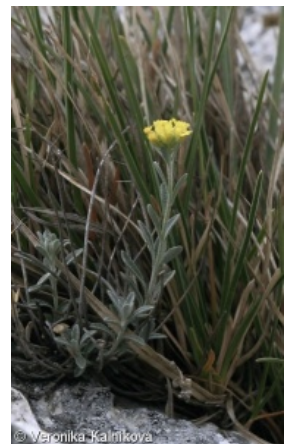
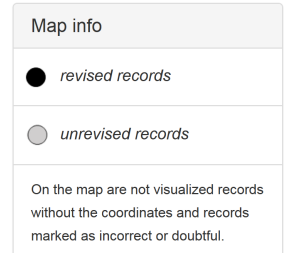
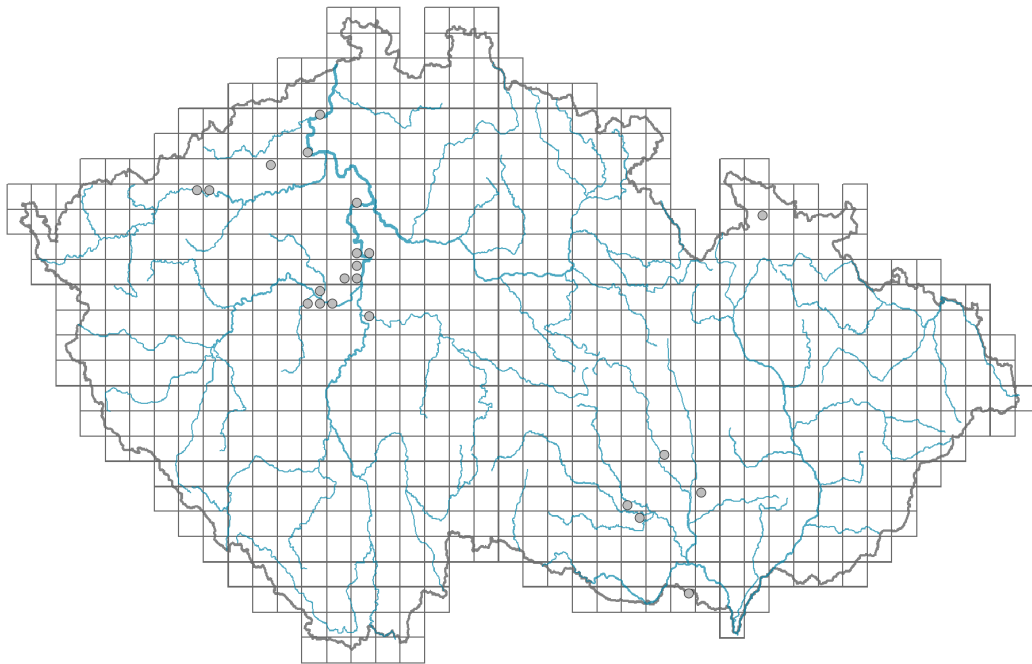


# *Alyssum montanum* subsp. *gmelinii*

## Distribution



## Habitus and growth type

Height [m]: **0.05-0.35**

Growth form: **polycarpic perennial non-clonal herb**

Life form: **hemicryptophyte**

Life strategy: **CSR - competitor/stress-tolerator/ruderal**

Life strategy (Pierce method based on leaf traits): **S/SR**

Life strategy (Pierce method, C-score): **2.7 %**

Life strategy (Pierce method, S-score): **75.3 %**

Life strategy (Pierce method, R-score): **22 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **both present and absent**

Leaf life span: **evergreen**

Leaf anatomy: **scleromorphic**

## Flower

Flowering phase: **3 Prunus avium-Ranunculus auricomus (end of early spring)**

Flower colour: **yellow**  
 Flower symmetry: **actinomorphic**  
 Perianth type: **calyx and corolla**  
 Perianth fusion: **free**  
 Calyx fusion: **aposepalous**  
 Inflorescence type: **racemus**  
 Dicliny: **synoecious**  
 Pollination syndrome: **insect-pollination, selfing**



