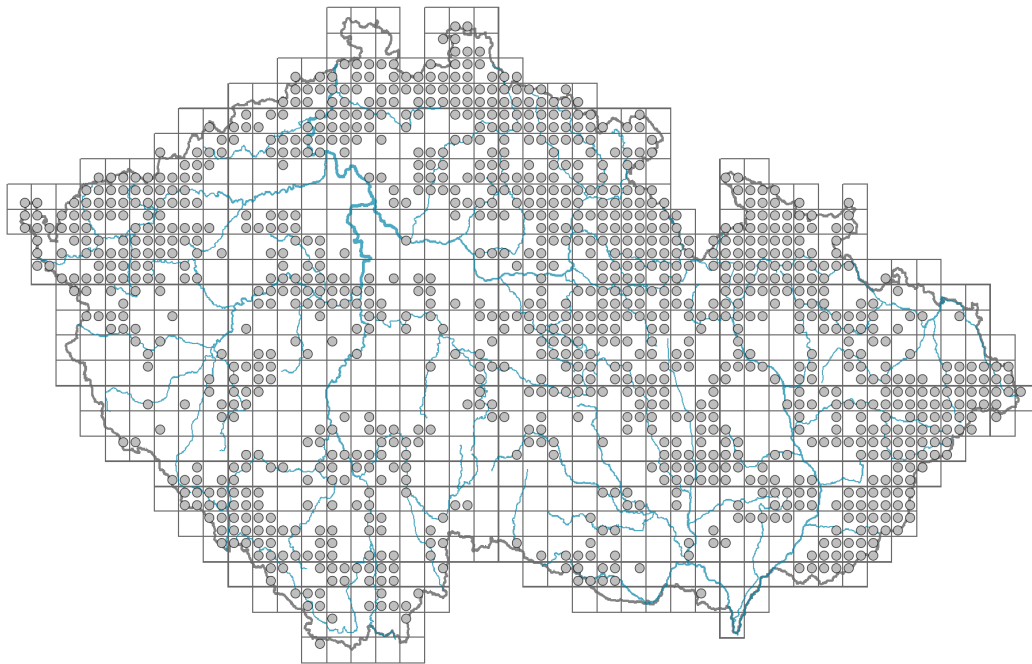


Phyteuma spicatum

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]: **0.2-0.8**

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

Life form: **hemicryptophyte**

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

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

Life strategy (Pierce method, C-score): **30.2 %**

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

Life strategy (Pierce method, R-score): **69.8 %**

Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **mainly present**

Leaf life span: **evergreen**

Leaf anatomy: **mesomorphic, hygromorphic**

Flower

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



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

Flower colour: **yellow-white, blue**

Flower symmetry: **zygomorphic**

Perianth type: **calyx and corolla**

Perianth fusion: **fused**

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

Calyx fusion: **synsepalous**

Inflorescence type: **spica**

Dicliny: **synoecious**

Generative reproduction type: **allogamy**

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

Fruit, seed and dispersal

Fruit type: **dry fruit - capsule**

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

Dispersal unit (diaspore): **seed**

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

Myrmecochory: **myrmecochorous nv**

Belowground organs and clonality

Shoot metamorphosis: **pleiocorm**

Root metamorphosis: **primary storage root**

Storage organ: **pleiocorm, primary storage root**

Shoot life span (cyclicality): **dicyclic or polycyclic shoots prevailing**

Branching type of stem-derived organs of clonal growth: **sympodial**

Primary root: **present**

Position of root buds: **primary root**

Role of root buds in life-history of a plant: **regenerative**

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): **13**

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): **18**

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): **16**

Number of buds per shoot at a depth greater than 10 cm (root buds included): **15**

Size of the belowground bud bank (root buds included): **36**

Depth of the belowground bud bank (root buds included) [cm]: **9**

Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

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



Karyology

Chromosome number (2n): **22**

Ploidy level (x): **2**

2C genome size [Mbp]: **2172.08**

1Cx monoploid genome size [Mbp]: **1086.04**

Genomic GC content: **40.3 %**

Taxon origin

Origin in the Czech Republic: **native**

Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **6x - transition between values 5 and 7; rarely at less than 20% of diffuse radiation incident in an open area (generalist)**

