

## Osprey Nation 2017 Report



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## Contents

Introduction	3
Osprey History	4
The 2017 Season	5
Figures	6
Osprey Nation Map	6
Yearly Data	7
Population Trends	8
The Future of the Program	9
Acknowledgements	9
2017 Stewards	10

Cover photo by Anastasia Zinkerman

**“It’s a fantastic model. It’s a great citizen science effort.”**

-- Alan F. Poole, author of *Ospreys: A Natural and Unnatural History*, on Osprey Nation

## Introduction

Osprey Nation is the Connecticut Audubon Society’s largest citizen science program. It was designed in 2014, in conjunction with the Connecticut Department of Energy and Environmental Protection (DEEP), to monitor the state’s Osprey population using citizen volunteers. Before 2014, DEEP collected Osprey data, but the rising population became so large that a broader, citizen science task force was required to effectively monitor these birds. Known nesting locations were mapped on the Osprey Nation map, and volunteer stewards chose which location they wanted to monitor in a given year.

The program has grown considerably. After four years of a steadily expanding Osprey Nation program, we are confident that almost all the Osprey nests in Connecticut were mapped in 2017 and almost all of the active nests are being monitored. With the help of over 270 stewards, we can gather information on the number of nests and successful young produced each year, which helps us understand how the once-vulnerable Osprey population is growing.

## Osprey History

Ospreys are fish-eating raptors that have a worldwide distribution. Historically, they nested in dead trees along waterways and captured food in the abundant fish populations. Over the last century, Ospreys have experienced a dramatic change in fortune. In North America, the introduction of the pesticide DDT polluted aquatic communities. The toxicant bio-accumulated and was potent in the fish species that Ospreys preyed upon. When Ospreys consumed their prey, the chemical entered their bodies and interfered with the ability of a female to create a strong eggshell. Afflicted females laid eggs with weak shells, and the embryos were crushed when the adults incubated the eggs. As a result, the success rate for the nesting period was extremely low, and extinction threatened the Osprey population in many parts of North America, including Connecticut.

DDT was banned in 1972, and consequently Ospreys were once again able to lay strong shells and produce healthy young. However, their devastated population could not be revived without help. Since 1972, environmental groups and individuals have constructed wooden nesting platforms to encourage Ospreys to nest. These platforms have proved incredibly successful and, along with the ban on DDT, the Osprey population has shown remarkable recovery!

The Osprey population has grown so much that some areas are now crowded with adults. In 2017, many monitors noticed intrusions of an individual Osprey on an established nest. There were more incidences of aggression between Osprey males. These observations may indicate that the population is approaching its maximum size

in Connecticut. Future years will show if the numbers continue to increase or if they stabilize at a certain level.

## The 2017 Season

The 2017 Osprey Nation season was the largest since the program started in 2014, in every category we measure. Two hundred eighty seven volunteers signed up to monitor 540 Osprey nests. Throughout the season, the volunteers reported information on their nest activity, the number of nestlings, and how many young birds successfully fledged. Table 1 shows relevant data for the four years of the project.

