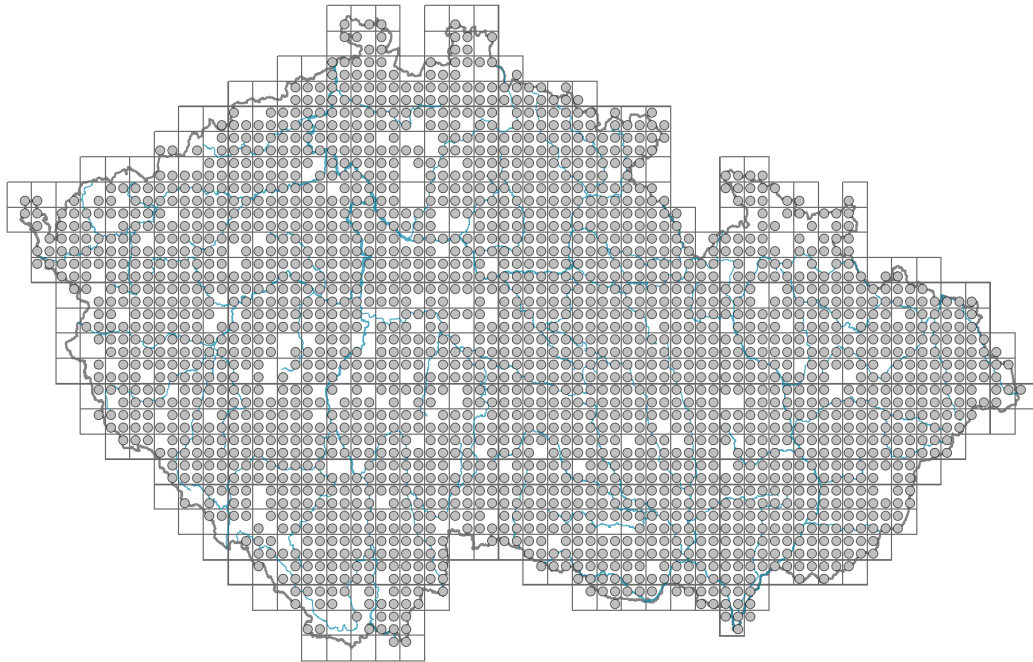


# *Tripleurospermum inodorum*

## 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]: **0.2-0.7**

Growth form: **annual herb**

Life form: **therophyte**

Life strategy: **CR - competitor/ruderal**

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

Life strategy (Pierce method, C-score): **23.5 %**

Life strategy (Pierce method, S-score): **0 %**

Life strategy (Pierce method, R-score): **76.5 %**

## 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: **overwintering green**

Leaf anatomy: **mesomorphic**

## Flower

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



© Dana Michalozova



© Dana Michalozova

Flower colour: **white, yellow**  
 Flower symmetry: **actinomorphic, zygomorphic**  
 Perianth type: **calyx reduced, corolla present**  
 Perianth fusion: **fused**  
 Shape of the sympetalous corolla or syntepalous perianth: **ligulate, tubular**  
 Calyx fusion: **synsepalous**  
 Inflorescence type: **corymbus ex anthodiis compositus**  
 Dicliny: **gynomonoecious**  
 Generative reproduction type: **allogamy self-incompatibility**  
 Pollination syndrome: **insect-pollination**  
 Pollinator spectrum: **hoverflies, other Diptera, nitidulids (honeybee, bumblebees, solitary bees, other Hymenoptera, flies s. l., meat flies s. l., butterflies, beetles, thrips, other pollinators, unknown)**

### Fruit, seed and dispersal

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

### Belowground organs and clonality

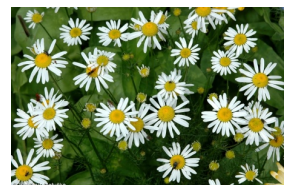
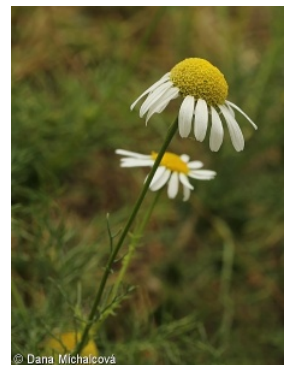
Shoot life span (cyclicality): **monocyclic shoots prevailing**  
 Primary root: **present**  
 Bud bank  
 Number of buds per shoot at the soil surface (root buds excluded): **3**  
 Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **3**  
 Number of buds per shoot at a depth greater than 10 cm (root buds excluded): **0**  
 Size of the belowground bud bank (root buds excluded): **5**  
 Depth of the belowground bud bank (root buds excluded) [cm]: **3**  
 Number of buds per shoot at the soil surface (root buds included): **3**  
 Number of buds per shoot at a depth of 0–10 cm (root buds included): **3**  
 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): **5**  
 Depth of the belowground bud bank (root buds included) [cm]: **3**

