

A LAYMAN'S GUIDE TO
LATE SUMMER & FALL
WILDFLOWERS

AT THE
FITZGERALD LAKE CONSERVATION AREA

compiled by

Bob Zimmermann
Broad Brook Coalition

INTRODUCTION

Over the past several years, I've become ever more intrigued by the succession of wildflowers that appear in the spring, summer and even fall. The Fitzgerald Lake Conservation Area affords an abundance of these wonderful plants and I started taking my camera along on hikes to try to capture their fleeting beauty. This in turn inspired me to share my photos with others in a context that relates some basic information about the flowers, their growth, their habitat and their reproduction. I've become particularly interested in the folklore associated with these plants and their use for food or medicinal purposes. I hope that this brief guide will help you to identify a sampling of the late summer and fall wildflowers that grow along the paths and in the woods and pastures of the FLCA. All but Lady's-Thumb are native to New England. Though many flowers fade as fall approaches, the season is enriched by the matchless effusion of asters and goldenrods. The photos were taken by me at the FLCA or on abutting land (except for two goldenrods from Graves Farm), but most can be found within the FLCA. The present collection of flower descriptions follows similar guides to spring and summer wildflowers that I've compiled in the past two years. Common, family, genus and specific names follow those found on the *Go Botany* web site (see Sources). Once again, I am deeply indebted to Connie Parks for looking over preliminary versions of this guide and for offering numerous helpful suggestions and corrections; while errors may persist, they are mine.

Bob Zimmermann
August 2019;
revised and expanded,
August 2020

TERMINOLOGY

Although I have tried to keep the plant and flower descriptions non-technical, there are a few terms in the text that need a bit of explanation. **Annuals** and **biennials** are plants that complete their life cycles within one or two years, respectively, while **perennials** continue to grow and reproduce for three or more years; most New England wildflowers are perennials. **Petals** and **sepals** are both modified leaves. Petals, which surround the reproductive apparatus of the flower and are often brightly colored to attract pollinators, are in turn surrounded by sepals, which cover the flower bud; though often green, sepals are sometimes colored and resemble petals in which case they are called **tepals**. **Bracts**, yet another modified leaf type, are usually located at the base of a flower, and are generally green. In members of the arum family, such as skunk cabbage and jack-in-the-pulpit, a spike of tiny flowers are borne on a structure called a **spadix**, enclosed by large, thick bracts. Some leaves are arranged in pairs, **opposite** to one another, while others occur singly in an **alternate** fashion, along the stem. Still others form a **whorl** of three or more leaves, circling the stem. The base of some leaves **clasp**, or entirely surround, the stem. Leaf characteristics can often be quite helpful in identification. The reproductive parts of a flower are known as the **pistil**, which contains the ovary, and the filamentous **stamen**, which produces pollen containing the male gametes. Seeds are packaged in a **fruit**, including **capsules** or **follicles** that split open to release the seeds at maturity, **achenes** that contain a single seed but do not open at maturity, and fleshy **berries** or **drupes** that are often consumed and dispersed by animals (and humans!). The underground parts of perennials, such as **rhizomes**, **tubers**, **corms** and **bulbs**, store nutrients to promote regrowth of the plant in spring or summer and in many cases account for asexual reproduction. **Rhizomes** are modified, fleshy stems that grow horizontally underground and contain multiple buds that can give rise to new plants; these structures account for the spread of many wildflowers (and are responsible for the invasiveness of numerous non-native plant species). **Tubers**, also derived from stem tissue, are enlarged, fleshy structures with buds scattered over their surface from which shoots (and roots) develop. **Corms** are solid structures that form at the stem base and generally produce a single bud or shoot, while **true bulbs** consist primarily of modified leaves with many layers, like an onion, and a single bud from which the plant develops.

