



# ADOPT A BIRD BOX

- 2023 -



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# LETTER FROM FRANKE

ADOPT-A-BIRD BOX  
COORDINATOR

**Thanks to help from Dr. Jim Chace and his students at Salve Regina University, particularly Brie von Beren and Cailin Martin, we were able to collect three times more data compared to 2022.**

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With 317 boxes distributed throughout the North, Alpha, and Beta fields, data collection started in April and ended in July. Data was collected weekly at each field. Due to the amount of data collected, we are able to more clearly visualize the day-to-day activity in each box, tracking nest building, egg laying, and fledgling processes.



In line with 2022, this season's data presents a statistically significant difference in the number of Tree Swallows versus House Sparrows. By tracking change over time, we can confidently note the success of individual nesting attempts. While Tree Swallow nests were more likely to fail, they supported nearly twice as many successful juveniles as the House Sparrows. Tree Swallows also show high rates of philopatry, meaning the same birds are returning to our fields year after year.

# LETTER FROM CAILIN

CONSERVATION  
RESEARCH INTERN

## **Every bird box tells a unique story about conservation and the miracle of life.**

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On my first day of work as a conservation scientist for NBS, I experienced research in a new and exciting way. Franke taught me to open the bird boxes and to quickly identify nests, eggs, species, and life stages. Although we spent less than a minute at a nest, so to minimally disturb the birds, each box was memorable. I will never forget my first time touching House Sparrow fledglings to count the young or seeing newly hatched Tree Swallows sleeping in a feathered nest.



Thank you to NBS staff and donors for supporting this large-scale conservation project that benefits native and migratory species like the House Wrens and our beloved Tree Swallows. It truly takes a village and I am incredibly grateful that I had the opportunity to celebrate the stories of all 317 boxes. This research would not be possible without your support. Cheers to another successful nesting season at NBS and here's to more!





67

ADOPTED  
BOXES



## ASTER TIER

**\$25 PER BOX**

**28 ADOPTED**

**\$700 RAISED**



## GOLDENROD TIER

**\$50 PER BOX**

**25 ADOPTED**

**\$1,250 RAISED**



## MILKWEED TIER

**\$150 PER BOX**

**14 SOLD**

**\$2,100 RAISED**



# WHY WE MONITOR BIRD BOXES

**TO PROTECT THE EGGS AND YOUNG  
OF NATIVE BIRDS, SUCH AS  
TREE SWALLOWS AND HOUSE WRENS,  
FROM LARGER PREDATORS**



**HABITAT FOR THESE  
CAVITY-NESTING BIRDS IS  
QUICKLY DECLINING AS HUMANS  
REMOVE TREES AND CLEAR LAND**

**NEST BOXES HELP SPECIES  
SUCH AS HOUSE WRENS  
WHOSE EGGS ARE SENSITIVE  
TO TEMPERATURES  
OVER 106°F  
AND BELOW 65°F**



# BIRD BOX SHORTHAND



**HOSP: HOUSE SPARROW**



**TRSW: TREE SWALLOW**



**HOWR: HOUSE WREN**

**EMPTY: BOX WITHOUT NESTING MATERIAL INSIDE**

**INACCESSIBLE: BOX COULD NOT BE OPENED**

**DOWN: BOX FELL OFF POST**



aaps.org

**OTHER: NON-BIRD INHABITED THE BOX (E.G. ANTS, MICE, ETC.)**



**ACTIVE: EGGS/FLEDGING/FLEDGED YOUNG IN THE NEST  
OR THE ADULT DID NOT FLUSH (LEAVE) THE BOX WHEN OPENED**

**[SPECIES] EMPTY: NESTING MATERIAL WITHOUT BIRD INSIDE**

**FAILED: DEAD BIRDS IN NEST – YOUNG OR ADULT**



# EGG IDENTIFICATION

## **TREE SWALLOW:**

**4-6 PLAIN WHITE, OVAL EGGS PER CLUTCH**

**SINGLE BROOD PER YEAR**



## **HOUSE SPARROW:**

**1-8 LIGHT BLUE/ GREEN/ BROWN**

**SPECKLED EGGS PER CLUTCH**

**2-4 BROODS PER YEAR**



## **HOUSE WREN :**

**4-7 PALE, REDDISH-BROWN SPECKLED EGGS**

**2 BROODS PER YEAR**



# GET TO KNOW THE TREE SWALLOW



All About Birds

**ADULT TREE SWALLOW**



All About Birds

**JUVENILE TREE SWALLOW**

**Behavior:** Soars and swoops in flocks around fields to forage

**Food:** Catches insects (especially flying ones); Consumes supplements with about 20% plant material in the winter when prey is scarce; Eats calcium rich eggshells; Uses nutrients from bones before breeding

**Habitat:** Uses existing tree nests or bird box cavities near fields or water

**Migration:** NBS → wintering in Florida & Central America



# TREE SWALLOW NEST IDENTIFICATION

CUP OF FEATHERS  
FOR THE YOUNG

SHORT &  
FLAT NEST  
MADE  
OF GRASS

 CAN YOU  
SPOT  
ALL 3 TREE  
SWALLOWS?