### Trophic mode

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

### Karyology

Chromosome number (2n): **36**  
 Ploidy level (x): **4**



2C genome size [Mbp]: **8059.93**  
 1Cx monoploid genome size [Mbp]: **2014.98**  
 Genomic GC content: **37.7 %**

## Taxon origin

Origin in the Czech Republic: **archaeophyte**  
 Invasion status: **naturalized**  
 Geographic origin: **anecophyte**  
 Period of introduction: **Iron Age (750-20 BCE)**  
 Introduction pathway: **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: **6x - transition between values 5 and 7 (generalist)**

Moisture indicator value: **5x - indicator of fresh soils, focus on soils of average moisture, missing on wet and on soils that frequently dry out (generalist)**

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: **-0.02**

Herb layer disturbance frequency indicator value: **0.04**

Whole-community disturbance severity indicator value: **0.85**

Herb layer disturbance severity indicator value: **0.86**

Whole-community structure based disturbance indicator value: **0.71**

Herb layer structure-based disturbance indicator value: **0.75**



## Habitat and sociology

### Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1C Walls: **1 - rare occurrence**

4 Wetland and riverine herbaceous vegetation

4A Reed-beds of eutrophic still waters: **1 - rare occurrence**

4B Halophilous reed and sedge beds: **1 - rare occurrence**

4C Eutrophic vegetation of muddy substrata: **1 - rare occurrence**

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

4E Reed vegetation of brooks: **1 - rare occurrence**

4G Tall-sedge beds: **1 - rare occurrence**

4H Vegetation of low annual hygrophilous herbs: **2 - optimum**

4I Vegetation of nitrophilous annual hygrophilous herbs: **2 - optimum**

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

- 4L Nitrophilous herbaceous fringes of lowland rivers: **1 - rare occurrence**
- 6 Meadows and mesic pastures
- 6C Pastures and park grasslands: **1 - rare occurrence**
- 6D Alluvial meadows of lowland rivers: **1 - rare occurrence**
- 6G Vegetation of wet disturbed soils: **1 - rare occurrence**
- 9 Sand grasslands and rock-outcrop vegetation
- 9B Open vegetation of acidic sands: **1 - rare occurrence**
- 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
- 10G Continental vegetation of annual halophilous grasses: **1 - rare occurrence**
- 10I Inland saline meadows: **2 - optimum**
- 10J Saline steppes: **1 - rare occurrence**
- 11 Heathlands and scrub
- 11L Tall mesic and xeric shrub: **1 - rare occurrence**
- 11N Low xeric scrub: **1 - rare occurrence**
- 11R Scrub and pioneer woodland of forests clearings: **1 - rare occurrence**
- 12 Forests
- 12T Robinia pseudacacia plantations: **1 - rare occurrence**
- 13 Anthropogenic vegetation
- 13A Annual vegetation of ruderal habitats: **2 - optimum**
- 13B Annual vegetation of arable land: **2 - optimum**
- 13C Annual vegetation of trampled habitats: **2 - optimum**
- 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 classes: [XB \*Stellarietea mediae\*](#)

Diagnostic taxon of alliances: [MAC \*Verbenion supinae\*](#), [XBA \*Caucalidion\*](#), [XBB \*Veronico-Euphorbion\*](#), [XBC \*Scleranthion annui\*](#), [XBG \*Atriplicion\*](#)

Diagnostic taxon of associations: [MAC01 \*Veronico anagalloidis-Lythretum hyssopifoliae\*](#), [MCC12 \*Tripleurospermo inodori-Bolboschoenetum planiculmis\*](#), [XBG09 \*Sisymbrietum altissimi\*](#), [XBG12 \*Ivaetum xanthiifoliae\*](#)

#### Constant taxon

Constant taxon of classes: [XB \*Stellarietea mediae\*](#)