Daisy Fleabane (*Erigeron annuus*)



- Family: Asteraceae (Sunflower, Daisy, Aster)
- Height: 1-5'
- Leaves: 1-4" long, alternate, lanceolate, toothed
- Flowers: ½" wide, numerous yellow disk flowers in center surrounded by 40-50 white or lavender-tinged ray flowers
- Fruit: 1-seeded achene with a fluffy *pappus* for dispersion by the wind.
- Flowering: June-October
- Habitat: Fields, meadows, pastures
- FLCA Location: Throughout
- Pollination: Numerous bees, flies and other insects attracted by nectar
- Name: *Erigeron* derived from two Greek words denoting "woolly old man"; *annuus*, from Latin, meaning plant is an annual
- Folklore: The common name of this annual plant came from a belief that its dried flowers could thwart infestation with fleas, but there is little evidence of its effectiveness as an insecticide

CANADA LILY
(*Lilium canadense*)



- Family: Liliaceae (Lily)
- Height: 2-5'
- Leaves: 4-6" long, whorled, lanceolate
- Flowers: 2-3" wide, 3 petals and 3 petal-like sepals, yellow to orange-red, with dark spots; nodding
- Fruit: Erect capsule, 1-2" long, containing 2 or more seeds
- Flowering: June-August
- Habitat: Wet meadows, wetland edges, stream floodplains
- FLCA Location: Stream bank in northern section of conservation area
- Pollination: Ruby-throated hummingbird
- Name: *Lilium* derives from "leiron" (Grk), a particular species of European lily
- Folklore: Flower buds and roots of this plant were gathered and eaten by Native Americans. It is also said to have been used imedicinally to treat stomach disorders, rheumatism, and snake bites. The Cherokee prepared an extract of boiled rhizomes to fatten children.

INDIAN-TOBACCO

(*Lobelia inflata*)



- Family: Campanulaceae (Bellflower)
- Height: 1-3'
- Leaves: 1-2½" long, alternate, ovate, toothed
- Flowers: ¼" long, 5 petals fused into a tube with two lips, pale violet; arranged as spike with flowers on central axis
- Fruit: Capsule forms in inflated calyx, ~⅓" long, at base of flower
- Flowering: July-October
- Habitat: Wetlands, meadows, fields, forest edges
- FLCA Location: Throughout
- Name: The genus was named for 16th-century Belgian botanist Matthias de Lobel; *inflata* (Lat.) refers to the inflated calyx
- Folklore: This plant, an annual, is acrid and poisonous--especially the roots. Nonetheless, the mashed roots of this plant were used by the Cherokee as a poultice for aches and sores; in the 19th century doctors employed it to induce vomiting

JEWELWEED OR SPOTTED TOUCH-ME-NOT

(*Impatiens capensis*)



- Family: Balsaminaceae (Touch-Me-Not)
- Height: 2-5'
- Leaves: 1½-4" long, ovate, alternate, coarsely toothed, underside glaucous,
- Stem: Translucent, succulent
- Flowers: 1" long, orange spotted with red; 5 petals, 2 fused on each side of flower; 3 sepals, one of which projects behind flower into spur-like sac containing nectar
- Fruit: Ripe ¾"-long capsule splits explosively when touched, expelling seeds up to 6'
- Flowering: July-October
- Habitat: Shores of streams or lakes, swamps
- FLCA Location: Boardwalk, many other wet areas
- Pollination: Hummingbirds, bees, some moths
- Name: Common name may come from sparkling beads of dew or rain on leaves
- Folklore: Native Americans used juice from stems of this annual plant to relieve itching from poison ivy and nettle

LADY'S-THUMB SMARTWEED

(*Persicaria maculosa*)



- Family: Polygonaceae (Buckwheat)
- Height: 1-2½'
- Leaves: 2-4" long, alternate, lanceolate, with dark green "thumbprint" in middle (see photo); leaf base forms a cylindrical sheath where it joins the stem
- Flowers: ~⅛" long, no petals but 4-6 pink sepals, in 1-2" cylindrical spikes at end of stem
- Fruit: ~⅛" shiny black, one-seeded; a favorite food of many species of birds
- Flowering: June-October
- Habitat: Moist fields, clearings, stream banks
- FLCA Location: Pretty much everywhere
- Name: The specific name *maculosa* (Lat.) refers to the dark spot on the leaf
- Notes: Lady's thumb is one of many smartweeds--both native and non-native (as lady's thumb)--found in our area. These annuals belong to the same family as the invasive plant Japanese knotweed. Leaves were used to soothe poison ivy by Native Americans.

