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Biological Survey of Elizabethtown College

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Biological Survey of Elizabethtown College

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Question:

What animals live on the Elizabethtown College campus?

Introduction:

Why study species richness on campus?

- Our campus has a large variety of natural ecosystems compared to other suburban college campuses
 - Wetlands, forests, meadows, ponds
- Number of species present or absent in an area might indicate health of an ecosystem
- Aesthetically, people often enjoy seeing a variety of organisms throughout a walk around campus
- Having a larger variety of animals gives more opportunities for students to learn about organisms in the field
- Indicating species present allows the college to commit to ecosystem conservation

Materials and Methods:

- Study period: May 20- June 12, 2019
- Bird sampling:
 - 8 days with 15 minute intervals per 7 locations
 - Tools: binoculars
- Salamander sampling:
 - 4 days with 4 locations
 - Tools: dip nets
- Butterfly sampling:
 - 2 days with 2 meadows
 - Tools: butterfly nets

Results:

Birds:

- 40 species found to be present via visual or audio observation (Figure 3)
- Sampling location 5 contained the most species present (Figure 2)

Salamanders:

- 2 species found to be present
- Sampling locations 15 and 16 had an absence of species

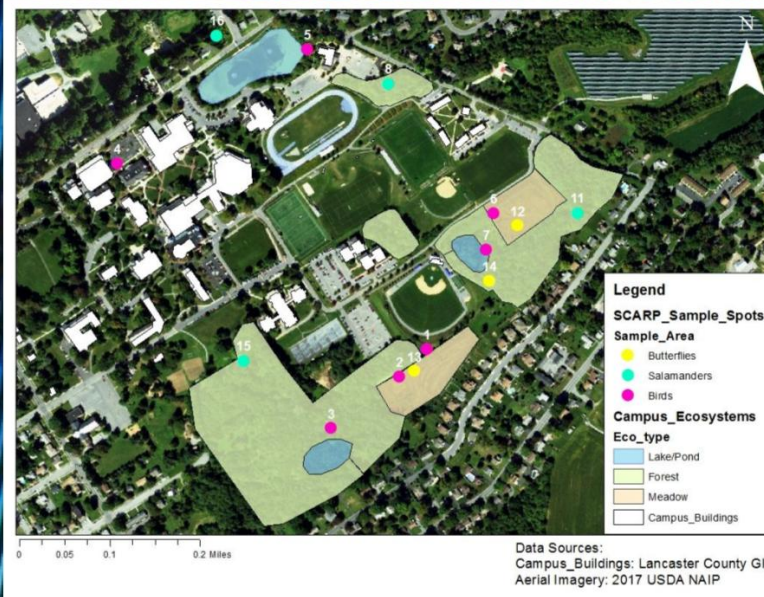


Figure 1. Sampling locations on the Elizabethtown College campus.

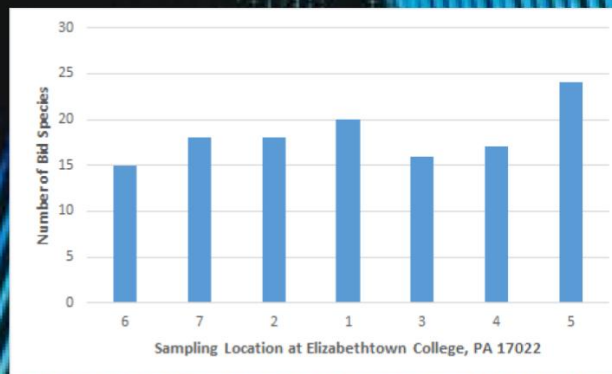


Figure 2. Bird species richness found at each of 7 sampling locations on Elizabethtown College campus.

American Crow, American Robin, Baltimore Oriole, Barn Swallow, Black-capped Chickadee, Blue Jay, Brown Thrasher, Brown-headed Cowbird, Canada Goose, Cedar Waxwing, Chimney Swift, Chipping Sparrow, Common Grackle, Downy Woodpecker, Eastern Bluebird, Eastern Kingbird, European Starling, Goldfinch, Gray Catbird, Great Blue Heron, Green Heron, Hairy Woodpecker, House Finch, House Sparrow, House Wren, Mallard, Mourning Dove, Northern Cardinal, Northern Flicker, Purple Finch, Red-bellied Woodpecker, Red-tailed Hawk, Red-winged Blackbird, Song Sparrow, Tree Swallow, Tufted Titmouse, Turkey Vulture, Warbling Vireo, White-breasted Nuthatch, Yellow-bellied Sapsucker

Figure 3. List of bird species found throughout all 7 locations sampled

Butterflies:

- 4 species found to be present
- The sampled area consists of location 12, 13, and 14 as well as the path between them

Other Animals:

- White-tailed deer seen at both southern meadows
- Green frogs and bullfrogs seen and heard by locations 7 and 12



Adult Two-lined Salamander



Adult Red-backed Salamander



Silver-Spotted Skipper



Yellow Sulphur Butterfly



White Cabbage Butterfly



Spring Azure Butterfly



Green Frog



American Bullfrog

Conclusion:

- Through our research, we were able to confirm the presence of:
 - 40 species of birds
 - 2 species of salamanders
 - 4 species of butterflies
- Lack of detection does not signify absence
- Further research can focus on different varieties of organisms