

Nagging Gnats



Missy Stoll
Science teacher at Anamosa Middle School
2019 extern at Dubuque County
Conservation in Peosta Iowa

Part I: Overview of Workplace

Swiss valley park offers 62 wooded acres along the meandering course of spring-fed Catfish Creek which is stocked with trout by the Iowa DNR each year. This park was named for the original settlers of the area. The Swiss Valley Nature Preserve and Center is located one mile from the park, offers additional trout fishing, hiking, cross-country skiing on groomed trails, and a visitor center with interpretive displays.

Part II: Workplace Focus

In order to help with the declining blue bird population the conservation center placed bluebird houses at a variety of places in the area including on the heritage trail, around the nature center and parks. Our monitoring involved weekly checks of the boxes, noting bluebird eggs and fledglings along with removal of non bluebird nest.

Part III: Introduce the Problem

It’s hard to believe that the bluebird population was once in decline, but it’s true. Between 1920s and 1970s suburban developments grew, as well as industrial agriculture causing farmlands, forests, and grasslands to shrink. This growth debilitated the number of plants that bluebirds rely on for food and nesting. We are seeing another problem with our bluebirds and it involves a pest to humans, gnats. This spring and summer we noticed that our bluebird houses were being invaded by gnats which caused death in our fledglings. Our problem was how to deal with the gnats. What helps kill the gnats and save the bluebirds?

Part IV: Background

In order to solve our problem students would have to become familiar with the scientific method or the engineering method along with data collecting, graphs and metric use. Students would have to research bluebirds to become familiar with habitats and preferences.

Part V: Workplace Solution

Swiss Valley and the Dubuque County Conservation board solved the problem by spraying the nest with a bug spray during weekly checks. This seemed to solve the problem initially but as the summer wore on we realized the fledglings would only survive at most 50% of the time. The team came up with a variety of solutions including bug soother, vanilla, vicks, absorbine jr. and a homemade remedy of epsom salt, listerine and stale beer that all have been claimed to work, but we are not sure on which actually works the best.

Part VI: Educational Pathways

In the Dubuque parks area there are 7 park rangers working full time to help year round. In order to become a park ranger you need a bachelor’s degree with related courses dealing with law enforcement, fish and wildlife management and archaeology. Typically park services ask for a full year or graduate school related to the area and occupation needs of your park. Dubuque County conservation holds 2 naturalist as full time year round employees. To become a naturalist you would need a 4 year degree in animal ecology, forestry, biology, wildlife management or even chemistry. Other positions held at the DCCB are 1 person to run the heritage trail, 1 for the fillmore fairways, a construction technician and a part time worker