



Photo Courtesy of Jennifer McNeal

Middle Creek in Motion

Keeping you updated through our seasons

SUMMER 2020

“To plant a garden is to believe in tomorrow.”

- Audrey Hepburn

We are in the thick of summer. The days are long and humid, and everyone is trying to stay cool, including Middle Creek’s wildlife. Most mammals avoid the mid-day summer heat, preferring to rest in the forest shade until temperatures drop and it’s time to feed. The same is true for our volunteers who tend the Visitors Center’s native plant and pollinator garden early each Saturday morning but retire before the sun reaches its peak. In this newsletter, we will introduce you to one of those volunteers, Ephrata-native Ellen Rupp, who has cared for the Visitors Center’s gardens for decades. We will also provide an update from Middle Creek manager Lauren Ferreri on summer wildlife management happenings, detail what goes into waterfowl research, look back on Middle Creek’s history, and provide other useful updates.

From the Field: Dog Days of Summer

While this summer has been hot and humid, Middle Creek wildlife continues to thrive. Juvenile birds and their parents are fueling up for fall migrations, shorebirds are already on the move south, and many Spring-born mammals are learning the food and forage ropes with their parents. Here’s what to look for in the field at Middle Creek this summer!

July – August

By late July and early August most wildlife has successfully produced young. At Middle Creek, it is common to see fawns nursing in the fields, tree swallows begging their parents for food, goslings going through the awkward transition to adult plumage, and young raccoons clinging to tree branches like novice high wire circus performers (see the kit in this edition’s headline photo). You might also notice Middle Creek’s various

fields and ponds begin to look different. The fields at Stop 3, once blooming with indigo and white Spiderwort and Beardtongue wildflower species, are transitioning to a mix of light purple and yellow flowers from the Monarda and Sunflower families.

Another change in summer occurs at the 30+ water impoundments at Middle Creek. Most visitors call them ponds, but these shallow water bodies are man-made and equipped with a special device called a water control structure that enables Game Commission habitat managers to raise or lower the water level based on the habitat and wildlife goals for the area. For example, various species of shorebirds begin to migrate south from their breeding grounds during July and August and use Middle Creek as a vital stopover site to rest and refuel. They feed on invertebrates present in exposed mudflats or wetlands. Habitat managers begin removing water (called “drawdowns”) from Middle Creek’s impoundments in the Spring and early Summer to create the necessary conditions for the valuable shorebird food source.



A “draw down” at Sportsmen’s Pond creates exposed mud flats ideal for migrating shorebirds.

September

In summer's final month, another major migration event begins. The first migrating waterfowl begin arriving at Middle Creek, typically led by green- and blue-winged teal. The exposed mudflats created by the earlier drawdowns begin to grow wetland-dependent plants like smartweeds, sedges, rushes and beggarticks, among others. Game Commission habitat managers also begin adding water back into the impoundments, flooding the new vegetation to trigger the release of seeds. The migrating waterfowl rely on these seeds and thrive in shallow water environments. Collectively, this drawdown and reflooding practice that occurs from late Spring to early Fall is called "moist soil management," and while early arriving waterfowl benefit in September, the habitat management practice will continue providing a valuable food source for other migrating waterfowl through the fall and early winter.

