13. Contents were removed at that time. No additional nesting attempts were made before or after the respective dates by English House sparrows. Competition among sparrows, tree swallows, and bluebirds appeared minimal this year.

Nesting Patterns

Starting dates for all three (3) species (Eastern Bluebird, Tree Swallow & English House Sparrow) were consistent with previous years within a day or two (Bluebird: 10-May-12; Tree Swallow: 7-May-12) except for the House Sparrow. In 2012, English House Sparrow nesting activity began as early as 14-April-12 compared to 2013, when the first eggs appeared 15-June-13. The difference might have been caused by the unusual weather conditions or the fact that the nestboxes were occupied by Tree Swallow and Eastern Bluebird pairs before the sparrows were ready to nest. The sparrows nested in boxes other than those used by the swallows and bluebird.

	<u>First Egg</u>	<u>Hatch</u>	<u>Fledge By Species</u>
Eastern Bluebird	9-May-13	29-May-13	10-June-13
	29-June-13	9-July-13	29-July-13
Tree Swallow	6-May-13	29-May-13	10-June-13
House Sparrow	15-June-13	2-July-13	Failed

Mortality by Species

Tree swallows suffered the highest numbers of un-hatched eggs and death prior to fledging. The overwhelming majority of the nestlings were Tree swallows followed by Eastern Bluebird and English House Sparrow. House sparrows were removed prior to hatching/fledging as non-native species. Nest mortality was most likely a combination of nestbox overcrowding, predation (unknown source) or over heating during periods of unusually high temperatures.

	Eggs Laid	Un-hatched	Live Young	Mortality
Eastern Bluebird	10	0	10	3
Tree Swallow	82	28	50	13
House Sparrow	7	1	6	6

A comparison of success rates between 2012 and 2013 appear on the following chart.

Success Rates Comparison between 2012 & 2013 for Tree Swallow & Eastern Bluebird

	<u>2012</u>		<u>2013</u>	
	TS	BB	TS	BB
Eggs Laid	88	5	82	10
Un-Hatcher	22	0	28	0
Live	68	5	50	10
Died	14	0	13	3
Fledged	54	5	37	7

In the comparison between 2012/2013, the Tree Swallow population laid slightly more eggs more eggs ((88/82), had fewer un-hatched (22/28), similar mortality (14/13) but fledged close to double (54/37) the number of nestlings. Eggs per nestbox ranged between four (4) and (7) eggs with the exception of one box (Box # 22) which had nine (9) eggs, five (5) which were un-hatched producing four (4) nestlings and fledged three (3) young.

The Eastern Bluebird nest produced only one (1) clutch in 2012 of five (5) eggs and five (5) fledglings. In 2013, there were two (2) clutches of bluebirds, both with five (5) eggs in each clutch. The first clutch fledged five (5) young while the second clutch, which also produced five (5) eggs, only two (2) nestlings, fledged. In addition, the female Eastern Bluebird was found dead in the box (Box # 10) a few days before the nestlings fledged. The cause of death could not be established but the male of the pair most likely continued to feed the remaining two nestlings.

Success rates are based on many variables not the least of which are weather, nestbox overcrowding, and predation by other birds, reptiles or mammals, and abandonment. Closely monitoring these variables will lead to a better understanding of how to improve success rates.

Conclusions, Recommendations, & After Thoughts

The 2013 nesting season had a few surprises (9 Tree Swallow eggs in one box), two Eastern Bluebird clutches and some variable weather conditions. The number of Tree Swallow fledglings was down compared with 2012 (54/37) but the mortality rate remained constant (14/13) for the two years.

Some remedial steps that should be taken include reducing the number and location of some of the boxes and installing additional predator guards. Several nestboxes are in need of repair or replacement to better control the loss of eggs and nestlings caused by rain water getting into the boxes.

Both fields are in need of mowing to reduce some of the invasive vegetation growth of woody plants.

Bluebirds are more likely to nest if the surrounding vegetation is kept lower to the ground. Mowing is best done in January or February and maybe a late spring mowing of selected areas may also improve nesting habitat for bluebirds. Unfortunately, the existing habitat is mostly wetland (great for Tree Swallow nesting) and only marginal for bluebirds.

The concluding lines of Robert Frosts' poem, "*The Last Word of a Bluebird*", go like this:

"And do everything! And perhaps in the spring He would come back and sing."

Respectfully submitted by,

Frank V. Budney

Friends of Lenape Park Bluebird Monitor & President, New Jersey Bluebird Society

Allen Jackson, 2013 Summary of Activities, Southern New Jersey

For 2013 we banded 2509 purple martins and 1188 bluebirds (over 1300 bluebirds were fledged if you include bluebirds not banded). The cool wet weather in the spring had an effect on most all bird species, especially bluebirds as their nesting season was shortened because of the bad weather. Less eggs were laid, less eggs

hatched, and less young fledged. We also had more nest competition from wrens and tree swallows because of the bad weather. Weather delays the start of bluebird nesting, allowing nest competitors to outcompete the bluebirds for the nest box. However, another 100 boxes were added to southern NJ which allowed us to fledge more young bluebirds than last year. 16 boxes were also added at sites in Virginia and Maryland which had good results.

