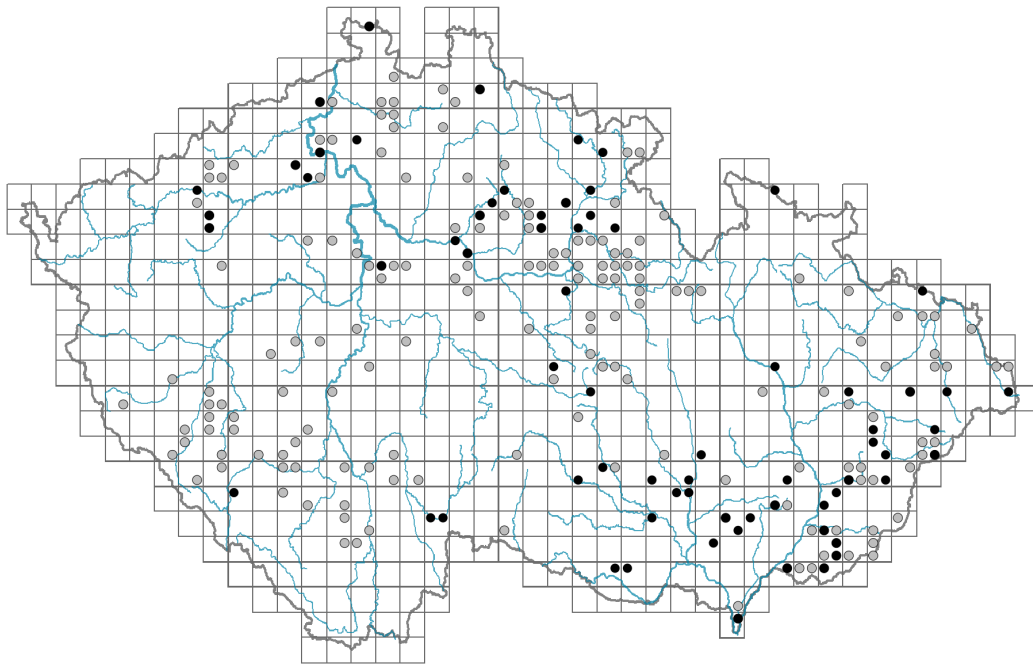


Inula helenium

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.

Habitus and growth type

Height [m]: **1-2**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **C - competitor**

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

Life strategy (Pierce method, C-score): **64.5 %**

Life strategy (Pierce method, S-score): **10.7 %**

Life strategy (Pierce method, R-score): **24.9 %**



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Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **both present and absent**

Leaf life span: **summer green**

Leaf anatomy: **mesomorphic**



© Dana Michalčová

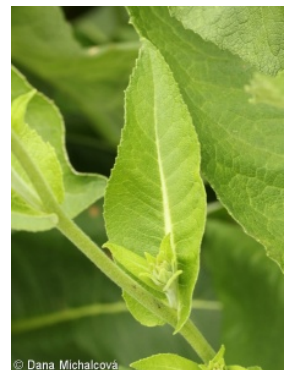
Flower

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



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Flowering phase: **8 Clematis vitalba-Galium sylvaticum (mid-summer)**
 Flower colour: **yellow**
 Flower symmetry: **actinomorphic, zygomorphic**
 Perianth type: **calyx reduced, corolla present**
 Perianth fusion: **fused**
 Shape of the sympetalous corolla or syntepalous perianth: **ligulate, tubular**
 Calyx fusion: **pappus**
 Inflorescence type: **corymbothsus ex anthodiis compositus**
 Dicliny: **gynomonoecious**
 Pollination syndrome: **insect-pollination**



Fruit, seed and dispersal

Fruit type: **dry fruit - achene/cypsela/samara**
 Fruit colour: **brown**
 Reproduction type: **by seed/spores and vegetatively**
 Dispersal unit (diaspore): **fruit, infrutescence or its part**
 Dispersal strategy: **Epilobium (mainly anemochory and autochory)**
 Myrmecochory: **probably myrmecochorous**

Belowground organs and clonality

Shoot metamorphosis: **rhizome**
 Storage organ: **rhizome**
 Type of clonal growth organ: **epigeogenous rhizome**
 Freely dispersible organs of clonal growth: **absent**
 Shoot life span (cyclicity): **dicyclic or polycyclic shoots prevailing**
 Branching type of stem-derived organs of clonal growth: **sympodial**
 Primary root: **absent**
 Persistence of the clonal growth organ [year]: **4**
 Number of clonal offspring: **1**
 Lateral spreading distance by clonal growth [m]: **0.01**
 Clonal index: **3**
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): **15**
 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): **20**
 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): **15**
 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): **20**
 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**

Taxon origin

Origin in the Czech Republic: **archaeophyte/neophyte**

Invasion status: **naturalized**

Geographic origin: **Europe, Mediterranean, Asia**

Year of the first record in the wild: **1819**

Period of introduction: **Late Middle Ages and Early Modern Period (merged category, 1200-1800)**

Introduction pathway: **intentional - ornamental**

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: **5 - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas**

Moisture indicator value: **5 - indicator of fresh soils, focus on soils of average moisture, missing on wet and on soils that frequently dry out**

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

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

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

Habitat and sociology

Occurrence in habitats

6 Meadows and mesic pastures

6A Mesic Arrhenatherum meadows: **1 - rare occurrence**

6C Pastures and park grasslands: **1 - rare occurrence**

8 Dry grasslands

8D Broad-leaved dry grasslands: **1 - rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **2.2 - taxon occurring partly in the forest, but mainly in open vegetation**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **2.2 - taxon occurring partly in the forest, but mainly in open vegetation**

Distribution and frequency

Floristic zone: **meridional**

Floristic region: **Western Asia**

Continentality degree: **8**

Distribution range extension along the continentality gradient: **2**

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

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

mapping cells: 169

taxon.data.freq_in_quad: 234

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0 %**

Occurrence frequency in vegetation plots with a cover above 5%: **100 %**

Occurrence frequency in vegetation plots with a cover above 25%: **0 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0 %**

Mean percentage cover in vegetation plots: **18 %**

Maximum percentage cover in vegetation plots: **18 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **3**

Number of narrow habitats in which the taxon has its optimum: **0**

Number of broad habitats in which the taxon occurs: **2**

Number of broad habitats in which the taxon has its optimum: **0**

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**