WHITE WATER-LILY

(*Nymphaea odorata*)



- Family: Nymphaeaceae (Water Lily)
- Height: 3-4" above water surface
- Leaves: 4-10" in diameter, alternate, most are floating, some submerged
- Flowers: 3-5" wide, 20-30 white petals surrounding 40 or more bright yellow stamens
- Fruit: Fleshy berry containing up to 2000 seeds
- Flowering: June-September
- Habitat: Lakes, ponds, slow-moving streams
- FLCA Location: Fitzgerald Lake
- Reproduction: Bees, flies and beetles carrying pollen are attracted to pool of fragrant fluid in flower; the flower closes, trapping the insect; the pollen is washed off and fertilizes the flower; the pollinator is then released and the flower stem recoils, drawing the flower head underwater where the seeds ripen; also spreads via rhizomes
- Name: *Nymphaea* refers to water nymphs (Grk.), *odorata* to fragrance of flower (Lat.)
- Folklore: Native Americans used leaves and roots to treat a variety of ailments; leaves eaten by many insects, seeds by ducks and other wetland birds, and rhizomes by muskrats and beavers

WHITE TURTLEHEAD

(*Chelone glabra*)



- Family: Plantaginaceae (Plantain)
- Height: 1-3'
- Leaves: 3-6" long, opposite, lanceolate, sharply toothed
- Flowers: 1-1½" long, 5 petals fused into tube with hood-like upper lip, white tinged with pink, in terminal clusters
- Fruit: Capsule splits open when dry; seeds ~1/8" long
- Flowering: July-September
- Habitat: Stream banks, wetland margins
- FLCA Location: Boardwalk
- Pollination: Bumblebees and hummingbirds
- Name: Resemblance of flower to a turtle's head is reflected in its generic name, *Chelone* meaning "tortoise" (Grk.); *glabra* means 'smooth' (Lat.); also snake head, shellflower, fish mouth
- Folklore: Used extensively by Native Americans as a laxative and to treat fever and malaria; ointment made from leaves was used to soothe sores and blisters

WHITE SNAKEROOT

(*Ageratina altissima*)



Family: Asteraceae (Sunflower, Daisy, Aster)

Height: 1-3'

Leaves: 3-6" long, opposite, ovate, sharply toothed

Flowers: 1/5" wide disk flowers, white, in flat-topped clusters, on stems that usually bear four or more flower heads

Fruit: Tiny seeds with fine white bristles at one end that are dispersed by the wind

Flowering: July-October

Habitat: Woods and thickets

FLCA Location: Forested hillsides

Reproduction: Seeds and rhizomes

Name: *Ageratina* ultimately derives from "ageraton" meaning ageless (Grk); *altissima* means the tallest (Lat)

Folklore: Early settlers to New England believed this plant to be useful in treating snake bites. It is very poisonous, however: consumption of milk or meat from cows that have grazed on this plant may be fatal to humans .

FORKED BLUECURLS (*Trichostema dichotomum*)



- Family: Lamiaceae (Mint)
- Height: 6-30"
- Leaves: ¾-2½" long, opposite, lanceolate, untoothed
- Flowers: ½-¾" long, blue, 5 petals; upper lip consists of 4 fused petals; the fifth, recurved petal comprises the lower lip; 4 blue, curled stamens project from corolla
- Fruit: 4 'nutlets'
- Flowering: August-October
- Habitat: Grasslands, fields, sandplains
- FLCA Location: Shady areas along trails and fields
- Pollination: This plant is pollinated by a variety of native bees
- Name: *Trichostema* refers to its hair-like stamens; *dichotomum* means "forked" (Lat.)
- Notes: This elegant little flower, an annual, does not appear to have been put to use for either practical or medicinal purposes

