

# Meadows

Rock Creek Park  
Washington, D.C.



**S**ince 1977, the National Park Service has engaged in a program called "Meadows" in Rock Creek Park. Its purpose: to increase nature's diversity within the park. If you want to see birds, butterflies and insects, and flowering plants, meadows today are among the richest areas of parkland.

Rock Creek is 85 percent woodland, mostly second-growth, mature trees that shed their leaves in the fall. Playgrounds, parking lots, roads, and mowed lawns occupy most of the remaining land for the public's enjoyment. But here and there along the fringes meadows have created swaths of deep grass and wildflowers, not lawn, not forest, but areas in between,

left to grow on their own by reducing mowing. Most of the meadows are small and scattered, representing about 23 acres out of some 2800 under Rock Creek's jurisdiction. The meadows have added habitat for plants and animals in the park.

With one exception, meadows grow undisturbed. In the Washington area abundant rainfall encourages trees to grow. If left entirely alone, the meadows would revert to woods. So once each spring, mowers cut down the dead stalks and woody sprouts.

Aside from that degree of management, the meadows are natural areas, demonstrating a succession of growth in interesting ways. Naturalists have

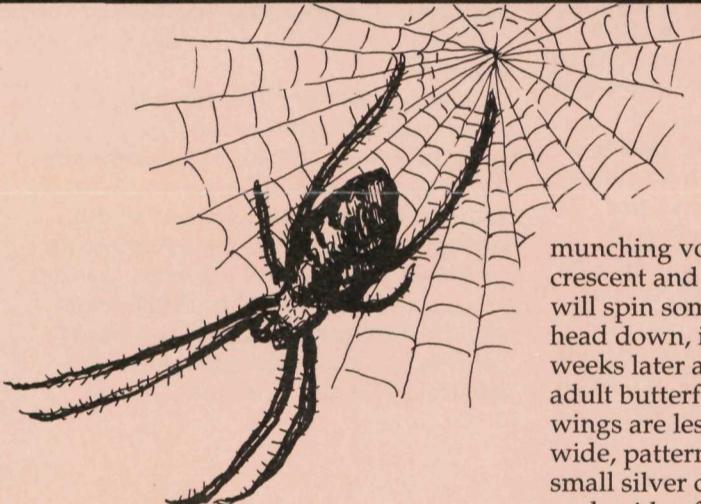
identified more than 400 species of sun-loving plants in the meadows. Tall grasses have gained a foothold; birds, a place to nest and perch; butterflies, an additional area that supports their life cycle. Meadow flowers and grasses attract pollinators; insects, in turn, support the small mammals scurrying through the weeds.

For most casual observers, the changes go unnoticed. But to those who watch carefully, the meadows are alive with activity. Here is a close-up of a few species found in meadows through the turn of a year in Rock Creek Park, as a naturalist might see it.

## Winter

The dry stalks of native purpletop grass stand three to five feet tall with seeds borne on stiff stems. The bull thistle, a biennial, marks its first season in a basal rosette whose prickles guard it from being eaten. Among the mammals the short-tailed shrew, most common in the park, keeps up its quick pace day and night foraging for insects. Though it measures four or five inches from the end of its short hairy tail to the tip of its whiskered nose, it weighs less than half an ounce.

Fair prey if not well hidden, the pearl crescent butterfly hibernates in larval form on the ground in winter. The goldfinch, a yellow-green bird with two white bars on its black wings, keeps a sharp eye out for seeds and larvae. In February it begins to molt and the male's bright yellow spring and summer plumage comes in, along with his low-slung black cap. Dangling from a twig is the tear-shaped egg sac of the black and yellow garden spider, packed with hundreds of eggs. During the late winter thaw, the eggs begin to hatch and a small spider can be seen slowly pulling itself up its silken dragline.



black and yellow garden spider

munching voraciously. It is a pearl crescent and soon, after it stuffs itself, it will spin some silk to suspend itself, head down, inside its chrysalis. Two weeks later at the end of April, the first adult butterfly breaks out of its cage. Its wings are less than an inch and a half wide, patterned in orange and black. A small silver crescent shows on the underside of its hind wing. Meantime the goldfinches have been chasing each other and singing. "Perchicoree" is one of the male's courting songs, but breeding and nesting will come later in summer. All the birds are signaling their presence in the meadow with singing.

## Spring

Spring is noisy with life. Leaves unfurl and newborn creatures take their first breaths. Seed cases swell and sprout; caterpillars begin chewing again. The main color is green—all shades of green. Cool season plants start growing and flower early, but purpletop grass needs a minimum temperature of 60° -65° F for its roots to spread. Above ground the bull thistle's prickly blue-green leaves grow as its taproot expands. The shrews are building their breeding nests of dry leaves and grass. During mating and for the 17-21 days of gestation, mother and father shrew share quarters. When the young arrive—an inch long, pink, and hairless—the male is driven out. But after a month, the young are weaned and pushed from the nest as the mother briskly prepares for her next litter.

