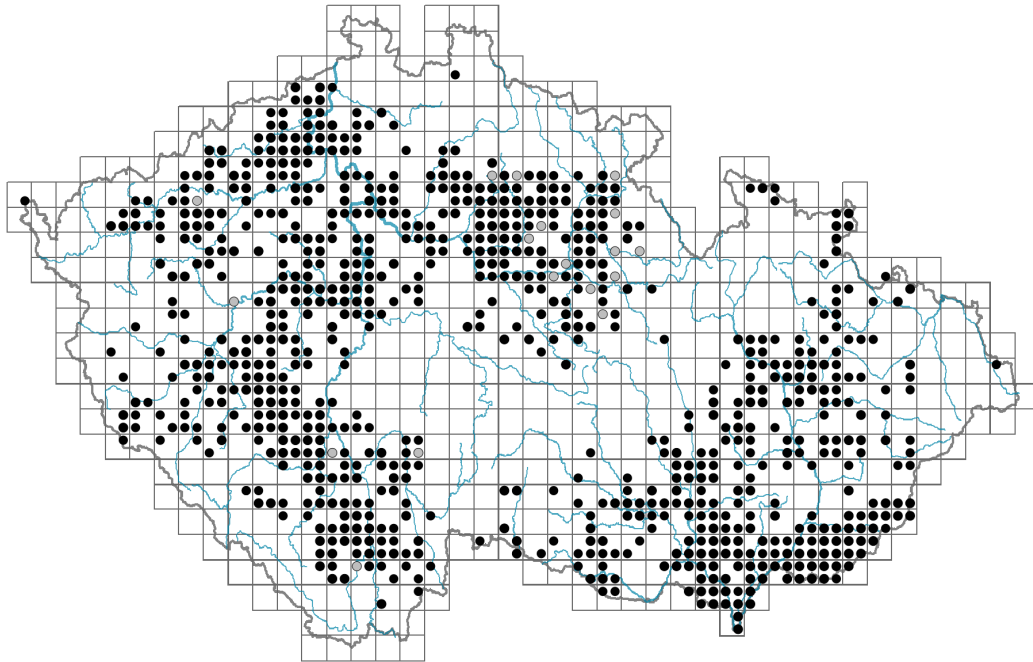


# *Serratula tinctoria*

## Distribution



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### 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**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **C - competitor**

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

Life strategy (Pierce method, C-score): **59 %**

Life strategy (Pierce method, S-score): **12.1 %**

Life strategy (Pierce method, R-score): **28.9 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire, simple - pinnately divided**

Stipules: **absent**

Petiole: **both present and absent**

Leaf life span: **summer green**

Leaf anatomy: **scleromorphic, mesomorphic**



© Vladimír Neuschleba



© Pavel Veselý

## Flower

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

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

Flower colour: **red-violet**

Flower symmetry: **actinomorphic**

Perianth type: **calyx reduced, corolla present**

Perianth fusion: **fused**

Shape of the sympetalous corolla or syntepalous perianth: **tubular**

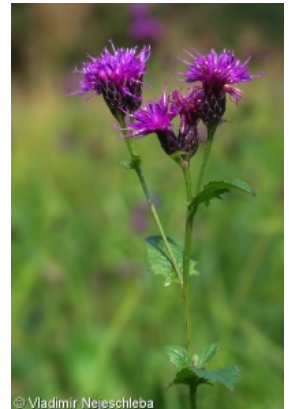
Calyx fusion: **pappus**

Inflorescence type: **corymbothsus ex anthodiis compositus**

Dicliny: **gynodioecious**

Pollination syndrome: **insect-pollination**

Pollinator spectrum: **bumblebees, hoverflies, other Diptera, butterflies (honeybee, solitary bees, flies s. l., meat flies s. l., beetles, other pollinators)**



## 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: **Epilobium (mainly anemochory and autochory)**

Myrmecochory: **myrmecochorous**

## Belowground organs and clonality

Shoot metamorphosis: **rhizome**

Storage organ: **rhizome**

Type of clonal growth organ: **epigeogenous 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]: **3.3**

Number of clonal offspring:

Lateral spreading distance by clonal growth [m]: **0.05**

Clonal index: **3**

## Bud bank

Number of buds per shoot at the soil surface (root buds excluded):

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):

Depth of the belowground bud bank (root buds excluded) [cm]:

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

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

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

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

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



## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

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

## Karyology

Chromosome number (2n): **22**

Ploidy level (x): **2**

2C genome size [Mbp]: **2917.9**

1Cx monoploid genome size [Mbp]: **1458.95**

Genomic GC content: **40.2 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **6 - transition between values 5 and 7; rarely at less than 20% of diffuse radiation incident in an open area**

Temperature indicator value: **6 - transition between values 5 and 7**

Moisture indicator value: **6x - transition between values 5 and 7 (generalist)**

Reaction indicator value: **7 - indicator of slightly acidic to slightly basic conditions, never occurring in very acidic conditions**

Nutrient indicator value: **3 - occurring at nutrient-poor sites more frequently than at average sites and exceptionally at rich 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: **-1.57**

