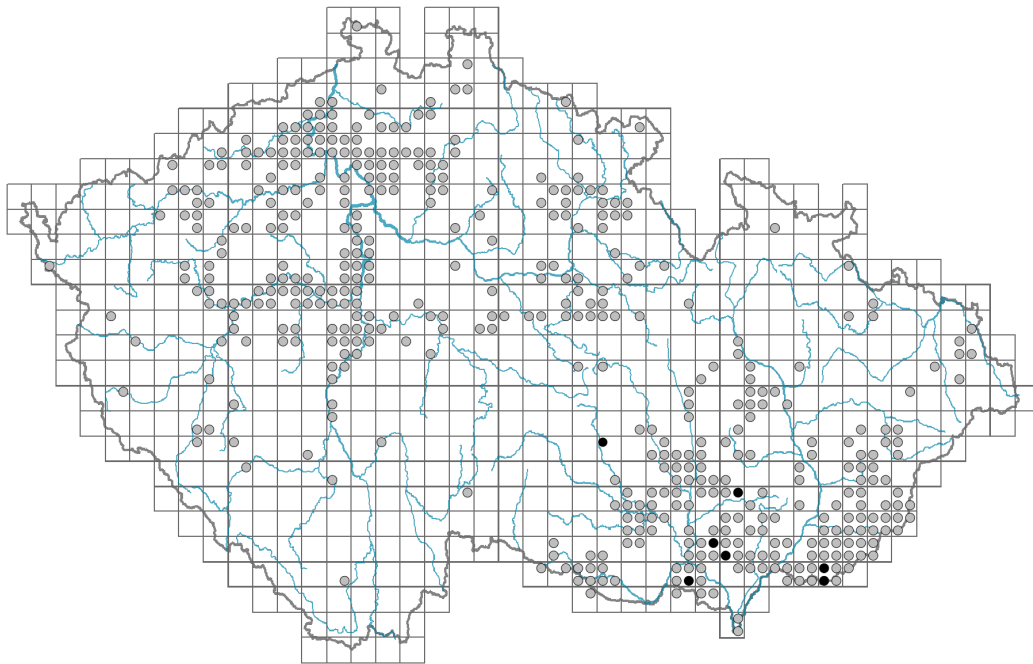


# *Geranium sanguineum*

## 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]: **0.2-0.5**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

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

Life strategy (Pierce method based on leaf traits): **CSR**

Life strategy (Pierce method, C-score): **27.5 %**

Life strategy (Pierce method, S-score): **39 %**

Life strategy (Pierce method, R-score): **33.5 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **opposite**

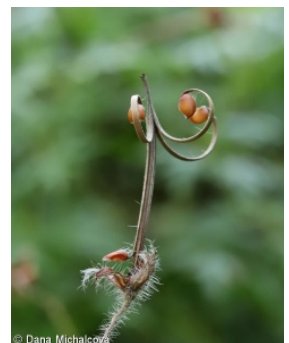
Leaf shape: **simple - palmately divided**

Stipules: **present**

Petiole: **present**

Leaf life span: **summer green**

Leaf anatomy: **scleromorphic, mesomorphic**



## Flower

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

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

Flower colour: **white, red, red-violet**

Flower symmetry: **actinomorphic**

Perianth type: **calyx and corolla**

Perianth fusion: **free**

Calyx fusion: **aposepalous**

Inflorescence type: **flores solitarii**

Dicliny: **gynomonoecious, gynodioecious**

Generative reproduction type: **facultative allogamy**

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

Pollinator spectrum: **honeybee, solitary bees, hoverflies (bumblebees)**



## Fruit, seed and dispersal

Fruit type: **dry fruit - dry schizocarp with an apical beak**

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

Dispersal unit (diaspore): **seed, fruit, infrutescence or its part**

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

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

## Belowground organs and clonality

Shoot metamorphosis: **rhizome**

Root metamorphosis: **secondary storage root, root shoot**

Storage organ: **rhizome, secondary storage root**

Type of clonal growth organ: **hypogeogenous rhizome**

Freely dispersible organs of clonal growth: **absent**

Shoot life span (cyclicality): **monocyclic shoots prevailing**

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

Primary root: **absent**

Persistence of the clonal growth organ [year]:

Number of clonal offspring: **2.1**

Lateral spreading distance by clonal growth [m]: **0.12**

Clonal index: **4**

Position of root buds: **lateral roots**

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

## 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):

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

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): **22**

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

Size of the belowground bud bank (root buds included): **42**

Depth of the belowground bud bank (root buds included) [cm]: **8**

## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

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

## Karyology

Chromosome number (2n): **84**

Ploidy level (x): **6**

2C genome size [Mbp]: **7479.95**

1Cx monoploid genome size [Mbp]: **1246.66**

Genomic GC content: **42.5 %**

## 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: **-1.25**

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

Whole-community disturbance severity indicator value: **0.22**

Herb layer disturbance severity indicator value: **0.21**

Whole-community structure based disturbance indicator value: **0.38**

Herb layer structure-based disturbance indicator value: **0.48**

## Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1A Calcareous cliffs: **1 - rare occurrence**

