

# Wet Meadow



**A** Wet Meadow is an open wetland habitat with soils that are saturated for part or all of the growing season. It has predominantly herbaceous (non-woody) plants that may include any combination of grasses, sedges, rushes, ferns, and forbs. The vegetation may be low and sparse, or tall and dense, depending on a variety of environmental factors.

Although standing water may be present at times—especially in winter or spring or after rainstorms—it does not persist for long, and many Wet Meadows have little if any standing water through much of the growing season. Like other kinds of meadows, many Wet Meadows are on active or inactive farmland.

## How to Recognize

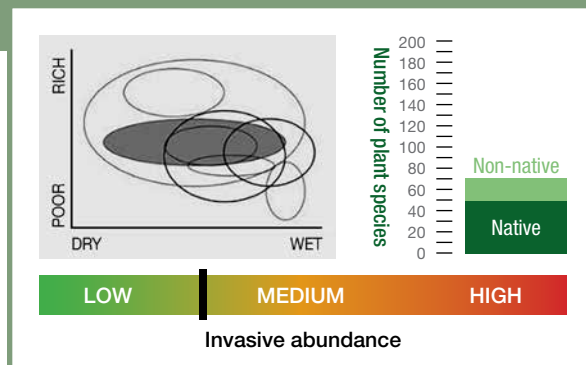
As the name implies, key characteristics of Wet Meadows are wet soils and open, meadow-like conditions. However, during drier parts of the year, the ground underfoot can crunch rather than squelch. Wet Meadows can also be as inconspicuous as a small, patch of short bristly sedges in the middle of a July pasture or as flowery as a late-summer purple burst of chest-high Purple Loosestrife, Joe-Pye Weed and Blue Vervain.

Because of the periodically soggy ground, Wet Meadows on active farms are often not mowed or grazed as frequently and closely as drier fields. Thus, scruffy meadows occurring in local low spots on the landscape are likely candidates, as are ‘roughs’ around landscaped ponds, where lawn mowers have been deterred by soft ground.

If a Wet Meadow is left uncut into the fall, abundant flowers attract a diversity of animals, including the last pulse of bee life; butterflies searching for hibernation or migration resources; and dragonflies, spiders and birds looking to cash in on the flower visitors. On warm September days, this flurry of animal life in a Wet



*Confirming that this scruffy Claverack pasture is a Wet Meadow would require taking a closer look at the plants.*



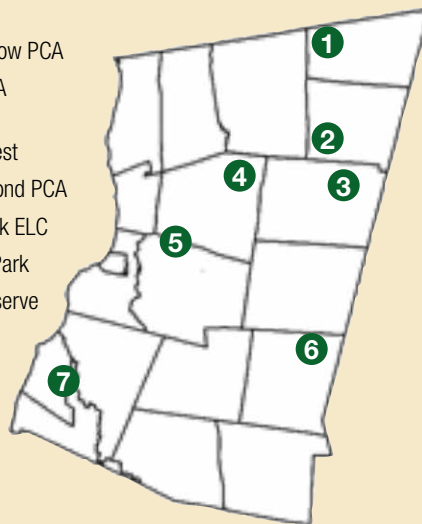
Meadow can stand in sharp contrast to the relative quiet of adjacent, closely-cropped Hayfields and Pastures.

## Location

Wet Meadows can be found throughout Columbia County, and can occur at any elevation—in small or large depressions or swales, along stream terraces and floodplains, on the slopes of seepy hillsides, and even perched near the summits of rocky hilltops.

## Distribution of Wet Meadows and Places to Visit

1. Hand Hollow PCA
2. Schor PCA
3. Beebe Hill State Forest
4. Borden Pond PCA
5. Mud Creek ELC
6. Roe Jan Park
7. Keep Preserve



## Visiting

Visit Wet Meadows throughout the County and at any time of year, though May–September are the best times for viewing wildflowers and butterflies.

In March or early April, you might be lucky enough to witness the wonderful courtship ritual of the American woodcock in some Wet Meadows as well as certain other meadows.

## What to Look For

**Plants:** Wet Meadows are sometimes dominated by invasive species, such as Purple Loosestrife and/or Reed Canary Grass and contain many plant species not unique to this habitat (see table of Characteristic Plants and the ‘Similar Habitats’ below). However, at the same time, they harbor a high diversity of native plant species, including some uncommon native wildflowers, such as Common Beard-tongue, Square-Stemmed Monkeyflower, Common and Swamp Milkweeds, Small-flowered Agrimony, Joe-Pye-Weed, American Groundnut, and New England Aster, which can be very conspicuous during their respective flowering seasons. Less conspicuous at first glance, but just as noteworthy is the diversity of native wetland sedges and grasses, including Rice Cutgrass, Fowl Mannagrass, Rattlesnake Grass, and Bluejoint.

