TOWN OF HERNDON

Runnymede Park

HABITAT AREAS

"Habitats" -- for wildlife and for people -- have a lot in common. We all need FOOD, WATER, SHELTER, and SPACE to support life. Shelter for people is usually buildings. Wildlife shelter in Runnymede is provided primarily by vegetation that is exceptionally diverse.

What may look like "overgrown stuff" is often a delicately balanced ***natural community***, in which each organism serves a purpose. In woodlands, for example: tall *canopy* trees shelter migratory songbirds; old *tree trunks* are homes for cavity-nesters and for another realm of life beneath the bark; medium and small *understory* trees shade a *shrub layer*, and *groundcovers* of vines, ferns, wildflowers, and mosses blanket parts of the system that live beneath your feet! All support each other. Unnecessary clearing to "clean up" underbrush, leaves, branches and rotting logs destroys the forest community--the ecosystem.

Habitat areas are listed by standard vegetative cover types. Key numbers are shown at typical points for convenience; the actual extent of a type of habitat can be observed as you get acquainted with the park.

1 WOODLAND MARSH
When undisturbed by people, wood ducks and mallards love to feed on salamander eggs in the Spring in areas like this. In this spot, salamander populations are nearly gone. The salamanders depended on pre-development wooded upland habitat. Undisturbed "wild" corridors and no use of yard and garden chemicals would help restore some salamanders.

2 MARSH/SWAMP
Cattail, swamp oak, willow, alder, red-twig and silky dogwood, spicebush, sassafras, sumac, jewelweed, thistle, milkweed, Joe Pye and many other plants and wildflowers are typical. Invasive exotic plants that are not desirable include bull thistle, lawn grasses and multiflora rose. Work to restore beneficial plants needs to continue.

3 WET MEADOW
Muskrats and beavers, who eat cattail roots, were killed in a major spill of diesel fuel into Sugarland Run in 1993, when a pipeline ruptured in Reston. Several years without the animals allowed cattails to fill in the marsh. Then other wetland and wet meadow plants became established and changed the landscape. This illustrates one type of natural wetland succession, though in this case, it was caused by human actions (the oil spill)

4 DECIDUOUS WOODLAND
Mixed Eastern and Southern species. Trees were cut for lumber in the late 1800's. The hardwood forest that is now along both sides of Sugarland Run and up the slopes from the stream is diversified regrowth. Canopy trees include oak, hickory, ash, American sycamore, tuliptree, and maple. Understory trees include dogwood, redbud, sassafras, bladdernut, alder, black cherry, and paw paw. In the floodplain, where most of these trees are located, they are typical of woods that populate stream valleys near the water and along streambanks -- the riparian forest.

5 CONIFEROUS WOODLAND
Dense evergreen stands of cedar and pine provide a haven for wildlife year-round -- shelter, cover, food and protected nesting areas for birds and small mammals.

6 MIXED HARDWOOD & EVERGREEN
Clumps of mixed tree species, throughout the park, are resources for reseeding. Near the meadow and parkway, they provide important visual and noise buffers as well as habitat.

7 THICKETS
These dense areas create natural barriers to people and protection for wildlife. Without these thickets for shelter, many of the birds that now live in the park would disappear.

8 MEADOW
Native grasses, sedges, and sun-loving wildflowers provide essential habitat for grazing deer, butterflies and many other insects, rabbits, birds, and woodchucks. Voles, shrews, and meadow mice are an important part of the food chain for wildlife -- they are eaten by hawks, owls, and red fox.

9 WATER
The perennial and intermittent streams, broad floodplain, and other wetlands support all wildlife in the stream valley. They are primary habitats for many aquatic species--from frogs and insects to crustaceans, fish, and water bugs.

Aquatic life was decimated in Sugarland Run during a major diesel fuel spill in March 1993. The complex ecosystem is still rebuilding, in spite of continuing insults and pollutants.

Pollution? Oil films in the marsh are automotive oil that washes in from streets. Oily-looking film also may come from decaying vegetation. "Orange stuff" sometimes seeps into puddles and appears along the edge of the stream. This is iron oxide bacteria that is "eating" iron that weathers from rocks...a harmless natural process.

Runnymede Park is a key element of the Town's Chesapeake Bay watershed education objectives.

This map prepared and produced by the Friends of Runnymede Park, Ranger volunteers.
September 2001 edition

SPECIAL SPOTS

Interpretive materials will be developed over time to explain key natural features. These and many more spots are used as study-stations by naturalists for park programs.

(1) **BLADDERNUT GROVE** ~ unique fruits... inflated papery capsules in Autumn..

STREAM CHARACTER
Compare the following spots:

(2N) **2-North:** stream has not yet cut down to rock. The slower-flowing water spreads into wetlands.

(2C) **2-Central:** the stream has eroded to expose diabase rock, but the rock limits additional downcutting.

(2S) **2-South:** slow and meandering, BUT notice the severe bank erosion, undercut trees, and gravel deposits--due to increasing stormwater runoff from development.

(3) **MILLRACE** (see text, other side)

(4) **PAW-PAW PATCH** Late-summer fruit for fox and raccoons Paw-paw leaves are the larval food for zebra swallowtail butterflies.

