

1 This is a good area for viewing butterflies. Many of the habitat characteristics preferred by butterflies can be found here. These characteristics include a sunny location, protection from the wind, wet spots for "puddling", the presence of host plants for caterpillars and nectar plants for butterflies. Milkweed, for example, is an important host plant for monarch caterpillars while also providing nectar for monarch butterflies. Many other butterfly species, such as banded hairstreaks, pearl crescents, great spangled fritillaries, American ladies and many types of skippers, rely on milkweed nectar also.

2 The field habitat to the right of the trail is being managed for species that require early successional habitat. These species include indigo buntings, prairie warblers, American goldfinches, yellow-breasted chats, blue-winged warblers and American woodcocks to name just a few.



The American woodcock is a species of interest to MPEA managers. Historically, this area had a relatively large population of breeding birds. As agricultural use of the area declined, the abandoned farm fields provided ideal habitat for woodcock. However, through natural succession, most of the old fields in the area returned to forest. Without the early-successional habitat that the woodcock require, their population numbers declined dramatically. Restoration and management of field habitats will benefit many species and add to the diversity of wildlife in the Environmental Area.

3 The Virginia pines, seen here in a state of decline amidst the deciduous canopy trees, are a sign of ecological succession. Succession occurs in response to a disturbance – in this case, clearing of the land for agriculture. Corn was most likely grown in this field as little as 45 years ago. Once farming stopped, pioneer species like the Virginia pine became established here. As time continues to pass, the deciduous trees will eventually dominate the area.

10 Many of the plant species found in the floodplain are different from those found in the upland forest. For example, skunk cabbage, which is abundant in this area, is an indicator of wet soils and would not be found in the drier upland. Some other plant species found in the floodplain include cardinal flower, monkeyflower, mad-dog skullcap, green dragon, buttonbush, and American sycamore.

11 This stream may once have been part of the main branch of the Middle Patuxent River. The river has since changed course and cut off this section. The "oxbow" however, is spring-fed and thus still flows at this end, although it is sometimes dry for 2 months or more during the summer.

12 The MPEA is impacted by surrounding land uses such as residential housing, roads, industry, and agricultural areas upstream. Some of these impacts are in the form of changes in the hydrology of the surrounding areas. Increased surface runoff and extremely high water flows during storm events cause extensive stream bank erosion. Less obvious are the effects of having an island of habitat that may be cut off from other forested areas by developments in between. Wildlife may be unable to move freely between suitable habitats, causing populations to become isolated from one another.

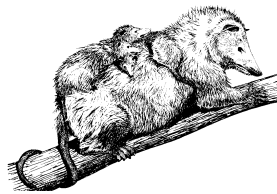


13 This is the upstream end of the "oxbow." The river may have changed its course here partly in response to a large fallen tree. The fallen tree would have collected debris and sediment, building up a berm to block the stream flow. The still pools of water, which now fill the old stream bed, make excellent breeding areas for frogs and toads. These pools are usually teeming with activity during the spring months and many tadpoles can be easily observed.

4 The structure to the left of the trail is a deer enclosure. Deer overabundance is a serious problem in this area as well as throughout the eastern United States. Research has shown that eight deer per square mile can have serious impacts throughout the ecosystem. Native species of understory plants such as blueberry, sweet cicely, azalea and mountain laurel are lost to browsing. Forest regeneration ceases as tree seedlings are highly preferred food of deer. As these plants disappear, so do the other species of wildlife that depend on them. In 1971, the breeding bird population at the MPEA was surpassed only by a virgin forest in Prince Georges County. Today, many of those species cannot be found here. Indeed, the estimated 45 deer per square mile (more than 300 total in the Area) found at the MPEA are having a profound negative impact on their surroundings. The enclosure, one of ten in the MPEA, is part of a long-term research study.

5 The large vines invading the canopy in this area are grape vines. There are several species of grape native to this area, including fox grape, summer grape, and riverbank grape. Grapevines need sunlight and will climb over other plants to get it. Often these plants are harmed as they are robbed of sunlight. The sheer weight of the grapevines can bring down trees, creating openings in the canopy. The fruit is a favorite food of many birds, and is also eaten by raccoons, opossums, skunks and other mammals. The dense foliage provides nesting sites for birds, as well as good escape and shelter cover. Grapevine bark is often used as nesting material.

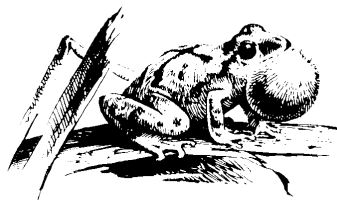
6 This point along the trail is a good area for viewing the topographic relief typical of this stream valley. On average, the highest points within the MPEA are about 400 feet above sea level (413 feet just above you) with 442 feet being the highest. Below you, the floodplain averages about 275 feet above sea level.



