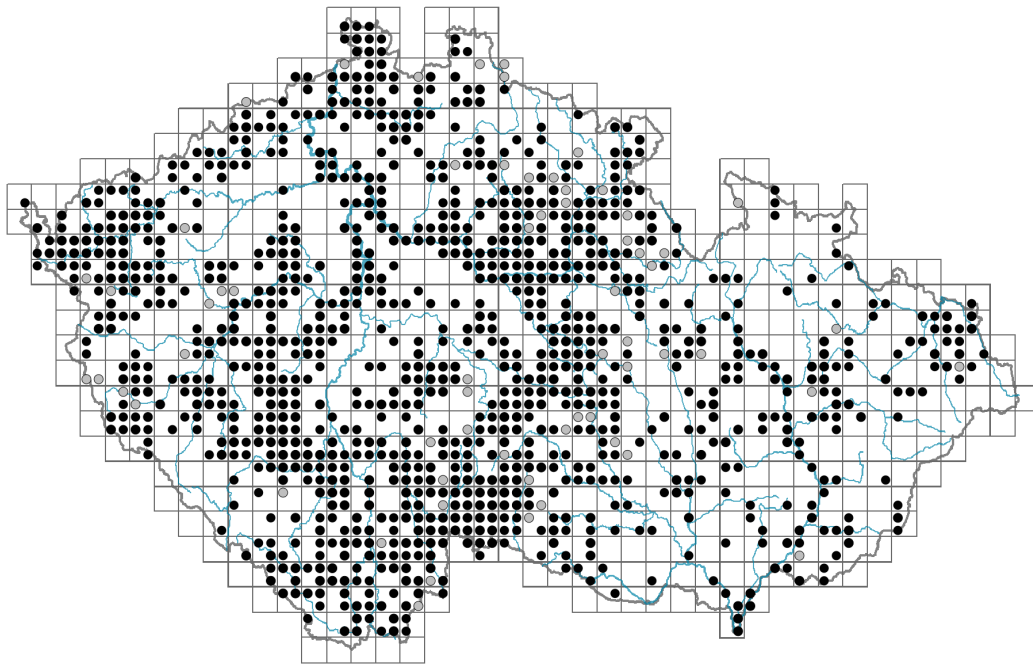


Sparganium emersum

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**

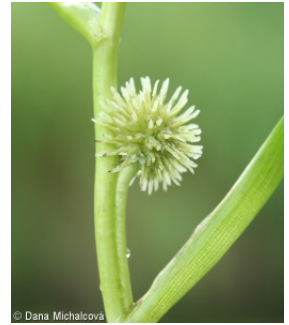
Perianth fusion: **reduced**

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 excluded) [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**

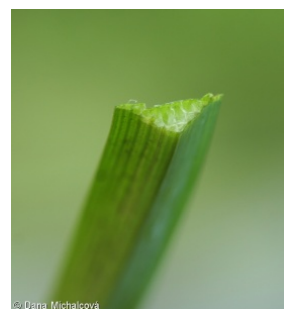
Size of the belowground bud bank (root buds included): **12**

Depth of the belowground bud bank (root buds included) [cm]: **5**

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© Dana Michalčová

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-Sagittario 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: **500**

taxon.data.freq_in_quad: **1101**

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**