

Species Observations at Scio Township Preserves Camera Trap Survey

By Mike Sefton

The goal of this survey was to document the species composition of Scio Township’s preserves. Surveying species composition helps in understanding how healthy a site is, best practices for future conservation efforts, and environmental trends.

Camera trap surveying is a nonintrusive survey method that can provide a wider context to animal activity along with the benefit of collecting archivable, verifiable data. By utilizing this survey method, it is possible to examine behavior and provide accurate identification with minimal disturbance to animals and the environment. A camera trap survey is typically conducted by placing motion and sound-activated trail cameras in areas of research, then reviewing and compiling the collected data.

This survey took place between three Scio Township preserves: Van Curler, West Scio, and Sloan. At each preserve, 2-3 observation periods were conducted. These observation periods consisted of placing two trail cameras near a water source such as a creek or vernal pool to increase the probability of consistent data and highlight the utilization of these water sources. The cameras were placed in a different location each observation period. After 6-8 days, camera footage was retrieved and reviewed to identify species and compile data.

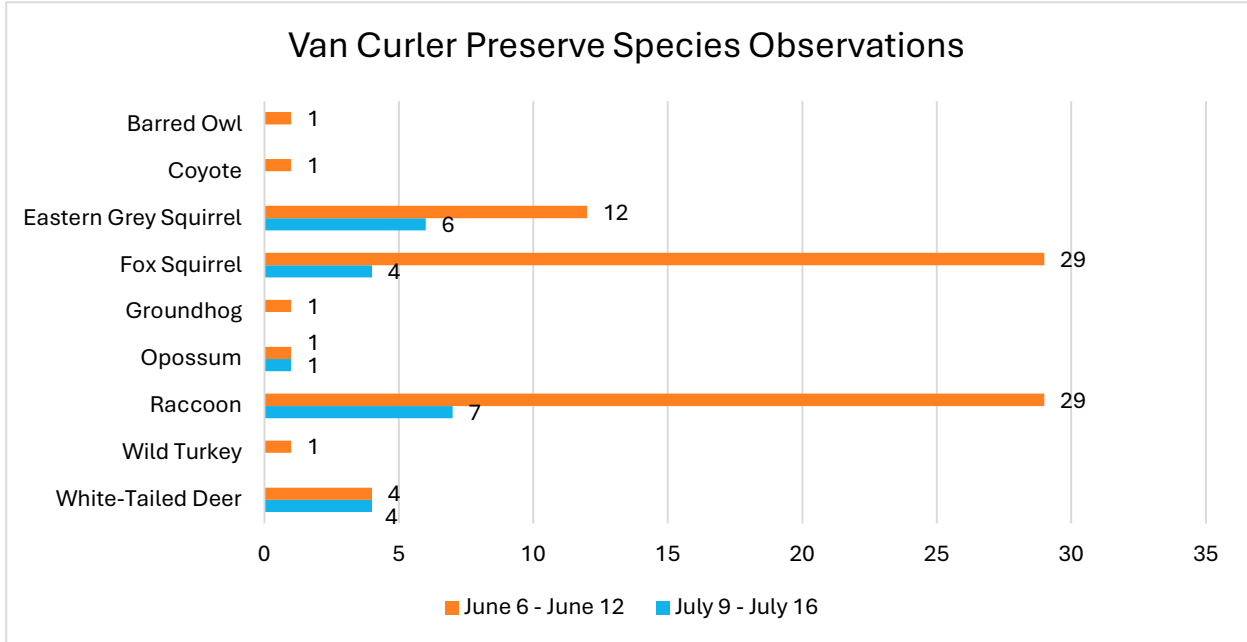


Figure 1

Van Curler Preserve is a 90-acre area consisting of mixed deciduous forest, a 6.5-acre prairie, several vernal pools, and a small creek. The land surrounding the preserve consists of mid-density suburban housing and agricultural fields.

