

Strange Birds

Many years ago I saw a mass of birds darting around in the night sky. They were strange birds, and I asked my grandmother what kind of birds they were. She said they were bats, and that caught me off guard. I had heard of bats before, but I had never imagined them to be so graceful. I had thought of them as blood-sucking monsters, and I found myself to be very wrong. There were just so many, and they soon became an object of interest to me.

Years later, I looked at the same patch of sky I had years ago. I thought about the past, and I remembered when I had seen so many bats. I looked around for quite a while, and I couldn't find a single one. This caused me to wonder why the creatures were no longer around. I did some research, and two of the most important were habitat destruction and White Nose Syndrome (5). White Nose Syndrome is caused by a fungus called *Geomyces destructans*, and it has the capability to absolutely ruin a bat population (6). The fungus grows on hibernating bats, and it is often spread in places where bats hibernate. When it grows on a bat, it causes them to wake up early and go out into the cold. It will waste the fat reserves that it had saved to survive the winter, and it will die by either freezing or starvation (6). This disease has devastated bat populations across the United States, and it has no known cure.

On the bright side, there is a solution. Not all bats are affected by the disease, and this provides hope for the survival of bats as a whole (8). By giving habitats to unaffected bats, we can foster the growth of bat populations without eliminating White Nose Syndrome. One way to make this habitat is to build a bat house (7). I soon realized that I could play a role in helping these animals. At the same time I was making these discoveries I was thinking about my Eagle Project for Boy Scouts. I wanted to build something that would truly help people, so I decided to build bat houses.

Getting this project approved would be a challenge. The approval board didn't like my idea a lot. They wanted to know how it would help people, not just bats. They had a good point, but I found a way to get around it. I did some research (you're probably seeing a trend here) and I discovered a few things. In addition to getting rid of pesky mosquitoes, bats play an important role in killing insects that can harm farmers' crops (3). By killing these insects, they can reduce the cost of pesticides that a farmer would have to buy to keep the bugs away (3). When I came back with my findings, it was easy to get the project approved.

My next step was to learn as much as possible about building bat houses. I scheduled a meeting with an expert on the subject, Katherine Caldwell with the NC Wildlife Resources Commission, and we talked about the requirements involved in building a bat house and the specifics on how to complete my project successfully. There turned out to be numerous requirements, some of them including 6 or more hours of direct sunlight every day, 12-20 feet off the ground, and not being anywhere near a tree (2). This would prove to make finding a location for the houses difficult.



(from left to right) Katherine Caldwell, her associate, my brother, and eighth grade me talking about bat houses.

Now for the fun part: actually building the houses. First, I had to find a design. I went with the Four-Chamber Nursery House because it is intended to hold 350-500 bats, and it fosters the growth of a bat population because it is especially appealing to mother bats who will bring about new ones. I had to buy materials and organize assembly days so that we could build the houses. This was fairly easy, and I followed construction with the ever so important painting of the houses. I built six houses, and I put them all around my town in whatever place someone would allow me to. I'd like to emphasize the fact that I risked my life up on a ladder to install these, and they were not light! After installation, I found that I had increased the bat capacity of my town by up to 3,000. To fully understand the impact this could have, imagine

that each of those ate 8,000 insects a night, which is not at all uncommon (4). If this were to occur, I would cause 24,000,000 insects to be eliminated every single night.



Some of my peers and I after building the bat houses.



One of my bat houses on a local school's gym.

Even after completing the project, I felt that I could do more. I decided to do a program at the local library to tell people in the community about the importance of bats and what they could do to help them. I didn't expect to get many people, but I actually ended up having a good turnout. I gave my presentation to them, and they seemed to have a positive response. Months later I was still having people ask where they could find the instructions to build one of my bat houses.

After all of my efforts, I still realize that I have barely made a dent in the problem that bats are facing. It will take a societal push for the conservation of bats to truly save them. I still tell people about the things I've learned, and I tell them what they could do to help. I hope that society will realize what they must do, and I hope that one day I will see the return of these strange birds.

Citations

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