

Ravine Rapid Assessment Vegetation Identification Guide

Ravine and Bluff Vegetation of the Chicago Region

Lake Michigan Watershed Ecosystem Partnership

This Guide is a part of a Rapid Assessment tool for the ravine and bluff systems of the Illinois Lake Michigan Watershed, and is intended to present a subset of both common and rare plant species found in these habitats. Many more species may be encountered than are presented here.

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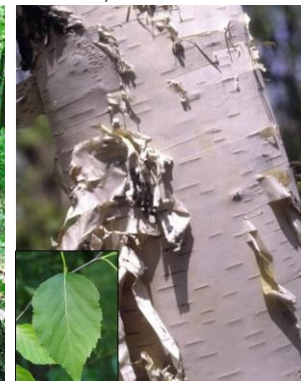
CANOPY SPECIES



1 *Acer negundo*
BOX ELDER: Opposite leaves, 3-7 leaflets. Stems and bark furrowing with age. Young plants resemble poison ivy.



2 *Acer saccharum*
SUGAR MAPLE: Opposite, 5-lobed leaves. Winged fruits are paired. Rough, gray-brown bark. Leaves lighter on undersides.



3 *Betula papyrifera* ★
PAPER BIRCH: White papery bark with dark horizontal stripes.



4 *Carya cordiformis*
MUSTARD BUD: Bark thin with small platy scales or shallow ridges & fissures. End buds slender and fuzzy yellow. Compound leaves of 7-9 leaflets.



5 *Fraxinus pennsylvanica* var. *subintegerrima* (LEFT) & *F. americana* (RIGHT); GREEN & WHITE ASH: Branches and twigs opposite. Diamond-shaped furrows in gray bark. Twigs smooth. Leaves compound with up to 9 leaflets, pale-green underneath (Green), or whitened and sometimes hairy underneath (White).



6 *Prunus serotina*
CHERRY: Branches alternate. Rounded to oval, serrated leaves end in a prominent elongated tip...



6 *Prunus serotina*
CHERRY: ... Bark resembles burnt potato chips with age.



7 *Populus deltoides*
COTTONWOOD: Grey to black, deeply furrowed bark. Triangular, prominently veined leaves. Coarsely toothed leaf margins. Sticky leaf buds.



8 *Quercus rubra* (TOP) & *Quercus alba* (BOTTOM)
RED OAK & WHITE OAK: Leaves lobed (pointed in Red; rounded in White). Bark with dark vertical striping (Red), shallowly furrowed and grey-whitish with patches (White). End buds clustered.

POC species ★; Invasive species ☒

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SHRUB AND VINE SPECIES



9 *Tilia americana*
BASSWOOD: Large heart-shaped leaves. Leaf margins serrated, leaf bases asymmetrical. Fragrant, cream-colored flowers in early summer. Fruits attached to elongated persistent bracts. Trunks often multiple.



10 *Robinia pseudoacacia* ☒
BLACK LOCUST: Stout thorns at bases of leaf stalks. Compound leaves with 7-21 small, rounded leaflets. Fragrant clusters of white flowers. Long, straight, leathery seed pods.



11 *Carpinus caroliniana*
MUSCLEWOOD/BLUE BEECH: Small tree with muscular, sinewy-looking trunk. Alternate, elliptical leaves have double serrated margins. Hanging papery fruit.



12 *Cornus rugosa* ★
ROUNDLEAF DOGWOOD: Opposite twigs green with purple spots, pith white. Leaves hairy below. Flowers white, fruits pale blue.



13 *Diervilla lonicera* ★
HONEYSUCKLE: Short, erect shrub. Oblong, finely toothed leaves taper to a tip; opposite. Yellow, funnel-shaped flowers.



14 *Hamamelis virginiana*
WITCH HAZEL: Shrubby, multi-branched tree. Oval leaves with wavy margins; uneven base...



14 *Hamamelis virginiana*
WITCH HAZEL: ... Yellow flowers with contorted petals bloom in the fall. Fruits resemble tiny woody acorns.



15 *Juniperus communis* ★
JUNIPER: Spreading evergreen with awl-shaped needles, 3-sided twigs. Needles in whorls of 3; bluish-green. White band on upper leaf surface. Fruits are powdery, blue-black, and berry-like.



16 *Juniperus virginiana*
EASTERN RED CEDAR: Bark reddish, thin, crown column-like. Leaves are minute scales. Berry-like fruits have a powdery white coating.



