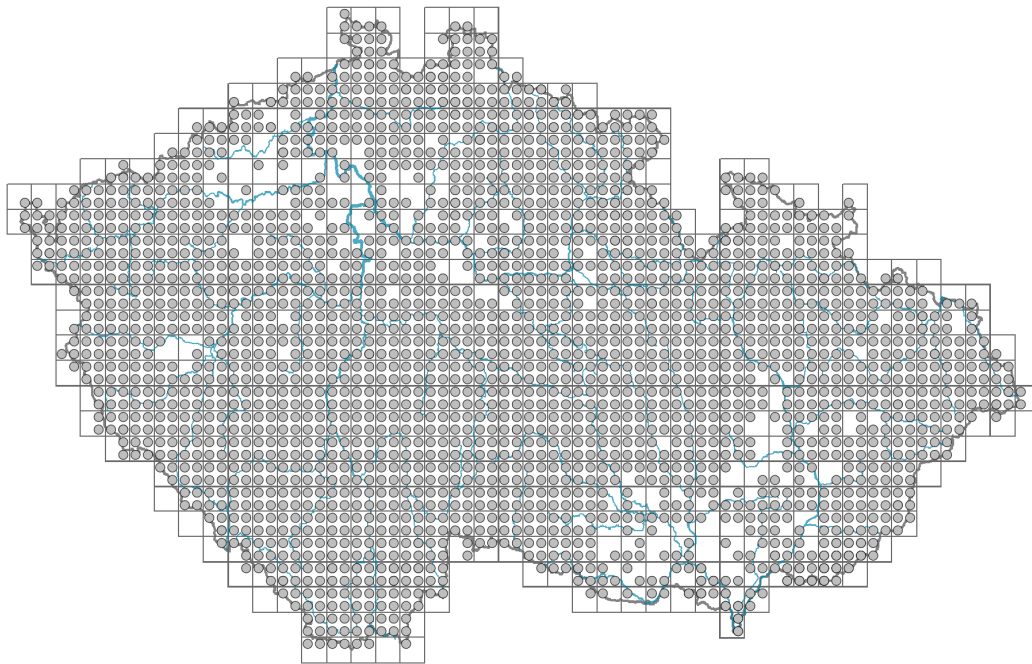


# Angelica sylvestris

## Distribution



### Map info

● revised records

○ unrevised records

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



## Habitus and growth type

Height [m]: **0.6-1.5**

Growth form: **monocarpic perennial non-clonal herb**

Life form: **hemicryptophyte**

Life strategy: **C - competitor**

Life strategy (Pierce method based on leaf traits): **S/CSR**

Life strategy (Pierce method, C-score): **15.5 %**

Life strategy (Pierce method, S-score): **63.4 %**

Life strategy (Pierce method, R-score): **21.1 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **compound - bipinnate, compound - tripinnate**

Stipules: **absent**

Petiole: **both present and absent**

Leaf life span: **summer green**

Leaf anatomy: **mesomorphic, helomorphic**

## Flower

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

Flowering phase: **8 Clematis vitalba-Galium sylvaticum (mid-summer)**

Flower colour: **white**

Flower symmetry: **actinomorphic**

Perianth type: **calyx absent, corolla present**

Perianth fusion: **free**

Inflorescence type: **umbrella composita**

Dicliny: **andromonoecious**

Generative reproduction type: **facultative allogamy**

Pollination syndrome: **insect-pollination**

Pollinator spectrum: **other Hymenoptera, other Diptera (honeybee, solitary bees, hoverflies, flies s. l., meat flies s. l., butterflies, beetles, nitidulids, other pollinators)**

## Fruit, seed and dispersal

Fruit type: **dry fruit - cremocarp**

Fruit colour: **brown**

Reproduction type: **only by seed/spores**

Dispersal unit (diaspore): **fruit, infructescence or its part**

Dispersal strategy: **Allium (mainly autochory)**

Myrmecochory: **non-myrmecochorous (b)**

## Belowground organs and clonality

Root metamorphosis: **primary storage root**

Storage organ: **primary storage root**

Shoot life span (cyclicality): **dicyclic or polycyclic shoots prevailing**

Primary root: **present**

Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **5**

Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **12**

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): **17**

Depth of the belowground bud bank (root buds excluded) [cm]: **4**

Number of buds per shoot at the soil surface (root buds included): **5**

Number of buds per shoot at a depth of 0–10 cm (root buds included): **12**

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): **17**

Depth of the belowground bud bank (root buds included) [cm]: **4**

## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

## Karyology

Chromosome number (2n): **22**



Ploidy level (x): **2**  
 2C genome size [Mbp]: **4429.27**  
 1Cx monoploid genome size [Mbp]: **2214.63**  
 Genomic GC content: **39.1 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

