

# *Bidens frondosa*

## Distribution



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### Map info

● revised records

○ unrevised records

On the map are not visualized records without the coordinates and records marked as incorrect or doubtful.



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## Habitus and growth type

Height [m]: **0.2-1.8**

Growth form: **annual herb**

Life form: **therophyte**

Life strategy: **CR - competitor/ruderal**

Life strategy (Pierce method based on leaf traits): **CR**

Life strategy (Pierce method, C-score): **51.4 %**

Life strategy (Pierce method, S-score): **4.2 %**

Life strategy (Pierce method, R-score): **44.4 %**

## Leaf

Leaf presence and metamorphosis: **leaves present, not modified**

Leaf arrangement (phyllotaxis): **opposite**

Leaf shape: **compound - ternate, compound - imparipinnate**

Stipules: **absent**

Petiole: **present**

Leaf life span: **summer green**

Leaf anatomy: **mesomorphic, helomorphic**

## Flower

Flowering period [month]: **August-September**

Flowering phase: **8 Clematis vitalba-Galium sylvaticum (mid-summer)**  
 Flower colour: **yellow**  
 Flower symmetry: **actinomorphic, zygomorphic**  
 Perianth type: **calyx absent, corolla present**  
 Perianth fusion: **fused**  
 Shape of the sympetalous corolla or syntepalous perianth: **ligulate, tubular**  
 Inflorescence type: **panicula ex anthodiis composita**  
 Dicliny: **synoecious**  
 Generative reproduction type: **autogamy**  
 Pollination syndrome: **selfing**  
 Pollinator spectrum: **honeybee, hoverflies, flies s. l. (solitary bees, other Hymenoptera, other Diptera, butterflies)**

### Fruit, seed and dispersal

Fruit type: **dry fruit - achene/cypsela/samara**  
 Fruit colour: **brown, black**  
 Reproduction type: **only by seed/spores**  
 Dispersal unit (diaspore): **fruit, infrutescence or its part**  
 Dispersal strategy: **Bidens (mainly autochory and epizoochory)**  
 Myrmecochory: **non-myrmecochorous (b)**

### Belowground organs and clonality

Shoot life span (cyclicity): **monocyclic shoots prevailing**  
 Primary root: **present**

#### Bud bank

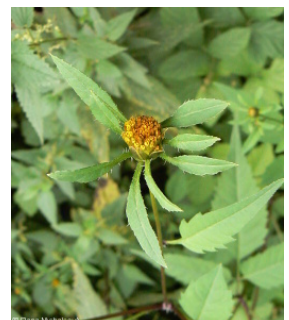
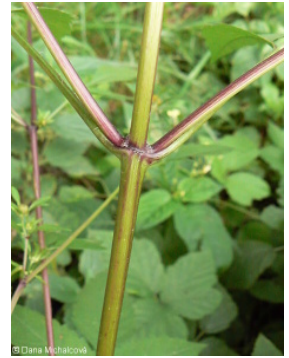
Number of buds per shoot at the soil surface (root buds excluded): **0**  
 Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **0**  
 Number of buds per shoot at a depth greater than 10 cm (root buds excluded): **0**  
 Size of the belowground bud bank (root buds excluded): **0**  
 Number of buds per shoot at the soil surface (root buds included): **0**  
 Number of buds per shoot at a depth of 0–10 cm (root buds included): **0**  
 Number of buds per shoot at a depth greater than 10 cm (root buds included): **0**  
 Size of the belowground bud bank (root buds included): **0**

### Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**  
 Carnivory: **non-carnivorous**  
 Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

### Karyology

Chromosome number (2n): **48**  
 Ploidy level (x): **4**  
 2C genome size [Mbp]: **2851.18**  
 1Cx monoploid genome size [Mbp]: **712.79**  
 Genomic GC content: **39.1 %**



## Taxon origin

Origin in the Czech Republic: **neophyte**

Invasion status: **invasive**

Geographic origin: **North America**

Year of the first record in the wild: **1907**

Period of introduction: **Late Modern Period (1800-1950)**

Introduction pathway: **unintentional - anthropogenic, unintentional - nature**



## Ecological indicator values

### Ellenberg-type indicator values

Light indicator value: **7 - half-light plant, mostly occurring at full light, but also in the shade up to about 30% of diffuse radiation incident in an open area**

Temperature indicator value: **6 - transition between values 5 and 7**

Moisture indicator value: **9 - wetness indicator, focus on often soaked, poorly aerated soils**

Reaction indicator value: **7 - indicator of slightly acidic to slightly basic conditions, never occurring in very acidic conditions**

Nutrient indicator value: **8 - pronounced nutrient indicator**

Salinity indicator value: **1 - salt tolerant, mostly on low-salt to salt-free soils, but occasionally on slightly salty soils**

### Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.78**

Herb layer disturbance frequency indicator value: **-0.57**

Whole-community disturbance severity indicator value: **0.37**

Herb layer disturbance severity indicator value: **0.39**

Whole-community structure based disturbance indicator value: **0.47**

Herb layer structure-based disturbance indicator value: **0.48**



## Habitat and sociology

### Occurrence in habitats

#### 3 Aquatic vegetation

3C Macrophytic vegetation of oligotrophic lakes and pools: **1 - rare occurrence**

#### 4 Wetland and riverine herbaceous vegetation

4A Reed-beds of eutrophic still waters: **1 - rare occurrence**

4B Halophilous reed and sedge beds: **1 - rare occurrence**

4C Eutrophic vegetation of muddy substrata: **2 - optimum**

4D Riverine reed vegetation: **2 - optimum**

4E Reed vegetation of brooks: **1 - rare occurrence**

4F Mesotrophic vegetation of muddy substrata: **1 - rare occurrence**

4G Tall-sedge beds: **1 - rare occurrence**

4H Vegetation of low annual hygrophilous herbs: **2 - optimum**

4I Vegetation of nitrophilous annual hygrophilous herbs: **3 - dominant**

4L Nitrophilous herbaceous fringes of lowland rivers: **2 - optimum**

#### 6 Meadows and mesic pastures

6D Alluvial meadows of lowland rivers: **1 - rare occurrence**





6G Vegetation of wet disturbed soils: **1 - rare occurrence**

10 Saline vegetation

10I Inland saline meadows: **1 - rare occurrence**

11 Heathlands and scrub

11I Willow carrs: **1 - rare occurrence**

11J Willow galleries of loamy and sandy river banks: **2 - optimum**

11R Scrub and pioneer woodland of forests clearings: **1 - rare occurrence**

12 Forests

12B Alluvial forests: **1 - rare occurrence**

13 Anthropogenic vegetation

13A Annual vegetation of ruderal habitats: **1 - rare occurrence**

13D Perennial thermophilous ruderal vegetation: **1 - rare occurrence**

13E Perennial nitrophilous herbaceous vegetation of mesic sites: **1 - rare occurrence**

13F Herbaceous vegetation of forests clearings and Rubus scrub: **1 - rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **0 - taxon that does not spontaneously occur in Czech forests**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **0 - taxon that does not spontaneously occur in Czech forests**

Diagnostic taxon

Diagnostic taxon of associations: [KAC01 \*Salicetum albae\*](#), [MBA04 \*Polygono brittingeri-Chenopodietum rubri\*](#), [MBA06 \*Polygonetum hydropiperis\*](#), [MCA10 \*Phalarido arundinaceae-Bolboschoenetum laticarpi\*](#), [MCE05 \*Leersietum oryzoidis\*](#), [XDA04 \*Sicyo angulatae-Echinocystietum lobatae\*](#)

Constant taxon

Constant taxon of associations: [KAB03 \*Salici purpureae-Myricarietum germanicae\*](#), [KAC01 \*Salicetum albae\*](#), [MBA04 \*Polygono brittingeri-Chenopodietum rubri\*](#), [MBA06 \*Polygonetum hydropiperis\*](#), [MCA10 \*Phalarido arundinaceae-Bolboschoenetum laticarpi\*](#), [MCE05 \*Leersietum oryzoidis\*](#), [XDA04 \*Sicyo angulatae-Echinocystietum lobatae\*](#)

Dominant taxon

Dominant taxon of associations: [MBA06 \*Polygonetum hydropiperis\*](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **3.6**

Ecological specialization index for non-forest vegetation: **3.7**

Ecological specialization index for forest vegetation: **5**

Colonization ability

Index of colonization success (ICS): **6**

Index of colonization potential (ICP): **6**

Optimum successional age [years]: **11.5**

## Distribution and frequency

Floristic zone: **northern temperate, southern temperate, submeridional**

Floristic region: **Europe, Americas**

Continental degree: **6**

Distribution range extension along the continentality gradient: **5**



Elevational belt in the Czech Republic: **lowlands, colline belt, submontane belt**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: 551

taxon.data.freq\_in\_quad: 1477

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **2.3 %**

Occurrence frequency in vegetation plots with a cover above 5%: **10.2 %**

Occurrence frequency in vegetation plots with a cover above 25%: **4.3 %**

Occurrence frequency in vegetation plots with a cover above 50%: **2.7 %**

Mean percentage cover in vegetation plots: **5.2 %**

Maximum percentage cover in vegetation plots: **88 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **22**

Number of narrow habitats in which the taxon has its optimum: **6**

Number of broad habitats in which the taxon occurs: **7**

Number of broad habitats in which the taxon has its optimum: **2**

## Threats and protection

Red List 2017 (national categories): **taxon is not on the Red List**

Red List 2017 (IUCN categories): **LC(NA) - least concern (taxon is not on the Red List)**

Legal protection: **not protected by law**