**Table 1**

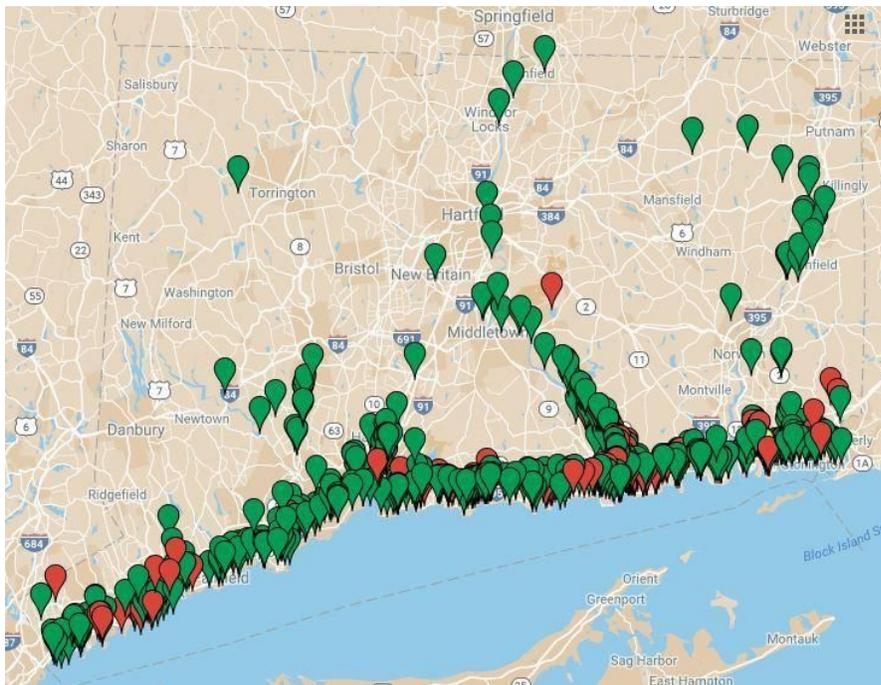
	2014	2015	2016	2017
Stewards	100	146	224	287
Nests	414	515	606	680
Nests with data	174	322	420	540
Active nests	210	250	337	394
Fledglings		356	490	607

The increased monitoring effort compared to 2016 provided more complete coverage of the nests and allowed us to better understand population growth. About 100 new nesting locations were added to the map, bringing the number of mapped nests to 680 (Figure 1). Out of these nests, we know that at least 390 were active (Figure 2). Stewards reported 66 inactive nests, meaning they were never occupied in 2017.

Every year, there are failed nests in which an adult pair attempts to produce young but fails due to inexperience of young adult pairs, predation of young by raccoons or owls, and other factors. This year, stewards observed 60 failed nests. Despite these failed nests, the number of successful young Ospreys exceeded the reported number of 2017. Approximately 607 fledglings were observed this year, a record number for Connecticut since 1970 (Figure 3).

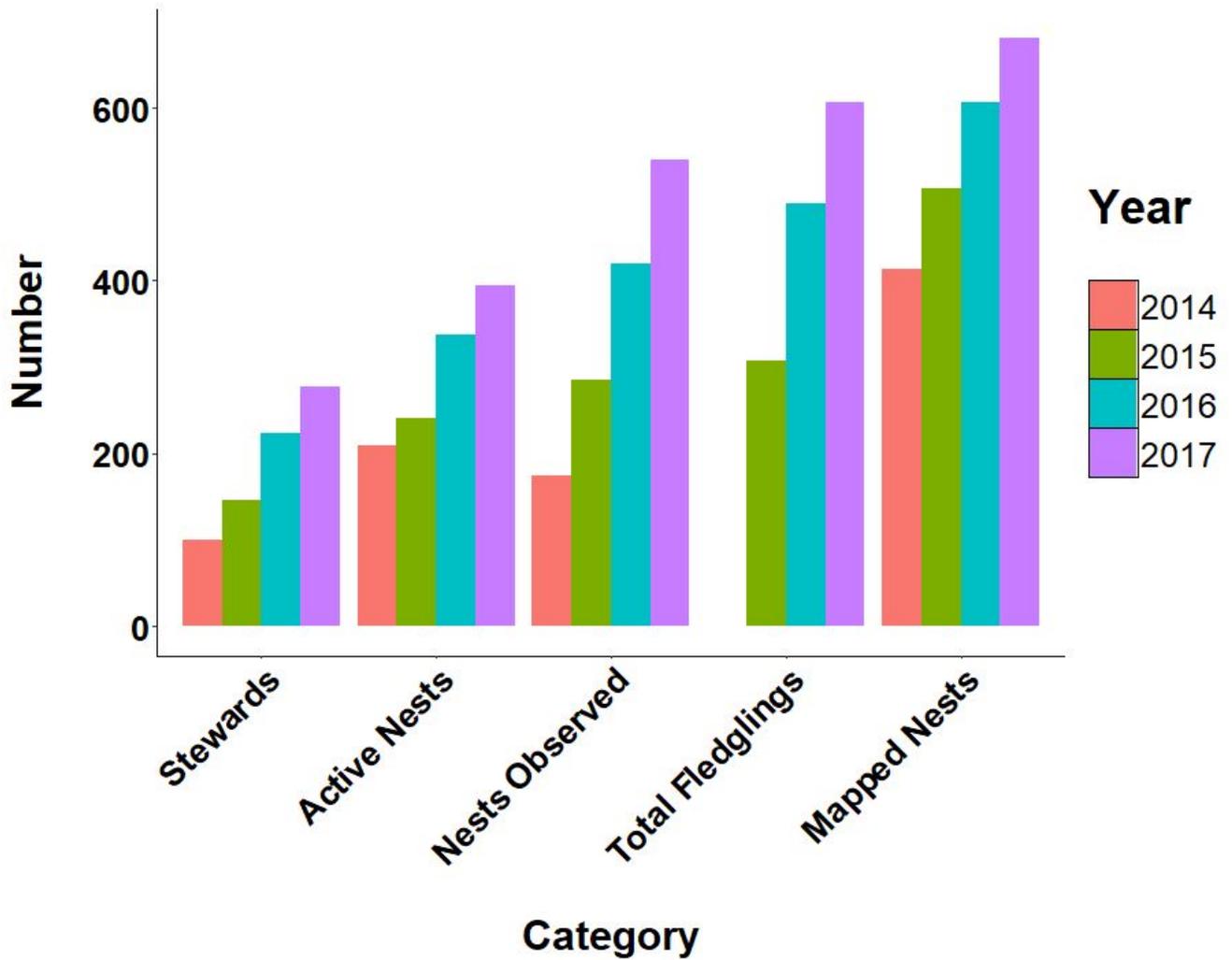
Osprey nests were found in all counties of Connecticut except Tolland County. The areas of highest abundance were along Long Island Sound and the Connecticut River. Moving north through the state, Ospreys became less common since their preferred nesting locations are scarce in this part of the state (Figure 1).

