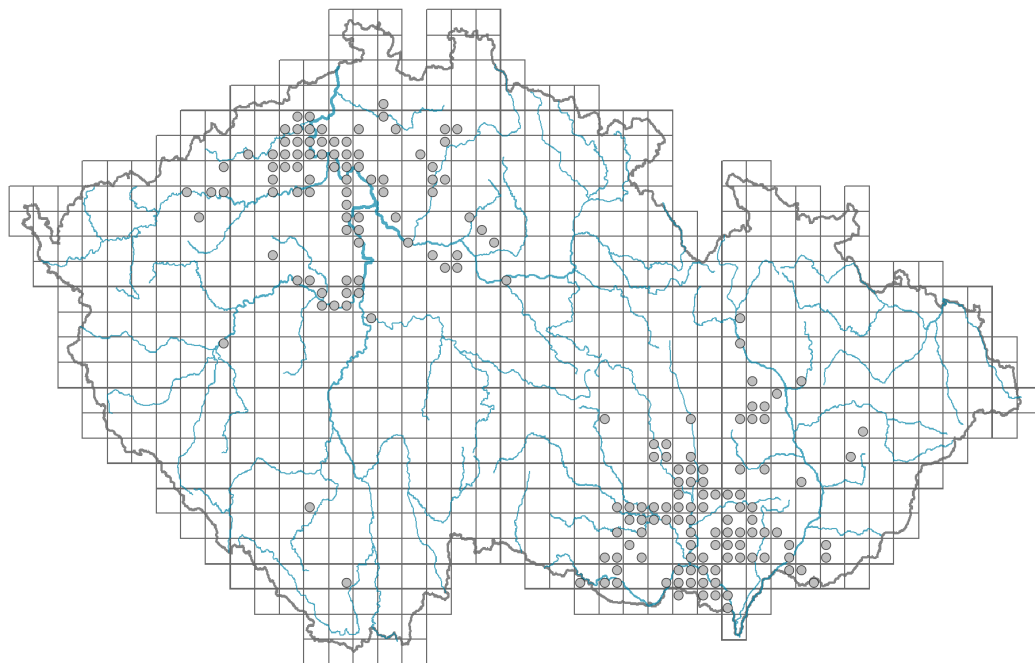


Campanula bononiensis

Distribution



© Milan Chytrý

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]: **0.3-0.7**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **CS - competitor/stress-tolerator**



© Jakub Štěpán

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**

Flower

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

Flowering phase: **7 Ligustrum vulgare-Stachys sylvatica (end of early summer)**

Flower colour: **blue-violet**

Flower symmetry: **actinomorphic**

Perianth type: **calyx and corolla**



© Dana Michalčová

Perianth fusion: **fused**

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

Calyx fusion: **synsepalous**

Inflorescence type: **racemus**

Dicliny: **synoecious**

Generative reproduction type: **allogamy self-incompatibility**

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

Fruit, seed and dispersal

Fruit type: **dry fruit - capsule**

Fruit colour: **brown**

Reproduction type: **by seed/spores and vegetatively**

Dispersal unit (diaspore): **seed**

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

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

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**



Karyology

Chromosome number (2n): **34**

Ploidy level (x): **2**

2C genome size [Mbp]: **3006.86**

1Cx monoploid genome size [Mbp]: **1503.43**

Genomic GC content: **41.1 %**

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

Moisture indicator value: **3 - missing on damp soil**

Reaction indicator value: **8 - transition between values 7 and 9, occurring mostly in calcium-rich conditions**

Nutrient indicator value: **3 - occurring at nutrient-poor sites more frequently than at average sites and exceptionally at rich sites**

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

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.66**

Herb layer disturbance frequency indicator value: **-0.78**

Whole-community disturbance severity indicator value: **0.24**

Herb layer disturbance severity indicator value: **0.16**

Whole-community structure based disturbance indicator value: **0.37**

Herb layer structure-based disturbance indicator value: **0.39**

Habitat and sociology

Occurrence in habitats

8 Dry grasslands

8B Submediterranean dry grasslands on rock outcrops: **2 - optimum**

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

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

8F Thermophilous forest fringe vegetation: **2 - optimum**

11 Heathlands and scrub

11L Tall mesic and xeric shrub: **2 - optimum**

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

12 Forests

12F Limestone beech forests: **1 - rare occurrence**

12H Peri-Alpidic basiphilous thermophilous oak forests: **2 - optimum**

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

12J Acidophilous thermophilous oak forests: **1 - rare occurrence**



12T Robinia pseudacacia plantations: **1 - rare occurrence**

12W Pine and larch plantations: **1 - rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **1.2 - taxon occurring mainly along forest edges and in forest openings, including forest roads and paths, windthrow sites, burnt sites and forest clearings**

Diagnostic taxon

Diagnostic taxon of alliances: [LCA Quercion pubescenti-petraeae](#)

Diagnostic taxon of associations: [LCA01 Lathyro collini-Quercetum pubescentis](#),
[LCA02 Lithospermo purpureocaerulei-Quercetum pubescentis](#)

Constant taxon

Constant taxon of associations: [LCA02 Lithospermo purpureocaerulei-Quercetum pubescentis](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.6**

Ecological specialization index for non-forest vegetation: **4.9**

Ecological specialization index for forest vegetation: **4.9**

Colonization ability

Index of colonization success (ICS): **3**

Index of colonization potential (ICP): **6**

Optimum successional age [years]: **14**

Distribution and frequency

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

Floristic region: **Europe, Western Siberia**

Continental degree: **8**

Distribution range extension along the continentality gradient: **4**

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

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **109**

taxon.data.freq_in_quad: **184**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.1 %**

Occurrence frequency in vegetation plots with a cover above 5%: **0 %**

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: **1.8 %**

Maximum percentage cover in vegetation plots: **3 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **12**

Number of narrow habitats in which the taxon has its optimum: **4**

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

Number of broad habitats in which the taxon has its optimum: **3**

Threats and protection

Red List 2017 (national categories): **C2b - endangered taxon, rare and declining**



Red List 2017 (IUCN categories): **VU - vulnerable**

Legal protection: **vulnerable taxon**