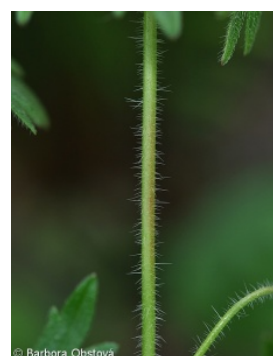
1B Siliceous cliffs and block fields: **1 - rare occurrence**

1D Mobile calcareous screes: **1 - rare occurrence**

6 Meadows and mesic pastures

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

8 Dry grasslands





- 8A Hercynian dry grasslands on rock outcrops: **2 - optimum**
- 8B Submediterranean dry grasslands on rock outcrops: **2 - optimum**
- 8C Narrow-leaved sub-continental steppes: **2 - optimum**
- 8D Broad-leaved dry grasslands: **2 - optimum**
- 8E Acidophilous dry grasslands: **1 - rare occurrence**
- 8F Thermophilous forest fringe vegetation: **3 - dominant**
- 9 Sand grasslands and rock-outcrop vegetation
- 9F Basiphilous vegetation of spring therophytes and succulents: **1 - rare occurrence**
- 11 Heathlands and scrub
- 11A Dry lowland to subalpine heathlands: **1 - rare occurrence**
- 11L Tall mesic and xeric shrub: **1 - rare occurrence**
- 11N Low xeric scrub: **3 - dominant**
- 12 Forests
- 12C Oak-hornbeam forests: **1 - rare occurrence**
- 12D Ravine forests: **1 - rare occurrence**
- 12H Peri-Alpidic basiphilous thermophilous oak forests: **2 - optimum**
- 12I Sub-continental thermophilous oak forests: **2 - optimum**
- 12J Acidophilous thermophilous oak forests: **2 - optimum**
- 12L Boreo-continental pine forests: **1 - rare occurrence**
- 12O Peri-Alpidic pine forests: **1 - rare occurrence**
- 12W Pine and larch 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: **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: [KBA \*Prunion fruticosae\*](#), [LCA \*Quercion pubescenti-petraeae\*](#), [LCB \*Aceri tatarici-Quercion\*](#), [THH \*Geranion sanguinei\*](#)
- Diagnostic taxon of associations: [KBA01 \*Prunetum fruticosae\*](#), [LCA01 \*Lathyro collini-Quercetum pubescentis\*](#), [LCA02 \*Lithospermo purpureocaerulei-Quercetum pubescentis\*](#), [LCB02 \*Carici fritschii-Quercetum roboris\*](#), [THF02 \*Brachypodio pinnati-Molinietum arundinaceae\*](#), [THH01 \*Trifolio alpestris-Geranietum sanguinei\*](#)
- Constant taxon
- Constant taxon of alliances: [LCB \*Aceri tatarici-Quercion\*](#), [THH \*Geranion sanguinei\*](#)
- Constant taxon of associations: [LCA02 \*Lithospermo purpureocaerulei-Quercetum pubescentis\*](#), [LCB02 \*Carici fritschii-Quercetum roboris\*](#), [THF02 \*Brachypodio pinnati-Molinietum arundinaceae\*](#), [THH01 \*Trifolio alpestris-Geranietum sanguinei\*](#)
- Dominant taxon
- Dominant taxon of associations: [THH01 \*Trifolio alpestris-Geranietum sanguinei\*](#)
- Ecological specialization indices
- Ecological specialization index for all vegetation types: **4.4**
- Ecological specialization index for non-forest vegetation: **4.6**



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

## Colonization ability

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

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

Optimum successional age [years]: **42**

## Distribution and frequency

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

Floristic region: **Europe**

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

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: **241**

taxon.data.freq\_in\_quad: **453**

## Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.9 %**

Occurrence frequency in vegetation plots with a cover above 5%: **44 %**

Occurrence frequency in vegetation plots with a cover above 25%: **24.5 %**

Occurrence frequency in vegetation plots with a cover above 50%: **5.8 %**

Mean percentage cover in vegetation plots: **14.7 %**

Maximum percentage cover in vegetation plots: **88 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **23**

Number of narrow habitats in which the taxon has its optimum: **9**

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): **C4a - near threatened taxon**

Red List 2017 (IUCN categories): **NT - near threatened**

Legal protection: **not protected by law**