14 Invasive exotic species are second only to habitat destruction as a threat to the integrity and diversity of our natural ecosystems. Invasive plants, like the multiflora rose seen here, often colonize an area in response to a disturbance such as this sewer line that was put in to support the surrounding communities.

15 As seen earlier, the Virginia pine stand here indicates that this area was once an old field. Notice that many of the flowering dogwoods, a common understory species, are dead or dying. The cause of this is two fungal diseases – dogwood anthracnose and powdery mildew. Since it was first reported in 1978, dogwood anthracnose has spread south and west from southern New England.

16 This old, concrete wading pool has been converted into an amphibian habitat by local students. Within a week of the students' work on the project, masses of frog eggs were laid in the pool and soon after they were joined by strings of toad eggs.



17 This small clearing, to the left of the trail, is the location for the MPEA's first outdoor education classroom. MPEA managers are developing educational programs for Howard County K-12 students. These programs will be designed to work in concert with the County's Science Curriculum.

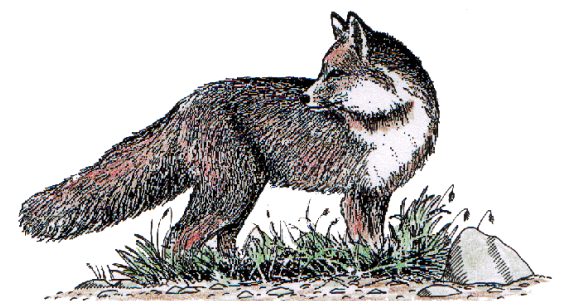
Source/Artist for graphics: red fox – EcoPics, Crystal Graphics Inc. woodcock, spring peeper – Hassinger, J. et. al., Woodlands and Wildlife. 1979. Artist: Ned Smith opossum and redback salamander – DeGraff, R. M. and D. D. Rudis. New England Wildlife: Habitat, Natural History and Distribution. 1983. Artists: R. A. Alexander and A. Rorer, resp.

7 This mature forest is typical of much of the upland forest cover in the MPEA. The type of forest community found in an area is largely determined by climate (the amount of sunlight, temperature, and precipitation), and by other factors such as topography, geology and soils, disturbance, biotic interactions, and human influences. A typical forest community type for this area is the oak – hickory forest, with tulip poplar trees dominating at mesic (moderately moist) sites like this one.

8 Spicebush dominates the understory in this area. The red fruits of this native shrub provide food for wood thrushes, veerys and other songbirds. Spicebush is also a larval host plant for the spicebush swallowtail butterfly. White-tailed deer do not browse spicebush as heavily as many of our other native plants, as it is not a preferred food. Perhaps the aromatic leaves have an unpleasant taste to deer. This preferential browsing may aid spicebush in gaining dominance in areas where deer are overabundant.

9 Take notice of the drainages in this area that catch surface water as it flows downhill to the river. Precipitation that falls within the watershed makes its way through the soil and as surface runoff into small streams and drainages. These streams feed into the rivers and eventually the water flows into the Chesapeake Bay.