Duck, Duck, Goose: A Glimpse into Waterfowl Research at Middle Creek

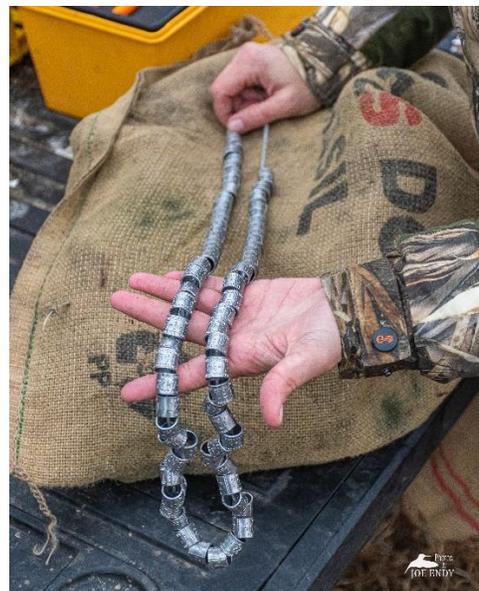
When you visit Middle Creek, there is a good chance you will see waterfowl. Many visitors gaze at tens of thousands of snow geese during the spring migration spectacle. Other visitors stalk the perfect photo during the fall duck migration. Still others may witness our annual Canada goose round up! Wait, there is a Canada goose rodeo?!? Not quite, but the Game Commission does catch Canada geese at Middle Creek each year.

While Canada geese bear our neighbor to the north's name, they are not from Canada. They disperse across borders and migrate to the ends of the earth. That is why the Game Commission, other state and U.S. federal agencies, and even other national and provincial agencies, must collaborate on wildlife management. The United States Fish and Wildlife Service (USFWS) tracks the populations of Canada geese and other game species to help set parameters for hunting seasons and harvest limits. States may restrict the number of allowable waterfowl harvested but cannot allow hunters to extend their harvest over the USFWS-set limits.

To determine the appropriate hunting season lengths and limits for waterfowl in each flyway (Middle Creek is part of the Atlantic migration flyway that begins in northern Canada and Greenland and follows the Atlantic coast to the Caribbean Sea and South America), the USFWS relies on state wildlife agencies, like the Game Commission, to perform visual surveys and mark/recapture studies that provide valuable information about population size and health. Middle Creek participates in many of these surveys and studies during the year (see table below).

Each summer, Game Commission biologists mark or "band" thousands of ducks and Canada geese in Pennsylvania. The small metal rings that serve as bands are attached to the bird's foot like a bracelet. Each band has a nine-digit number and website on it. If a hunter, field biologist, or other member of the public encounters the bird after banding, they may visit the website and log the number to help provide valuable data points about the bird's movements. By tracking banded birds, the USFWS can determine how population dynamics are changing over time, if hunting seasons and limits need to be adjusted, where birds are moving to and from, and how old birds can live.

On your next visit to Middle Creek, be sure to take a closer look at any waterfowl you observe. You might be surprised at how many are sporting jewelry on their leg in the name of science!



Game Commission biologist Lauren Ferreri holds a string of duck bands.

Visual Survey or Mark/ Recapture Study	Time of Year Performed at Middle Creek
Waterfowl Breeding Population and Habitat Survey	April, May
Goose Banding	June
Pre-season Duck Banding	August, September
Tundra Swan Productivity Survey	December
Mid-winter Waterfowl Inventory	January
American Black Duck Banding	January - March

How Does Middle Creek's Garden Grow?

If you have spent time at the Middle Creek Visitors Center, you likely paused to admire the garden at its doorsteps. Well-tended, ever evolving native plants and flowers about the entrance wall, and a pollinator garden greets visitors gazing out the east-facing windows over the lake.

For thirty years, the answer to how these gardens grow has been the same: Ephrata native Ellen Rupp. "Do you mind if I pull some weeds?" That's how Ellen's service to and employment at Middle Creek began. Up one day in the early 1990s for a walk, Ellen noticed the Visitors Center grounds overrun with thistle, mint, and other undesirables. She asked then Middle Creek manager Ed Gosnell if she could do something about it. Ed eyeballed the weeds and replied, "Absolutely you can."

Three decades later and Ellen has transformed the grounds of Middle Creek's Visitors Center into a point of pride to the delight of garden enthusiasts, birders, photographers, and other members of the Middle Creek community. Ellen also transformed herself. What started as an interest and a way to volunteer a few hours turned into an area of expertise when Ellen invested the time and energy to become a certified Master Gardener.

