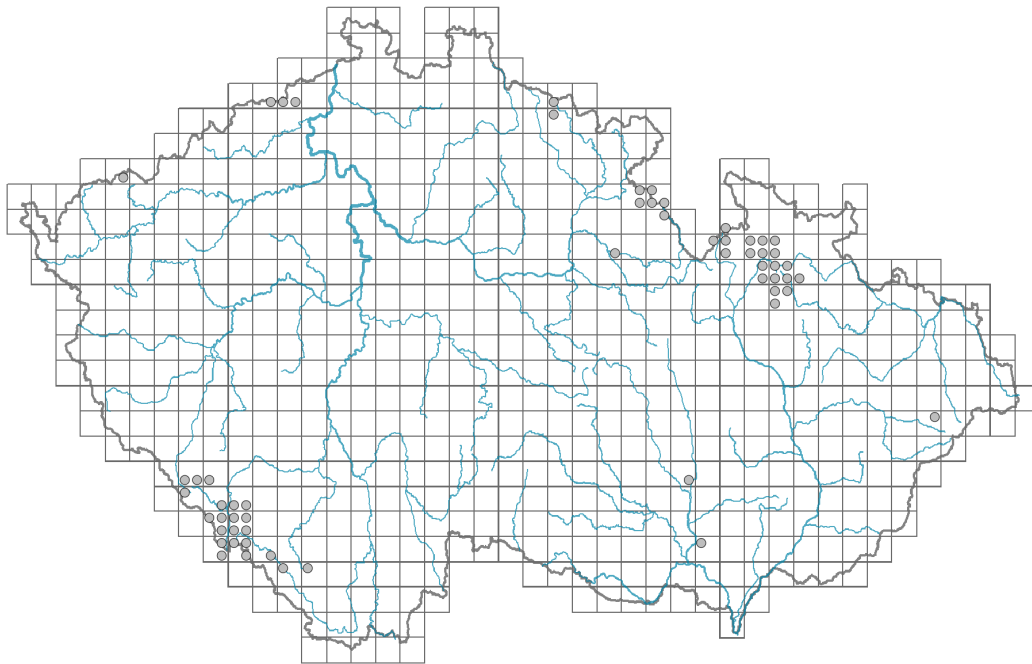


Ligusticum mutellina

Distribution



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]: **0.1-0.5**

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

Life form: **hemicryptophyte**

Life strategy: **C - competitor**

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

Life strategy (Pierce method, C-score): **55.3 %**

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

Life strategy (Pierce method, R-score): **44.7 %**

Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **compound - bipinnate, compound - tripinnate**

Stipules: **absent**

Petiole: **both present and absent**

Leaf life span: **evergreen**

Leaf anatomy: **mesomorphic**

Flower

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

Flower colour: **white, pink**
 Flower symmetry: **actinomorphic**
 Perianth type: **calyx absent, corolla present**
 Perianth fusion: **free**
 Inflorescence type: **umbella composita**
 Dicliny: **andromonoecious**
 Generative reproduction type: **facultative allogamy**
 Pollination syndrome: **insect-pollination**
 Pollinator spectrum: **flies s. l. (hoverflies, meat flies s. l.)**



Fruit, seed and dispersal

Fruit type: **dry fruit - cremocarp**
 Fruit colour: **brown**
 Reproduction type: **by seed/spores and vegetatively**
 Dispersal unit (diaspore): **fruit, infrutescence or its part**
 Dispersal strategy: **Allium (mainly autochory)**
 Myrmecochory: **non-myrmecochorous (b)**



Belowground organs and clonality

Shoot metamorphosis: **pleiocorm**
 Root metamorphosis: **primary storage root, root shoot**
 Storage organ: **pleiocorm, primary storage root**
 Shoot life span (cyclicality): **dicyclic or polycyclic shoots prevailing**
 Branching type of stem-derived organs of clonal growth: **sympodial**
 Primary root: **present**
 Position of root buds: **primary root**
 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): **15**
 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): **20**
 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): **19**
 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): **39**
 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): **22**

Ploidy level (x): **2**

2C genome size [Mbp]: **1411.44**

1Cx monoploid genome size [Mbp]: **705.72**

Genomic GC content: **37.6 %**

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: **3 - cool indicator, occurring mainly in subalpine areas**

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

Reaction indicator value: **5 - indicator of moderate acidity, occurring rarely in strongly acidic as well as in neutral to alkaline conditions**

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

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

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-0.97**

Herb layer disturbance frequency indicator value: **-0.66**

Whole-community disturbance severity indicator value: **0.18**

Herb layer disturbance severity indicator value: **0.21**

Whole-community structure based disturbance indicator value: **0.47**

Herb layer structure-based disturbance indicator value: **0.57**

Habitat and sociology

Occurrence in habitats

2 Alpine and subalpine grasslands

2A Alpine grasslands on siliceous bedrock: **2 - optimum**

2B Subalpine tall-forb and tall-grass vegetation: **2 - optimum**

5 Vegetation of springs and mires

5C Alpine and subalpine soft-water springs: **1 - rare occurrence**

6 Meadows and mesic pastures

6B Montane mesic meadows: **1 - rare occurrence**

7 Acidophilous grasslands

7A Subalpine and montane acidophilous grasslands: **2 - optimum**

7B Submontane Nardus grasslands: **1 - rare occurrence**

11 Heathlands and scrub

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

11H Subalpine deciduous scrub: **1 - rare occurrence**

12 Forests

12R Acidophilous spruce forests: **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: [AD *Mulgedio-Aconitetea*](#)

Diagnostic taxon of alliances: [ADA *Calamagrostion villosae*](#), [ADD *Adenostylion alliariae*](#)

Diagnostic taxon of associations: [ADA03 *Violo sudeticae-Deschampsietum cespitosae*](#), [ADD01 *Ranunculo platanifolii-Adenostyletum alliariae*](#), [ADD02 *Salicetum lapponum*](#), [TEA02 *Thesio alpini-Nardetum strictae*](#), [TEF03 *Festuco supinae-Vaccinietum myrtilli*](#)

Constant taxon

Constant taxon of associations: [ADA03 *Violo sudeticae-Deschampsietum cespitosae*](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **5.2**

Ecological specialization index for non-forest vegetation: **5.4**

Colonization ability

Index of colonization success (ICS): **1**

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

Distribution and frequency

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

Floristic region: **Europe**

Continentality degree: **5**

Distribution range extension along the continentality gradient: **3**

Elevational belt in the Czech Republic: **montane belt, subalpine belt**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **33**

taxon.data.freq_in_quad: **58**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.1 %**

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

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: **2.9 %**

Maximum percentage cover in vegetation plots: **13 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **9**

Number of narrow habitats in which the taxon has its optimum: **3**

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): **C3 - vulnerable taxon**

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

Legal protection: **vulnerable taxon**