In total, Van Curler Preserve displayed 9 separate species sighted 101 times over two observation periods. During the first observation period of June 6th-June 12th, cameras were placed facing a vernal pool within the mixed deciduous forest. The most common species sighted during this observation period were raccoon (29) and fox squirrel (29). Species detected least commonly were barred owl (1), coyote (1), groundhog (1), opossum (1), and wild turkey (1). The remainder of identified species were Eastern grey squirrel (12) and white-tailed deer (4). In the second observation period of July 9th-July 16th cameras were set up to face a separate vernal pool which was also within the mixed deciduous forest. The most common species sighted were raccoon (7) and Eastern grey squirrel (6). The least observed was opossum (1). Additional species detections include fox squirrel (4) and white-tailed deer (4). (Figure 1)

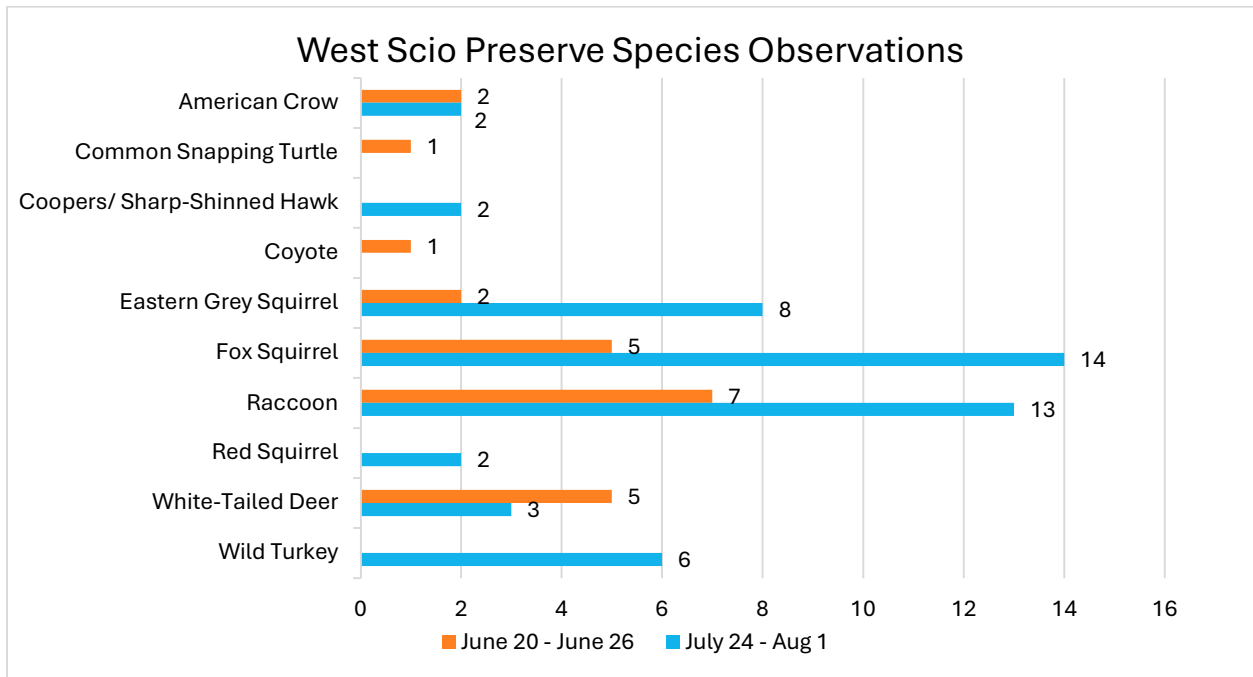


Figure 2

West Scio Preserve holds 217 acres of upland and wetland forest. There are several vernal pools throughout the property, the largest measuring 686m² in the southern section of the preserve. Surrounding the preserve are predominately agricultural fields as well as several residential and industrial buildings.

West Scio Preserve exhibited 10 species with 73 sightings. During both observation periods at West Scio Preserve, the trail cameras were placed along the edge of the largest vernal pool. Throughout June 20th-June 26th, the cameras were placed along the west side of the vernal pool. The most sighted species this observation period were raccoon (7), fox squirrel (5), and white-tailed deer (5). Additional species include American crow (2), common snapping turtle (1), coyote (1), and Eastern grey squirrel (2). During the observation period of July 24th-August 1st, the cameras were placed along the north side of the vernal pool. The most common species were fox squirrel (14), and raccoon (13). The least detected species were American crow (2),

Cooper’s/sharp-shinned hawk (2) and red squirrel (2). Additional species observations include Eastern grey squirrel (8), white-tailed deer (3), and wild turkey (6). (Figure 2)

