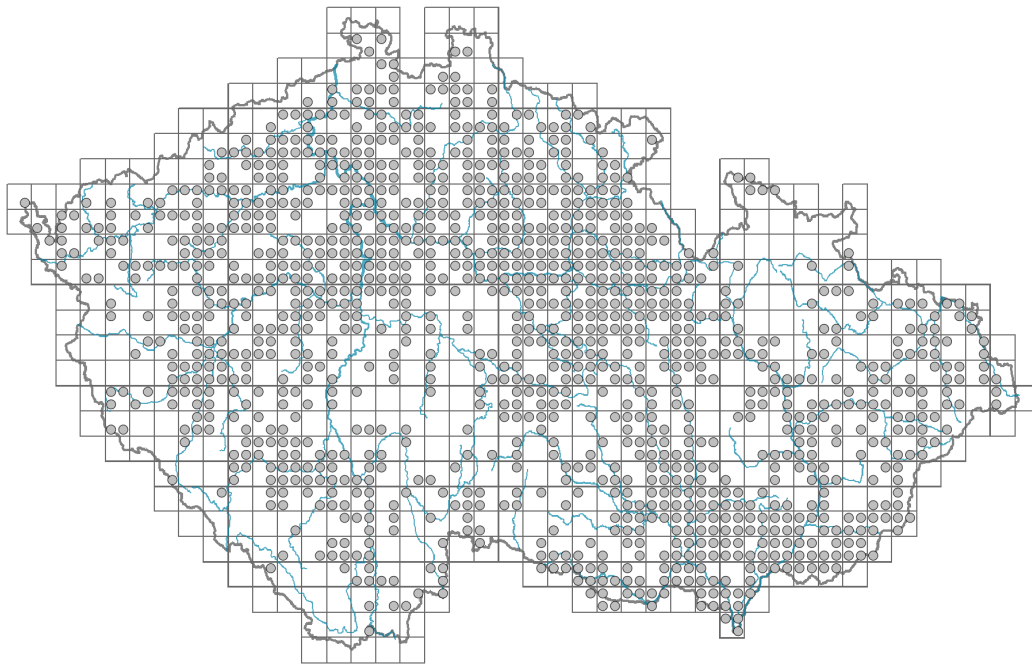


# *Saponaria officinalis*

## 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]: **0.3-0.8**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **C - competitor**

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

Life strategy (Pierce method, C-score): **42.7 %**

Life strategy (Pierce method, S-score): **17.7 %**

Life strategy (Pierce method, R-score): **39.6 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **opposite**

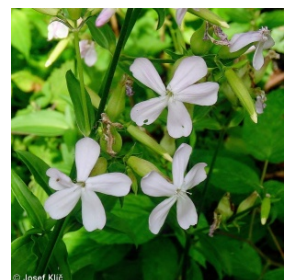
Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **both present and absent**

Leaf life span: **summer green**

Leaf anatomy: **mesomorphic**



## Flower

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

Flowering phase: **8 Clematis vitalba-Galium sylvaticum (mid-summer)**

Flower colour: **white, pink**

Flower symmetry: **actinomorphic**

Perianth type: **calyx and corolla**

Perianth fusion: **free**

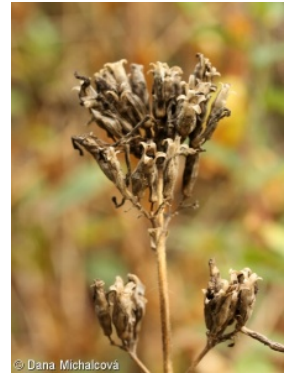
Calyx fusion: **synsepalous**

Inflorescence type: **panicula e dichasiis composita**

Dicliny: **synoecious, gynomonoecious, gynodioecious**

Generative reproduction type: **mixed mating**

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: **probably myrmecochorous**