# GET TO KNOW THE HOUSE SPARROW

**MALE ADULT**



**FEMALE ADULT  
JUVENILE**

**NONBREEDING  
MALE**



**Behavior:** Forages on the ground and frequents bird feeders; Acts aggressively and territorially towards native species competing for resources.

**Food:** Consumes grain, seeds, food waste, and insects.

**Habitat:** Prefers manmade to undisturbed natural habitats.

**History:** Old World Sparrows introduced to New York in 1851 and California & Utah in the 1870s. Quickly spread and outcompeted native species leading to its invasive reputation.

# HOUSE SPARROW NEST IDENTIFICATION

**NEST BOX FILLED  
TO THE BRIM  
WITH WHATEVER MIXED  
MATERIALS  
THEY FIND:  
-FEATHERS  
-PLANTS  
-LITTER**

# GET TO KNOW THE HOUSE WREN

**Behavior:** Commonly forages on lower branches; May be aggressive during nesting season when competing for mates; Males sometimes kill other House Wren eggs and mate with the nesting mother.

**Food:** Consumes insectivores, spiders, earwigs, flies, etc.

**Habitat:** Cavity nesters commonly found in forests and swamps with scrub to build their nests.

*Fun fact:* Male House Wrens build many nests hoping to attract a mate! This is interesting because females of most bird species are solely responsible for nest construction.

House Wrens find new mates every nesting season.



All About Birds

**ADULT HOUSE WREN**



# **HOUSE WREN NEST IDENTIFICATION**



**HOUSE WRENS BUILD  
A PLATFORM  
OF STICKS WHICH  
THEIR NESTS REST UPON.  
HERE WAS AN EXAMPLE OF A  
HOUSE WREN TAKING  
OVER ONE OF  
OUR TREE SWALLOW NESTS!**