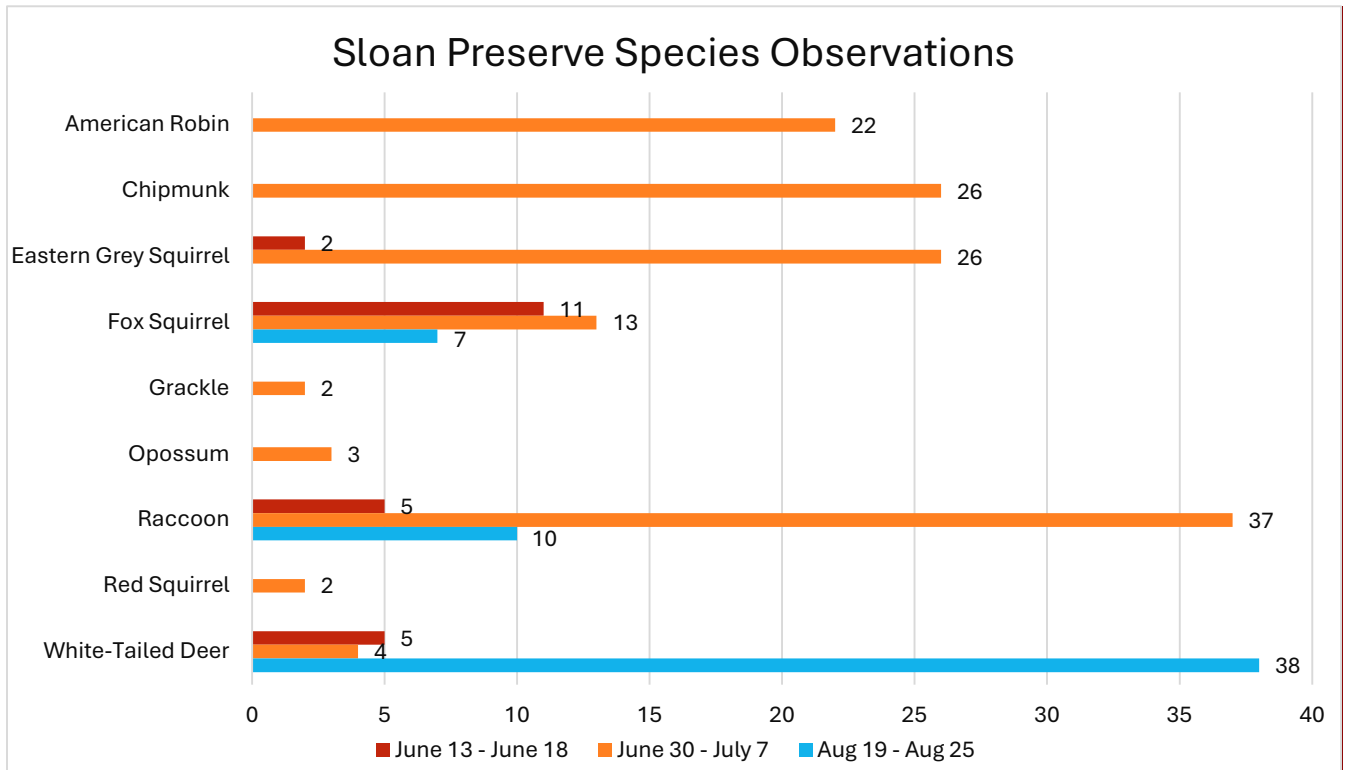


Figure 3

Sloan Preserve Single Species Observations	
June 30-July 7	Aug 19-Aug 25
Carolina Wren	Coyote
Groundhog	Great Blue Heron
Unidentified Mouse	

Figure 4

Sloan Preserve consists of 50 acres of wetland and upland forest, grassland, and a seasonal floodplain. Mill Creek runs through part of this preserve. The surrounding area consists of most agricultural fields with some houses that are spaced apart.

Sloan Preserve displayed 14 species with 219 observations. The first of three observation periods took place June 13th- June 18th. The two trail cameras were set to face the riparian zone along a section of Mill Creek. One individual trail camera ran out of power on 6/17/25 at 15:03, which cut the collection of data by about 24 hours. Species identified during this observation period were fox squirrel (11), raccoon (5), white-tailed deer (5), and Eastern grey squirrel (2). Throughout the second observation period of June 30th-July 7th, the trail cameras were placed

facing a vernal pool in a mixed hardwood area of Sloan Preserve. The species with the greatest number of sightings was raccoon (37), followed by Eastern grey squirrel (26), chipmunk (26), and American robin (22). The least detected species were Carolina wren (1), groundhog (1), and an unidentified mouse (1). Additional species observed were fox squirrel (13), common grackle (2), opossum (3), red squirrel (2), and white-tailed deer (4). During the third observation period of Aug 19th-Aug 25th the cameras were placed to face an offshoot of Mill Creek, and a section of the riparian zone along Mill Creek. The species with the most sightings was white-tailed deer (38). The species observed the least were coyote (1) and great blue heron (1). Remaining sightings include fox squirrel (7) and raccoon (10). (Figure 3; Figure 4)

Compared to all observation periods, June 30th-July 7th at Sloan Preserve displayed the greatest species diversity with 12 species encountered. This period also held the highest number of species sightings with 138 observations.