**Insects:** The plentiful late-summer flowers of Wet Meadows mean that butterflies are some of the most characteristic organisms of this habitat. The abundant nectar (and occasional Milkweed) attract migrating Monarchs and many of our common butterflies. Least Skippers, while not limited to Wet Meadows, are typical of them. Certain rarer butterfly species are closely tied to this and similar habitats because their caterpillars feed on wetland plants such as sedges (Black Dash, Mulberry Wing, Dion Skipper, or the Browns), Turtlehead (Baltimore Checkerspot) and Water Docks (Bronze Copper).

Wet Meadows, together with Old Fields, also provide important late-season nectar and pollen sources for various native bees and wasps. Despite its status as a non-native ‘invasive’ (because of its competition with native wetland plants), Purple Loosestrife flowers will often be literally humming with bee life.

Ground Beetles in general prefer moist areas and are moderately abundant in Wet Meadows. In our area, *Pterostichus patruelis*, a medium-sized, admittedly non-descript black beetle, seems to favor this over other habitats. Ants are not especially common in Wet Meadows, with the exception of several species of *Myrmica*, which prefer moist soils. While distinguishing among *Myrmica* species is a chore, the prominent ridges on their exoskeleton give *Myrmica* ants as a whole an almost shriveled appearance.

The abundant insect life of Wet Meadows lures various predators, including dragonflies. Because these meadows are usually dry for at least part of the year, they do not provide breeding habitat for dragonflies, but such colorful species as the Ruby Meadowhawk and Halloween Pennant often come here to hunt. Spiders also abound and, in August and September, the orb webs of the strik-

ing Black and Yellow Garden Spider are conspicuous. A dangling butterfly usually means that a Crab Spider (or an Ambush Bug) has caught a meal.

### Characteristic Plants

The following species are common in this habitat, but not necessarily unique to it.

- \* Indicator species    ○ Non-native species
- Invasive species

#### SHRUBS

- Arrow-wood
- Eurasian Bush Honeysuckle ●
- Gray dogwood
- Meadowsweet
- Multiflora Rose ●
- Pussy Willow

#### GROUND FLORA

- Arrow-leaved Tearthumb
- Blue Vervain \*
- Boneset \*
- Broom Sedge \*
- Canada Goldenrod (s.l.)
- Common Bedstraw ○
- Fowl Meadowgrass
- Giant Goldenrod
- Grass-leaved Goldenrod
- Kentucky Bluegrass ○
- Marsh Fern
- Purple Loosestrife ●
- Purplestem Aster \*
- Reed Canary-Grass ●
- Rough-Leaved Goldenrod
- Sensitive Fern
- Soft Rush \*
- Spotted Touch-Me-Not
- Willowherb
- Woolgrass



*Purple Loosestrife*



*Purplestem Aster*

**Reptiles & Amphibians:** Snakes and frogs are among the vertebrate predators of this habitat. Various species of snakes will wander through Wet Meadows; aside from the widespread Eastern Garter Snake, the more rarely seen Green and Ribbon Snakes may also be found here. Pickerel and Green Frogs sometimes stray through, while the rarer Northern Leopard Frog, who seems to be uncommon in the County, is generally associated with this habitat.

A pair of turtle species are also part of the predatory contingent and are at least partially associated with Wet Meadows. Spotted Turtles use this and a variety of other wetland and upland habitats for foraging, resting and even over-wintering. Bog Turtles uses calcareous Wet Meadows that are adjacent to their core fen habitats.

**Birds & Mammals:** Nesting Red-Winged Blackbirds are raucous, early-season inhabitants of uncut Wet Meadows and similar habitats. Swamp Sparrows nest here and in Marshes. American Goldfinches, Song Sparrows, and Eastern Bluebirds may nest in Wet Meadows that have scattered trees or shrubs. The uncommon Virginia Rail and Sora nest in dense grass- or sedge-dominated Wet Meadows, if there are adjacent areas of open water.

The winding trails of Meadow Voles, punctuated by grass-lined nests, are often conspicuous beneath the thatch

of taller Wet Meadow vegetation or, in spring, as doodles in the melting snow atop the now-flattened meadow vegetation. Meadow Voles occur in a range of field types, but are able swimmers and don't seem to mind wet feet. Mink and other mammals together with hawks and owls hunt for the voles and other creatures.