Tiny black and yellow garden spiders shed their skins just before coming out of the egg sac. They move up the plant stalks, face into the wind, and lift their abdomens. Air currents pull silk thread from their bodies and soon the spiders launch themselves on their silken kites to travel a few feet or even miles. Hundreds hatch but most are eaten before they are grown.

The black caterpillar with yellow dots and stripes and eight rows of spines, pulls itself up an aster plant and starts



goldfinch

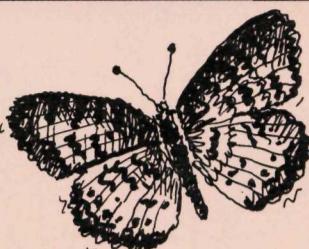
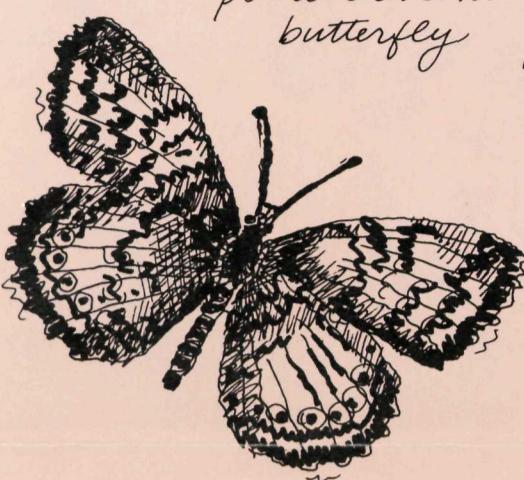


bull thistle

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pearl crescent butterfly

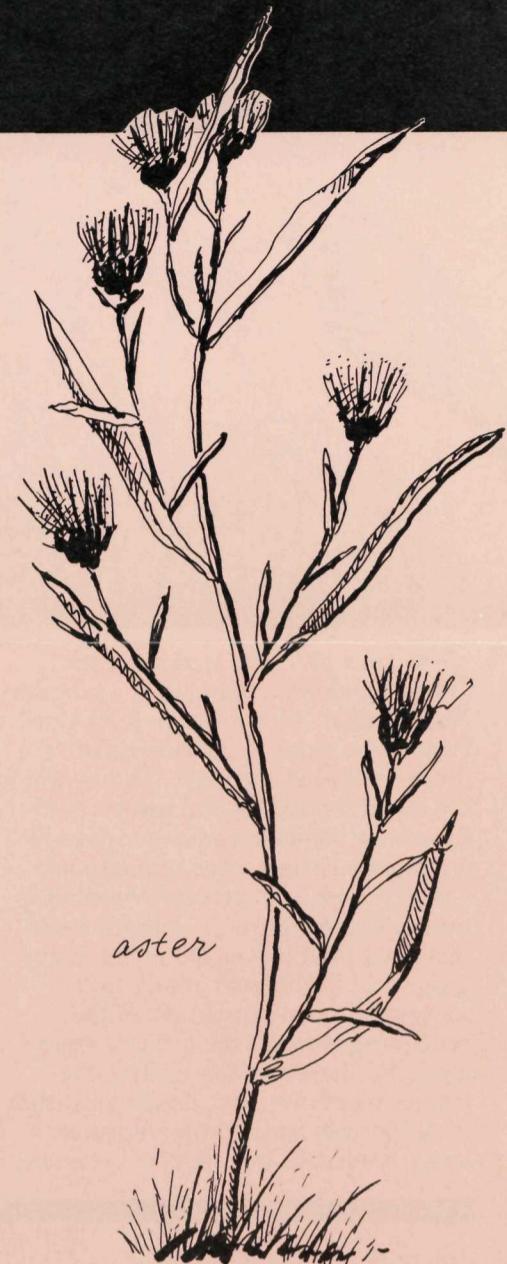


## Fall

Preparing for winter is the theme of the season, whether by storing food, growing winter coats, laying eggs, or dispersing seeds. The wear and tear of summer's work can be seen in missing feathers, tattered butterfly wings, chewed leaves, or insects short a leg or two. The bull thistle looks as if it has been in a pillow fight, its down strewn about. Most of fall's seeds are designed for travel, either by hooks that fasten on passersby, or by parachute, such as those of milkweed and asters. Purpletop grass starts its dormant time, though the seeds persist on the stalks. A surprising number of flowers are still blooming in October: asters, goldenrod, sweet everlasting.

Owls hunt the shrew; it gives out a high-pitched squeak if captured. The male garden spider comes to mate with the female on her web, a signal for her to build her egg sac. She spins it of brown and yellow silk, then lays hundreds of eggs in the middle. Mission complete, the adult spiders' lives come to an end.

Selecting an aster leaf, the female pearl crescent butterfly lays her pale eggs. In a week or two, tiny caterpillars hatch to do what they are born to do—eat. This brood, grandchildren of the spring butterflies, will not complete its cycle this year but will hibernate on the ground until spring. The adults generally die after mating. The stay-at-home goldfinches look alike again after their fall molt. The nest is empty.



