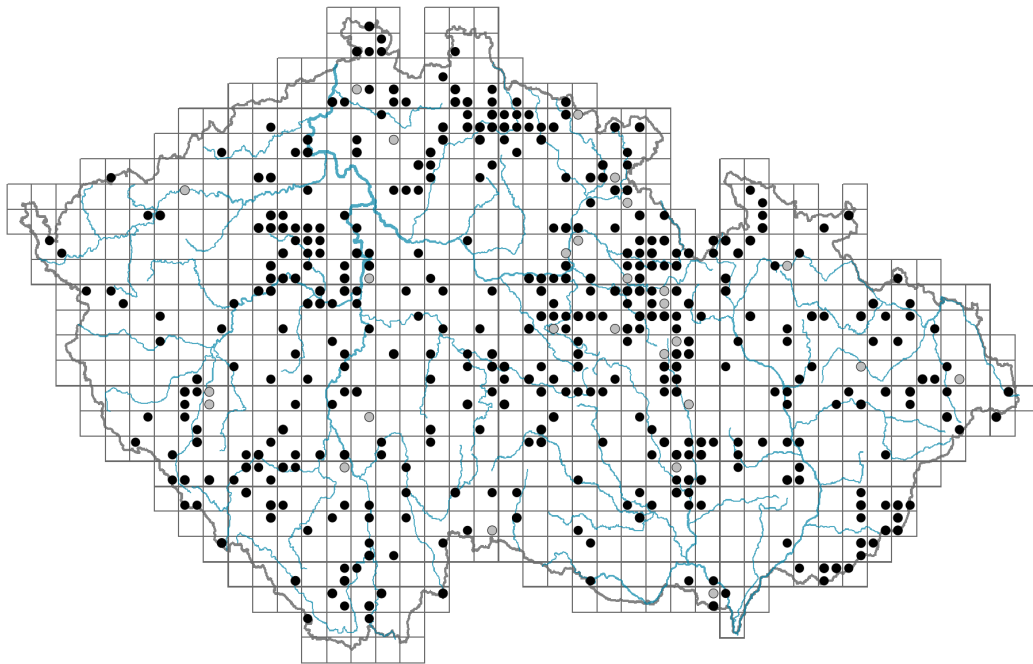


# Gymnocarpium robertianum

## 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]: **0.15-0.5**

Growth form: **clonal herb**

Life form: **geophyte**

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

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

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

Stipules: **absent**

Petiole: **present**

Leaf life span: **summer green**

Leaf anatomy: **hygromorphic**

## Flower

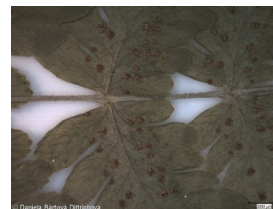
Flowering period [month]: **June-August**

Dicliny: **synoecious**

## Fruit, seed and dispersal

Reproduction type: **by seed/spores and vegetatively**

Dispersal unit (diaspore): **seed**  
 Dispersal strategy: **Lycopodium (mainly anemochory)**  
 Myrmecochory: **non-myrmecochorous (b)**



## Belowground organs and clonality

Shoot metamorphosis: **rhizome**  
 Storage organ: **rhizome**  
 Type of clonal growth organ: **hypogeogenous rhizome**  
 Freely dispersible organs of clonal growth: **absent**  
 Shoot life span (cyclicity): **monocyclic shoots prevailing**  
 Branching type of stem-derived organs of clonal growth: **dichotomous**  
 Primary root: **absent**  
 Persistence of the clonal growth organ [year]: **4**  
 Number of clonal offspring: **0.5**  
 Lateral spreading distance by clonal growth [m]: **0.13**  
 Clonal index: **3**

## Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **0**  
 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): **15**  
 Depth of the belowground bud bank (root buds excluded) [cm]: **5**  
 Number of buds per shoot at the soil surface (root buds included): **0**  
 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): **15**  
 Depth of the belowground bud bank (root buds included) [cm]: **5**

## Trophic mode

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

## Karyology

Chromosome number (2n): **160**  
 Ploidy level (x): **4**  
 2C genome size [Mbp]: **11124.72**  
 1Cx monoploid genome size [Mbp]: **2781.18**  
 Genomic GC content: **43.6 %**

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

Moisture indicator value: **5 - indicator of fresh soils, focus on soils of average moisture, missing on wet and on soils that frequently dry out**

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

Nutrient indicator value: **4 - transition between values 3 and 5**

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

### Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.38**

Herb layer disturbance frequency indicator value: **-1.14**

Whole-community disturbance severity indicator value: **0.19**

Herb layer disturbance severity indicator value: **0.2**

Whole-community structure based disturbance indicator value: **0.49**

Herb layer structure-based disturbance indicator value: **0.26**

## 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: **1 - rare occurrence**

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

#### 5 Vegetation of springs and mires

5B Lowland to montane soft-water springs: **1 - rare occurrence**

#### 8 Dry grasslands

8B Submediterranean dry grasslands on rock outcrops: **1 - rare occurrence**

#### 11 Heathlands and scrub

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

#### 12 Forests

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

12E Herb-rich beech forests: **1 - rare occurrence**

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

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

### Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **2.1 - taxon occurring both in the forest and open vegetation**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **2.1 - taxon occurring both in the forest and open vegetation**

### Diagnostic taxon

Diagnostic taxon of classes: [\*\*SC \*Thlaspietea rotundifolii\*\*\*](#)

Diagnostic taxon of alliances: [SAA Cystopteridion](#), [SCA Stipion calamagrostis](#)

Diagnostic taxon of associations: [SCA01 Gymnocarpietum robertiani](#)

Constant taxon

Constant taxon of associations: [SCA01 Gymnocarpietum robertiani](#)

Dominant taxon

Dominant taxon of associations: [SCA01 Gymnocarpietum robertiani](#)

Ecological specialization indices

Ecological specialization index for all vegetation types: **3.7**

Ecological specialization index for non-forest vegetation: **4**

Ecological specialization index for forest vegetation: **5.3**

## Distribution and frequency

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

Floristic region: **circumpolar**

Continentality degree: **6**

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

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

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **313**

taxon.data.freq\_in\_quad: **463**

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%: **70.4 %**

Occurrence frequency in vegetation plots with a cover above 25%: **29.6 %**

Occurrence frequency in vegetation plots with a cover above 50%: **11.1 %**

Mean percentage cover in vegetation plots: **20.4 %**

Maximum percentage cover in vegetation plots: **63 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **11**

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

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

Number of broad habitats in which the taxon has its optimum: **1**

## 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**