### Ellenberg-type indicator values

Light indicator value: **6 - transition between values 5 and 7; rarely at less than 20% of diffuse radiation incident in an open area**

Temperature indicator value: **5x - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas (generalist)**

Moisture indicator value: **8 - transition between values 7 and 9**

Reaction indicator value: **6x - transition between values 5 and 7 (generalist)**

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

Salinity indicator value: **0 - not salt tolerant, glycophyte**

### Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.01**

Herb layer disturbance frequency indicator value: **-0.41**

Whole-community disturbance severity indicator value: **0.29**

Herb layer disturbance severity indicator value: **0.3**

Whole-community structure based disturbance indicator value: **0.42**

Herb layer structure-based disturbance indicator value: **0.54**

## Habitat and sociology

### Occurrence in habitats

#### 1 Vegetation of cliffs, screes and walls

1A Calcareous cliffs: **1 - rare occurrence**

1B Siliceous cliffs and block fields: **1 - rare occurrence**

#### 2 Alpine and subalpine grasslands

2B Subalpine tall-forb and tall-grass vegetation: **1 - rare occurrence**

#### 4 Wetland and riverine herbaceous vegetation

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

4D Riverine reed vegetation: **1 - rare occurrence**

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

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

4J River gravel banks: **1 - rare occurrence**

4K Petasites fringes of montane brooks: **2 - optimum**

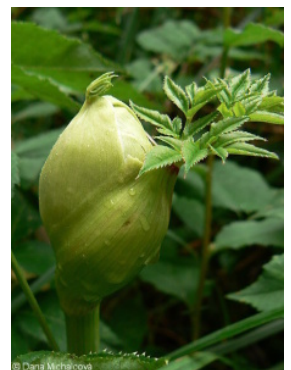
4L Nitrophilous herbaceous fringes of lowland rivers: **1 - rare occurrence**

#### 5 Vegetation of springs and mires

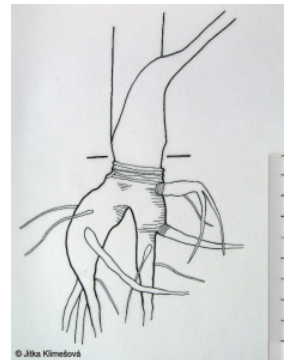
5A Hard-water springs with tufa formation: **1 - rare occurrence**

