


Guide to Indiana's Common Goldenrod Species

by Paul E Rothrock, Taylor University, Upland, IN 46989 (plrothroc@tayloru.edu)

I. Habitat: open meadows and abandoned fields

A. Leaves narrow, linear, untoothed; inflorescence \pm flat-topped 

A'. Leaves lanceolate to elliptic, often toothed; inflorescence elongate, often looking "wind-swept" – go to B (below)



Grass-leaved goldenrod, *Euthamia graminifolia* [Y1231*]

B. Leaves with distinct midrib & fine, branched lateral veins, edges vaguely toothed; leaves gradually reducing in size from base to top of stem and into infl.

B'. Leaves tri-veined; upper and lower leaves little changed in size but notably smaller within the inflorescence; forms rhizomatous clones



Gray or old-field goldenrod, *Solidago nemoralis* [Y1251*]; the leaves & stems have fine, ashy-gray hairs. This species does not form rhizomatous clones.

Tall goldenrod (*Solidago altissima*) and Canada goldenrod (*S. canadensis*) [Y1247] are similar. The green bracts (involucre) that form the base of the flower heads are mostly 3-4.5 mm long in tall goldenrod, but only 2-3 mm in Canada goldenrod. The latter also has more strongly toothed leaves.

II. Habitat: moist soil (fens, wet thickets, stream banks)

A. Stems hairless, roundish, often with waxy, whitish coating; upper surface of leaves firm but not sandpapery



Late goldenrod, *Solidago gigantea* [Y1248; H257]; resembles Canada goldenrod, but has hairless stems.

A'. Stems hairless, with raised angles or ribs; upper surface of leaves sandpapery



Swamp or rough-leaved goldenrod, *Solidago patula* [Y1255]; the inflorescence has widely spreading branches

III. Habitat: mesic to dry woodlands

A. Inflorescence terminal with arched branches and flower heads directed upwards



A'. Inflorescence composed of axillary clusters or, if terminal, branches not arched or one-sided – go to B (next page)

Elm-leaved goldenrod, *Solidago ulmifolia* [Y1254; H258]: this species lacks hair on its stem. It also lacks tri-veined leaves. The flowering sequence is well-defined – from branch apex to base.



B. Leaves narrowly-elliptic, sessile; stem straight or arched



Bluestem goldenrod, *Solidago caesia* [Y1239; H260]: the stem often has a bluish cast due to a waxy coating.

B'. Leaves ovate and tapering to a winged leaf stalk; stem zigzags at lower nodes



Zigzag goldenrod, *Solidago flexicaulis* [Y1238; H259]

Other goldenrod species:

Indiana's flora includes an additional 21 species of goldenrods (*Euthamia* and *Solidago* species) that are less widely distributed through the state. Here are a few you are most likely to encounter.

1. Early goldenrod, *Solidago juncea* [Y1250] – blooms in July and early August in fields and open woods.
2. Showy goldenrod, *S. speciosa* [Y1240] – inhabits open woods (e.g., black oak savannas) and prairies with gravelly or sandy soils. It has a cylindrical inflorescence that lacks the one-sided flowering-branches seen in tall or Canada goldenrod.
3. Rough goldenrod, *S. rugosa* [Y1253] – grows in northern and parts of SE Indiana in moist woods and thickets. The leaves lack a tri-veined pattern and have a tapered base.
4. Stiff goldenrod, *S. rigida* [Y1237] – this species has flat-topped inflorescences and inhabits prairies and prairie restorations, especially in northern Indiana.
5. Bog goldenrod, *S. uliginosa* [Y1242] – as its name implies is a bog, fen, or marsh plant found mostly in northern Indiana. Its leaf stalks clasp the stem.
6. Ohio and Riddell's goldenrods, *S. ohioensis* & *S. riddellii* [Y1235-6] – both species grow in wet calcareous habitats of northern Indiana. They have flat-topped inflorescences and hairless stems and foliage.



Showy goldenrod, *Solidago speciosa*

*Y=Yatskievych's *Field Guide to Indiana Wildflowers*; H=Homoya's *Wildflowers and Ferns of Indiana Forests*