NODDING BEGGAR-TICKS

(*Bidens cernua*)



- Family: Asteraceae (Aster, Sunflower, Daisy)
- Height: 1-3'
- Leaves: 2-6" long, opposite, lanceolate, toothed, attached directly to stem
- Flowers: 2" wide heads, numerous dark yellow cone flowers at center surrounded by 6-10 bright yellow ray flowers; heads droop (i.e., nod) when mature
- Fruit: Achenes with 4 barbed bristles that attach to fur of animals, feathers of birds and clothes of humans; eaten by ducks
- Flowering: August-October
- Habitat: Shores of ponds and streams; wetland edges
- FLCA Location: Boardwalk
- Pollination: Many different species of native bees
- Name: *Bidens* refers to teeth or bristles on achene; *cernua* means "nodding" (Lat.); "tick" reflects ability of fruit to stick to fur, clothing, etc.; also, bur marigold
- Folklore: There is little evidence that this annual plant was used for medicinal or other practical purposes

WATER HOREHOUND

(*Lycopus americanus*)



- Family: Lamiaceae (Mint)
- Height: 6-24"
- Leaves: 1-3" long, opposite, lanceolate, coarsely toothed, fuzzy underneath
- Stem: Square, hairy
- Flowers: 1/8" wide, tubular with 4 fused petals, white, densely clustered in the leaf axils
- Seeds: 1/8" long nutlets, eaten by waterfowl
- Flowering: June-September
- Habitat: Wetlands, edges of streams and ponds
- FLCA Location: Stream banks
- Reproduction: Pollinated by bees and flies; also spreads via rhizomes
- Name: *Lycopus* derived from Greek *lycos* or "wolf" and *pous* or "foot"; common name believed to come from Old English words for "downy plant"
- Folklore: Reported to have been used by Native Americans as an analgesic and to treat gastrointestinal problems. Though in the mint family, this plant is not aromatic.

VIRGINIA VIRGIN'S BOWER
(*Clematis virginiana*)



- Family: Renunculaceae (Buttercup)
- Height: Climbing vine with 6-20' woody stem
- Leaves: Opposite, compound leaves, with 3 toothed, often lobed, 3"-long leaflets
- Stem: The stems of this plant twine around nearby shrubs and bushes
- Flowers: 1" wide; no petals but 4 petal-like, white sepals arising from leaf axils; numerous stamens or pistils on male or female plants, respectively
- Reproduction: Single, 0.1" dry seed (achene) in spherical head with feathery "tails" that are dispersed by wind; pollinated by bees and wasps; also spread by rhizomes
- Flowering: July-September
- Habitat: Stream banks, wetland edges
- FLCA Location: Boardwalk
- Name: Common name may relate to Queen Elizabeth I or to Virgin Mary; also Old Man's Beard, Devil's Darning Needle
- Folklore: Though toxic to mammals, Cherokee made an infusion of virgin's bower with milkweed to treat backache, induce dreaming

NEW ENGLAND AMERICAN-ASTER

(*Symphotrichum novae-angliae*)



Family: Asteraceae (Aster, Sunflower, Daisy)

Height: 3-6'

Leaves: 1-5" long; lance-shaped, untoothed, fuzzy underneath; leaves clasp stems

Stem: Covered with sticky hairs

Flowers: 1-2" wide, each head has 35-45 bright purple ray flowers surrounding multiple yellow disk flowers at center

Flowering: August-October

Habitat: Meadows, fields

FLCA Location: Cooke's Pasture

Name: Aster is from Greek, meaning "star"; name of genus comes from the Greek words *symp* meaning "coming together" and *trich* meaning "hair," referring to the fused or connate anthers of this flower

Folklore: Though the brilliance of this flower is attention-getting, it has not been used much for practical purposes. It has been reported, however, that Native Americans burned both flowers and leaves to relieve various maladies

WHITE WOOD ASTER

(*Eurybia divaricata*)