17 *Lonicera dioica* ★
LIMBER HONEYSUCKLE: Vine. Oval leaves opposite; uppermost pair joined at base. Tubular red flowers in whorls. Berries red.

POC species ★; Invasive species ☒

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18 *Ostrya virginiana*
HORNBEAM/IRONWOOD: Reddish bark becomes shaggy with age and divides into narrow strips. Double-serrated, oval leaves abruptly taper to a tip. Fruits are hop-like with papery coverings.

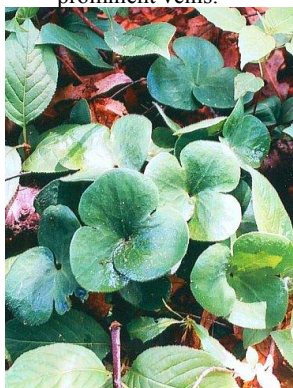
19 *Rhus typhina*
SUMAC: Small clone-forming tree. Velvety hairs on stout twigs. Leaves compound. Flowers in branched clusters, berries hairy.

20 *Viburnum acerifolium*
MAPLE LEAFED VIBURNUM: 3-lobed leaves maple-like. Small, white, 5-petaled flowers in terminal clusters. Berries blue-black.

21 *Frangula alnus* ☒
GLOSSY BUCKTHORN: Dark outer bark, yellow inner bark. Glossy leaves have smooth margins; prominent veins.



HERBACEOUS SPECIES GROUP 1:
Spring-Blooming Species



22 *Rhamnus cathartica* ☒
BUCKTHORN: Smooth brown bark speckled with white. Oval leaves; finely crenulate margins. Some branches have thorn-like tips.

23 *Erythronium albidum*
TROUT LILY: Oblong, lanceolate, dark green, mottled leaves. Flowers white, lily-like, nodding. Grows in large colonies.

24 *Hepatica acutiloba*
LIVERWORT: Leaves leathery, 3-lobed, tips somewhat pointed. Pink, purple, blue, or white flowers.

25 *H. nobilis var. obtusa* ★
ROUND-LOBED HEPATICA: Leaves roundly 3-lobed. Flowers white to lavender. Uncommon.



26 *Sanguinaria canadensis*
BLOODROOT: Single large sheath-like, multi-lobed leaf at base of flower; white flowers with yellow stamens. Can grow in large colonies.

27 *Trillium grandiflorum*
TRILLIUM: 3 large leaf-like, ovate bracts sit below flower. Single, 3-petaled white, purple, or pink flower.

28 *Viola conspersa* ★
DOG VIOLET: Stemmed plants with heart-shaped, scalloped leaves and lobed stipules. Blue to violet flowers.

29 *Viola sororia*
COMMON VIOLET: Heart-shaped, scalloped leaves are all basal. Flowers white or blue, leaves and stems hairy or smooth.

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HERBACEOUS SPECIES GROUP 2:
Summer-Blooming Species



30 *Aster macrophyllus*
LARGE-LEAFED ASTER: Large, heart-shaped basal leaves, often forming a mat. Purple to reddish stems. White to lavender flowers.



31 *Eupatorium purpureum*
PURPLE JOE-PYE WEED: Tall and unbranched, with whorls of 4 to 5 leaves. Domed mass of small, pink to purple flowers. Crushed leaves aromatic. Stem purple at nodes.



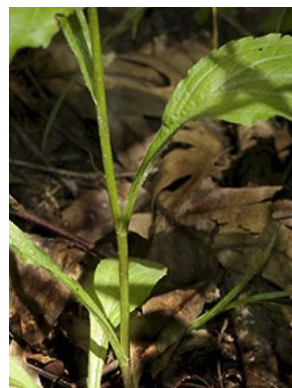
32 *Helianthus strumosus*
PALE-LEAFED SUNFLOWER: Narrow, ovate leaves with pale undersides. Flowers yellow mostly solitary at branch tips.



33 *Solidago flexicaulis*
ZIG-ZAG GOLDENROD: Stem zig-zags; leaves broadly ovate, toothed, on a winged leaf stalk.



34 *Solidago ulmifolia*
ELM-LEAVED GOLDENROD: Inflorescence branches arching; leaves ovate to elliptic or lance-elliptic with coarsely toothed edges.



HERBACEOUS SPECIES GROUP 3:
Grasses and Sedges



35 *Bromus pubescens*
WOODLAND BROME: Leaves shiny above, duller below. Nodes and drooping inflorescences are finely hairy.