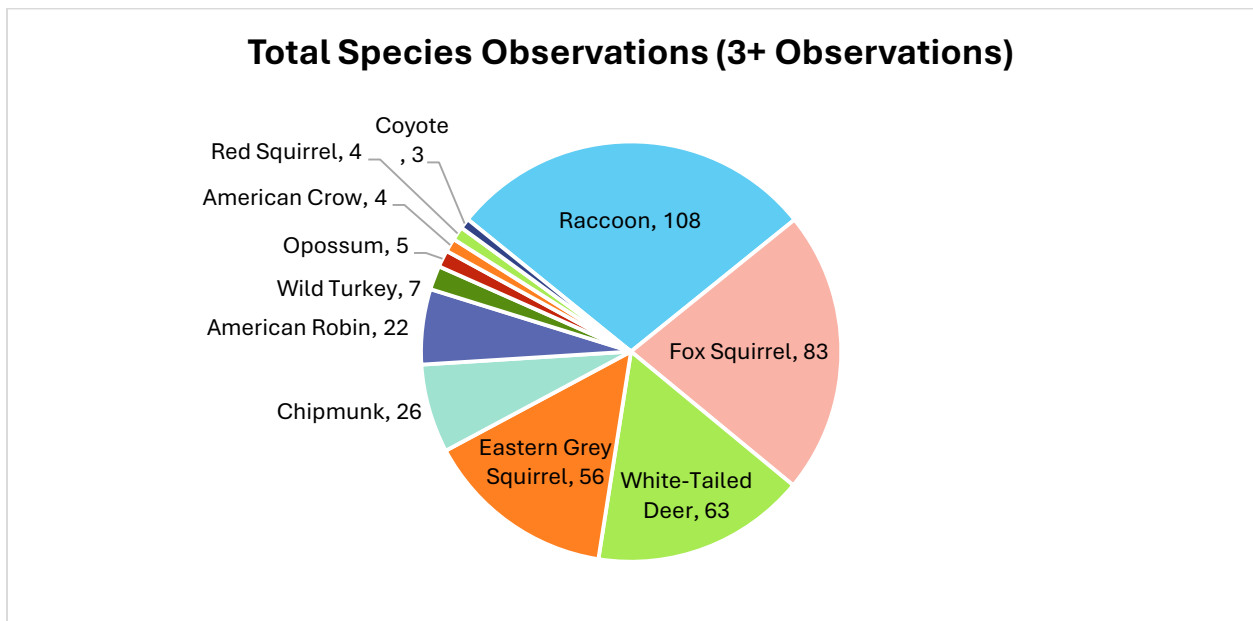


Figure 5

Total Species Observations (1-2 Observations)	
Single Species Observation	2 Species Observations
Cooper's/Sharp-Shinned Hawk	Barred Owl
Common Grackle	Carolina Wren
Groundhog	Common Snapping Turtle
	Great Blue Heron
	Unidentified Mouse

Figure 6

Altogether in this survey 19 species were detected with 392 sightings. The most frequently sighted species were raccoon (108), followed by fox squirrel (83), white-tailed deer

(63), and Eastern grey squirrel (56). Species with only one detection include barred owl, Carolina wren, common snapping turtle, great blue heron, and an unidentified mouse. Remaining species total sightings include chipmunk (26), American robin (22), wild turkey (7), opossum (5), American crow (4), red squirrel (4), coyote (3), Cooper's/Sharp-shinned hawk (2), common grackle (2), and groundhog (2). (Figure 5; Figure 6)

I recommend continuing to monitor the species composition of Scio Township's preserves as further research and data is needed to monitor environmental trends and provide best management recommendations. I also believe it would be beneficial to expand the research by conducting additional camera trap surveys in autumn, winter, and spring which may provide a larger sample set.

Jansen, P.A., Forrester, T.D., & McShae, W.J. "Protocol for Camera-Trap Surveys of Mammals at Forestgeo Sites." *ForestGEO*. Dec. 2018.

Frey, N. "Using Trail Cameras to Detect Small Mammals." *USU*. Sep. 2025.