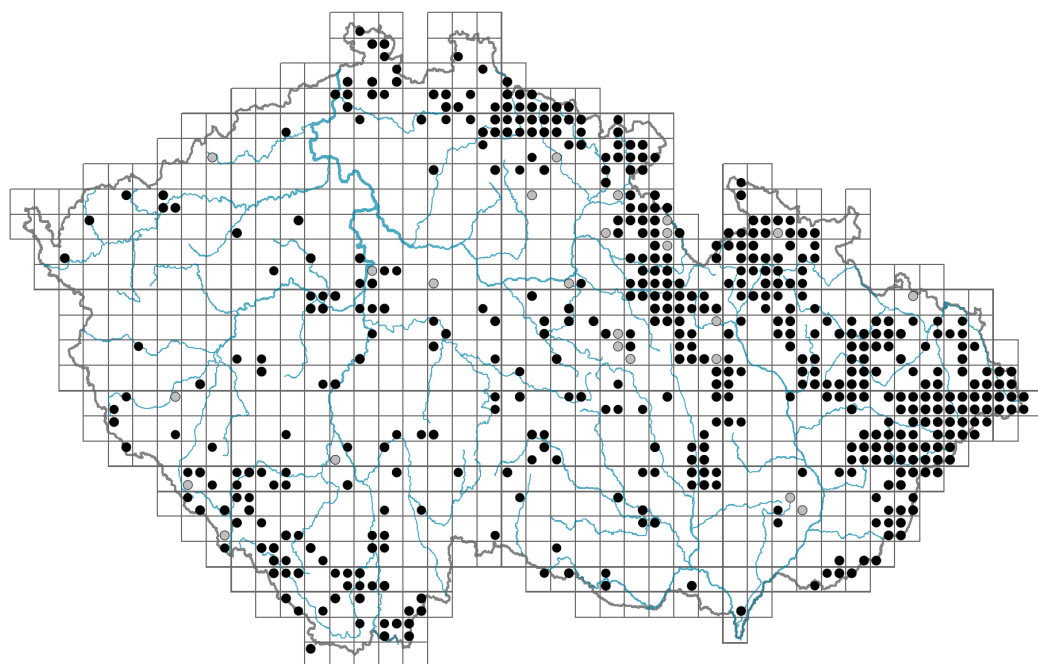


# *Polystichum aculeatum*

## 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]: **0.3-0.8**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **CS - competitor/stress-tolerator**

Life strategy (Pierce method based on leaf traits): **C/CS**

Life strategy (Pierce method, C-score): **70 %**

Life strategy (Pierce method, S-score): **16.3 %**

Life strategy (Pierce method, R-score): **13.7 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **rosulate**

Leaf shape: **compound - bipinnate**

Stipules: **absent**

Petiole: **present**

Leaf life span: **evergreen**

Leaf anatomy: **scleromorphic**

## Flower

Flowering period [month]: **June-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]: **4**

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): **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): **15**

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): **20**

Depth of the belowground bud bank (root buds included) [cm]: **4**

## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

## Karyology

Chromosome number (2n): **164**

Ploidy level (x): **4**

2C genome size [Mbp]: **25393.32**

1Cx monoploid genome size [Mbp]: **6348.33**

Genomic GC content: **45 %**

## Taxon origin

Origin in the Czech Republic: **native**



## Ecological indicator values

### Ellenberg-type indicator values

Light indicator value: **3 - shade plant, usually occurring where the incident radiation is less than 5% of that in an open area, but also at sunnier sites**

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

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

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: **0 - not salt tolerant, glycophyte**

### Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.98**

Herb layer disturbance frequency indicator value: **-0.7**

Whole-community disturbance severity indicator value: **0.22**

Herb layer disturbance severity indicator value: **0.03**

Whole-community structure based disturbance indicator value: **0.03**

Herb layer structure-based disturbance indicator value: **0.15**

## 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: **1 - rare occurrence**

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

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

#### 2 Alpine and subalpine grasslands

2B Subalpine tall-forb and tall-grass vegetation: **1 - rare occurrence**

#### 11 Heathlands and scrub

11D Subalpine acidophilous *Pinus mugo* scrub: **1 - rare occurrence**

11R Scrub and pioneer woodland of forests clearings: **1 - rare occurrence**

#### 12 Forests

12C Oak-hornbeam forests: **1 - rare occurrence**

12D Ravine forests: **2 - optimum**

12E Herb-rich beech forests: **2 - optimum**

12F Limestone beech forests: **2 - optimum**

12R Acidophilous spruce forests: **1 - rare occurrence**

12S Basiphilous spruce forests: **2 - optimum**

12V Spruce plantations: **1 - rare occurrence**

#### 13 Anthropogenic vegetation

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 Mesophyticum and Oreophyticum: **1.1 - taxon occurring mainly in the closed forest**

## Diagnostic taxon

Diagnostic taxon of associations: [LBF03 Arunco dioici-Aceretum pseudoplatani](#)

## Ecological specialization indices

Ecological specialization index for all vegetation types: **6.4**

Ecological specialization index for non-forest vegetation: **6.1**

Ecological specialization index for forest vegetation: **6.5**

## Colonization ability

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

Index of colonization potential (ICP): **7**

Optimum successional age [years]: **35**

## Distribution and frequency

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

Floristic region: **Europe, Asia, Americas**

Continentality degree: **4**

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

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

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **287**

taxon.data.freq\_in\_quad: **535**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.3 %**

Occurrence frequency in vegetation plots with a cover above 5%: **3.8 %**

Occurrence frequency in vegetation plots with a cover above 25%: **1 %**

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

Mean percentage cover in vegetation plots: **2.5 %**

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: **16**

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: **2**

## Threats and protection

Red List 2017 (national categories): **C4a - near threatened taxon**

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

Legal protection: **not protected by law**