## Similar Habitats

Wet Meadows share some of the plants of other meadows, especially Old Fields, and with Marshes. For example, all of the goldenrod species commonly found in Wet Meadows, are also important components of upland Old Fields. To distinguish a Wet Meadow from an Old Field (which is not always easy), look for wetland indicator plants, such as certain sedges, as well as Purple Loosestrife, Reed Canary Grass, Sensitive Fern, Soft Rush, Blue Vervain, Boneset, and Purple-stem Aster. Some of these common wetland plants are also found in Marshes. However, a Marsh tends to have standing water of longer-duration in the growing season, and hence harbor plants—such as Pickerelweed and species of cattails, bur-reeds, and arrowheads—that are well-adapted to those wetter conditions and rarely found in Wet Meadows.



*A Spotted Turtle and Mulberry Wing from Hillsdale.*



*Eastern Ribbon Snake in Hillsdale.*

## Some of the Rare Species

### Plants

- Andrew's Bottle Gentian — Regionally scarce
- Bush's Sedge — Regionally uncommon
- Canada Lilly — Regionally scarce
- Cattail Sedge — Regionally scarce
- Ragged Fringed Orchid — Regionally scarce
- Shrubby St. Johnswort — NYS threatened
- Squarrose Sedge — Regionally uncommon
- Winged Monkeyflower — NYS rare

### Butterflies

- Appalachian Brown
- Black Dash — Regionally rare
- Dion Skipper — Regionally rare
- Eyed Brown — Regionally rare
- Mulberry Wing — Regionally rare

### Reptiles

- Bog Turtle — NYS endangered
- Eastern Ribbon Snake — Regionally uncommon
- Spotted Turtle — NYS special concern
- Wood Turtle — NYS special concern

*“Callout here callout here callout here callout here callout here callout here callout here callout here callout here.”*

## Stewardship

If left alone (i.e., unmowed) most Wet Meadows in agricultural or post-agricultural settings will become shrubby and then forested wetlands—valuable habitats in their own right! To maintain a Wet Meadow, however, mowing at least every few years may be necessary to prevent it from being overtaken by woody vegetation. In the near term, mowing of a Wet Meadow reduces the usable habitat for butterflies, bees, and other pollinators that depend on nectar, and for the larvae of butterflies, moths, and other insects that feed on live foliage.

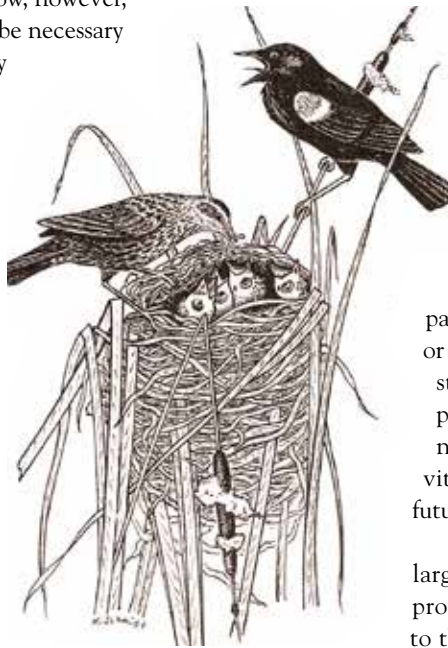
The formation of a Wet Meadow band around constructed ponds should be encouraged by making at least part of the shoreline gradual and by limiting the mowing of such areas. Although this may seem counterintuitive, since wet spots can hamper human use and management, pond owners will be rewarded with a nice floral display and rich insect life.

Because some insects are year-round residents, being active throughout much of the growing season and dormant but present throughout the winter, there may be no ideal time for mowing.

If the entire meadow must be mowed, then it's best to delay mowing until late fall or winter, so that both, the late-blooming plants and the spring ephemerals will be available to insects that need food sources in those seasons when few other sources are available. If mowing cannot be limited to those periods, an alternative practice is to leave unmowed sections or to rotate the areas mowed each year so that some unmowed habitat is always available.

In any case, mowing or grazing should be undertaken only when the soils are dry enough that they will not be damaged. Compaction of wet soils by farm equipment or grazing livestock can harm the soil structure, impede the root growth of plants, impair plants' ability to take up nutrients and water, and reduce the vitality of a Wet Meadow long into the future.

