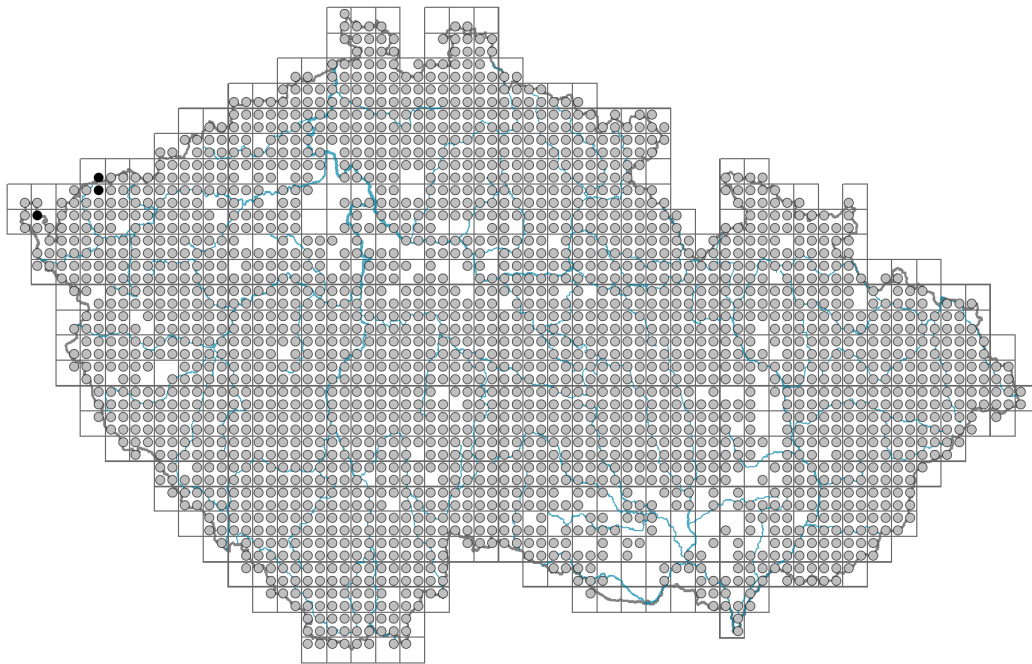


# *Campanula patula*

## 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]: **0.25-0.7**

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

Life form: **hemicryptophyte**

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

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate, rosulate**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **both present and absent**

Leaf life span: **evergreen**

Leaf anatomy: **mesomorphic**

## Flower

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

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

Flower colour: **violet, blue-violet**

Flower symmetry: **actinomorphic**

Perianth type: **calyx and corolla**

Perianth fusion: **fused**

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

Calyx fusion: **synsepalous**

Inflorescence type: **corymbothsus**

Dicliny: **synoecious**

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

Pollination syndrome: **insect-pollination, selfing**

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



## Fruit, seed and dispersal

Fruit type: **dry fruit - capsule**

Fruit colour: **brown**

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

Dispersal unit (diaspore): **seed**

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): **7**

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): **12**

Depth of the belowground bud bank (root buds excluded) [cm]: **3**

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): **7**

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): **12**

Depth of the belowground bud bank (root buds included) [cm]: **3**

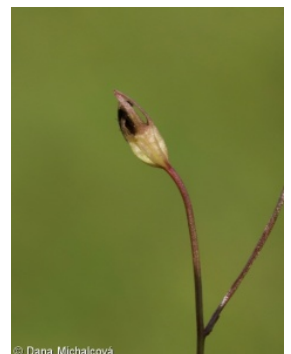


## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

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



## Karyology

Chromosome number (2n): **20 (40, 60)**

Ploidy level (x): **2 (4, 6)**

2C genome size [Mbp]: **2066.81**

1Cx monoploid genome size [Mbp]: **1033.4**

Genomic GC content: **39.4 %**

## Taxon origin

Origin in the Czech Republic: **native**

## 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: **6 - transition between values 5 and 7**

Nutrient indicator value: **5 - occurring at moderately nutrient-rich sites, and less frequently at poor and rich sites**

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

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.45**

Herb layer disturbance frequency indicator value: **-0.14**

Whole-community disturbance severity indicator value: **0.31**

Herb layer disturbance severity indicator value: **0.33**

Whole-community structure based disturbance indicator value: **0.57**

Herb layer structure-based disturbance indicator value: **0.72**

## Habitat and sociology

Occurrence in habitats

4 Wetland and riverine herbaceous vegetation

4K Petasites fringes of montane brooks: **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**