## Belowground organs and clonality

Shoot metamorphosis: **stolon**

Storage organ: **stolon**

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]: **4**

Number of clonal offspring: **6**

Lateral spreading distance by clonal growth [m]: **0.13**

Clonal index: **5**

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**

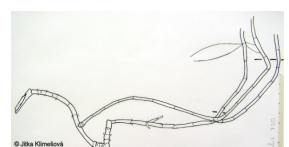
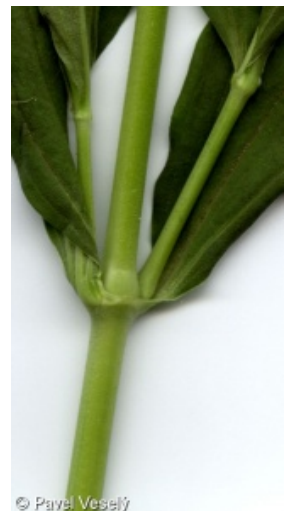
Number of buds per shoot at the soil surface (root buds included): **5**

Number of buds per shoot at a depth of 0–10 cm (root buds included): **18**

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): **38**

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): **28**

Ploidy level (x): **2**

2C genome size [Mbp]: **4152.27**

1Cx monoploid genome size [Mbp]: **2076.13**

Genomic GC content: **40.6 %**



## Taxon origin

Origin in the Czech Republic: **archaeophyte**

Invasion status: **naturalized**

Geographic origin: **Europe, Mediterranean**

Period of introduction: **Early Middle Ages (550-1200)**

Introduction pathway: **intentional - ornamental, intentional - other, unintentional - anthropogenic, unintentional - nature**

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

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

### Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.71**

Herb layer disturbance frequency indicator value: **-0.53**

Whole-community disturbance severity indicator value: **0.61**

Herb layer disturbance severity indicator value: **0.61**

Whole-community structure based disturbance indicator value: **0.52**

Herb layer structure-based disturbance indicator value: **0.55**

## Habitat and sociology

### Occurrence in habitats

4 Wetland and riverine herbaceous vegetation

4D Riverine reed vegetation: **1 - rare occurrence**

4J River gravel banks: **1 - rare occurrence**

4L Nitrophilous herbaceous fringes of lowland rivers: **2 - optimum**  
6 Meadows and mesic pastures  
6A Mesic Arrhenatherum meadows: **2 - optimum**  
9 Sand grasslands and rock-outcrop vegetation  
9B Open vegetation of acidic sands: **1 - rare occurrence**  
9C Festuca grasslands on acidic sands: **1 - rare occurrence**  
11 Heathlands and scrub  
11J Willow galleries of loamy and sandy river banks: **1 - rare occurrence**  
11L Tall mesic and xeric shrub: **1 - rare occurrence**  
11R Scrub and pioneer woodland of forests clearings: **1 - rare occurrence**  
13 Anthropogenic vegetation  
13A Annual vegetation of ruderal habitats: **1 - rare occurrence**  
13D Perennial thermophilous ruderal vegetation: **2 - optimum**  
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: **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 associations: [XDA01 Cuscuta europaeae-Calystegietum sepium](#),  
[XDA04 Sicyo angulatae-Echinocystietum lobatae](#)  
Ecological specialization indices  
Ecological specialization index for all vegetation types: **4.2**  
Ecological specialization index for non-forest vegetation: **4.2**  
Colonization ability  
Index of colonization success (ICS): **4**  
Index of colonization potential (ICP): **6**  
Optimum successional age [years]: **27**

## Distribution and frequency

Floristic zone: **northern temperate, southern temperate, submeridional**  
Floristic region: **Europe, Western Siberia**  
Distribution range extension along the continentality gradient: **5**  
Elevational belt in the Czech Republic: **lowlands, colline belt, submontane belt**  
Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **508**  
taxon.data.freq\_in\_quad: 1218  
Commonness in vegetation plots from the Czech Republic  
Occurrence frequency in vegetation plots: **0.4 %**  
Occurrence frequency in vegetation plots with a cover above 5%: **8.5 %**  
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: **3 %**  
Maximum percentage cover in vegetation plots: **18 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **13**

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

Number of broad habitats in which the taxon occurs: **5**

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**