## Summer

The warm season plants grow tall, goldenrod and aster as much as four to five feet. Purpletop grass turns up everywhere that has not been mowed. Colors are bright in the meadows. In its second year, the bull thistle's six-foot stalk is crowned with purple flower heads. A bundle of energy, the short-tailed shrew may eat three times its weight per day, finding plenty of insects, snails, beetles, and even small frogs and birds. Its slate-colored fur and tiny eyes are seldom seen because it darts along runways under leaf litter.

At the center of her two-foot circular web, the female black and yellow garden spider has placed her zigzag signature. She spins her web in early evening in about an hour; the spokes are smooth but the sticky spiral threads can trap an insect flying by. A host of butterflies sip nectar from the meadow flowers, floating from aster to milkweed to clover. The resting pearl crescent holds its wings out and slowly fans them up and down. The female may be ready to lay her pale green eggs on an aster leaf.

In summer the goldfinches have built a nest, bound with spider silk and lined with thistledown. Only a few feet above ground at the meadow edge, the nest holds three to five light blue eggs. The female goldfinch incubates the eggs for almost two weeks while her mate brings home seeds to eat. Ripe thistle seeds and occasional caterpillars sustain the nestlings as they grow and summon their parents with a shrill "chip-ee."

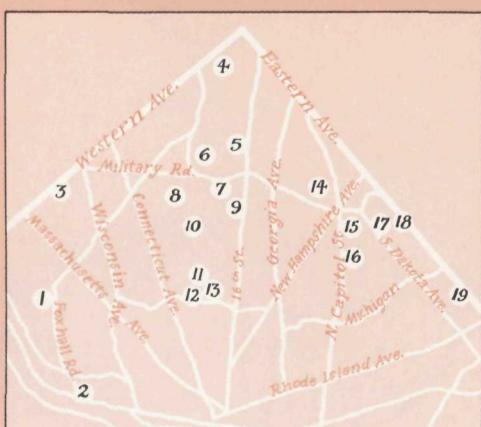


If you stand with one foot on the lawn and the other in a meadow, you are part of two different worlds. In contrast to the sameness of short blades of lawn grass, the meadow world offers great variety. Something is always going on in meadows, but you have to look carefully to see the interplay of action there. Your attention may move from leaves stirring to the sound of wings whirring, from fragrant yellow flowers to tall grasses, only to pause at the rustle of a small creature's passage. And every year brings something new.

short-tailed shrew

## Meadow Locations

Meadows occupy a dozen areas in the Rock Creek watershed plus seven locations under park supervision in the Fort Circle Parks and at Battery Kemble and Glover-Archbold trestle. The Rock Creek Nature Center offers checklists of park plants and birds as well as a list of the meadows' butterflies.



### NORTHWEST

1. Battery Kemble Park. East of Chain Bridge Rd., up hill from main parking lot.
2. Glover-Archbold Trestle. North of intersection of M St. and Foxhall Rd.
3. Fort Bayard. Bounded by Western Ave., Fessenden, and 46th Sts.
4. East Beach Drive. Edging woods west of East Beach Dr., between Tamarack and Sycamore Sts.
5. Sherrill Drive. Flanking bridge over Rock Creek, at intersection with Beach Dr.
6. H2 Stables. North side of Old Bingham Rd., off Oregon Ave., near Park Police stables.
7. Ross Drive. West of Picnic Grove 22, near intersection of Ross Dr. and Joyce Rd.
8. Military Field. South of Military Rd., between 27th St. and Glover Rd.
9. Madison-Carter Barron. Bounded by Morrow Dr. and Madison St., near 16th St.
10. Picnic Grove 17. Edging woods, east of Glover Rd., north of intersection with Ross Dr.
11. Park Road. About 200 ft. east of Beach Dr. at Pierce Mill, northeast of tennis courts.
12. Klinge. Williamsburg Lane off Porter St., behind Klinge Mansion.
13. Bluff Bridge. 0.3 mi. downstream from Pierce Mill, west of footbridge.
14. Fort Slocum. Edging woods, along Kansas Ave., Madison Dr., to Third St.

### NORTHEAST

15. Fort Totten Metro. Large open area west of First Place, north of Metro stop.
16. Fort Totten. North of Fort Totten Dr., in southern part of park.

17. Eighth and Gallatin. Between Gallatin and Galloway Sts., edging woods.
18. Sargent Road. East of Sargent Rd., between Gallatin and Galloway Sts.
19. Barnard Hill. West of Eastern Ave., north of Bunker Hill Rd.

## Information

Call 202-426-6829 V/TDD (Rock Creek Nature Center), or write:  
Superintendent, Rock Creek Park  
National Park Service  
5000 Glover Road, NW  
Washington, DC 20015

Emergency: Call U.S. Park Police 202-619-7300

## Rock Creek Park

On September 27, 1890, the U.S. Congress directed that Rock Creek's wild valley be set aside to "provide for the preservation . . . of all timber, animals, or curiosities . . . and their retention in their natural condition." Rock Creek Park's jurisdiction now encompasses 2800 green acres, shelters historic landmarks, offers recreation and sports, and helps people enjoy nature. Refresh yourself with the natural features as you find them, but please leave all undisturbed for others to enjoy. No collecting is allowed.