Wet Meadows that are part of large or diverse habitat complexes may provide habitat components valuable to the many animals—such as Spotted Turtle and Wood Turtle—that use an array of habitats to fulfill their needs. Maintaining landscapes unfragmented by roads, driveways, and other developed areas will help to preserve safe routes for animals moving between habitats.



*Red-winged Blackbird.*

## History

Open Wet Meadows may rarely be self-sustaining, being instead the product of recent or on-going natural or human-caused disturbances. Many of our Wet Meadows form in slight depressions or wet swales in active or abandoned pastures, hayfields or cropland, and have been kept open (i.e., without woody vegetation) by frequent or occasional grazing, mowing, or tilling. Other human-caused origins include recent clearing of shrublands or forests, partial draining of marshes, or partial wetland filling.

Wet Meadows also develop in Beaver meadows (after a Beaver dam has been breached), frequently-flooded riparian (i.e., streamside) meadows, tree-fall gaps in forested swamps, or seepage areas or perched wetlands on hillsides or summits. Marshes and other wetland habitats often have narrow or broad Wet Meadow zones at their perimeters where they transition to a surrounding upland habitat.

The last 400 years of human activity have probably meant a roller coaster ride for Wet Meadows in our region. Prior to European settlement, such meadows slowly blinked on and off in a landscape significantly shaped by the Beaver. The arrival of the Dutch and French heralded extensive trapping of Beaver, and this species was probably effectively extinct in the County by around 1700 thereby stifling one important force of Wet Meadow creation.

However, at the same time, farmers were opening up previously-forested wet areas for agriculture and so were often creating Wet Meadows. Indeed, before the advent of upland hayfields in the second half of the 18th cen-

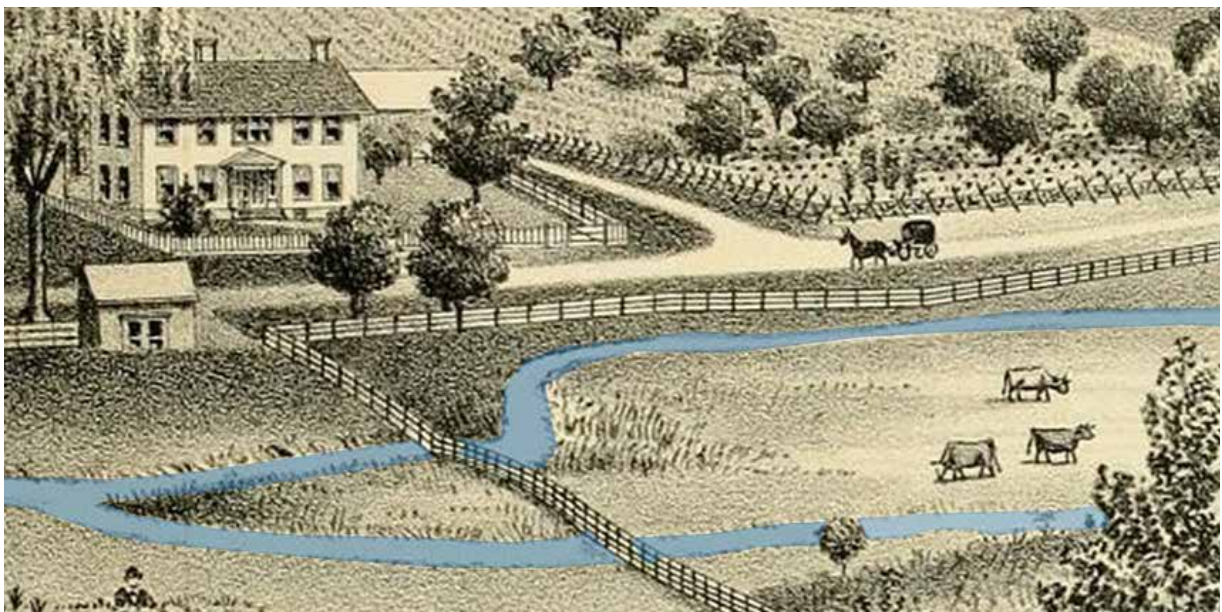


*An American Beaver swims across a Gallatin pond.*

tury, those Wet Meadows that were regularly flooded and thereby replenished with nutrients were a core component of the grass-based colonial farming system.