Herb layer disturbance frequency indicator value: **-0.43**

Whole-community disturbance severity indicator value: **0.27**

Herb layer disturbance severity indicator value: **0.22**

Whole-community structure based disturbance indicator value: **0.23**

Herb layer structure-based disturbance indicator value: **0.37**

## Habitat and sociology

Occurrence in habitats

5 Vegetation of springs and mires

5D Calcareous fens: **1 - rare occurrence**

6 Meadows and mesic pastures

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

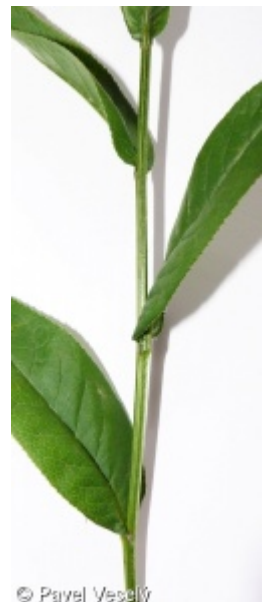
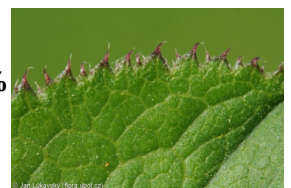
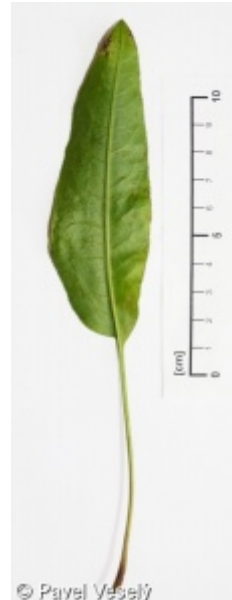
6C Pastures and park grasslands: **1 - rare occurrence**

6D Alluvial meadows of lowland rivers: **2 - optimum**

6E Wet Cirsium meadows: **1 - rare occurrence**

6F Intermittently wet Molinia meadows: **2 - optimum**

8 Dry grasslands



8B Submediterranean dry grasslands on rock outcrops: **1 - rare occurrence**

8D Broad-leaved dry grasslands: **2 - optimum**

8F Thermophilous forest fringe vegetation: **1 - rare occurrence**

9 Sand grasslands and rock-outcrop vegetation

9E Acidophilous vegetation of spring therophytes and succulents: **1 - rare occurrence**

9F Basiphilous vegetation of spring therophytes and succulents: **1 - rare occurrence**

10 Saline vegetation

10I Inland saline meadows: **1 - rare occurrence**

11 Heathlands and scrub

11L Tall mesic and xeric shrub: **1 - rare occurrence**

12 Forests

12C Oak-hornbeam forests: **1 - rare occurrence**

12F Limestone beech forests: **1 - rare occurrence**

12H Peri-Alpidic basiphilous thermophilous oak forests: **1 - rare occurrence**

12I Sub-continental thermophilous oak forests: **2 - optimum**

12K Acidophilous oak forests: **1 - rare occurrence**

12O Peri-Alpidic pine forests: **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 classes: [LC \*Quercetea pubescentis\*](#)

Diagnostic taxon of alliances: [LCB \*Aceri tatarici-Quercion\*](#), [LCC \*Quercion petraeae\*](#), [TDD \*Molinion caeruleae\*](#)

Diagnostic taxon of associations: [LCB02 \*Carici fritschii-Quercetum roboris\*](#), [LCC03 \*Melico pictae-Quercetum roboris\*](#), [TDD01 \*Molinietum caeruleae\*](#), [TDE03 \*Lathyro palustris-Gratioletum officinalis\*](#), [TDE04 \*Cnidio dubii-Deschampsietum cespitosae\*](#), [THF02 \*Brachypodio pinnati-Molinietum arundinaceae\*](#)

Constant taxon

Constant taxon of alliances: [LCB \*Aceri tatarici-Quercion\*](#)

Constant taxon of associations: [LCB02 \*Carici fritschii-Quercetum roboris\*](#), [LCC03 \*Melico pictae-Quercetum roboris\*](#), [TDD01 \*Molinietum caeruleae\*](#), [TDE03 \*Lathyro palustris-Gratioletum officinalis\*](#), [TDE04 \*Cnidio dubii-Deschampsietum cespitosae\*](#), [THF02 \*Brachypodio pinnati-Molinietum arundinaceae\*](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.6**

Ecological specialization index for non-forest vegetation: **5.3**

Ecological specialization index for forest vegetation: **5.6**

Colonization ability

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

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

Optimum successional age [years]: **75**



## Distribution and frequency

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

Floristic region: **Europe**

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: **368**

taxon.data.freq\_in\_quad: **817**

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%: **11.3 %**

Occurrence frequency in vegetation plots with a cover above 25%: **2.5 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0 %**

Mean percentage cover in vegetation plots: **4 %**

Maximum percentage cover in vegetation plots: **42 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **20**

Number of narrow habitats in which the taxon has its optimum: **4**

Number of broad habitats in which the taxon occurs: **8**

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**