# **BOX 72**

## **A MURDER MYSTERY**



Getty Images

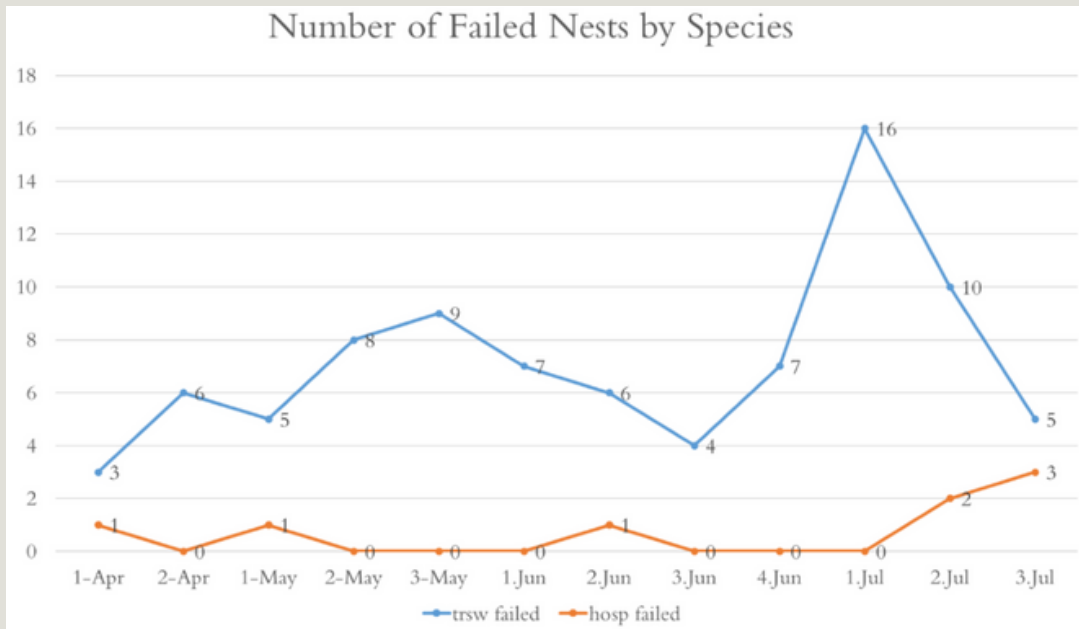


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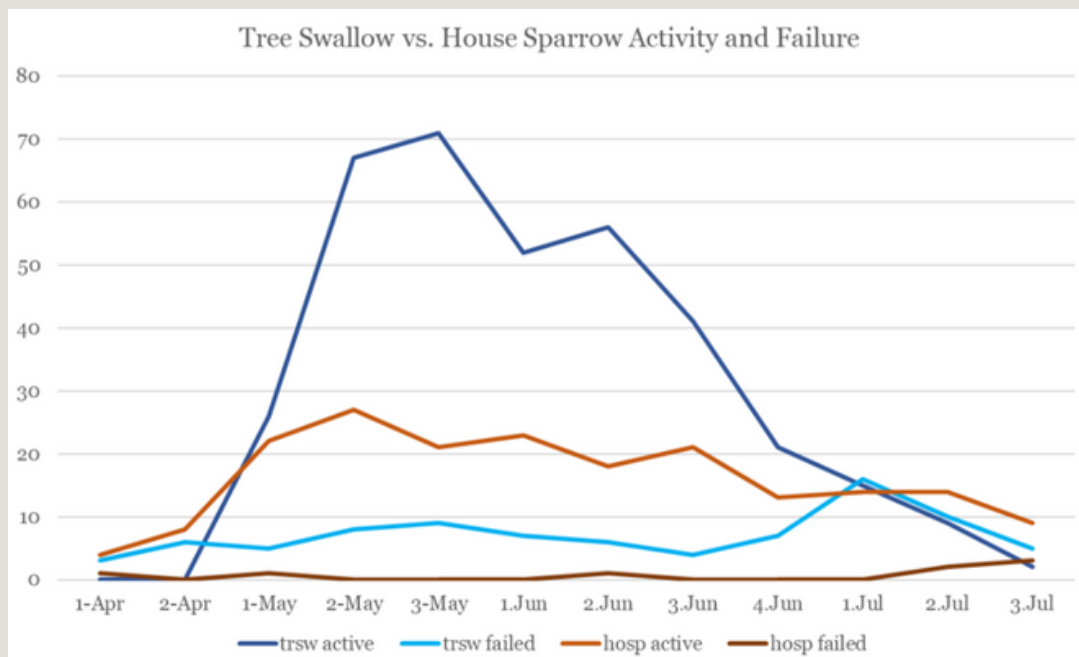
**NON-NATIVE, TERRITORIAL HOUSE SPARROWS  
COMMONLY ATTACK NATIVE  
TREE SWALLOWS.**

**COULD THEY BE THE KILLERS OF TREE SWALLOWS?**

# INVESTIGATION VIA DATA ANALYSIS



On average, we noticed that 0 House Sparrow nests versus 7 Tree Swallow nests failed weekly. There was a sudden spike when 16 Tree Swallow nests failed during the first week of July. We observed cracked eggs and dead adults with external injuries in the boxes. Could we directly link the cause to House Sparrow attacks?



To further investigate, we looked for a correlation, or a close relationship, between an increase of House Sparrow activity and Tree Swallow deaths. We did not find this correlation as shown by the decreasing trend in the light orange line (House Sparrow activity) compared to the spike in the light blue line (Tree Swallow failure). But the case is not closed...



# MURDER IN BOX 72

What if there was direct evidence of a box where a Tree Swallow failed and a House Sparrow took over? We reviewed the data sheet and found numerous examples. Exhibit A, Box 72:

EMPTY	EMPTY	PARTIAL	TRSW FAILED	TRSW FAILED	TRSW FAILED	TRSW FAILED	5 EGG HOSP	HOSP EMPTY	HOSP EMPTY	HOSP EMPTY	EMPTY
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During the first two weeks of April, the box was empty. In the third week, we noticed the start of a nest being built; A bird was moving in. Suddenly, come the last week of April, we found a dead Tree Swallow in the nest. It remained there for three more weeks until a House Sparrow took over. During the third week of June, we found five House Sparrow eggs. Therefore, the story of Box 72 is evidence that House Sparrows will attack Tree Swallows to take their nests and lay eggs each year.