Constant taxon of alliances: [MAC \*Verbenion supinae\*](#), [MBB \*Chenopodion rubri\*](#), [XBA \*Caucalidion\*](#), [XBB \*Veronico-Euphorbion\*](#), [XBC \*Scleranthion annui\*](#), [XBE \*Oxalidion fontanae\*](#), [XBF \*Spergulo arvensis-Erodion cicutariae\*](#), [XBG \*Atriplicion\*](#)

Constant taxon of associations: [MAA03 \*Stellario uliginosae-Isolepidetum setaceae\*](#), [MAC01 \*Veronico anagalloidis-Lythretum hyssopifoliae\*](#), [MAC02 \*Cerastio dubii-Ranunculetum sardoi\*](#), [MBA04 \*Polygono brittingeri-Chenopodietum rubri\*](#), [MBB02 \*Bidenti frondosae-Atriplicetum prostratae\*](#), [MBB03 \*Chenopodietum\*](#)

[ficifolii](#), [MBB04 Chenopodio chenopodioidis-Atriplicetum prostratae](#), [MCC12 Tripleurospermo inodori-Bolboschoenetum planiculmis](#), [TCB03 Agrostio stoloniferae-Juncetum ranarii](#), [XAB05 Lolio perennis-Matricarietum discoideae](#), [XBA03 Euphorbio exiguae-Melandrietum noctiflori](#), [XBA04 Stachyo annuae-Setarietum pumilae](#), [XBA05 Veronicetum hederifolio-triphylli](#), [XBB01 Mercurialietum annuae](#), [XBB02 Veronico-Lamietum hybridi](#), [XBC01 Aphano arvensis-Matricarietum chamomillae](#), [XBC02 Spergulo arvensis-Scleranthetum annui](#), [XBC03 Erophilo vernaе-Arabidopsietum thalianae](#), [XBE01 Echinochloo cruris-galli-Chenopodietum polyspermi](#), [XBF01 Setario pumilae-Echinochloetum cruris-galli](#), [XBG01 Chenopodietum stricti](#), [XBG02 Chenopodietum urbici](#), [XBG03 Atriplicetum nitentis](#), [XBG05 Cynodonto dactyli-Atriplicetum tataricae](#), [XBG07 Sisymbrietum loeselii](#), [XBG08 Descurainietum sophiae](#), [XBG09 Sisymbrietum altissimi](#), [XBG10 Chamaeplietum officinalis](#), [XBG11 Conyzo canadensis-Lactucetum serriolae](#), [XBG12 Ivaetum xanthiifoliae](#), [XBG13 Kochietum densiflorae](#), [XBI02 Malvetum pusillae](#), [XBI03 Polygono arenastri-Chenopodietum muralis](#), [XBK01 Digitalio sanguinalis-Eragrostietum minoris](#), [XCA01 Carduo acanthoidis-Onopordetum acanthii](#), [XCB01 Melilotetum albo-officinalis](#), [XCB02 Berteroetum incanae](#), [XCB04 Dauco carotae-Picridetum hieracioidis](#), [XCB05 Poo compressae-Tussilaginetum farfarae](#)

Dominant taxon

Dominant taxon of associations: [MAC01 Veronico anagalloidis-Lythretum hyssopifoliae](#), [XBC01 Aphano arvensis-Matricarietum chamomillae](#), [XBC03 Erophilo vernaе-Arabidopsietum thalianae](#), [XBG07 Sisymbrietum loeselii](#), [XBG09 Sisymbrietum altissimi](#), [XBG10 Chamaeplietum officinalis](#), [XCB03 Dauco carotae-Crepidetum rhoeadifoliae](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **4.3**

Ecological specialization index for non-forest vegetation: **4.3**

Ecological specialization index for forest vegetation: **4.5**

Colonization ability

Index of colonization success (ICS): **8**

Index of colonization potential (ICP): **6**

Optimum successional age [years]: **5**

## Distribution and frequency

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

Floristic region: **circumpolar**

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

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: **648**

taxon.data.freq\_in\_quad: **2212**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **8.2 %**

Occurrence frequency in vegetation plots with a cover above 5%: **16.4 %**

Occurrence frequency in vegetation plots with a cover above 25%: **3.5 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0.7 %**

Mean percentage cover in vegetation plots: **5.1 %**

Maximum percentage cover in vegetation plots: **99 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **30**

Number of narrow habitats in which the taxon has its optimum: **7**

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): **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**