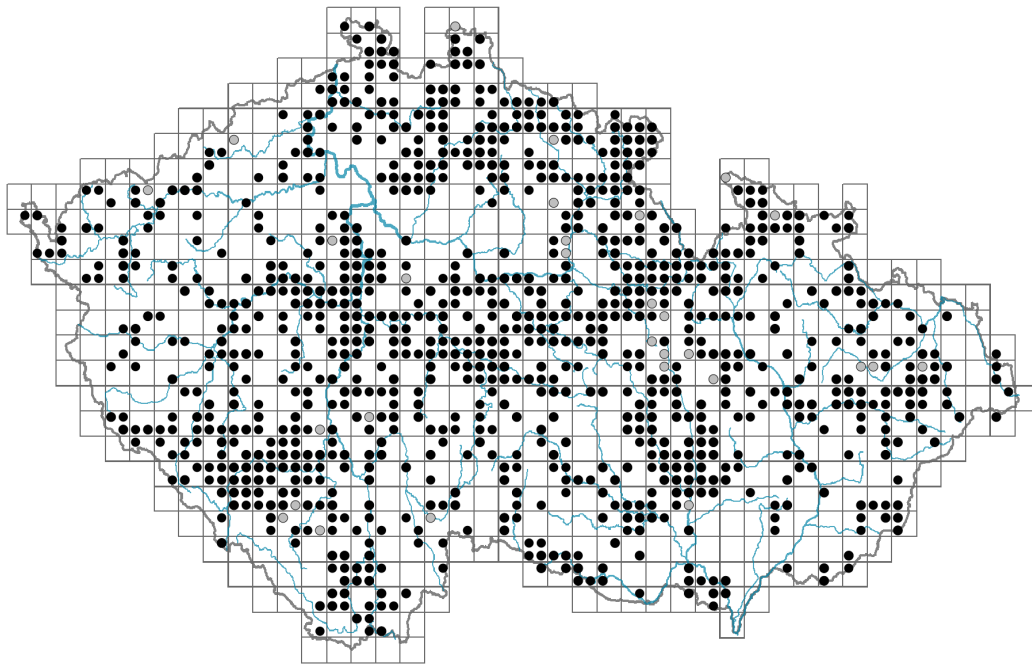


# *Asplenium ruta-muraria*

## 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]: **0.05-0.2**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

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

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

Life strategy (Pierce method, C-score): **12.6 %**

Life strategy (Pierce method, S-score): **54.6 %**

Life strategy (Pierce method, R-score): **32.8 %**



## Leaf

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

Leaf arrangement (phyllotaxis): **rosulate**

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

Stipules: **absent**

Petiole: **present**

Leaf life span: **evergreen**

Leaf anatomy: **scleromorphic, mesomorphic**



## Flower

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

Dicliny: **synoecious**

## Fruit, seed and dispersal

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

Dispersal unit (diaspore): **spore**

Dispersal strategy: **Lycopodium (mainly anemochory)**

Myrmecochory: **non-myrmecochorous (b)**

## Belowground organs and clonality

Shoot metamorphosis: **rhizome**

Storage organ: **rhizome**

Type of clonal growth organ: **epigeogenous rhizome**

Freely dispersible organs of clonal growth: **absent**

Primary root: **absent**

Persistence of the clonal growth organ [year]:

Number of clonal offspring: **0.5**

Lateral spreading distance by clonal growth [m]: **0.01**

Clonal index: **2**

### 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): **144**

Ploidy level (x): **4**

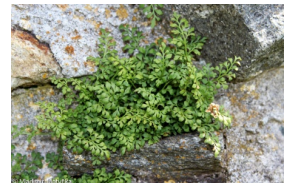
2C genome size [Mbp]: **11901.43**

1Cx monoploid genome size [Mbp]: **2975.36**

Genomic GC content: **47 %**

## Taxon origin

Origin in the Czech Republic: **native**



## Ecological indicator values

### Ellenberg-type indicator values

Light indicator value: **8 - light plant, only exceptionally occurring at less than 40% of diffuse radiation incident in an open area**

