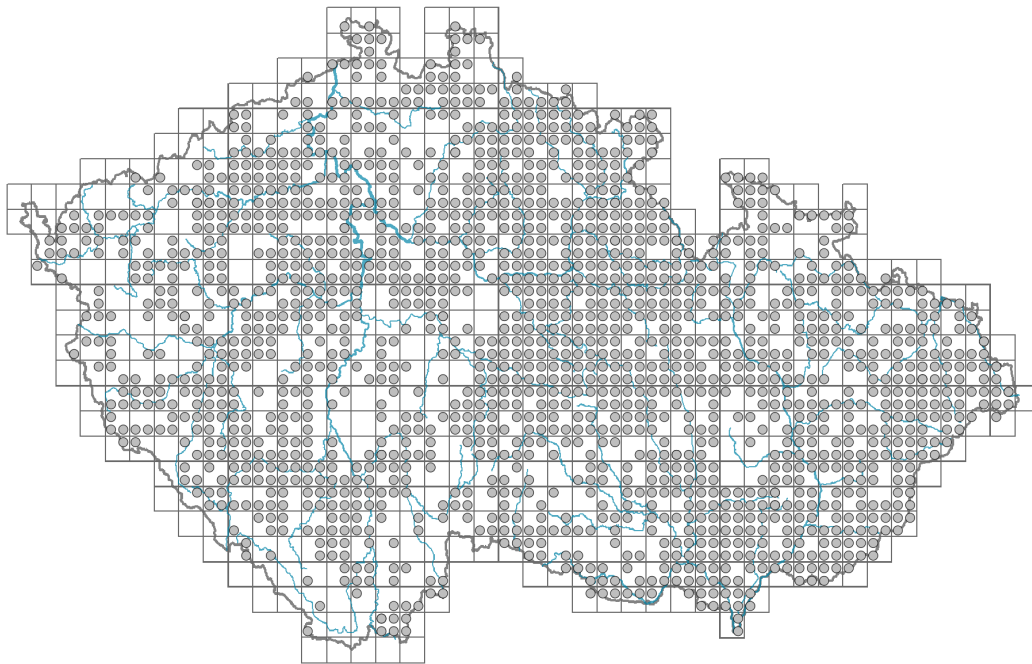


# Sonchus arvensis

## Distribution



© Pavel Veselý

### Map info

● revised records

○ unrevised records

On the map are not visualized records without the coordinates and records marked as incorrect or doubtful.

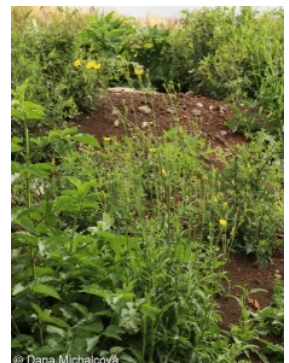
## Habitus and growth type

Height [m]: **0.4-1.5**Growth form: **clonal herb**Life form: **geophyte (hemicryptophyte)**Life strategy: **CR - competitor/ruderal**Life strategy (Pierce method based on leaf traits): **C/CR**Life strategy (Pierce method, C-score): **74.9 %**Life strategy (Pierce method, S-score): **0 %**Life strategy (Pierce method, R-score): **25.1 %**

## Leaf

Leaf presence and metamorphosis: **leaves present, not modified**Leaf arrangement (phyllotaxis): **alternate**Leaf shape: **simple - pinnately divided**Stipules: **absent**Petiole: **both present and absent**Leaf life span: **summer green**Leaf anatomy: **mesomorphic**

## Flower

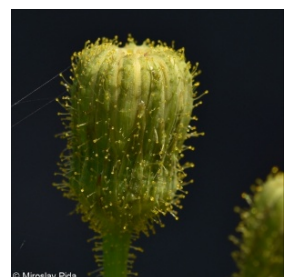
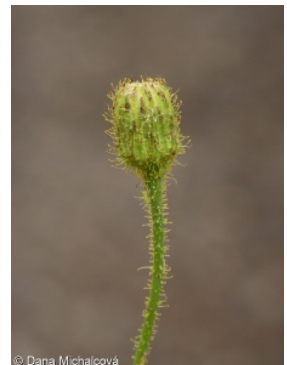
Flowering period [month]: **July-October**

© Dana Michalčová



© Miroslav Páda

Flowering phase: **7 Ligustrum vulgare-Stachys sylvatica (end of early summer)**  
 Flower colour: **yellow**  
 Flower symmetry: **zygomorphic**  
 Perianth type: **calyx reduced, corolla present**  
 Perianth fusion: **fused**  
 Shape of the sympetalous corolla or syntepalous perianth: **ligulate**  
 Calyx fusion: **pappus**  
 Inflorescence type: **corymbothyrus ex anthodiis compositus**  
 Dicliny: **synoecious**  
 Generative reproduction type: **facultative allogamy**  
 Pollination syndrome: **insect-pollination, selfing**  
 Pollinator spectrum: **other Diptera, nitidulids (solitary bees, hoverflies, flies s. l.)**



## Fruit, seed and dispersal

Fruit type: **dry fruit - achene/cypsela/samara**  
 Fruit colour: **brown**  
 Reproduction type: **by seed/spores and vegetatively**  
 Dispersal unit (diaspore): **fruit, infrutescence or its part**  
 Dispersal strategy: **Epilobium (mainly anemochory and autochory)**  
 Myrmecochory: **probably non-myrmecochorous**