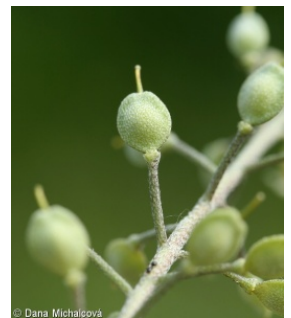
### Fruit, seed and dispersal

Fruit type: **dry fruit - silicula**  
 Fruit colour: **brown**  
 Reproduction type: **only by seed/spores**  
 Dispersal unit (diaspore): **seed**  
 Dispersal strategy: **Allium (mainly autochory)**  
 Myrmecochory: **non-myrmecochorous (b)**



### Belowground organs and clonality

Shoot metamorphosis: **pleiocorm**  
 Storage organ: **pleiocorm**  
 Shoot life span (cyclicality): **dicyclic or polycyclic 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): **10**  
 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): **13**  
 Depth of the belowground bud bank (root buds excluded) [cm]: **2**  
 Number of buds per shoot at the soil surface (root buds included): **10**  
 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): **13**  
 Depth of the belowground bud bank (root buds included) [cm]: **2**



### Trophic mode

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



### Karyology

Chromosome number (2n): **32**  
 Ploidy level (x): **4**  
 2C genome size [Mbp]: **2489.57**  
 1Cx monoploid genome size [Mbp]: **622.39**

Genomic GC content: **40.6 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **9 - full light plant, occurring only in fully irradiated places, not at less than 50% of diffuse radiation incident in an open area**

Temperature indicator value: **7 - heat indicator, occurring in relatively warm lowlands**

Moisture indicator value: **2 - transition between values 1 and 3**

Reaction indicator value: **8 - transition between values 7 and 9, occurring mostly in calcium-rich conditions**

Nutrient indicator value: **2 - transition between values 1 and 3**

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

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.54**

Herb layer disturbance frequency indicator value: **-0.24**

Whole-community disturbance severity indicator value: **0.21**

Herb layer disturbance severity indicator value: **0.25**

Whole-community structure based disturbance indicator value: **0.53**

Herb layer structure-based disturbance indicator value: **0.6**

## Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

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

1D Mobile calcareous screes: **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: **2 - optimum**

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**

9F Basiphilous vegetation of spring therophytes and succulents: **2 - optimum**

12 Forests

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

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

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

12O Peri-Alpidic pine forests: **1 - rare occurrence**

12W Pine and larch plantations: **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: [TFF \*Alyso alyssoidis-Sedion\*](#), [THB \*Bromo pannonici-Festucion pallentis\*](#)

Diagnostic taxon of associations: [THA02 \*Seselio ossei-Festucetum pallentis\*](#), [THB01 \*Poo badensis-Festucetum pallentis\*](#), [THC02 \*Minuartio setaceae-Seslerietum caeruleae\*](#), [THD02 \*Erysimo crepidifolii-Festucetum valesiacae\*](#)

## Constant taxon

Constant taxon of alliances: [THB \*Bromo pannonici-Festucion pallentis\*](#)

Constant taxon of associations: [THB01 \*Poo badensis-Festucetum pallentis\*](#), [THC02 \*Minuartio setaceae-Seslerietum caeruleae\*](#)

## Ecological specialization indices

Ecological specialization index for all vegetation types: **5.5**

Ecological specialization index for non-forest vegetation: **5.5**

Ecological specialization index for forest vegetation: **4.7**

## Colonization ability

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

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

Optimum successional age [years]: **42**

## Distribution and frequency

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

Floristic region: **Europe**

Continental degree: **5**

Distribution range extension along the continentality gradient: **4**

Elevational belt in the Czech Republic: **lowlands, colline belt**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **88**

taxon.data.freq\_in\_quad: **153**

## Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.4 %**

Occurrence frequency in vegetation plots with a cover above 5%: **10.2 %**

Occurrence frequency in vegetation plots with a cover above 25%: **0 %**

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

Mean percentage cover in vegetation plots: **3.3 %**

Maximum percentage cover in vegetation plots: **23 %**

## Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **15**

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

Number of broad habitats in which the taxon occurs: **4**

Number of broad habitats in which the taxon has its optimum: **2**

## **Threats and protection**

Red List 2017 (national categories): **C3 - vulnerable taxon**

Red List 2017 (IUCN categories): **NT - near threatened**

Legal protection: **not protected by law**