- Family: Asteraceae (Aster, Sunflower, Daisy)
- Height: 1-3'
- Leaves: 2-7" long, alternate, heart-shaped, coarsely toothed
- Stem: Often zig-zagged
- Flowers: 1" wide, 6-10 white ray flowers with disk flowers that turn from yellow to burgundy; flowers in cluster at top of stem
- Fruit: Dry, seed-like, tipped with whitish tufts; seeds eaten by songbirds
- Flowering: August-October
- Habitat: Open forests
- FLCA Location: Widespread in woodlands
- Reproduction: Pollinated by bees and butterflies; also spread by rhizomes
- Name: Aster is from Greek word for "star"; *Eurybia* is derived from Greek "wide and few," possibly referring to ray flowers; *divaricata* means "spreading at wide angle" (Lat.)
- Folklore: This plant has not been exploited extensively for practical use

PURPLE-STEMMED AMERICAN-ASTER

(*Symphotrichum puniceum*)



- Family: Asteraceae (Aster, Sunflower, Daisy)
- Height: 3-6'
- Leaves: 2-6" long, alternate, lanceolate, finely toothed
- Flowers: 1-1.5" wide; tubular yellow disk flowers at center surrounded by 30-60 pale violet ray flowers
- Reproduction: Dry seed with tuft of white hair; also spreads via rhizomes
- Flowering: August-October
- Habitat: Marshes, swamps, wet meadows
- FLCA Location: Boardwalk
- Name: Aster is from Greek, meaning "star"; name of genus comes from the Greek words *symp* meaning "coming together" and *trich* meaning "hair," referring to the fused anthers; *puniceum* is from Latin "purple" also swamp aster, red-stem aster
- Folklore: Roots said to have been used by Native Americans to treat fever, colds, pneumonia and typhoid

SOME OTHER ASTERS FOUND AT THE FLCA



Lance-leaved American-aster
Symphyotrichum lanceolatum



Calico American-aster
Symphyotrichum lateriflorum



Heart-leaved American-aster
Symphyotrichum cordifolium



New York American-aster
Symphyotrichum novi-belgii

GRASS-LEAVED GOLDENROD

(*Euthamia graminifolia*)



- Family: Asteraceae (Aster, Sunflower, Daisy)
- Height: 2-4'
- Leaves: 2-5" long, alternate, narrow, elongated, pointed
- Flowers: 1/8" wide, bright yellow, with 8-12 disk florets and 10-20 ray florets in flat-topped clusters of heads
- Fruit: ~1/8" long achene with tiny seeds; eaten by goldfinches and swamp sparrows
- Flowering: July-October
- Habitat: Fields, meadows, edges of wetlands
- FLCA Location: Cooke's Pasture
- Reproduction: Pollinated by bees, wasps, moths and butterflies; also spread via rhizomes
- Name: *Euthamia* means "well-crowded" (Grk.), *graminifolia* derives from Latin words for "grass" and "leaf"; also goldentop
- Folklore: Infusions widely used widely by various Native American tribes to relieve chest pain, cure fevers and as an analgesic or astringent

BLUE-STEM GOLDENROD

(*Solidago caesia*)



- Family: Asteraceae (Aster, Sunflower, Daisy)
- Height: 1-3'
- Leaves: 2-5" long, alternate, elliptic, tapering at both ends, toothed, sharply pointed
- Flowers: ¼" long, yellow, composite heads, with 4-5 disk florets and 4-5 ray florets in clusters emerging from leaf axils; scattered along reddish-purple stem and with larger terminal cluster
- Fruit: ~⅛" long achene with tiny seeds; eaten by songbirds
- Flowering: August-October
- Habitat: Woodlands, forests
- FLCA Location: Throughout woods
- Pollination: Pollinated by bees, wasps, flies; also spreads via rhizomes
- Name: *Solidago* derives from Latin *solidus* meaning "whole"; *caesia* means "light blue" (Lat.); also, axillary goldenrod
- Note: There is little evidence that blue-stem goldenrod was used for medicinal or other practical purposes

