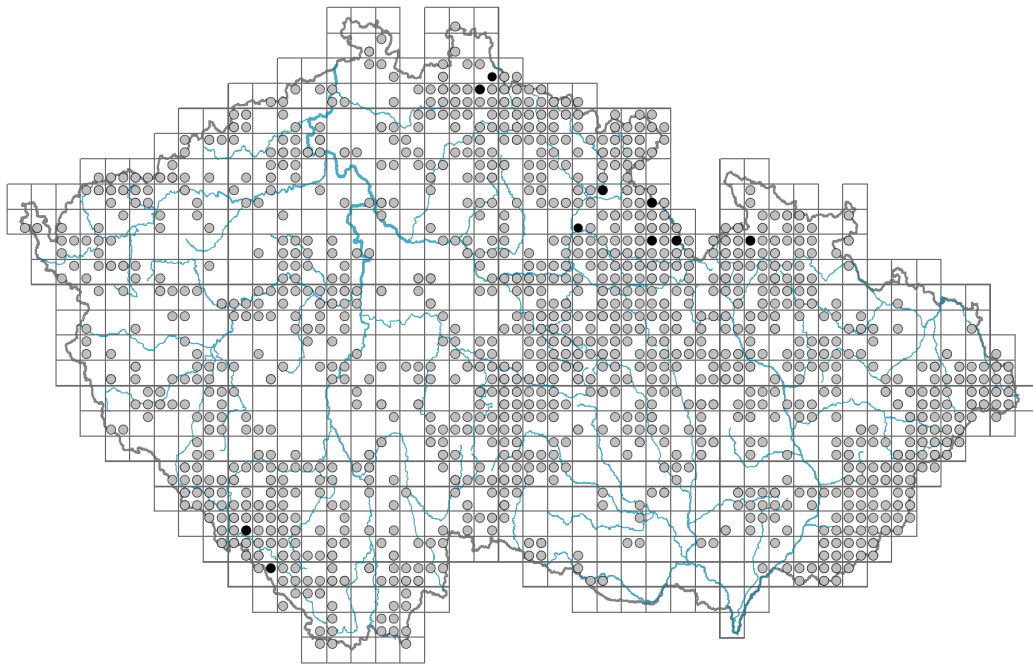


# *Euphrasia officinalis*

## 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]: **0.1-0.4**

Growth form: **annual herb**

Life form: **therophyte**

Life strategy: **R - ruderal**

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

Life strategy (Pierce method, C-score): **1.9 %**

Life strategy (Pierce method, S-score): **51.9 %**

Life strategy (Pierce method, R-score): **46.3 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **opposite**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **both present and absent**

Leaf life span: **summer green**

Leaf anatomy: **mesomorphic**

## Flower

Flowering phase: **6 Cornus sanguinea-Melica uniflora (start of early summer)**

Flower colour: **white**  
 Flower symmetry: **zygomorphic**  
 Perianth type: **calyx and corolla**  
 Perianth fusion: **fused**  
 Shape of the sympetalous corolla or syntepalous perianth: **bilabiate**  
 Calyx fusion: **synsepalous**  
 Inflorescence type: **racemus**  
 Dicliny: **synoecious**  
 Generative reproduction type: **facultative autogamy**  
 Pollination syndrome: **insect-pollination, selfing**  
 Pollinator spectrum: **hoverflies (honeybee, bumblebees, solitary bees, other Hymenoptera, flies s. l., meat flies s. l., other Diptera, butterflies)**

## Fruit, seed and dispersal

Fruit type: **dry fruit - capsule**  
 Fruit colour: **brown, black**  
 Reproduction type: **only by seed/spores**  
 Dispersal unit (diaspore): **seed**  
 Dispersal strategy: **Allium (mainly autochory)**  
 Myrmecochory: **probably myrmecochorous**

## Belowground organs and clonality

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

### Bud bank

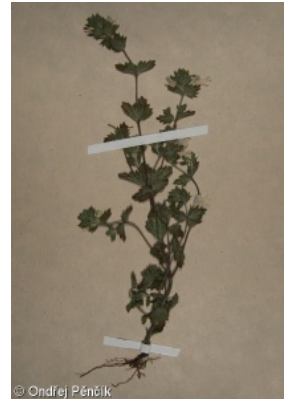
Number of buds per shoot at the soil surface (root buds excluded): **0**  
 Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **0**  
 Number of buds per shoot at a depth greater than 10 cm (root buds excluded): **0**  
 Size of the belowground bud bank (root buds excluded): **0**  
 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: **root hemiparasite**  
 Carnivory: **non-carnivorous**  
 Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