5B Lowland to montane soft-water springs: **1 - rare occurrence**

5C Alpine and subalpine soft-water springs: **1 - rare occurrence**



- 5D Calcareous fens: **2 - optimum**  
 5E Acidic moss-rich fens and peatland meadows: **2 - optimum**  
 5F Transitional mires: **1 - rare occurrence**  
 6 Meadows and mesic pastures  
 6A Mesic Arrhenatherum meadows: **1 - rare occurrence**  
 6B Montane mesic meadows: **1 - rare occurrence**  
 6C Pastures and park grasslands: **1 - rare occurrence**  
 6D Alluvial meadows of lowland rivers: **2 - optimum**  
 6E Wet Cirsium meadows: **2 - optimum**  
 6F Intermittently wet Molinia meadows: **2 - optimum**  
 6G Vegetation of wet disturbed soils: **1 - rare occurrence**  
 7 Acidophilous grasslands  
 7A Subalpine and montane acidophilous grasslands: **1 - rare occurrence**  
 7B Submontane Nardus grasslands: **1 - rare occurrence**  
 8 Dry grasslands  
 8F Thermophilous forest fringe vegetation: **1 - rare occurrence**  
 10 Saline vegetation  
 10I Inland saline meadows: **1 - rare occurrence**  
 11 Heathlands and scrub  
 11D Subalpine acidophilous Pinus mugo scrub: **1 - rare occurrence**  
 11H Subalpine deciduous scrub: **2 - optimum**  
 11I Willow carrs: **1 - rare occurrence**  
 11J Willow galleries of loamy and sandy river banks: **2 - optimum**  
 11L Tall mesic and xeric shrub: **1 - rare occurrence**  
 11N Low xeric scrub: **1 - rare occurrence**  
 11R Scrub and pioneer woodland of forests clearings: **2 - optimum**  
 12 Forests  
 12A Alder carrs: **2 - optimum**  
 12B Alluvial forests: **2 - optimum**  
 12C Oak-hornbeam forests: **1 - rare occurrence**  
 12D Ravine forests: **1 - rare occurrence**  
 12E Herb-rich beech forests: **1 - rare occurrence**  
 12F Limestone beech forests: **1 - rare occurrence**  
 12G Acidophilous beech forests: **1 - rare occurrence**  
 12H Peri-Alpidic basiphilous thermophilous oak forests: **1 - rare occurrence**  
 12I Sub-continental thermophilous oak forests: **1 - rare occurrence**  
 12K Acidophilous oak forests: **1 - rare occurrence**  
 12Q Peatland birch forests: **1 - rare occurrence**  
 12T Robinia pseudacacia plantations: **1 - rare occurrence**  
 12U Plantations of broad-leaved non-native trees: **2 - optimum**  
 12V Spruce plantations: **1 - rare occurrence**  
 12W Pine and larch plantations: **1 - rare occurrence**  
 13 Anthropogenic vegetation  
 13D Perennial thermophilous ruderal vegetation: **1 - rare occurrence**  
 13E Perennial nitrophilous herbaceous vegetation of mesic sites: **2 - optimum**  
 13F Herbaceous vegetation of forests clearings and Rubus scrub: **2 - optimum**



## Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **2.1 - taxon occurring both in the forest and open vegetation**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **2.1 - taxon occurring both in the forest and open vegetation**

## Diagnostic taxon

Diagnostic taxon of alliances: [TDF \*Calthion palustris\*](#)

Diagnostic taxon of associations: [TDF03 \*Angelico sylvestris-Cirsietum palustris\*](#)

## Constant taxon

Constant taxon of alliances: [TDF \*Calthion palustris\*](#)

Constant taxon of associations: [KAB03 \*Salici purpureae-Myricarium germanicae\*](#), [LAA03 \*Carici acutiformis-Alnetum glutinosae\*](#), [TDF01 \*Angelico sylvestris-Cirsietum oleracei\*](#), [TDF02 \*Cirsietum rivularis\*](#), [TDF03 \*Angelico sylvestris-Cirsietum palustris\*](#), [TDF04 \*Crepido paludosae-Juncetum acutiflori\*](#), [TDF05 \*Polygono bistortae-Cirsietum heterophylli\*](#), [TDF06 \*Chaerophyllo hirsuti-Calthetum palustris\*](#), [TDF08 \*Scirpetum sylvatici\*](#), [TDF09 \*Caricetum cespitosae\*](#), [TDF10 \*Scirpo sylvatici-Caricetum brizoidis\*](#), [TDF12 \*Filipendulo ulmariae-Geranium palustris\*](#), [TDF13 \*Lysimachio vulgaris-Filipenduletum ulmariae\*](#)

## Ecological specialization indices

Ecological specialization index for all vegetation types: **4.9**

Ecological specialization index for non-forest vegetation: **5.4**

Ecological specialization index for forest vegetation: **4.8**

## Colonization ability

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

Index of colonization potential (ICP): **2**

Optimum successional age [years]: **15**

## Distribution and frequency

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

Floristic region: **Europe, Siberia**

Distribution range extension along the continentality gradient: **6**

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

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: 663

taxon.data.freq\_in\_quad: 2276

## Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **6 %**

Occurrence frequency in vegetation plots with a cover above 5%: **9 %**

Occurrence frequency in vegetation plots with a cover above 25%: **1 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0.1 %**

Mean percentage cover in vegetation plots: **3.3 %**

Maximum percentage cover in vegetation plots: **63 %**

## Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **52**

Number of narrow habitats in which the taxon has its optimum: **14**

Number of broad habitats in which the taxon occurs: **11**

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

### **Threats and protection**

Legal protection: **not protected by law**