Temperature indicator value: **5 - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas**

Moisture indicator value: **3 - missing on damp soil**

Reaction indicator value: **8 - transition between values 7 and 9, occurring mostly in calcium-rich 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: **-1.41**

Herb layer disturbance frequency indicator value: **-1.2**

Whole-community disturbance severity indicator value: **0.14**

Herb layer disturbance severity indicator value: **0.16**

Whole-community structure based disturbance indicator value: **0.72**

Herb layer structure-based disturbance indicator value: **0.45**

## Habitat and sociology

### Occurrence in habitats

#### 1 Vegetation of cliffs, screes and walls

1A Calcareous cliffs: **2 - optimum**

1B Siliceous cliffs and block fields: **1 - rare occurrence**

1C Walls: **2 - optimum**

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: **1 - rare occurrence**

#### 9 Sand grasslands and rock-outcrop vegetation

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

#### 11 Heathlands and scrub

11N Low xeric scrub: **1 - rare occurrence**

#### 12 Forests

12D Ravine forests: **1 - rare occurrence**

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

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

12O Peri-Alpidic pine forests: **2 - optimum**

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 classes: [LE \*Erico-Pinetea\*](#), [SA \*Asplenietea trichomanis\*](#), [SB \*Cymbalaria muralis-Parietariaetea judaicae\*](#)

Diagnostic taxon of alliances: [LEA \*Erico carneae-Pinion\*](#), [SAA \*Cystopteridion\*](#), [SAB \*Asplenion cuneifolii\*](#), [SBA \*Cymbalaria muralis-Asplenion\*](#), [THC \*Diantho lumnitzeri-Seslerion\*](#)

Diagnostic taxon of associations: [LEA01 \*Thlaspio montani-Pinetum sylvestris\*](#), [SAA02 \*Asplenietum rutae-murario-trichomanis\*](#), [SAB02 \*Notholaeno marantae-Sempervivetum hirti\*](#), [SBA01 \*Cymbalarietum muralis\*](#), [SBA02 \*Corydalis-lythrae\*](#), [SCA03 \*Teucrio botryos-Melicetum ciliatae\*](#), [THC01 \*Carici humilis-Seslerietum caeruleae\*](#), [THC02 \*Minuartio setaceae-Seslerietum caeruleae\*](#), [THC03 \*Saxifrago paniculatae-Seslerietum caeruleae\*](#)

## Constant taxon

Constant taxon of classes: [SA \*Asplenietea trichomanis\*](#)

Constant taxon of alliances: [SAA \*Cystopteridion\*](#)

Constant taxon of associations: [SAA02 \*Asplenietum rutae-murario-trichomanis\*](#), [SAB02 \*Notholaeno marantae-Sempervivetum hirti\*](#), [SCA03 \*Teucrio botryos-Melicetum ciliatae\*](#), [THC03 \*Saxifrago paniculatae-Seslerietum caeruleae\*](#)

## Dominant taxon

Dominant taxon of associations: [SAA02 \*Asplenietum rutae-murario-trichomanis\*](#)

## Ecological specialization indices

Ecological specialization index for all vegetation types: **3.3**

Ecological specialization index for non-forest vegetation: **3.5**

Ecological specialization index for forest vegetation: **5.1**

## Colonization ability

Index of colonization success (ICS): **3**

Index of colonization potential (ICP): **3**

Optimum successional age [years]: **49**

**Distribution and frequency**

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

Floristic region: **Europe, Asia**

Distribution range extension along the continentality gradient: **6**

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

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **488**

taxon.data.freq\_in\_quad: **985**

## Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.7 %**

Occurrence frequency in vegetation plots with a cover above 5%: **36.7 %**

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: **6.1 %**

Maximum percentage cover in vegetation plots: **38 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **14**

Number of narrow habitats in which the taxon has its optimum: **5**

Number of broad habitats in which the taxon occurs: **5**

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**