Ellen's volunteerism also sowed the seed for an eventual position at Middle Creek. Beginning in 1997, with the support of then Middle Creek manager Jim Binder, Ellen has worked part-time on the Middle Creek staff, managing the Visitors Center's three distinct gardens: the main hummingbird and butterfly garden between the entrance doors; the pollinator garden adjacent to the Middle Creek welcome kiosk, and; the bird food and shelter garden in the patio area overlooking the lake. Recently, with the backing of current manager Lauren Ferreri and the ever-ready support of Visitors Center attendant Al Keith, she launched an informal garden committee comprised of 8 volunteers who meet every Saturday. This crew is responsible for the new solar pond in the pollinator garden outside the overlook windows on the Visitors Center's east wall.

Like many long-time area residents, Ellen has witnessed a lot of changes to Middle Creek. For one, she remembers when the dam, lake, and Visitors Center were not even there! When she and high school friends ventured up into the Furnace Hills for social gatherings, the area now covered by the lake was still just Middle Creek and farmland. And when the Visitors Center was built in the early 1970s, Ellen and her family did not pay much attention to it --- they just hiked the trails and, sometimes in winter when conditions were right, cross-country skied.

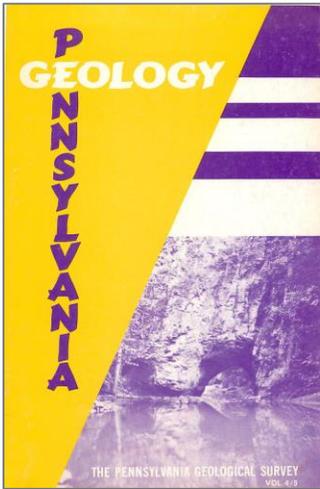
About the time she added running the Laurel Road, Millstone Road, and Tour Road to her exercise regimen, Ellen also started spending more time on the Visitors Center grounds, getting to know the staff, and starting her volunteer work, which also includes building and maintaining the property's eastern bluebird boxes.

As someone who has watched Middle Creek change through the years, Ellen is thrilled it has become a destination to connect people to wildlife conservation through the interactive Visitors Center exhibits and ongoing education programs. The size of the annual snow goose and tundra swan migration crowds amaze her, but she is happy to share Middle Creek's uniqueness and beauty --- something she appreciates every day driving up Hopeland Road to work --- with visitors from around the world.



Game Commission Flashback: Geology and Wildlife Management

In October 1973, *Pennsylvania Geology*, a bimonthly publication of the Pennsylvania Department of Environmental Resources, featured a spread on Middle Creek that began, "At first glance there appears little, if any, connection between the science of geology and management of wildlife." We disagree, they both rock! And if you think otherwise, you are clearly an igneous! Bad jokes aside, the article provides insight into the early formation (okay, that was the last one) of Middle Creek. Included below are select excerpts and photographs from the October 1973 article in *Pennsylvania Geology* about how the two agencies collaborated to bring the "Middle Creek project" to life.



GEOLOGY AND WILDLIFE MANAGEMENT

At first glance there appears little, if any, connection between the science of geology and the management of wildlife. However, in Pennsylvania these two subject areas and the two state agencies, the Bureau of Topographic and Geologic Survey and the Pennsylvania Game Commission, responsible for their administration have worked closely together through the years.

The most recent and perhaps the most dramatic example of this association has been the development of the Middle Creek Wildlife Management area located on the Lebanon-Lancaster County boundary near Kleinfeltersville. Here more than 5,000 acres have been provided by the Pennsylvania Game Commission for waterfowl management. And since waterfowl need marshy habitat, a dam was constructed and a 400-acre shallow-water lake created.

The cover (far left) and excerpts (immediate left, below left and right) from the October 1973 Pennsylvania Geology, which featured an article on Middle Creek.



In 1963 the Survey published a geologic map and report (Geology and Mineral Resources of the Womelsdorf Quadrangle) that was later used in all planning and development stages of the Middle Creek project. In the very earliest stage of the project, questions concerning the suitability of a dam site as well as the engineering

characteristics of the rocks at the site were asked by the Game Commission and answered by the Survey.