# WHY WE WILL MANAGE THE HOUSE SPARROW BY COATING THEIR EGGS IN OIL

## MOTIVE

TAKE OVER TREE SWALLOW NESTS:

- SAVES ENERGY
- INCREASES TERRITORY
- LESS COMPETITION

## INVASIVE

HOUSE SPARROW AVERAGE:

- 3 BROODS PER YEAR
- 4-7 EGGS PER BROOD
- 20 JUVENILES YEARLY



## REASON

OILING PREVENTS AIR FROM PASSING THROUGH THE SHELL  
TO THE DEVELOPING EMBRYO. THE FEMALE HOUSE  
SPARROW WILL CONTINUE TO SIT ON THE EGGS IN THE  
HOPE THAT THEY WILL HATCH THUS MISSING THE  
OPPORTUNITY TO RAISE ANOTHER BROOD

**MANAGING HOUSE SPARROWS REDUCES  
FUTURE COMPETITION FOR NEST BOXES**

# **BOX 154**

## **A COMING-OF-AGE STORY**



**89 TREE SWALLOWS SUCCESSFULLY FLEDGED.  
THIS IS THE STORY OF 4 SIBLINGS.**



# THE FAMILY OF BOX 154

Every box that is home to a Tree Swallow is considered a success story. They are native migratory birds who return to our fields every year to breed. This year, our 3 fields were home to 71 nesting Tree Swallows. Here is the coming-of-age story of one especially large family:

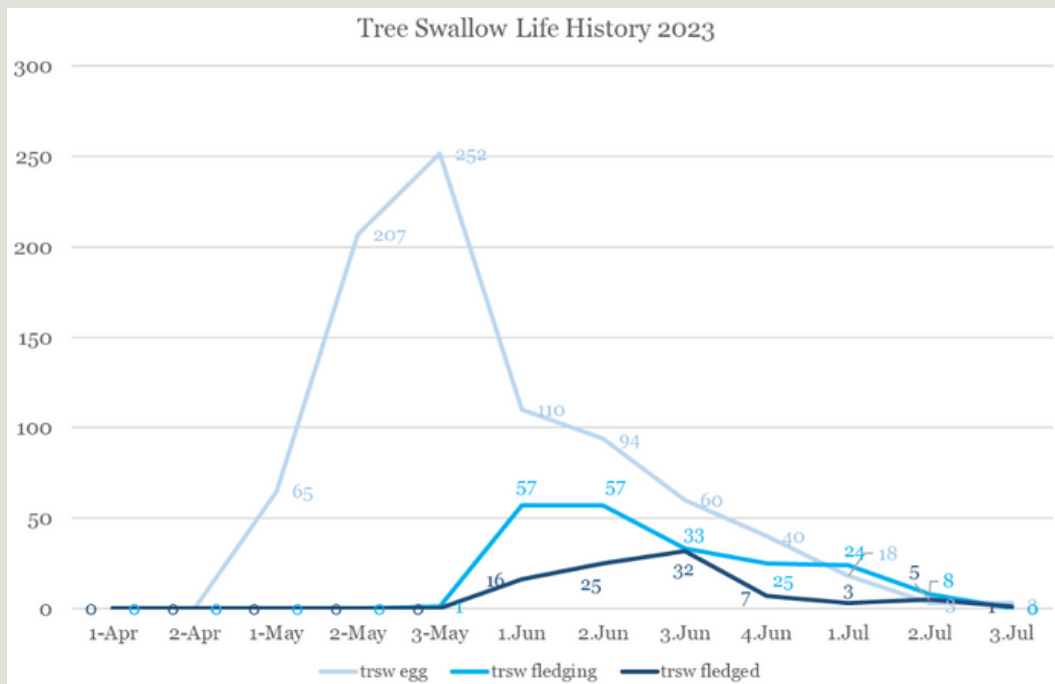
EMPTY	EMPTY	TRSW EMPTY	3 EGG TRSW	4 EGG TRSW	4 FLED GING TRSW	TRSW NESTI NG	4 FLED GED TRSW	TRSW EMPTY	TRSW EMPTY	TRSW EMPTY	EMPTY
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At first, the box was empty for two weeks. In the first week of May, a Tree Swallow moved in and swiftly built a nest. She laid three eggs the week after. To our surprise, she laid another egg during the third week of May! Thankfully, all four eggs hatched healthily by the next box check. In the second week of June, we met their mother! She was nesting and did not flush, so we left to let her take care of her young. One week later, all four Tree Swallows fledged. Shortly after, the family left the nest to prepare for the next big adventure, migration!

# WAS BOX 154 A TYPICAL FAMILY?

Tree Swallows migrate every March from South America, where they winter, to our fields, where they nest in the summer. Between March and April, female Tree Swallows perch atop our nest boxes while males court them with elaborate "flutter flight" and bowing. Generally, females usually lay eggs as early as May and as late as September.

The eggs are incubated for 11-20 days. Hatchlings are usually fledged within 15-25 days.



