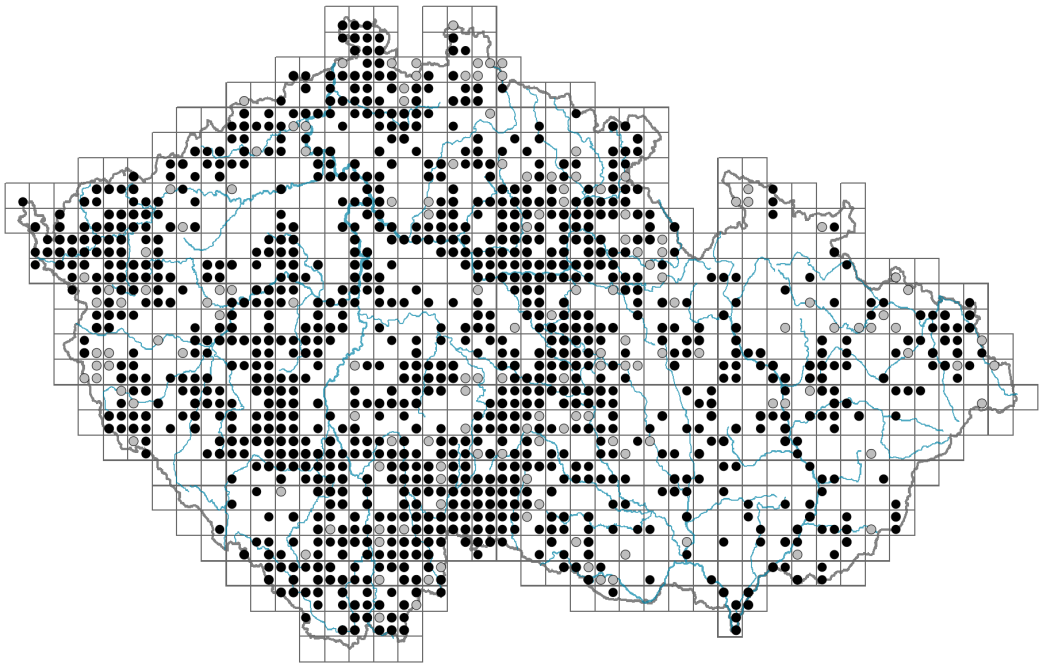
Sparganium emersum

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

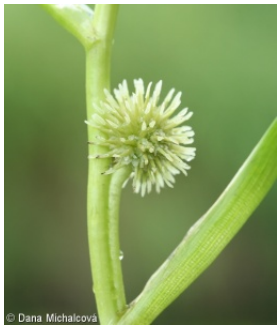
Height [m]: **0.2–1.2**
Growth form: **clonal herb**
Life form: **hydrophyte**
Life strategy: **CS – competitor/stress-tolerator**
Life strategy (Pierce method based on leaf traits): **CR**
Life strategy (Pierce method, C-score): **50.7 %**
Life strategy (Pierce method, S-score): **0 %**
Life strategy (Pierce method, R-score): **49.3 %**

Leaf

Leaf presence and metamorphosis: **leaves present, not modified**
Leaf arrangement (phyllotaxis): **alternate**
Leaf shape: **simple – entire**
Stipules: **absent**
Petiole: **absent**
Leaf life span: **evergreen**
Leaf anatomy: **hydromorphic**

Flower

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



Flowering phase: **7 Ligustrum vulgare-Stachys sylvatica (end of early summer)**
Flower colour: **green**
Perianth type: **reduced**
Perianth fusion: **reduced**
Inflorescence type: **racemus e capitulis compositus**
Dicliny: **monoecious**
Generative reproduction type: **facultative allogamy**
Pollination syndrome: **wind-pollination**

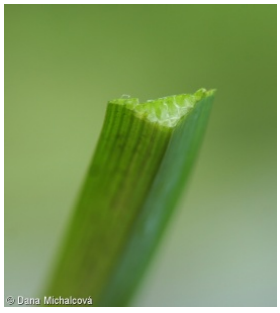
Fruit, seed and dispersal

Fruit type: **dry fruit – achene/cypsela/samara**
Reproduction type: **by seed/spores and vegetatively**
Dispersal unit (diaspore): **fruit, infrutescence or its part**
Dispersal strategy: **Sparganium (mainly autochory and hydrochory)**
Myrmecochory: **non-myrmecochorous (b)**