Later, as planning and construction of the dam and lake area progressed, the Game Commission designed four picnic areas that were to include tables, drinking water, restrooms and parking lots.

As a final input to the Middle Creek Wildlife Management Area project, the Survey was asked to prepare simple sketches and short dialogue on the geologic history of the region. The exhibits contractor took this material and worked it into the first display case in a developing story ending with wildlife management in this southern Lebanon County region.



So you see, there is a connection between geology and wildlife management in Pennsylvania.



Free Wildlife Remote Learning Resources and Virtual Field Trips for Fall 2020!

Each year, more than 2,000 Pennsylvanians enjoy an educational program at Middle Creek. While the Middle Creek Visitors Center is closed, the opportunity remains to connect with a Game Commission educator and wildlife learning resources through [Wildlife on WiFi](#), the Game Commission's virtual learning campaign.

The [Wildlife on WiFi remote learning hub](#) hosts dozens of at home wildlife conservation lessons, activities, videos, wildlife webcams, storybook readings, and more! Game Commission educators are also available for "virtual field trips" via Zoom and other platforms. To learn more or schedule a virtual field trip, send us an email at wildlifeonwifi@pa.gov.



A Game Commission educator hosts a virtual field trip for a Pennsylvania 4th grade class on Zoom.

Middle Creek Manager Lauren Ferrari Hosts Webinar on Kestrel and Barn Owl Banding

Pennsylvania Game Commission biologists recently launched a new virtual series to help Pennsylvania residents connect to wildlife no matter where they are. The debut edition of *From the Field* featured Middle Creek manager Lauren Ferrari and Game Commission biologist Dan Mummert in the field working with American kestrels and barn owls. If you missed the live event, not to worry, the recording is available on the Game Commission YouTube channel. To view, [please click here](#).



New Episodes of Game Commission Podcast *Call of the Outdoors* Available

The PGC recently launched its new podcast, "[Call of the Outdoors](#)," a series focused on wildlife, hunting, habitat and conservation across the Keystone State. The podcast is hosted by Game Commission Marketing Director and world turkey calling champion Matt Morrett. Episodes are available online at www.calloftheoutdoorspgc.com.

Listeners can also subscribe and download podcast episodes on [Apple Podcasts](#), [Google Play Store](#), [Spotify](#) and [Stitcher](#).

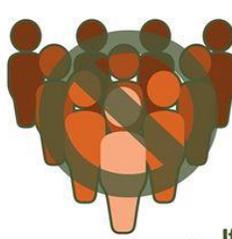
COVID-19 Update: Staying Safe on State Game Lands and at Middle Creek

The Middle Creek Visitors Center remains closed in response to the 2019 novel coronavirus (COVID-19). This closure applies to the Visitors Center only. All other Middle Creek public access areas and trails are open for public use and recreation. While enjoying Middle Creek during this time, please observe all appropriate precautions. Game Commission managers continue to monitor the situation and will communicate any changes on the Game Commission website (link below), on Middle Creek property signs, and in this newsletter.

For more information, please visit the [Pennsylvania Game Commission's coronavirus-cancellations bulletin](#).



While engaging in recreational activities is permitted during COVID-19 stay-at-home orders, please practice these additional guidelines when enjoying the outdoors.



Do not recreate in large groups.



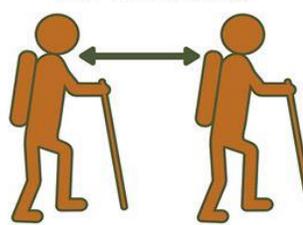
If a parking lot is full, please go to another lot or trail. Do not make your own parking.



Carry your trash in and out.



Avoid touching your eyes, nose & mouth. Cough or sneeze into a tissue or elbow.



Maintain a 6 foot distance when passing others.



Be aware of hunting seasons. Wear orange.

Contact Us

Have a question or comment about Middle Creek Wildlife Management Area? We would love to hear from you! Please contact us at middlecreek@pa.gov.