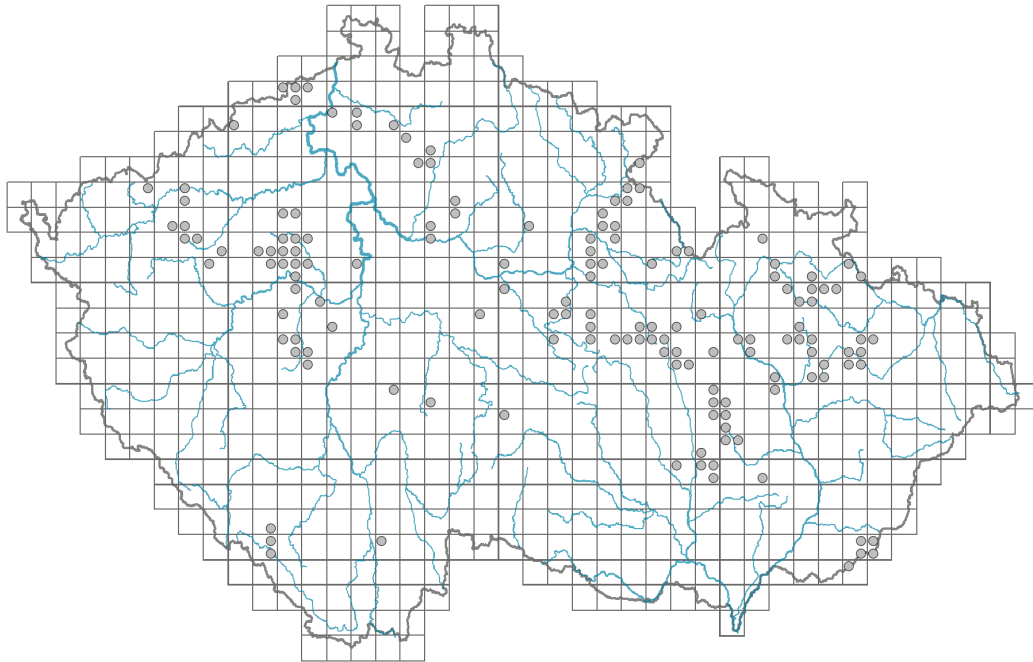


Phyteuma orbiculare

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]: **0.1-0.25**

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): **S/CSR**

Life strategy (Pierce method, C-score): **15 %**

Life strategy (Pierce method, S-score): **54.8 %**

Life strategy (Pierce method, R-score): **30.3 %**

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: **summer green**

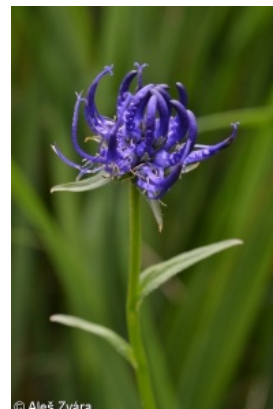
Leaf anatomy: **mesomorphic**



Flower

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

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: **tubular**
 Calyx fusion: **synsepalous**
 Inflorescence type: **capitulum**
 Dicliny: **synoecious**
 Generative reproduction type: **allogamy**
 Pollination syndrome: **insect-pollination, selfing**
 Pollinator spectrum: **bumblebees, hoverflies, flies s. l. (solitary bees, other Diptera)**



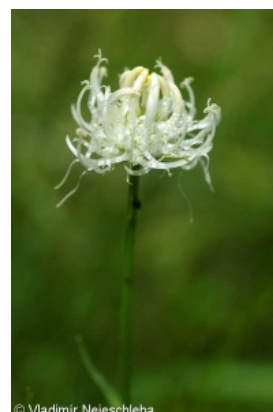
Fruit, seed and dispersal

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



Belowground organs and clonality

Shoot metamorphosis: **pleiocorm**
 Root metamorphosis: **primary storage root**
 Storage organ: **pleiocorm, primary storage root**
 Shoot life span (cyclicity): **dicyclic or polycyclic shoots prevailing**
 Branching type of stem-derived organs of clonal growth: **sympodial**
 Primary root: **present**
 Position of root buds: **lateral roots**
 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): **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): **22**

Ploidy level (x): **2**

2C genome size [Mbp]: **2106.27**

1Cx monoploid genome size [Mbp]: **1053.14**

Genomic GC content: **39.8 %**

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

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: **7 - indicator of slightly acidic to slightly basic conditions, never occurring in very acidic 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**

Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1B Siliceous cliffs and block fields: **2 - optimum**

2 Alpine and subalpine grasslands

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

5 Vegetation of springs and mires

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

5D Calcareous fens: **2 - optimum**

6 Meadows and mesic pastures

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

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

8 Dry grasslands

8D Broad-leaved dry grasslands: **2 - optimum**

12 Forests

12A Alder carrs: **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 classes: [AC Elyno-Seslerietea](#)

Diagnostic taxon of alliances: [ACA Agrostion alpinae](#)

Diagnostic taxon of associations: [ACA02 Saxifraga paniculatae-Agrostietum alpinae](#)

Constant taxon

Constant taxon of associations: [ACA02 Saxifraga paniculatae-Agrostietum alpinae](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **5.5**

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

Distribution and frequency

Floristic zone: **southern temperate, submeridional**

Floristic region: **Europe**

Continentality degree: **5**

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

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: **103**

taxon.data.freq_in_quad: **150**

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: **2.3 %**

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: **8**

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

Number of broad habitats in which the taxon occurs: **6**

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

Threats and protection

Red List 2017 (national categories): **C2t - endangered taxon, declining**

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

Legal protection: **endangered taxon**

