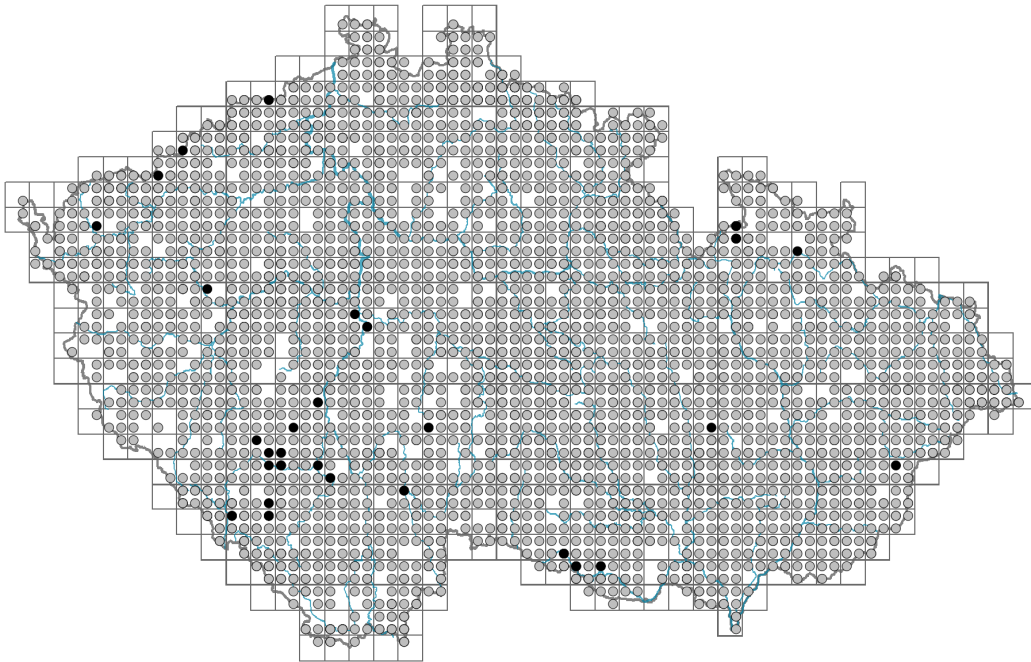


# *Viola tricolor* agg.

## 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.



© Pavel Veselý

## Habitus and growth type

Height [m]: **0.05-0.45**

Growth form: **annual herb**

Life form: **hemicryptophyte, therophyte**

Life strategy: **R - ruderal**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire**

Stipules: **present**

Petiole: **present**

Leaf life span: **evergreen**

Leaf anatomy: **mesomorphic, hygromorphic**

## Flower

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

Flowering phase: **3 Prunus avium-Ranunculus auricomus (end of early spring), 4 Fagus sylvatica-Galeobdolon (start of mid-spring)**

Flower colour: **yellow-white, yellow, violet, blue-violet**

Flower symmetry: **zygomorphic**



© Dana Michalčová



© Dana Michalčová

Perianth type: **calyx and corolla**

Perianth fusion: **free**

Calyx fusion: **aposepalous**

Inflorescence type: **flores solitarii**

Dicliny: **synoecious**

Generative reproduction type: **autogamy, mixed mating**

Pollination syndrome: **insect-pollination, selfing, cleistogamy**

### Fruit, seed and dispersal

Fruit type: **dry fruit - capsule**

Fruit colour: **brown**

Reproduction type: **only by seed/spores**

Dispersal unit (diaspore): **seed**

Dispersal strategy: **Allium (mainly autochory)**

Myrmecochory: **myrmecochorous**

### Belowground organs and clonality

Shoot metamorphosis: **pleiocorm**

Storage organ: **pleiocorm**

Shoot life span (cyclicality): **monocyclic shoots prevailing**

Branching type of stem-derived organs of clonal growth: **sympodial**

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): **6**

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): **6**

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**

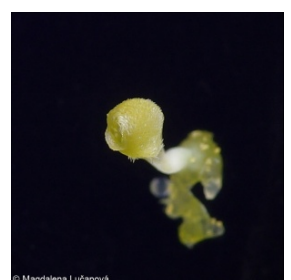
### Karyology

Chromosome number (2n): **26, 34**

Ploidy level (x): **6, 8**

2C genome size [Mbp]: **3762.31**

1Cx monoploid genome size [Mbp]: **566.49**



## 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: **4x - transition between values 3 and 5 (generalist)**

Reaction indicator value: **4x - transition between values 3 and 5 (generalist)**

Nutrient indicator value: **5x - occurring at moderately nutrient-rich sites, and less frequently at poor and rich sites (generalist)**

Salinity indicator value: **0 - not salt tolerant, glycophyte**

## Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1A Calcareous cliffs: **1 - rare occurrence**

1B Siliceous cliffs and block fields: **2 - optimum**

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

1D Mobile calcareous screes: **1 - rare occurrence**

4 Wetland and riverine herbaceous vegetation

4D Riverine reed vegetation: **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

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

6B Montane mesic meadows: **2 - optimum**

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

6G Vegetation of wet disturbed soils: **1 - rare occurrence**

8 Dry grasslands

8A Hercynian dry grasslands on rock outcrops: **2 - optimum**

8B Submediterranean dry grasslands on rock outcrops: **2 - optimum**

8C Narrow-leaved sub-continental steppes: **1 - rare occurrence**

8E Acidophilous dry grasslands: **1 - rare occurrence**

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

9 Sand grasslands and rock-outcrop vegetation

9B Open vegetation of acidic sands: **1 - rare occurrence**

9C Festuca grasslands on acidic sands: **1 - rare occurrence**

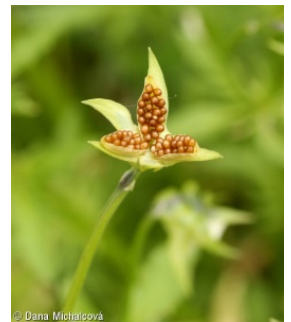
9D Pannonian sand steppes: **1 - rare occurrence**

9E Acidophilous vegetation of spring therophytes and succulents: **2 - optimum**

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

11 Heathlands and scrub

11A Dry lowland to subalpine heathlands: **1 - rare occurrence**



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

11N Low xeric scrub: **2 - optimum**

## 12 Forests

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

12I Sub-continental thermophilous oak forests: **1 - rare occurrence**

12J Acidophilous thermophilous oak forests: **1 - rare occurrence**

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

12L Boreo-continental pine forests: **1 - rare occurrence**

12T Robinia pseudacacia plantations: **1 - rare occurrence**

12W Pine and larch plantations: **1 - rare occurrence**

## 13 Anthropogenic vegetation

13A Annual vegetation of ruderal habitats: **1 - rare occurrence**

13B Annual vegetation of arable land: **2 - optimum**

13C Annual vegetation of trampled habitats: **1 - rare occurrence**

13D Perennial thermophilous ruderal vegetation: **1 - rare occurrence**

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**

## Distribution and frequency

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

Floristic region: **Europe, Western Asia**

Elevational belt in the Czech Republic: **lowlands, colline belt, submontane belt, montane belt, subalpine belt**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: 656

taxon.data.freq\_in\_quad: 2265

Commonness in vegetation plots from the Czech Republic

Maximum percentage cover in vegetation plots: **18 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **37**

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: **6**



© Pavel Veselý



© Pavel Veselý



© Pavel Veselý



© Marie Fonešová



© Pavel Veselý