## Figures

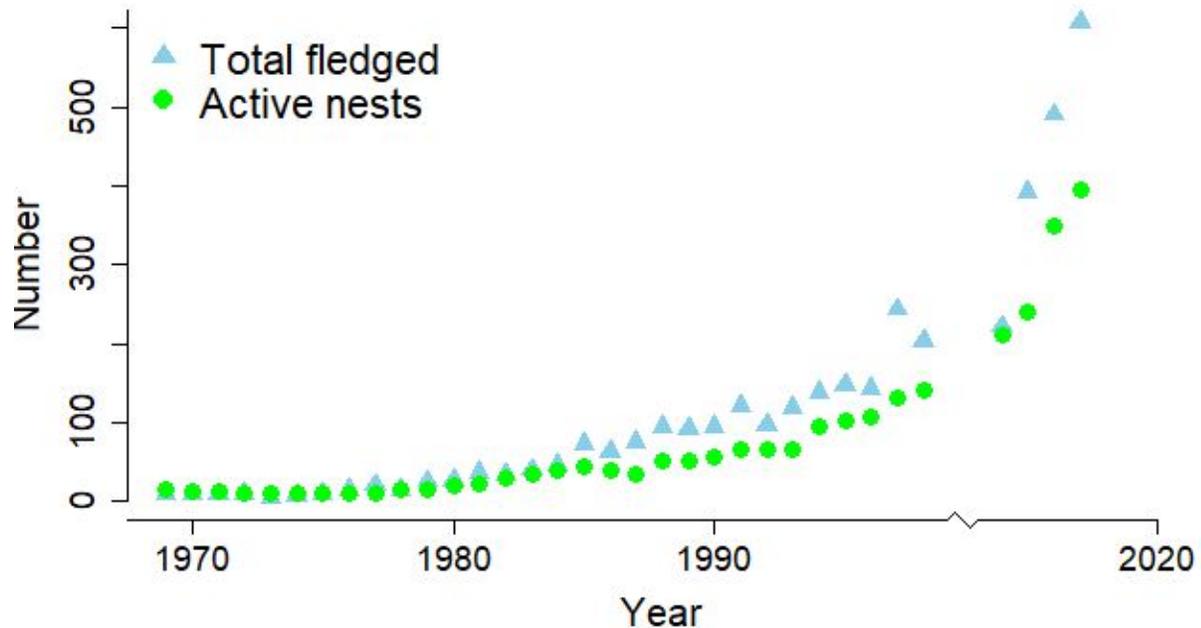


**FIGURE 1** The 2017 Osprey Nation map. Each pin represents a known nesting location. Location types ranged from wooden platforms to navigation markers to chimney all over the state! Green pins are nests that were monitored this year, and red pins were nests that were not monitored. The Osprey population is restricted mostly to the

southern border of the state and along the Connecticut River where waterways are healthy and fish are plenty.