(5) **VERNAL PONDS** in the woods along Sycamore Path are breeding habitat for salamanders, toads and tree frogs, who live in upland woods most of the year.

(6) **COMPARE ~** the shapes of the "open grown" trees in the picnic area, with the same species of trees in nearby woods. Which trees compete most for nutrients, water, sun, and space?

CAUTION

ROCKS in the stream are SLIPPERY

Learn to recognize POISON IVY

HOW IT GROWS
Poison ivy grows as a vine that climbs or trails, and as a shrub.

BERRIES are white.

LEAVES are in threes, but size, shape, and luster are highly variable. Young leaves in spring--and autumn leaves--are red. Summer leaves are green. All parts of this plant--including the hairy brown vines that climb trees--may cause allergic reactions.

Many other "harmless" plants also have three leaves.

IF YOU TOUCH POISON IVY ~
The best quick treatment to prevent rash reaction: rinse thoroughly with running water...in the stream, fountain, or at home. Use COOL, not hot, water. Do this as soon as possible. Do not use "wipes", do not scrub or rub around. Use dish detergent or other cleanser that does NOT contain lanolin or other oil.

SNAKES ~ Black rat snakes and other non-venemous snakes are the most commonly seen. Please do not kill them. Respect their place in nature by leaving them alone.

OTHER ANIMALS ~ You are visiting their home. Observe, enjoy -- but do not abuse them or take them away.

TRAILS

PRIMARY TRAVEL
●●●●● Asphalt
○○○○○ Gravel or natural surface
FOOTPATHS
●●●●●● Natural surface, gravel, mulch
OFF-LIMITS ~ The house belongs to the Town. It is part of the park and is temporarily occupied until we have a nature center.

GEOGRAPHIC SETTING AND NATURAL ASSETS

Runnymede Park's total area is 58 acres, including a stream valley and upland areas. About 60 % of the park is unbuildable flood plain and the potential for built improvements is limited by terrain, rocks and hydric soils (including swelling clays). The upland natural habitat areas are increasingly rare and are valuable resources for wildlife and for nature study in this urbanizing area.

GEOLOGY

The entire Herndon region was once covered by a freshwater lake. Lake sediments were deposited before the Age of Dinosaurs. Later, igneous (melted) rocks moved from great depth and were forced (intruded) into the lake sediments along cracks, faults, and between layers of the lake sediments. These intrusive rocks are called *diabase*.

Heat from the intrusions, and pressure, changed the lake sediments into sandstone, siltstone and shale, in varying degrees of hardness.

Over geologic time, uplift and erosion have exposed rocks in places. The soils are the result of weathering of rocks and deposition of sediments carried in streams. You can see exposed rocks along Woodland Trail and in many places along the southern and central reaches of Sugarland Run.

STREAM AND MARSH

Runnymede is part of the Sugarland Run greenway, a stream valley that extends about 10 miles from Spring Street in Herndon to the Potomac River. This connected corridor is a recreational resource and a travelway and habitat for wildlife.

Sugarland Run is part of the Potomac Basin drainage system. The part of the Sugarland Run watershed that drains into the stream in this park covers about 4 square miles (2,580 acres).

Water quality and stream characteristics reflect changing land uses throughout the area—from farming to urbanized development. The headwaters and most tributaries have been developed, with natural channels diverted into storm sewers. Sediment severely degrades water quality. Paved areas, rooftops, and turf cause increasing stormwater runoff, which affects water temperature and chemistry and causes significant streambank erosion. Non-point source pollution from lawn fertilizers, pesticides, road salts, and motor oil destroy aquatic habitat value. Careless trash disposal outside of the park is washed in by floods; it accumulates rapidly and requires cleanup.

Biological water quality is monitored sporadically and efforts are being made to monitor chemical quality. This stream should be a spawning area for finfish, but the impacts of change in the watershed make it difficult for aquatic life to survive. Shrubby and wooded areas in the park encourage absorption of storm water. The marsh is an excellent natural filter for runoff and storm sewer effluents that empty into the marsh. Wetlands have amazing capacity to absorb and convert many harmful pollutants into less harmful materials, but there is a limit to the capability of the marsh to biologically cleanse the water.

WILDLIFE HABITATS

The diversity of terrain and vegetation within this relatively small area is unusual. The combinations of cover, food, and water are ideal for a wide variety of wildlife that can adapt to the general urban setting. 13 of 21 general types of wildlife habitat are represented in the park, and the many edges between habitats are rich resources for wildlife. Dense thickets, brush piles, shrubby vegetation, and mixed species of trees are essential for wildlife shelter, cover and breeding.

Runnymede's plants and animals live in communities, in complex and interdependent systems — somewhat similar to the way we live in built communities. The natural communities here provide important biodiversity in our community and we can learn a lot about survival for people from wildlife!

TREES & SHRUBS

46 tree species and 23 shrub species occur in the park. Dead trees (snags) that are not a safety hazard are left standing as habitat for cavity-nesting birds such as woodpeckers and bluebirds. The natural process of eastern forest succession is demonstrated along Redbud Trail. Trees and shrubs along the stream are typical of a riparian forest; trees in the marsh area are swamp species.