36 *Carex pennsylvanica*
PENNSYLVANIA SEDGE: Stem sharply 3-angled and smooth. Bright-green arching leaves to 12" long. Blooms in early spring.



37 *Carex pedunculata* ★
LONG-STALK SEDGE: Rosette forming. Strap-like leaves dark-green with red bases. Fruits appear in May.



38 *Elymus villosus*
SILKY WILD RYE: Long, straight, thin awns extend from inflorescence. Upper leaves velvety.



39 *Hystrix patula*
BOTTLEBRUSH GRASS: Greyish-green, arching leaves. Erect, smooth, central stem to 4 feet. Bottle-brush shaped terminal floral spikes.

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HERBACEOUS SPECIES GROUP 4: Seep Species



40 *Oryzopsis racemosa* ★
BLACK-SEEDED RICE GRASS: Stems arise from a knotty rhizome. Upper leaf surface rough, lower leaf surface hairy. Seeds black.

41 *Caltha palustris*
MARSH MARIGOLD: Wide, heart-shaped, glossy leaves. Thick branching stem. Flowers bear 5 petal-like sepals; deep yellow.

42 *Eupatorium maculatum*
JOE-PYE WEED: 3-5 feet tall; unbranched. Leaves lanceolate with forward pointing teeth; in whorls of 4 to 5. Pink flowers in flat-topped flower clusters. Stems slightly hairy with purple spots.



HERBACEOUS SPECIES GROUP 5: Beach Species



43 *Symplocarpus foetidus*
SKUNK CABBAGE: Early blooming plant of wet habitats. Distinctive spike of minute flowers enclosed in a speckled, brownish purple hood. Leaves initially basal, becoming large and conspicuously quilted over the growing season.

44 *Ammophila breviligulata* ★
MARRAM GRASS: Stiff, erect beach grass. Inner surfaces of leaves have a bluish tint. Flower spikes are long, soft, and tightly packed, turning a bright golden color in the fall.



45 *Artemisia caudata*
BEACH WORMWOOD: Reddish tinted, upright, central stem. Leaves divided, silvery, feathery-like. Small nodding, yellow flowers.

46 *Cakile edentula* ★
SEA ROCKET: Succulent leaves with undulating margins. White to light-purple, four-petaled flowers occur at the tips of stems. Elongated seed pods have an upper and a lower segment.

47 *Calamovilfa longifolia*
SAND REED GRASS: Arching leaf blades; grayish-green. Sheaths somewhat hairy. Fruits on open panicles are pale grains with tufted hairs.

48 *Chamaesyce polygonifolia* ★
SEA-SIDE SPURGE: Mat-like and sprawling with red stems. Small, oblong leaves have a prominent mid-vein.

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49 *Elymus canadensis*
CANADA WILD RYE:
Long narrow leaves;
green above, bluish
below. 5 – 9” nodding
flower spike. Long awns
curve outward with age.



50 *Potentilla anserina*
SILVERWEED: Low
spreading plant from red
stolons. Leaflets oblong,
sharply toothed, lower
surfaces silver. Flowers
5- petaled, yellow.

HERBACEOUS SPECIES GROUP 6: Invasive Species



51 *Alliaria petiolata* ☒
GARLIC MUSTARD: Lower leaves heart-shaped,
upper leaves more oval; light-green. Leaf margins
deeply toothed. Strong aroma of garlic when crushed.
White 4-petaled flowers.



52 *Carduus nutans* ☒
MUSK THISTLE: Deeply pinnately lobed leaves with
prickles. Large purple flowering heads nod. May grow
to six feet.



53 *Cirsium arvense* ☒
FIELD THISTLE: Leaves narrow, lobed; prickles along
margins. Upper leaves clasp stem. Purple flowering
heads are smaller than those of Musk Thistle.



54 *Coronilla varia* ☒
CROWN VETCH:
Densely spreading.
Compound leaves with
11-25 leaflets. Pink to
white pea-like flowers.



55 *Dipsacus spp.* ☒
TEASEL: Basal rosette leaves lobed or entire. Leaves
clasp tall, prickly stalk. Flowers white or purple arranged
on a dense, spiny head.



56 *Elymus arenarius* ☒
LYME GRASS: Conspicuous bluish leaves. Where the
leaf meets the stem, tissue extends past and wraps
around stem. Spreads aggressively in sandy areas. Tan
seed heads are elongated and stiff.