## Karyology

Chromosome number (2n): **22**  
 Ploidy level (x): **2**  
 2C genome size [Mbp]: **1060.65**  
 1Cx monoploid genome size [Mbp]: **530.32**



## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **8 - light plant, only exceptionally occurring at less than 40% 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: **5x - indicator of fresh soils, focus on soils of average moisture, missing on wet and on soils that frequently dry out (generalist)**

Reaction indicator value: **4x - transition between values 3 and 5 (generalist)**

Nutrient indicator value: **4 - transition between values 3 and 5**

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

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.34**

Herb layer disturbance frequency indicator value: **-0.34**

Whole-community disturbance severity indicator value: **0.27**

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

Whole-community structure based disturbance indicator value: **0.74**

Herb layer structure-based disturbance indicator value: **1**

## Habitat and sociology

Occurrence in habitats

2 Alpine and subalpine grasslands

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

4 Wetland and riverine herbaceous vegetation

4H Vegetation of low annual hygrophilous herbs: **1 - rare occurrence**

5 Vegetation of springs and mires

5D Calcareous fens: **1 - rare occurrence**

5E Acidic moss-rich fens and peatland meadows: **1 - rare occurrence**

5F Transitional mires: **1 - rare occurrence**

5H Wet peat soils and bog hollows: **1 - rare occurrence**

6 Meadows and mesic pastures

6A Mesic Arrhenatherum meadows: **2 - optimum**

6B Montane mesic meadows: **2 - optimum**

6C Pastures and park grasslands: **2 - optimum**

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

6E Wet Cirsium meadows: **1 - rare occurrence**

6F Intermittently wet Molinia meadows: **2 - optimum**

7 Acidophilous grasslands

7A Subalpine and montane acidophilous grasslands: **2 - optimum**

7B Submontane Nardus grasslands: **2 - optimum**

8 Dry grasslands





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

8E Acidophilous dry grasslands: **1 - rare occurrence**

8F Thermophilous forest fringe vegetation: **1 - rare occurrence**

11 Heathlands and scrub

11A Dry lowland to subalpine heathlands: **1 - rare occurrence**

11D Subalpine acidophilous *Pinus mugo* scrub: **1 - rare occurrence**

11H Subalpine deciduous scrub: **1 - rare occurrence**

13 Anthropogenic vegetation

13C Annual vegetation of trampled habitats: **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 alliances: [TEC \*Violion caninae\*](#)

Diagnostic taxon of associations: [TDC02 \*Anthoxantho odorati-Agrostietum tenuis\*](#), [TEC02 \*Campanulo rotundifoliae-Dianthetum deltoidis\*](#)

Constant taxon

Constant taxon of associations: [TDC02 \*Anthoxantho odorati-Agrostietum tenuis\*](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **5.6**

Ecological specialization index for non-forest vegetation: **5.7**

## Distribution and frequency

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

Floristic region: **Europe, Western Siberia**

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: 493

taxon.data.freq\_in\_quad: 1116

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.6 %**

Occurrence frequency in vegetation plots with a cover above 5%: **11 %**

Occurrence frequency in vegetation plots with a cover above 25%: **0.5 %**

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

Mean percentage cover in vegetation plots: **3.5 %**

Maximum percentage cover in vegetation plots: **29 %**

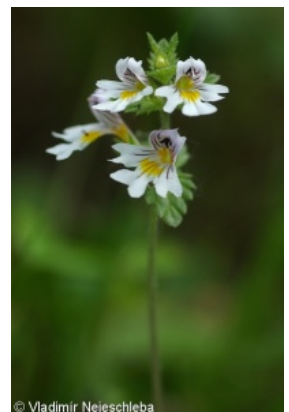
Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **21**

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

Number of broad habitats in which the taxon occurs: **8**

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



## **Threats and protection**

Legal protection: **not protected by law**