Four new purple martin colonies were started in Galloway, Belleplain, and 2 in Millville. Over 500 bluebird boxes are located throughout southern NJ, most with nest monitors. I was able to start 16 new BB trails which all had monitors in addition to the dozen or so new trails that were started in 2012.

I am always humbled with the support and response I get from organizations (Citizens United to Protect the Maurice River and its Tributaries, Atlantic Audubon Society, NJ Div of Fish and Wildlife, New Moon Nursery) and all the volunteers who step forward to monitor bluebird trails. Everyone's enthusiasm only adds to the success of the bluebird and martin projects.

Highlites:

- 5 boxes had white eggs
- 1 box has had 7 clutches of white eggs since 2011
- 4 boxes had 3 clutches - less than last year
- continued partnership with Middle Township Middle School assistance with funding
- ~30 Citizens United members involved with Bluebirds
- closer to defining optimal bluebird habitat
- cages did not work to repel tree swallows
- Wheaton Arts and Cultural Center environmental project progressed
- funding support for projects

2014:

- ~ 40 BB boxes setup already
- research on deflectors for tree swallows and house wrens
- numerous new trails and improvements on existing trail

Mike Connelly 2013 Somerset County

26 bluebirds in 11 boxes, in 3 locations, and 15 tree swallows

Nels Anderson: Pinelands Bluebird Trail Report 2013

Again it was a good year for Bluebirds in the pines. Spring was wet and cool with almost 20" of rain measured here in June but that didn't slow things down. The first Bluebird egg was observed April 2 and the first to fledge did so the week of May 5. Over the past five years numbers have been steady with 1,039 fledged and much of that is due to the consistency yard placed boxes offer. Since yards are usually manicured they provide a more stable nesting area, year to year. Thanks to all of you who provide room and support this effort. In The Wharton Forest a clear cut is great for a few years but as things grow and become unsuitable for Bluebirds they will move elsewhere. On the other hand Chickadees don't mind the growth and will take over those boxes. The sharp increase in the number of Chickadees this year indicates something is going on. Moving things around to favor Bluebirds is an ongoing process.

Predation wasn't a big factor this year. A few nests were abandoned though with no signs of foul play and that could be for a number of reasons but still a disappointment. On the other hand opening a box and seeing an empty flattened nest with a few poops but no feathers or bodies is as good as it usually gets indicating the brood has successfully fledged. Some birds such as chickadees and titmice roost in cavities during bad weather

and they will use nest boxes as well. A tell tale sign of this is an accumulation of droppings in the bottom of the box. Sarah at Unexpected Wildlife reported several Bluebirds entering a box at dusk and emerging in the morning so check once in a while for evidence of guests. Mice, flying squirrels, bats, frogs, toads, wasps, hornets, ants, snakes and of course birds have all been found in nest boxes.

Year>	2002	03	04	05	06	07	08	09	10	11	12	13
Bluebird nests	60	36	35	28	51	49	64	68	69	63	69	66
Bluebird fledged	150	91	95	66	152	159	206	195	219	207	212	206
Chickadee fledged	38	62	104	95	72	47	53	75	44	59	28	79
Tree Swallow fledged	29	27	28	36	45	29	35	20	33	41	39	20

11-7-2013 N. Anderson: Ninety boxes monitored 20 times = 1,800 data points.

John Layton: 2013 Nest Box Results

1. Retention Basin & Personal Trails 50 Boxes

<u>Bluebirds</u>	<u>Tree Swallows</u>	<u>House wrens</u>	<u>Titmice</u>	<u>Chickadees</u>
Chicks Banded & Fledged 154	9 Fledged	15 Fledged	11 Fledged	12 Fledged
Eggs not fertile 38				
Eggs lost to predators 4				
Chicks lost 6				
Total of Eggs & Chicks 240				

2. E.B.Forsythe N.W.R. {Oceanville}

Bluebird	Nests 5	Eggs 12	Chicks 0	Fledged 0
Tree Swallows	27 Nests	123 Chicks	Fledged	
House wrens	6 Nests	25 Chicks	Fledged	
Chickadees	2 Nests	11 Chicks	Fledged	

3. Fred & Annette Scherer Germania section of Galloway Twp

233 Bluebirds Banded & fledged, monitored and banded 25 chicks while they were on vacation in June

4. Jesse & Jack Connor Stockton College

Fledged: 34 Bluebird chicks, 29 Tree Swallows chicks, 4 House wren chicks, 2 Chickadee chicks

5. Gaylord Inman Galloway Park { 4 boxes) 3 Bluebird chicks fledged

John Layton: Totals for 2013 Season

Eastern Bluebirds 424

Tree Swallows 161

House wrens 44

Tufted titmice 11

Chickadee 25

NOTE

Tree swallows have completely over taken E.B.Forsythe N.W.R. Building nests on top of 2 bluebird nests with 5 eggs in one and 4 in another. This is the first time in 14 years of monitoring this refuge that I had 0 bluebirds hatch or fledge