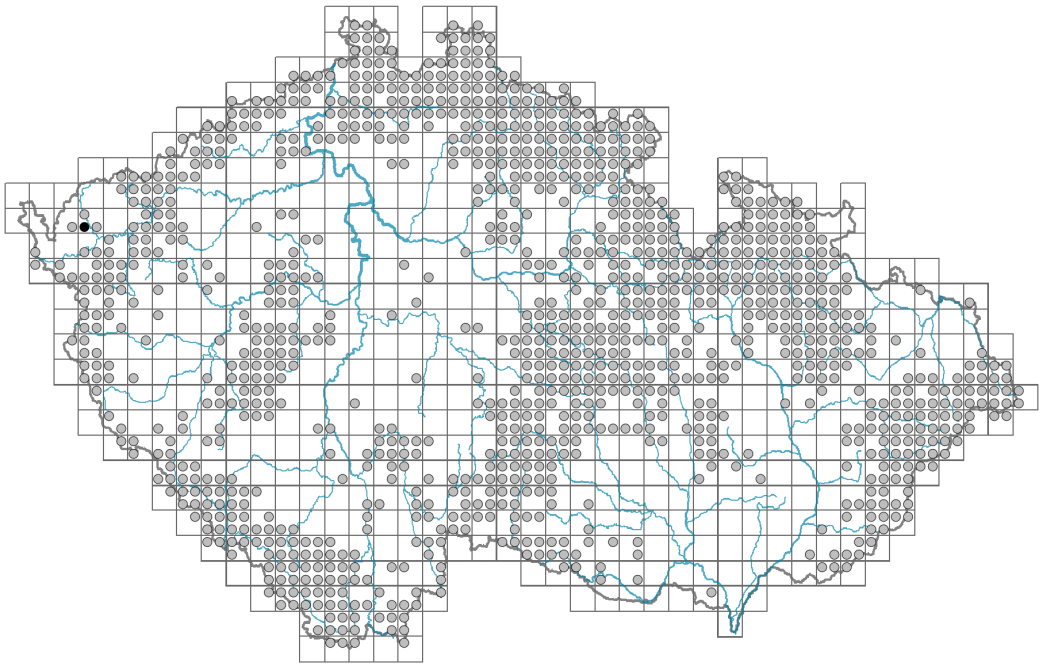
Polygonatum verticillatum

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]: **0.3–1**
Growth form: **clonal herb**
Life form: **geophyte**
Life strategy: **CSR – competitor/stress-tolerator/ruderal**
Life strategy (Pierce method based on leaf traits): **R/CR**
Life strategy (Pierce method, C-score): **29.4 %**
Life strategy (Pierce method, S-score): **0 %**
Life strategy (Pierce method, R-score): **70.6 %**

Leaf

Leaf presence and metamorphosis: **leaves present, not modified**
Leaf arrangement (phyllotaxis): **verticillate**
Leaf shape: **simple – entire**
Stipules: **absent**
Petiole: **absent**
Leaf life span: **summer green**
Leaf anatomy: **mesomorphic**

Flower

Flowering period [month]: **May–June**

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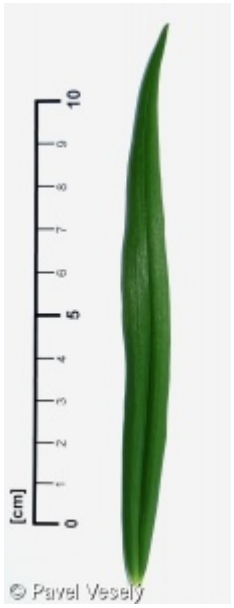


Flowering phase: **5 Sorbus aucuparia-Galium odoratum (end of mid-spring)**
Flower colour: **white**
Flower symmetry: **actinomorphic**
Perianth type: **homochlamydeous**
Perianth fusion: **fused**
Shape of the sympetalous corolla or syntepalous perianth: **tubular**
Inflorescence type: **flores solitarii**
Dicliny: **synoecious, andromonoecious**
Generative reproduction type: **mixed mating**
Pollination syndrome: **insect-pollination, selfing**

Fruit, seed and dispersal

Fruit type: **fleshy fruit – berry**
Fruit colour: **red, blue, black**
Reproduction type: **by seed/spores and vegetatively**
Dispersal unit (diaspore): **seed, fruit, infrutescence or its part**
Dispersal strategy: **Cornus (mainly autochory and endozoochory)**
Myrmecochory: **non-myrmecochorous (b)**

Belowground organs and clonality

Shoot metamorphosis: **rhizome**
Storage organ: **rhizome**
Type of clonal growth organ: **hypogeogenous rhizome**
Freely dispersible organs of clonal growth: **absent**
Shoot life span (cyclicity): **monocyclic 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]: **0.1**
Clonal index: **4**

Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **3**
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): **18**
Depth of the belowground bud bank (root buds exluded) [cm]: **4**
Number of buds per shoot at the soil surface (root buds included): **3**
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): **18**
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

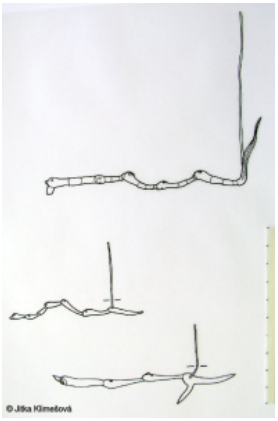
Chromosome number (2n): **28**
Ploidy level (x): **2**
2C genome size [Mbp]: **16541.38**
1Cx monoploid genome size [Mbp]: **8270.69**
Genomic GC content: **45.3 %**

Taxon origin

Origin in the Czech Republic: **native**

Ecological indicator values

Ellenberg-type indicator values



Light indicator value: **4 – transition between values 3 and 5**
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: **4 – transition between values 3 and 5**
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: **-1.93**
Herb layer disturbance frequency indicator value: **-0.73**
Whole-community disturbance severity indicator value: **0.23**
Herb layer disturbance severity indicator value: **0.08**
Whole-community structure based disturbance indicator value: **0.1**
Herb layer structure-based disturbance indicator value: **0.2**

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

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

7 Acidophilous grasslands

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

11 Heathlands and scrub

11D Subalpine acidophilous Pinus mugo scrub: **2 – optimum**
11H Subalpine deciduous scrub: **2 – optimum**
11R Scrub and pioneer woodland of forests clearings: **1 – rare occurrence**

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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: **2 – optimum**
12F Limestone beech forests: **1 – rare occurrence**
12G Acidophilous beech forests: **2 – optimum**
12I Sub-continental thermophilous oak forests: **1 – rare occurrence**
12K Acidophilous oak forests: **1 – rare occurrence**
12R Acidophilous spruce forests: **2 – optimum**
12S Basiphilous spruce forests: **2 – optimum**
12U Plantations of broad-leaved non-native trees: **1 – rare occurrence**
12V Spruce plantations: **1 – rare occurrence**

13 Anthropogenic vegetation

13F Herbaceous vegetation of forests clearings and Rubus scrub: **1 – rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **1.1 – taxon occurring mainly in the closed forest**
Affinity to the forest environment in Mesophyticum and Oreophyticum: **1.1 – taxon occurring mainly in the closed forest**

Diagnostic taxon

Diagnostic taxon of alliances: **ADC *Salicion silesiacae***
Diagnostic taxon of associations: **ADC01 *Salici silesiacae-Betuletum carpaticae***, **ADE01 *Daphno mezerei-Dryopteridetum filicis-maris***, **ADE02 *Adenostylo alliariae-Athyrietum distentifolii***, **LBC04 *Athyrio distentifolii-Fagetum sylvaticae***, **LBE02 *Calamagrostio villosae-Fagetum sylvaticae***

Constant taxon

Constant taxon of alliances: **ADC *Salicion silesiacae***
Constant taxon of associations: **ADC01 *Salici silesiacae-Betuletum carpaticae***, **ADE01 *Daphno mezerei-Dryopteridetum filicis-maris***, **KCA02 *Adenostylo alliariae-Pinetum mugo***, **LBC04 *Athyrio distentifolii-Fagetum sylvaticae***, **LBE02 *Calamagrostio villosae-Fagetum sylvaticae***

Ecological specialization indices

Ecological specialization index for all vegetation types: **5.6**
Ecological specialization index for non-forest vegetation: **4.3**
Ecological specialization index for forest vegetation: **5.8**

Colonization ability

Index of colonization success (ICS): **6**
Index of colonization potential (ICP): **8**
Optimum successional age [years]: **3**

Distribution and frequency

Floristic zone: **boreal, northern temperate, southern temperate, submeridional, meridional**
Floristic region: **Europe, Western Asia**
Continentality degree: **4**
Distribution range extension along the continentality gradient: **4**

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Elevational belt in the Czech Republic: **submontane belt, montane belt, subalpine belt (colline belt)**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: 457

taxon.data.freq_in_quad: 1149

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%: **2.9 %**

Occurrence frequency in vegetation plots with a cover above 25%: **0.2 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0 %**

Mean percentage cover in vegetation plots: **2.4 %**

Maximum percentage cover in vegetation plots: **38 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **20**

Number of narrow habitats in which the taxon has its optimum: **7**

Number of broad habitats in which the taxon occurs: **7**

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

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**

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