With the establishment of European upland grasses and other forage, farmers became less tied to their Wet Meadows and, because wetness at the wrong time could hamper plant growth or complicate machine work, many of these habitats were drained and/or had their flooding controlled. In Columbia County, drainage was probably especially common on wet clay meadows, where natural water percolation was slow. Recent landscape history has likely seen a continuing decline in Wet Meadows because the dam-making of the resurgent Beaver is often hindered by humans, because some wetland draining does still occur, and, perhaps most importantly, because the continued abandonment of agricultural land means that meadows regularly grow back into forest. The popularity of ponds in residential landscaping may counteract this decline slightly, since a fringe of Wet Meadow is sometimes allowed to develop around the pond.

*Cows graze in or near a Wet Meadow in this image of a Ghent farm from Elli's 1878 History of Columbia County, New York (water highlighting added).*



## Perspectives

“Field not cut for the season” was how one participant in our photo survey described the image of a Wet Meadow.

Aside from this agricultural lens, Wet Meadow seems to be a habitat that few people have much of a perspective on. No children that we interviewed spoke of the joy of running through the tall vegetation, nor did they depict Wet Meadows in their photographs and drawings of favorite places. Foragers and hunters largely left out these parts of the landscape in their descriptions of places to look for edible plants or game. Recreationists could think of few activities that would make sense in such a place.

In general, except for agriculture, people don’t often seem to venture into Wet Meadows. It was for these reasons that we led focus group participants straight into the dense, spongy heart of this habitat at RoeJan Park to gain a rare perspective—the middle of an unmowed Wet Meadow. How do people view a place they would never think to go?

Of the 14 different habitats that we brought focus groups into, the Wet Meadow stood out as a favorite. Wrote one participant, “I would not, on my own, have pushed into the wetlands, but it was lovely to feel how sheltered we were in the tall grasses—and to experience their rustling embrace as the wind passed through.”

This sense of a shelter and wonder was echoed by other participants, such as one who explained, “It was so amazing to be where you couldn’t really see out. You were really inside this magical space. I really liked that, because we don’t [usually] go in there.”

Another explained, “I liked not being able to see where I was and hearing the grass hitting each other and against my face. It was my favorite.” And still others highlighted the encompassing quality of the elements: “I felt immersed in a water element...I heard the wind in the wetlands, and it was just an experience—the sky, the light.”

**“Most of the other places in the park seem more malleable, bendable to human will and use, but the wet meadow seems to belong to itself.”**



*Focal group participants explore a Wet Meadow at RoeJan Park.*

Leaving the mowed paths for such an immersive experience in a habitat that few venture into can understandably make it seem like a rare and wild habitat. One participant described, “What I liked about it was a place that seemed untamed and probably untamable by humans...I really enjoyed that. It’s a rare experience.”

This is, however, likely more a matter of perspective than landscape ecology. Wet Meadows are by nature a transitional habitat, and these days they are often both created and maintained by human activity. The person who saw

in a Wet Meadow a “field not cut for the season” was in many ways quite right—a Wet Meadow, to remain as such, is often a meadow not yet cut.

## Photo “Scavenger Hunt”



*Borden’s Pond, Chatham*

## Rich in Species

As part of our cultural research we provided visitors to public parks with cameras and sent them on “photo scavenger hunts.” One of their tasks was to take a photo of a place they thought was particularly rich in native plants and animals. This wet meadow at Borden’s Pond was identified by several scavenger hunt participants as such an ecologically rich place.

In responding to photos of wet meadows, people generally did consider them to be rich in ecological value and they elicited one of the highest number of named species amongst the different habitats in the photo survey. These included butterflies, Purple Loosestrife, Red-winged Blackbirds, and snakes.



## Interact with Wet Meadows

Track signs of spring and fall



Wet Meadows are a fascinating place to observe through the seasons. For those interested in phenology, or seasonal occurrences in nature, below are two fun examples of phenological observations that can be made in Wet Meadows, one an early sign of spring and the other an indication that the growing season is winding down.

### **March–April: The Amorous Flight of the American Woodcock**

The courtship rituals of the American Woodcock are a spectacular harbinger of spring that often occurs in or near Wet Meadows. To observe this display is a real treat. Seek out low open areas just before dusk, and listen for the distinctive buzz-like and repeated “beep” of the male woodcock as he walks over the ground, then watch for his slow spiral ascent high into the sky. He completes this feat with a stunning dive descent accompanied by a distinctive chirping noise, then repeats. An attractive display for female Woodcocks and humans alike!

### **August–September: Fall Flowers**

Late summer and fall bring a richly-colored palette to the Wet Meadow as many flowers come into bloom. As you visit Wet Meadows throughout the fall, what bloomings do you observe? How many different flowers and colors do you see, and how do these change over the course of the season?



*Above left: American Woodcock;  
at left: New England Aster.*