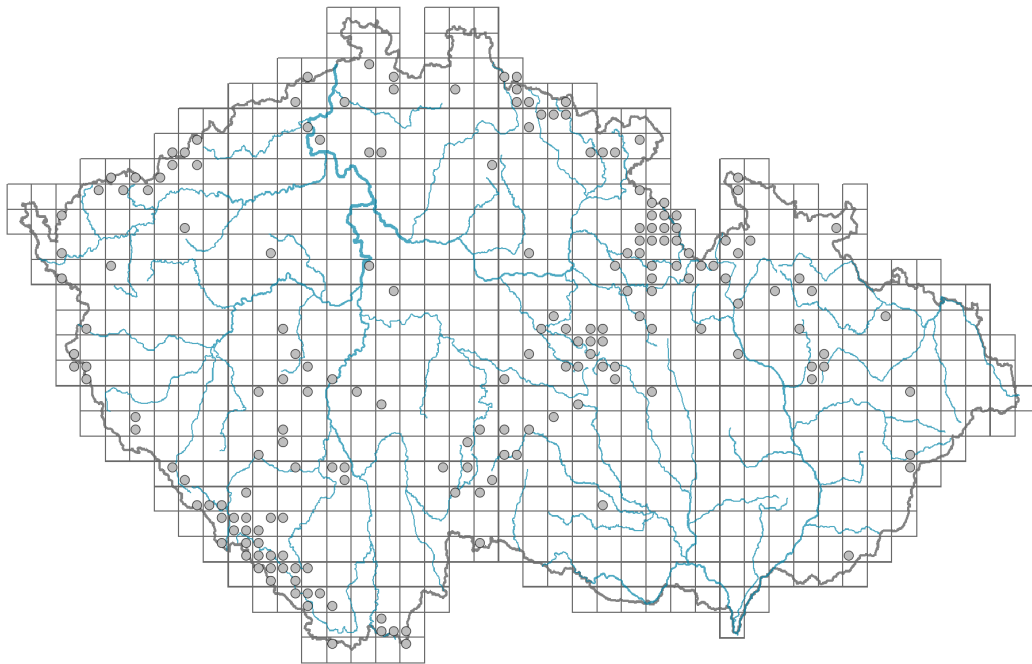


# *Polemonium caeruleum*

## Distribution



© Eva Hellenbergerová

### Map info

● revised records

○ unrevised records

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



© Eva Hellenbergerová



© Vladimír Nejšlechta

## Habitus and growth type

Height [m]: **0.2-0.8**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **CSR - competitor/stress-tolerator/ruderal**

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

Life strategy (Pierce method, C-score): **39.2 %**

Life strategy (Pierce method, S-score): **0 %**

Life strategy (Pierce method, R-score): **60.8 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **compound - imparipinnate**

Stipules: **absent**

Petiole: **present**

Leaf life span: **summer green**

Leaf anatomy: **mesomorphic, helomorphic**

## Flower

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

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

Flower colour: **white, blue**

Flower symmetry: **actinomorphic, zygomorphic**

Perianth type: **calyx and corolla**

Perianth fusion: **fused**

Shape of the sympetalous corolla or syntepalous perianth: **rotate**

Calyx fusion: **synsepalous**

Inflorescence type: **cincinnus**

Dicliny: **synoecious**

Generative reproduction type: **alogamy self-incompatibility, facultative alogamy**

Pollination syndrome: **insect-pollination**

### Fruit, seed and dispersal

Fruit type: **dry fruit - capsule**

Fruit colour: **brown**

Reproduction type: **mostly by seed/spores, rarely vegetatively**

Dispersal unit (diaspore): **seed**

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

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

### Belowground organs and clonality

Shoot metamorphosis: **pleiocorm**

Storage organ: **pleiocorm**

Type of clonal growth organ: **epigeogenous rhizome**

Freely dispersible organs of clonal growth: **absent**

Shoot life span (cyclicality): **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]: **0.05**

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**

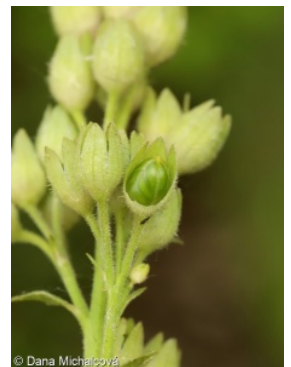
Number of buds per shoot at a depth greater than 10 cm (root buds included): **0**

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**

## Karyology

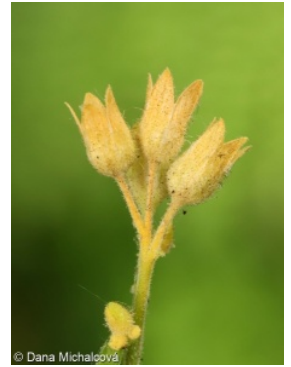
Chromosome number (2n): **18**

Ploidy level (x): **2**

2C genome size [Mbp]: **11160.22**

1Cx monoploid genome size [Mbp]: **5580.11**

Genomic GC content: **43 %**



## 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: **4 - transition between values 3 and 5**

Moisture indicator value: **7 - humidity indicator, focus on well moistened, but not wet soils**

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

4 Wetland and riverine herbaceous vegetation

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

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

5 Vegetation of springs and mires

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

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

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

6 Meadows and mesic pastures

6B Montane mesic meadows: **1 - rare occurrence**

6E Wet Cirsium meadows: **2 - optimum**

6F Intermittently wet Molinia meadows: **1 - rare occurrence**

11 Heathlands and scrub

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

12 Forests

12B Alluvial forests: **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**

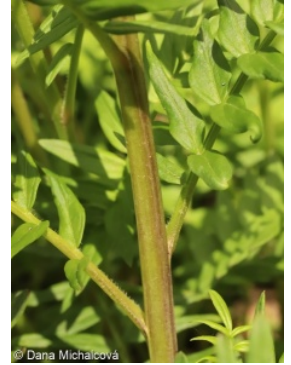
Ecological specialization indices

Ecological specialization index for all vegetation types: **4.8**

Ecological specialization index for non-forest vegetation: **5.1**

Colonization ability

Index of colonization success (ICS): **1**



### **Distribution and frequency**

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

Floristic region: **Europe, Asia, Americas**

Continentality degree: **7**

Distribution range extension along the continentality gradient: **3**

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

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **146**

taxon.data.freq\_in\_quad: **193**

Commonness in vegetation plots from the Czech Republic

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

Occurrence frequency in vegetation plots with a cover above 5%: **25 %**

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: **4.3 %**

Maximum percentage cover in vegetation plots: **13 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **10**

Number of narrow habitats in which the taxon has its optimum: **1**

Number of broad habitats in which the taxon occurs: **5**

Number of broad habitats in which the taxon has its optimum: **1**

### **Threats and protection**

Red List 2017 (national categories): **C2r - endangered taxon, rare**

Red List 2017 (IUCN categories): **EN - endangered**

Legal protection: **not protected by law**