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 (cyclicity): **dicyclic or polycyclic shoots prevailing**
Branching type of stem-derived organs of clonal growth: **sympodial**
Primary root: **absent**
Persistence of the clonal growth organ [year]: **2**
Number of clonal offspring: **4.3**
Lateral spreading distance by clonal growth [m]: **0.22**
Clonal index: **5**

Bud bank



Number of buds per shoot at the soil surface (root buds excluded): **0**
Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **12**
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): **12**
Depth of the belowground bud bank (root buds exluded) [cm]: **5**
Number of buds per shoot at the soil surface (root buds included): **0**
Number of buds per shoot at a depth of 0–10 cm (root buds included): **12**
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): **12**
Depth of the belowground bud bank (root buds included) [cm]: **5**

Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**
Carnivory: **non-carnivorous**
Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

Karyology

Chromosome number (2n): **30**
Ploidy level (x): **2**
2C genome size [Mbp]: **1020.94**
1Cx monoploid genome size [Mbp]: **510.47**
Genomic GC content: **42.7 %**

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: **10 – aquatic plant that survives long periods without soil flooding**
Reaction indicator value: **6 – transition between values 5 and 7**
Nutrient indicator value: **7 – occurring at nutrient-rich sites more often than at average sites and only exceptionally at poor sites**
Salinity indicator value: **1 – salt tolerant, mostly on low-salt to salt-free soils, but occasionally on slightly salty soils**

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.65**
Herb layer disturbance frequency indicator value: **-0.63**
Whole-community disturbance severity indicator value: **0.17**
Herb layer disturbance severity indicator value: **0.21**
Whole-community structure based disturbance indicator value: **0.58**
Herb layer structure-based disturbance indicator value: **0.58**

Habitat and sociology

Occurrence in habitats

3 Aquatic vegetation

3A Macrophytic vegetation of eutrophic and mesotrophic still waters: **2 – optimum**
3B Macrophytic vegetation of water streams: **2 – optimum**
3C Macrophytic vegetation of oligotrophic lakes and pools: **2 – optimum**

4 Wetland and riverine herbaceous vegetation

4A Reed-beds of eutrophic still waters: **2 – optimum**
4C Eutrophic vegetation of muddy substrata: **2 – optimum**
4D Riverine reed vegetation: **1 – rare occurrence**
4E Reed vegetation of brooks: **1 – rare occurrence**
4F Mesotrophic vegetation of muddy substrata: **1 – rare occurrence**
4G Tall-sedge beds: **1 – rare occurrence**
4H Vegetation of low annual hygrophilous herbs: **1 – rare occurrence**

4I Vegetation of nitrophilous annual hygrophilous herbs: **1 – rare occurrence**

5 Vegetation of springs and mires

5B Lowland to montane soft-water springs: **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 alliances: **MCC *Eleocharito palustris-Sagittarion sagittifoliae***

Diagnostic taxon of associations: **MCC03 *Sagittario sagittifoliae-Sparganietum emersi*, VBA04 *Nupharetum pumilae*, VBB09 *Potametum tenuifolii***

Constant taxon

Constant taxon of associations: **MCC03 *Sagittario sagittifoliae-Sparganietum emersi***

Dominant taxon

Dominant taxon of associations: **MCC03 *Sagittario sagittifoliae-Sparganietum emersi***

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.4**

Ecological specialization index for non-forest vegetation: **4.4**

Colonization ability

Index of colonization success (ICS): **2**

Index of colonization potential (ICP): **1**

Optimum successional age [years]: **11.5**

Distribution and frequency

Floristic zone: **boreal, northern temperate, southern temperate, submeridional, meridional, subtropical, tropical**

Floristic region: **Europe, Asia, Eastern America**

Distribution range extension along the continentality gradient: **7**

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: 520

taxon.data.freq_in_quad: 1186

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%: **51.7 %**

Occurrence frequency in vegetation plots with a cover above 25%: **41.9 %**

Occurrence frequency in vegetation plots with a cover above 50%: **27.9 %**

Mean percentage cover in vegetation plots: **30 %**

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: **12**

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

Number of broad habitats in which the taxon occurs: **3**

Number of broad habitats in which the taxon has its optimum: **2**

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**