SOME OTHER GOLDENRODS FOUND IN OUR AREA



Rough-stemmed Goldenrod
Solidago rugosa



Canada Goldenrod
Solidago canadensis



Early Goldenrod
Solidago juncea



Tall Goldenrod
Solidago altissima

GOLDENRODS FROM GRAVES FARM



Zig-Zag Goldenrod
Solidago flexicaulis



Silverrod
Solidago bicolor

AMERICAN WITCH-HAZEL

(*Hamamelis virginiana*)



- Family: Hamamelidaceae
- Height: Shrub or small tree to 30'
- Leaves: 3-6" long, oval, with rounded teeth and lopsided base
- Flowers: 1" wide, 4 petals, yellow, spidery, on leafless twigs
- Fruit: ~½" long, in woody capsule; small, black seeds can be ejected for a distance of 20-30' when capsule bursts
- Flowering: October-November
- Habitat: Forest, floodplain, swamp
- FLCA Location: Fishing Place trail, dam; throughout forested areas
- Name: "Witch" derives from an old English word meaning pliant or bendable; also called winterbloom
- Folklore: Extracts of leaves and bark used as a mild, aromatic astringent by Native Americans, later in commercial lotions; forked branches also used as divining rods by dowsers in search of underground water

BERRIES



Red Baneberry
Actaea rubra



Jack-in-the-Pulpit
Arisaema triphyllum



Partridge-berry
Mitchella repens



Maple-leaved Viburnum
Viburnum acerifolium



Common Winterberry
Ilex verticillata



Eastern Spicy-wintergreen
Gaultheria procumbens

The Fitzgerald Lake Conservation Area harbors many flowers and shrubs that produce colorful berries or fruits, usually in late summer or autumn. Some, however, like red baneberry, produce their fruit much earlier in the season. While they are pleasing to human eyes, they appear to be even more appealing to birds' eyes, which are particularly sensitive to red and black. Although these colors may mean "food" to a bird, there's something in it for the plant as well. Birds pick the fruit--essentially packaged seed--digest the nourishing pulp, then disperse the undigested seeds in their droppings. In this way, they spread the species throughout the surrounding habitat.

SOURCES

General

Go Botany (<https://gobotany.newenglandwild.org>), New England Wildflower Society, Framingham, MA, 2011-2017.

The Audubon Society Field Guide to North American Wildflowers (Eastern Region), W.A. Niering and N.C. Olmstead, Alfred A. Knopf, New York, 1979.

Newcomb's Wildflower Guide, L. Newcomb, Little, Brown, New York, 1977.

USA Phenology Network Botany Primer, P. Guertin, L. Barnett, E.G. Denny and S.N. Schaffer, USA-NPN Education and Engagement Series 2015-001, www.usanpn.org, 2015.

http://westboroughlandtrust.org/wildflowers/flowers/fl_tp2.htm

<http://gardenseyevue.com/favorite-native-plants/>

<http://www.wildflowerinformation.org/>

Individual Plants

American Witch-hazel (<http://www.witchipedia.com/herb:witch-hazel>)

Grass-leaved goldenrod: (https://plants.usda.gov/plantguide/pdf/pg_eugr5.pdf)

Indian Tobacco (https://plants.usda.gov/plantguide/pdf/cs_lobin.pdf)

Jewelweed (<https://www.psu.edu/dept/nkbiology/naturetrail/speciespages/jewelweed.html>)

Nodding beggars-ticks (<https://www.friendsofthewildflowergarden.org/pages/plants/burmarigold.html>)

Turtlehead (<https://vnps.org/princewilliamwildflowersociety/botanizing-with-marion/turtlehead-plant-profile/>)

White Snakeroot (https://www.bbg.org/news/weed_of_the_month_white_snakeroot)

White Water Lily (<https://homeguides.sfgate.com/water-lilies-make-seeds-65567.html> and <http://wildadirondacks.org/adirondack-wildflowers-white-water-lily-nymphaea-odorata.html>)