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: **2 - optimum**

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

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

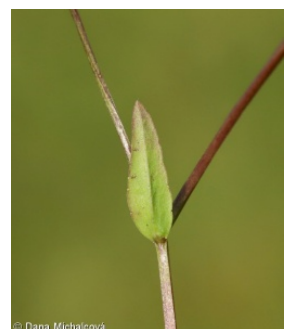
6G Vegetation of wet disturbed soils: **1 - rare occurrence**

7 Acidophilous grasslands

7A Subalpine and montane acidophilous grasslands: **1 - rare occurrence**

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

8 Dry grasslands



8B Submediterranean dry grasslands on rock outcrops: **1 - rare occurrence**

8C Narrow-leaved sub-continental steppes: **1 - rare occurrence**

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

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

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

9 Sand grasslands and rock-outcrop vegetation

9C Festuca grasslands on acidic sands: **1 - rare occurrence**

11 Heathlands and scrub

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

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

11L Tall mesic and xeric shrub: **1 - rare occurrence**

11N Low xeric scrub: **1 - rare occurrence**

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

12 Forests

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

12C Oak-hornbeam forests: **1 - rare occurrence**

12D Ravine forests: **1 - rare occurrence**

12E Herb-rich beech forests: **1 - rare occurrence**

12I Sub-continental thermophilous oak forests: **1 - rare occurrence**

12K Acidophilous oak forests: **1 - rare occurrence**

12L Boreo-continental pine forests: **1 - rare occurrence**

12T Robinia pseudacacia 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: **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 alliances: [TDA \*Arrhenatherion elatioris\*](#)

Diagnostic taxon of associations: [TDA02 \*Ranunculo bulbosi-Arrhenatheretum elatioris\*](#), [TDA03 \*Poo-Trisetetum flavescens\*](#), [TDA04 \*Potentillo albae-Festucetum rubrae\*](#), [THF02 \*Brachypodio pinnati-Molinietum arundinaceae\*](#)

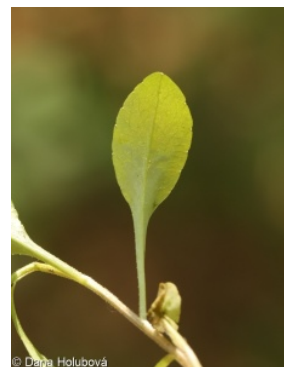
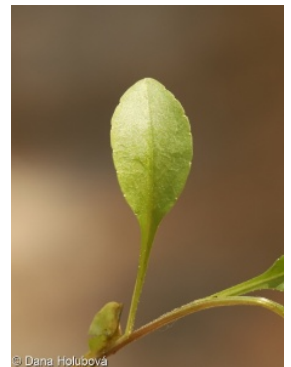
Constant taxon

Constant taxon of alliances: [TDA \*Arrhenatherion elatioris\*](#)

Constant taxon of associations: [TDA01 \*Pastinaco sativae-Arrhenatheretum elatioris\*](#), [TDA02 \*Ranunculo bulbosi-Arrhenatheretum elatioris\*](#), [TDA03 \*Poo-Trisetetum flavescens\*](#), [TDA04 \*Potentillo albae-Festucetum rubrae\*](#), [TDB01 \*Geranio sylvatici-Trisetetum flavescens\*](#), [TDC02 \*Anthoxantho odorati-Agrostietum tenuis\*](#), [TDE04 \*Cnidio dubii-Deschampsietum cespitosae\*](#), [THF02 \*Brachypodio pinnati-Molinietum arundinaceae\*](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **5.7**



Ecological specialization index for non-forest vegetation: **5.8**

Ecological specialization index for forest vegetation: **4.4**

Colonization ability

Index of colonization success (ICS): **7**

Index of colonization potential (ICP): **5**

Optimum successional age [years]: **7**

### Distribution and frequency

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

Floristic region: **Europe**

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

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: **661**

taxon.data.freq\_in\_quad: **2291**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **3.7 %**

Occurrence frequency in vegetation plots with a cover above 5%: **0.6 %**

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: **2 %**

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: **35**

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

Number of broad habitats in which the taxon occurs: **9**

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**