## Belowground organs and clonality

Root metamorphosis: **root shoot**  
 Type of clonal growth organ: **root with adventitious buds**  
 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]: **2**  
 Number of clonal offspring: **4.8**  
 Lateral spreading distance by clonal growth [m]: **0.15**  
 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): **9**  
 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): **14**  
 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): **54 (18, 36)**

Ploidy level (x): **6**

2C genome size [Mbp]: **5418.63**

1Cx monoploid genome size [Mbp]: **903.11**

Genomic GC content: **39.4 %**

## Taxon origin

Origin in the Czech Republic: **archaeophyte**

Invasion status: **naturalized**

Geographic origin: **Mediterranean**

Period of introduction: **Bronze Age (2300-750 BCE)**

Introduction pathway: **unintentional - agriculture, unintentional - anthropogenic**

## 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: **5 - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas**

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: **7x - occurring at nutrient-rich sites more often than at average sites and only exceptionally at poor sites (generalist)**

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: **0.26**

Herb layer disturbance frequency indicator value: **0.26**

Whole-community disturbance severity indicator value: **0.95**

Herb layer disturbance severity indicator value: **0.95**

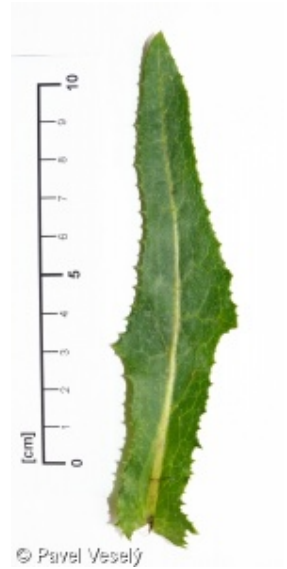
Whole-community structure based disturbance indicator value: **0.8**

Herb layer structure-based disturbance indicator value: **0.86**

## Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls



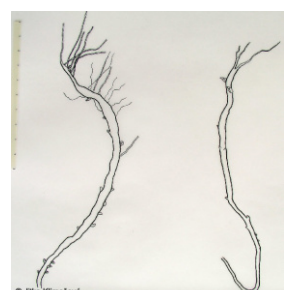
1C Walls: **1 - rare occurrence**  
 4 Wetland and riverine herbaceous vegetation  
 4B Halophilous reed and sedge beds: **1 - rare occurrence**  
 4G Tall-sedge beds: **1 - rare occurrence**  
 4H Vegetation of low annual hygrophilous herbs: **1 - rare occurrence**  
 4I Vegetation of nitrophilous annual hygrophilous herbs: **1 - rare occurrence**  
 6 Meadows and mesic pastures  
 6G Vegetation of wet disturbed soils: **2 - optimum**  
 10 Saline vegetation  
 10G Continental vegetation of annual halophilous grasses: **1 - rare occurrence**  
 10I Inland saline meadows: **1 - rare occurrence**  
 11 Heathlands and scrub  
 11J Willow galleries of loamy and sandy river banks: **1 - rare occurrence**  
 13 Anthropogenic vegetation  
 13A Annual vegetation of ruderal habitats: **1 - rare occurrence**  
 13B Annual vegetation of arable land: **2 - optimum**  
 13D Perennial thermophilous ruderal vegetation: **1 - rare occurrence**  
 13E Perennial nitrophilous herbaceous vegetation of mesic sites: **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 classes: [XB \*Stellarietea mediae\*](#)  
 Diagnostic taxon of alliances: [XBA \*Caucalidion\*](#), [XBB \*Veronico-Euphorbion\*](#)  
 Diagnostic taxon of associations: [XBA03 \*Euphorbio exiguae-Melandrietum noctiflori\*](#), [XBB02 \*Veronico-Lamietum hybridi\*](#)  
 Constant taxon  
 Constant taxon of alliances: [XBB \*Veronico-Euphorbion\*](#)  
 Constant taxon of associations: [MBB04 \*Chenopodio chenopodioidis-Atriplicetum prostratae\*](#), [XBA03 \*Euphorbio exiguae-Melandrietum noctiflori\*](#), [XBB02 \*Veronico-Lamietum hybridi\*](#)  
 Ecological specialization indices  
 Ecological specialization index for all vegetation types: **5.5**  
 Ecological specialization index for non-forest vegetation: **5.5**  
 Colonization ability  
 Index of colonization success (ICS): **6**  
 Index of colonization potential (ICP): **5**  
 Optimum successional age [years]: **5**

## Distribution and frequency

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

Floristic region: **Europe, Asia**

Distribution range extension along the continentality gradient: **8**



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: 586

taxon.data.freq\_in\_quad: 1610

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **2 %**

Occurrence frequency in vegetation plots with a cover above 5%: **8.5 %**

Occurrence frequency in vegetation plots with a cover above 25%: **1.3 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0.2 %**

Mean percentage cover in vegetation plots: **3.6 %**

Maximum percentage cover in vegetation plots: **63 %**

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: **2**

Number of broad habitats in which the taxon occurs: **6**

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**