57 *Hemerocallis fulva* ☒
DAYLILLY: Sword-like
leaves bright green,
smooth. Tall flowering
stalk bears bright orange
and yellow flowers.

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58 *Hesperis matronalis* ☒
DAME'S ROCKET:
 Hairy stem. Leaves sessile, lance-shaped, and toothed. Clusters of flowers; purple to pink.



59 *Melilotus alba* (LEFT) & *M. officinalis* (RIGHT) ☒
WHITE & YELLOW SWEET CLOVER: Species very similar. Round or ribbed stems. Leaves with 3 leaflets. The chief distinguishing character is flower color; terminal flowering spikes are white or yellow.



60 *Phalaris arundinacea* ☒
REED CANARY GRASS: Leaves to 10 or more inches long. Leaf margins are rough. Flowering heads become straw colored. Ligule, where leaf meets stem, is large, membranous, and conspicuous. Prefers wet habitats.



60 *Phragmites australis* ☒
COMMON REED: Tall (to 16 feet) grass. Leaves bluish-green. Flower panicle is silky, and purple or red turning yellow later in the season. Forms dense colonies on wet ground.



61 *Solidago altissima* & *S. canadensis* ☒
TALL & CANADA GOLDENROD: Plant is bushy, with hairy stems below the plumed, yellow inflorescence; leaves narrow, slightly toothed, 3-veined, and stalkless. Abundant in degraded habitats.



About North Shore Ravines

Over time, water cutting through glacial moraines bordering Lake Michigan has carved ravines through the steep bluffs. Steep topography and proximity to the lake contribute to a microclimate that supports a diverse assemblage of species, including rare species that have more northern distributions.

About the Lake Michigan Watershed Ecosystem Partnership

This assessment is part of a larger effort to protect the health of northeastern Illinois' ravine systems by the Lake Michigan Watershed Ecosystem Partnership. To learn more, go to: www.greatlakes.org/LMWEP, and send questions or comments to: Angela Larsen, Coastal Conservation Manager & Lake Michigan Watershed Ecosystem Partnership Coordinator, Alliance for the Great Lakes, at alarsen@greatlakes.org & (312) 445-9746.

★ A POC (Plants of Concern) species is defined as a native plant that is officially listed as Endangered or Threatened in Illinois or is considered by botanists and ecologists to be rare in Northeast Illinois, particularly within the ravine system for this guide. See www.plantsofconcern.org for more information.

☒ Invasive species are aggressive native or exotic species that negatively impact other native species. See www.invasive.org, or the northeast Illinois Invasive Plant Partnership's website (niipp.net) for more information.

POC species ★; Invasive species ☒

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Resources

This guide represents a small subset of the hundreds of species that one may encounter in ravines, on bluffs, and along beaches of the Chicago region. The resources below can be used to identify additional species.

Picture Identification: Ladd, D. 2001. *North Woods Wildflowers*. Helena: Falcon Publishing Inc.

Keys to species: Swink, F. & Wilhelm, G. 1994. *Plants of the Chicago region, 4th ed.* Indianapolis: Indiana Academy of Science.

Ravine Flora: Moran, Robbin C. Vascular Flora of the Ravines along Lake Michigan in Lake County, IL. *The Michigan Botanist*. 17:123-140. (Available at michbotclub.org/the-michigan-botanist)

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Jane and John Balaban, North Branch Restoration Project:: 3, 9a, 11a, 14a, 15a, 18a, 20, 26b, 28, 29, 36, 38, 41, 46b

Chris Evans, Illinois Wildlife Action Plan, Bugwood.org: 4a, 11b, 16, 51a, 51b, 55a, 55b, 60a

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Kathry Corio and John Balaban: 8a, 8b

Plants of Concern (POC) & Chicago Botanic Garden (CBG): 10a, 10b, 22, 22(inset), 23, 39, 43a(inset), 54, 54(inset), 59a, 59b, 60a

Rachel Goad, POC, CBG: 12, 14b, 15b, 26a, 44a, 44b, 48, 50, 56a, 56b

Greg Hitzroth, POC, CBG: 13, 13(inset), 24, 24(inset)

Margo Milde, POC volunteer: 17, 25, 37

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Mary Ellen (Mel) Harte, Bugwood.org: 53b

Britt Slattery, US Fish and Wildlife Service, Bugwood.org: 57

Deb Maurer, Lake County FPD: 58

Leslie J. Mehrhoff, University of Connecticut, Bugwood.org: 60b