Temperature indicator value: **5x - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas (generalist)**

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: **-1.69**

Herb layer disturbance frequency indicator value: **-0.56**

Whole-community disturbance severity indicator value: **0.26**

Herb layer disturbance severity indicator value: **0.18**

Whole-community structure based disturbance indicator value: **0.18**

Herb layer structure-based disturbance indicator value: **0.36**

Habitat and sociology

Occurrence in habitats

2 Alpine and subalpine grasslands

2B Subalpine tall-forb and tall-grass vegetation: **2 - optimum**

4 Wetland and riverine herbaceous vegetation

4K Petasites fringes of montane brooks: **1 - rare occurrence**

5 Vegetation of springs and mires

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

6 Meadows and mesic pastures

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

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

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

7 Acidophilous grasslands

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



7B Submontane *Nardus* grasslands: **1 - rare occurrence**

8 Dry grasslands

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

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

11 Heathlands and scrub

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

11H Subalpine deciduous scrub: **2 - optimum**

12 Forests

12B Alluvial forests: **2 - optimum**

12C Oak-hornbeam forests: **2 - optimum**

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

12E Herb-rich beech forests: **2 - optimum**

12F Limestone beech forests: **2 - optimum**

12G Acidophilous beech forests: **1 - rare occurrence**

12H Peri-Alpidic basiphilous thermophilous oak forests: **1 - rare occurrence**

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

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

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

12R Acidophilous spruce forests: **1 - rare occurrence**

12S Basiphilous spruce forests: **1 - rare occurrence**

12U Plantations of broad-leaved non-native trees: **1 - rare occurrence**

12V Spruce plantations: **1 - rare occurrence**

13 Anthropogenic vegetation

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: **2.1 - taxon occurring both in the forest and open vegetation**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **2.1 - taxon occurring both in the forest and open vegetation**

Diagnostic taxon

Diagnostic taxon of alliances: [ADB *Calamagrostion arundinaceae*](#), [TDB *Polygono bistortae-Trisetion flavescens*](#), [TEB *Nardo strictae-Agrostion tenuis*](#)

Diagnostic taxon of associations: [ADB01 *Bupleuro longifoliae-Calamagrostietum arundinaceae*](#), [ADD03 *Trollio altissimi-Geranium sylvatici*](#), [ADD04 *Laserpitio archangelicae-Dactylidetum glomeratae*](#), [LBA01 *Alnetum incanae*](#), [TDB01 *Geranio sylvatici-Trisetetum flavescens*](#), [TDB02 *Melandrio rubri-Phleletum alpini*](#), [TEA02 *Thesio alpini-Nardetum strictae*](#), [TEB01 *Sileno vulgaris-Nardetum strictae*](#)

Constant taxon

Constant taxon of alliances: [TDB *Polygono bistortae-Trisetion flavescens*](#), [TEB *Nardo strictae-Agrostion tenuis*](#)

Constant taxon of associations: [ADD03 *Trollio altissimi-Geranium sylvatici*](#), [ADD04 *Laserpitio archangelicae-Dactylidetum glomeratae*](#), [TDB01 *Geranio sylvatici-Trisetetum flavescens*](#), [TDB02 *Melandrio rubri-Phleletum alpini*](#), [TEB01 *Sileno vulgaris-Nardetum strictae*](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.5**



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Ecological specialization index for non-forest vegetation: **6.1**

Ecological specialization index for forest vegetation: **5.4**

Colonization ability

Index of colonization success (ICS): **5**

Index of colonization potential (ICP): **3**

Optimum successional age [years]: **4**

Distribution and frequency

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

Floristic region: **Europe**

Continental degree: **5**

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

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: **486**

taxon.data.freq_in_quad: **1145**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **1.4 %**

Occurrence frequency in vegetation plots with a cover above 5%: **2.5 %**

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: **2.2 %**

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: **28**

Number of narrow habitats in which the taxon has its optimum: **8**

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

Number of broad habitats in which the taxon has its optimum: **5**

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**