Pictured above is our timeline when Tree Swallows laid eggs, hatched, and fully fledged at NBS. Most Tree Swallows laid eggs between the second and third weeks of May. Most fledglings hatched the first two weeks of June and fully fledged during the second and third weeks. Our average Tree Swallow followed a typical nesting season timeline. Box 154 laid eggs at the same time and developed at the same pace. We are happy that they found a home here with lots of time left to prepare for migration!

# BOX 106 A THRILLER



**SOMETIMES HAPPY ENDINGS  
HAVE A SURPRISE TWIST**



# WHAT WAS THE TWIST IN BOX 106?

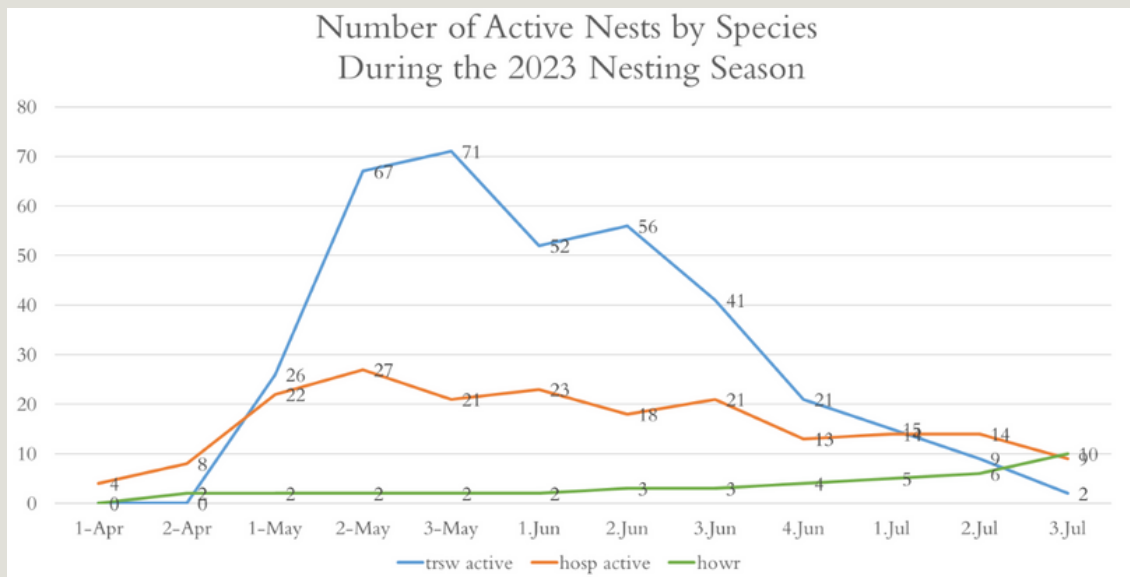
The first two weeks of April passed unremarkably in Box 106. Everything changed during the first week of May when a Tree Swallow moved in and built a nest. One week later, the Tree Swallow mother laid 5 eggs! In the first week of June, they hatched into healthy fledglings. Over the next two weeks, the young Tree Swallows remained in the nest growing feathers. With feathers ready for flight, the birds became fully fledged the third week of June. In July, all of the Tree Swallows successfully left the nest!

EMPTY	EMPTY	TRSW EMPTY	5 EGG TRSW	5 EGG TRSW	3 FLED GING TRSW	3 FLED GED TRSW	3 FLED GED TRSW	TRSW EMPTY	TRSW EMPTY	PARTIAL	HOWR
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Typically once a tree swallow nests empties, it remains that way. This is why we were shocked to see that there was a new nesting attempt in Box 106 merely two weeks later! An even sweeter surprise was finding out who was building the nest! During our final box check, we discovered a very distinct House Wren nest built on top of the old Tree Swallow's nest!  
(This nest is pictured on page 13).

# WHY HOUSE WRENS ARE INTERESTING

Pictured below is the number of active nests at each weekly box check throughout the season. As shown by the blue line, Tree Swallows steadily declined in active nests after the second week of June. House Wren nesting activity, however, was relatively consistent species until the final week of data collection (shown by the green line). This was expected.



Unlike Tree Swallows and House Sparrows, which use nest boxes regardless of location in the fields, House Wrens stick to the perimeter. This is likely because their nests are mostly built of sticks. Nesting as close as possible to the tree line by the edges of the fields conserves their energy. Because they are the least common breeder in the survey, with a limited number of nesting choices, it was interesting to see one repurpose a home!

**WILL YOU BE PART  
OF OUR NEXT NESTING  
SEASON'S STORY?**

**PLEASE CONSIDER  
SPONSORING A BIRD  
BOX IN THE SPRING OF  
2024!**

**If you were involved in the 2023 Bird Box Season please fill out this  
[survey](#).**

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