Biomass is the amount of vegetation. For example, there was much more "biomass" before adjacent woodlands were cut for residential development. One result is that songbirds that breed in forest interiors no longer have enough woods here and all birds are much more vulnerable to predators, such as cowbirds and free-roaming domestic cats.

MEADOW

The meadow area is not "overgrown lawn". It contains a rich assemblage of native wildflowers, grasses and sedges. Meadows play an important role in nature and some parks in the area have worked for years to establish meadows. We already have a high-quality meadow!

PLANT INVENTORY & RESTORATION

As of 2004, nearly 450 native plants have been identified in the park by Maryland and Virginia Native Plant Societies and Runnymede Rangers volunteers.

Invasive exotic plants are a continuing problem. They need to be removed so that beneficial native species can provide better habitat for wildlife. For example, invasive multiflora rose hips are eaten by birds but do not have the nutrients and oils the birds need. Native rose species are oily and provide energy for the birds. For more information: 703-435-6800, Ext. 2113.

ANIMALS

Fox, deer, beaver, squirrel, opossum, groundhog, skunk, raccoon, bat, chipmunk, turtles, rabbit, mouse, vole, shrew, birds, reptiles and amphibians, small aquatic species, and countless bugs, insects, and spiders live in the park.

HUMAN HISTORY & INTERACTIONS

A prehistoric Native American village was probably near the stream. A sawmill/gristmill stood where the Hunter's Creek clubhouse is now, but all traces were lost during development. Traces of a millrace can be seen; it was used to supply water to power the mill and to float logs to the mill in the late 1800's. The uplands were farmed early in the twentieth century. The "Carroll House" includes a stone cabin, circa. 1905, probably used as a vacation cabin. The cabin will be restored in the future.

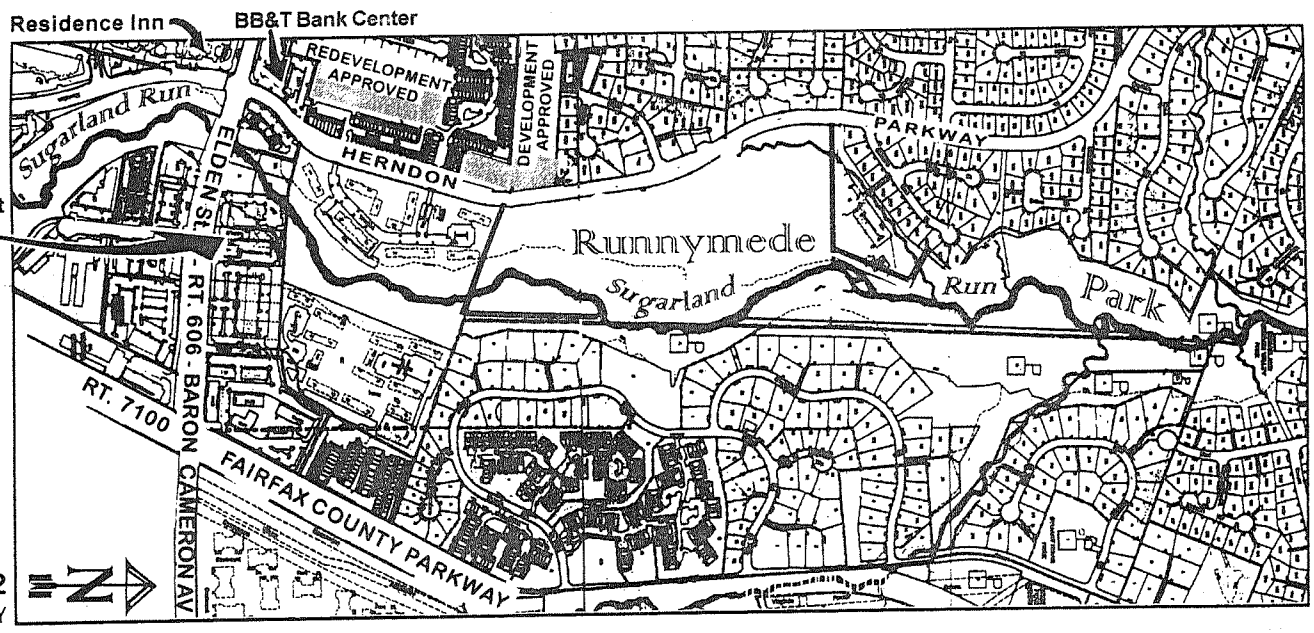
There are many examples of "man-nature" interactions throughout the park.

The purpose of the Friends of Runnymede Park is to protect, enhance, and preserve the physical, natural, and cultural heritage of this special parkland.

Friends of Runnymede Park

Post-consumer recycled content % may vary

SEPT. 2002
UPDATED: THIS SIDE ONLY



TOWN OF HERNDON VIRGINIA 1879

Runnymede Park MAP

■ TRAILS ■ FEATURES ■ POINTS OF INTEREST ■