**FIGURE 2** A comparison of Osprey Nation categories between the years of the program. There are increases across the board for every category each year. These increases are partly due to the increase of monitors and probably also due in part to the rising Osprey population. In 2017, we reached a record number of stewards and fledglings observed. Total fledglings was not recorded in the first year of the program.



**FIGURE 3** A visualization of the Osprey population since 1969 when DEEP began to monitor the population. The population was almost extinct near 1970 and rose into the 1990s. Between 1999 and 2013, DEEP records for the Osprey population are not available. However, Osprey Nation records show that the population has continued on a trajectory of positive growth.

## The Future of the Program

Each year, we hope to see the program grow as we engage more citizen scientists.

The role of citizen scientists is invaluable. These volunteers are collecting data on an important species and learning more about nature in the process. Through their efforts, we can understand how the Osprey population is growing and immediately notice any threats that may be facing their population. In future years, as we expand

our program, we want all Osprey nests to be monitored so we have accurate and complete coverage of the population in our state.

## Acknowledgements

First and foremost, we would like to thank the volunteer stewards who participated in Osprey Nation this year. Their time and efforts have provided us with important information on a special species.

We would also like to thank members of the Connecticut Audubon and the DEEP staff for assisting in the organization and success of the program.



## 2017 Stewards

Peter Alessi  
Rick Allison  
Mark Andersen  
Kevin Anderson  
Cheryl Ann Quigley  
Mary Ann Romano  
Rosalie Anzalone  
Martha Asarisi  
Stephanie Asher

Diana Atwood Johnson  
Michael Aurelia  
Lori Baker  
Mary Barravecchia  
Lori Bassett  
Laura Bastien  
Melissa Bentley  
Krista Berish

Debbie Berner-Siciliano  
Kathy Bolanowski  
Larry Bolanowski  
Maura Bonafede  
Greg Brenner  
Scott Brinckerhoff  
Donna Brinckerhoff  
Susan Brooks

Dawn Brucale  
Suzanne Burns  
David Cameron  
Karen Carlone  
Joe Carney  
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Bonnie Castellani  
Bridget Cervero  
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Megan Czekaj  
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Diana DeLisa  
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Kathleen DePasquale  
Laurie Desmet  
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Denis Devaux  
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Tom Doggart  
Janice Dowin  
Rich Dowin  
Jerilyn Duefrene  
Cynthia Ehlinger  
Lee Ellen Chontos  
Cynthia Ellis  
Ken Ewell  
Susan Ferency  
Josephine Ferrante  
Michael Ferry  
Fiona Fine  
Bobbie Fisher

Woody Fitzgerald  
Jim Foley  
Sukey Foley  
Carole Franklin  
Jim Frayer  
Debbie Fusco  
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Ray Gaulke  
Mark Geist  
Ginger Germano  
Thais Gherardi  
Ray Gilbert  
Terry Gobeli  
Brigitte Godzich  
Deanna Goizueta  
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Richard Goldstein  
Sarah Goldstein  
David Goodman  
Debbi Goodman  
Nicholas Graber  
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Dave Grainger  
Steven Greenhouse  
Bob Gregory  
Elinor Gregory  
Andy Griswold  
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Pat Grote  
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Greg Kosakow  
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Rick Landau  
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Deborah Lepine  
Steven Light  
Michelle Lind  
Suzanne Loggie  
Grace Lombard  
Colette Long  
Wyatt Long  
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Renee McIntyre  
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Emil Montalvo  
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Karen Morley  
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Carey Muldowney  
Gail Munn

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