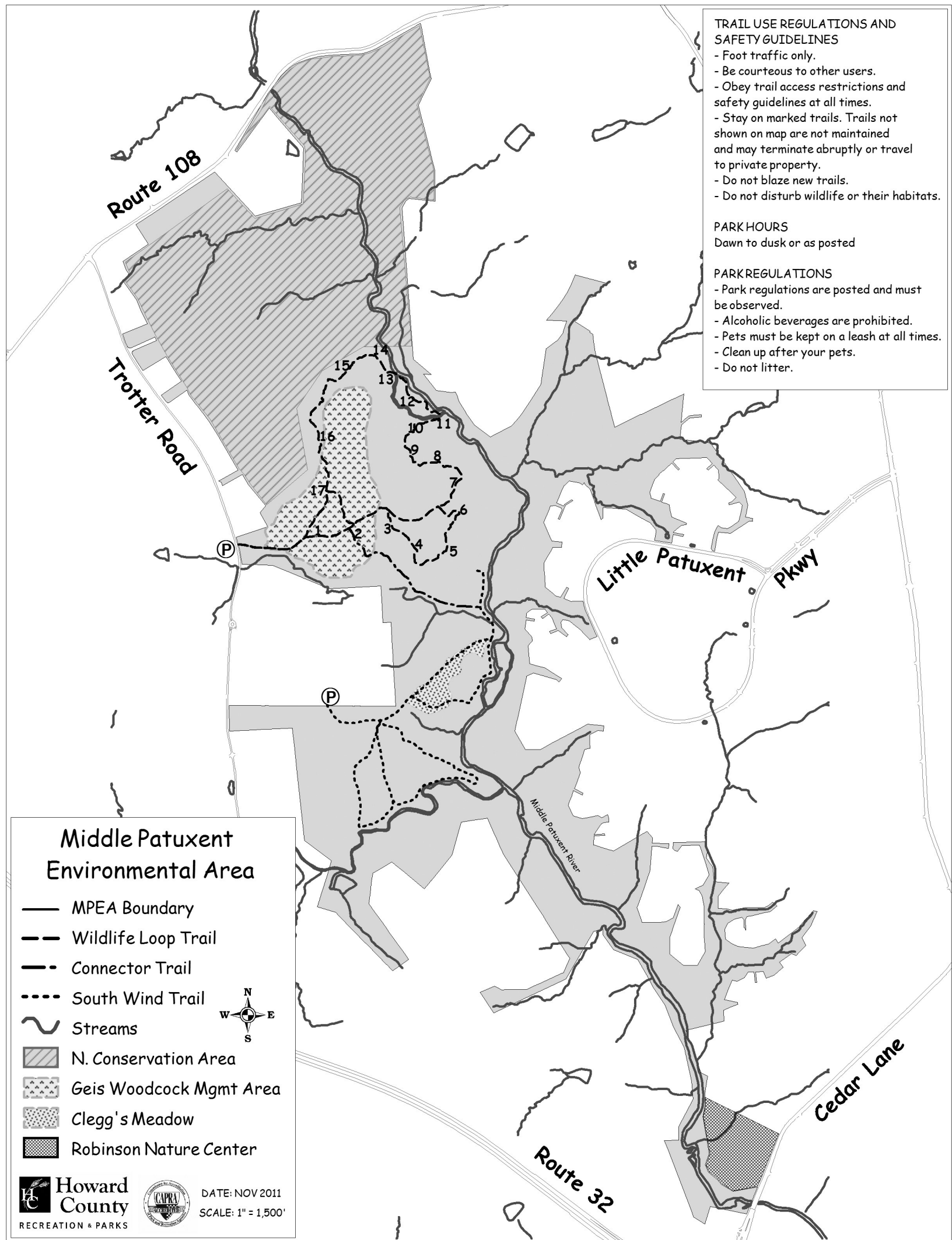
Middle Patuxent Environmental Area



Wildlife Loop Trail Interpretive Nature Walk

Welcome to the Middle Patuxent Environmental Area (MPEA). The MPEA, established in 1996, is 1,021 acres in size and contains a diversity of habitat types. There are upland and bottomland hardwood forest, fields, wetlands, ponds, and riparian habitats. The primary components of the MPEA's mission are natural resources management, education, research and recreation. There are 5.4 miles of hiking trails in the MPEA. This brochure will guide you through the Wildlife Loop Trail (2.4 miles, red markers). Numbered posts along the trail correspond to the numbers in this brochure. ENJOY!

For more information on natural resources management projects or volunteer opportunities at MPEA, contact: Cheryl Farfaras: 410-313-4726 cfarfaras@howardcountymd.gov.



Wildlife Loop Trail Narrative Description:

The Wildlife Loop Trail is about 2.4 miles in length, and marked with red, 3" aluminum trail markers. The trailhead is located at the Trotter Road entrance to the environmental area, in the central portion of the western boundary. The trail starts out going east through early successional habitat between the wildlife clearings. At the first trail split, the branch to the right will take the hiker in the direction indicated by the interpretive trail brochure (in the order of the numbered trail points).

At the next trail intersection, the Wildlife Loop Trail continues straight, while entering the meadow to the right will lead to the start of the Connector Trail. Continuing along the Wildlife Loop, the hiker will come to another split in the trail. Continuing straight (the shorter route) or turning right will eventually lead to the same point at the next intersection. The longer route to the right travels through a declining Virginia pine stand, and offers some scenic glimpses of the

wetland down below in the floodplain, as viewed from the hill above. As this small scenic loop rejoins the main trail (turn right) the hiker finds himself alongside a large, fern-filled gully with a small ephemeral stream at the bottom. This spot is the location of an old sawmill. The evidence is in the form of a subtle mound (sawdust) and old Esso oil cans.

At this point, the trail moves uphill through mature, upland oak-hickory forest, dominated by tulip poplar. The trail winds leisurely through the woods, around the mid-slope of a hill, before eventually dropping down into the floodplain.

The first glimpse of water is in the spring-fed pools of an oxbow that is usually dry at both ends. The trail crosses the downstream end of the oxbow over a small bridge. The trail works its way northwest along the Middle Patuxent River, through bottomland red maple forest, before crossing the upstream end of the oxbow. After traveling

a short distance further, through a more open section of sewer easement, the trail turns west away from the river.

Here the trail goes past another declining Virginia pine stand, moving southwest into mature upland forest again. As the trail winds south, back towards the starting point, the hiker will pass some interesting landmarks. There is an old abandoned '59 Chevy, and nearby are the remains of an old wading pool. The trail passes an outdoor classroom before reaching the first trail split and the end (or beginning) of the trail.