

AMERICAN KESTREL PROGRAM

A STUDY ON AMERICA'S SMALLEST FALCON

In 2013, Delaware's Department of Natural Resources and Environmental Control added the American Kestrel to its Endangered Species list. The population of American Kestrels in the Mid-Atlantic region has deteriorated by nearly 90% since 1966. In an effort to pin-point the drivers of this decline, the Brandywine Zoo became the first AZA organization to partner with The American Kestrel Partnership, launched by The Peregrine Fund.

Our Mission Statement: *To determine probable cause of decline in Delaware's American Kestrel populations by; conducting demographic studies which utilize the guidelines of the American Kestrel Partnership, unifying citizen and professional science data, and educating the general public on American Kestrels and ways to help increase their population.*

WHAT WE ACCOMPLISHED IN 2014

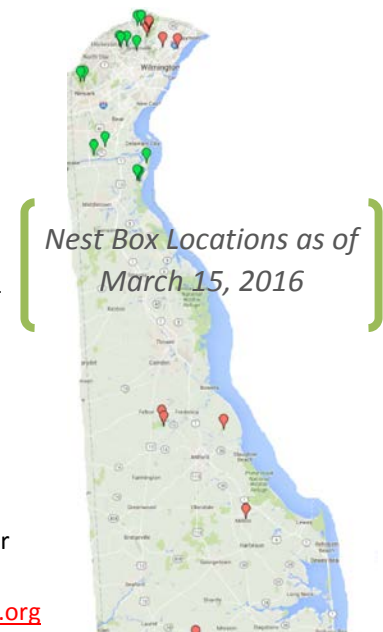
- ❖ Number of nest boxes: 11
- ❖ Partnerships with Delaware State Parks, Point Lookout Foundation, Wilmington Western Rotary Club and private residences
- ❖ Grants- Rotary club for education materials regarding kestrels (\$3500); Fresno Chaffee Zoo grant for nest box cameras (\$1700)

ACCOMPLISHMENTS IN 2015

- ❖ Number of nest boxes: 28
- ❖ New Partnerships with Delaware State Parks, Delaware Nature Conservancy, Delaware Wild Lands, - Mt. Cuba, [Tatnall School](#)
- ❖ Breeding pairs seen: 1

ACCOMPLISHMENTS SO FAR IN 2016

- ❖ Number of nest boxes: 35 and growing
- ❖ [Formation of Delaware Kestrels Partnership](#)
- ❖ New Partnerships with Delmarva Ornithological Society, American Birding Association, Winterthur, DNREC-Fish and Wildlife, Town of Middletown
- ❖ [Working with American Kestrel Working Group](#)
- ❖ Grants – International Association of Avian Trainers & Educators for materials and technology (\$3800), Mushroom Festival (\$500)
- ❖ Created citizen science website to involve public in research; [CitSci.org](#)



LOOKING TO THE FUTURE

The goal of 2016 is to have a total of 50 erected boxes across the state of Delaware. Ideally, these boxes would be installed in Kent and Sussex County, as 75% of our current boxes are located in New Castle County. Current partner relationships look promising to gain these areas in both public and private lands. Once quadrants are established from the Breeding Bird Atlas for Delaware, a goal of our project may be to install at least one nest box per appropriate quadrant. With high hopes, we are encouraging breeding pairs with the increased amount of nest boxes set up – specifically in locations where kestrels have been seen in the last year. Our goal is to observe two breeding pairs across the state this year. Utilizing information from our citizen scientists and fellow birders, we will be able to update our CitSci webpage using eBird and email communication, and hopefully see trends according to preferred ecosystems (i.e. box height, type of land, distance from box to structure/ tree lines, etc.)

KEYS TO SUCCESS

Through our various contacts and conversations with staff at the Peregrine Fund, with DE Fish and Wildlife, with members of the American Birding Association and Delaware Ornithological Society, and with Tri State Bird Rescue, we have developed at this time a typical protocol for appropriately sighting Kestrel boxes. We believe that the following site features will lead to successful habitation of the boxes by Kestrels:

- ❖ Boxes should be sighted in an open field with moderate height, diverse vegetation; too tall and they are unable to hunt the deep vegetation, too short or non-diverse and appropriate dietary prey may not be found.
- ❖ Kestrels are primarily insectivores in the summer, but shift opportunistically to rodents or small birds in the off seasons when invertebrates are not readily available, so boxes should be sighted where appropriate foraging can be easily found.
- ❖ Cooper's and Sharp Shinned Hawks are primary predators of Kestrels, so boxes should be sighted at least 50 yards, but preferably 100 yards from tree-lines to avoid hazards of predation by these birds which will roost and hunt from tree lines.
- ❖ Kestrel boxes should be sighted within range (again, 50-100 yards) of power/phone/cable lines, if possible, due to the Kestrel's preference for perching on them while hunting. Sighting boxes directly on telephone poles may be ideal, if the poles are owned by the landowner.
- ❖ While farm fields may be ideal for boxes, only fields not using herbicides or insecticides should be used for nest sites. Additionally, farmers may not want to mow/plow around boxes in the center of their fields, so working with landowners for sighting on hedgerows may be a best practice. This may include sighting boxes along driveways which have power poles and lines running up the road and placing a box on a pole.
- ❖ The 2012 Bird Breeding Atlas noted Kestrels in only 61 observation blocks, down from 156 blocks in the previous Atlas in 1987. Sites found with confirmed nesting activity were around Brandywine Creek State Park, St. George's, Milford, Milton, Seaford and Wilmington. These sites will be the foremost focus, but also sites of confirmed observations from the 1987 Atlas will be monitored.
- ❖ We additionally will use sightings reported by birders on eBird to site boxes where kestrels have recently been observed.

