

New records of moss *Orthotrichum affine* var. *bohemicum* Plášek & Sawicki from Silesia (Czech Republic)

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New records of moss *Orthotrichum affine* var. *bohemicum* Plášek & Sawicki from Silesia (Czech Republic). – Acta Mus. Siles. Sci. Natur., 63: 25-28, 2014.

Abstract: *Orthotrichum affine* var. *bohemicum* is a variety of epiphytic moss described in 2011 on the basis of findings in the Czech Republic. During the research in the Zlatohorská vrchovina highlands situated in Silesia (NE part of the Czech Republic) five new localities of the taxa were found in 2013. In Silesia there has not been any record of this moss till the present. Descriptions of the new localities together with ecological characteristics are given.

Key words: new records, epiphytic moss, ecology, Silesia, Czech Republic

Introduction

During a bryofloristic survey in the Zlatohorská vrchovina highlands (NE part of the Czech Republic), the epiphytic moss *Orthotrichum affine* var. *bohemicum* Plášek & Sawicki was collected in 2013. Altogether five localities of the taxa were recorded by the first author. In Silesia region no record of the taxa has been known till present.

The moss was first found in the Lužické hory Mts (NW part of the Czech Republic) in October 2006. Later it was described as a new variety and named *Orthotrichum affine* var. *bohemicum* Plášek & Sawicki (Plášek et al. 2011, Plášek & Sawicki 2012). Subsequently, during revision of herbaria (LE, S and LOD), historical specimens of this taxa collected in the USA (Ellis et al. 2012a), Poland (Ellis et al. 2012b) and Sweden (Ellis et al. 2013) were found. Recent bryological survey in the Crimean Peninsula also brought a new record of the variety from Ukraine (Číhal 2014).

New records

The names of the bryophytes follow the Check list of the bryophytes of the Czech Republic by Kučera et al. (2012). Phytogeographical characterization was taken from Hejný & Slavík (1997). The presented localities are ordered according to their geographical location from north to south. Herbarium specimens are housed in the herbarium of University of Ostrava (OSTR).

Phytogeographical division: *Mesophyticum*

Phytogeographical province: *Mesophyticum Massivi bohemici*

Phytogeographical district: **75. Jesenické podhůří**

- Petrovice village, bank of the Osoblaha stream, 250 m N of the top of Čertův kámen hill, 100 m W of the edge of Janov village, 445 m a.s.l., WGS-84: N= 50°14'31.0", E=17°27'36.0", 13.X.2013 leg. J. Halfar, teste V. Plášek (OSTR).

The moss was recorded on the bark of *Fraxinus excelsior*, located on the N bank of the stream. It grew horizontally on a branch at a height of 155 cm above ground. Associated species (alphabetically): *Orthotrichum anomalum*, *O. diaphanum* and *O. pumilum*.

- 700 m SW of the edge of Horní Holčovice, 600 m S of the top of Moravský kopec hill, 723 m a.s.l., solitaire tree on the meadow near a field road, WGS-84: N= 50°8'24.9", E= 17°26'43.9", 28. IX. 2013 leg. J. Halfar, teste V. Plášek (OSTR).

The population was collected from the bark of the solitaire tree (*Fraxinus excelsior*) located on the meadow near a field road. The moss cushion grew vertically on a trunk at a height of 230 cm above ground. Associated species (alphabetically): *Orthotrichum pumilum*, *O. speciosum*.

- 2.5 km NNE of Karlovice village, Hájovny settlement, valley of the Adamovský stream, along a forest road, 509 m a.s.l., WGS-84: N= 50°7'3.3", E= 17°27'12.2", 28. IX. 2013 leg. J. Halfar, teste V. Plášek (OSTR).

The moss was recorded growing on the bark of *Salix fragilis* on the edge of a forest road near the stream. Population was growing horizontally on the branch at a height of 210 cm above ground. Associated species (alphabetically): *Orthotrichum pumilum* and *Ulota bruchii*.

- NE edge of Karlovice village, 600 m SSE of the top of Obří vrch hill, edge of the forest, 547 m a.s.l., WGS-84: N=50°6'39.3, E=17°26'23.3", 28. IX. 2013 leg. J. Halfar, teste V. Plášek (OSTR).

The moss grew on the bark of *Acer pseudoplatanus*, located on the edge of a forest towards sunny south-facing meadow. Population was growing vertically on the trunk at a height of 100 cm above ground. Associated species (alphabetically): *Orthotrichum anomalum*, *O. pallens* and *Orthotrichum pumilum*.

Phytogeographical division: ***Oreophyticum***

Phytogeographical province: ***Oreophyticum Massivi bohemic***

Phytogeographical district: **97. Hrubý Jeseník**

- W edge of Rejvíz village, on the meadow, 500 m NE of the top of U Pomníku hill, 772 m a.s.l., WGS-84: N= 50°13'40.6", E=17°18'1.1", leg. J. Halfar 29. IX. 2013, teste V. Plášek (OSTR).

The moss was recorded on the bark of *Fraxinus excelsior*. It grew in a higher part of the trunk at a height of 190 cm above ground. The solitaire tree was located in a meadow. Associated species (alphabetically): *Orthotrichum anomalum*, *O. pumilum*.

Discussion

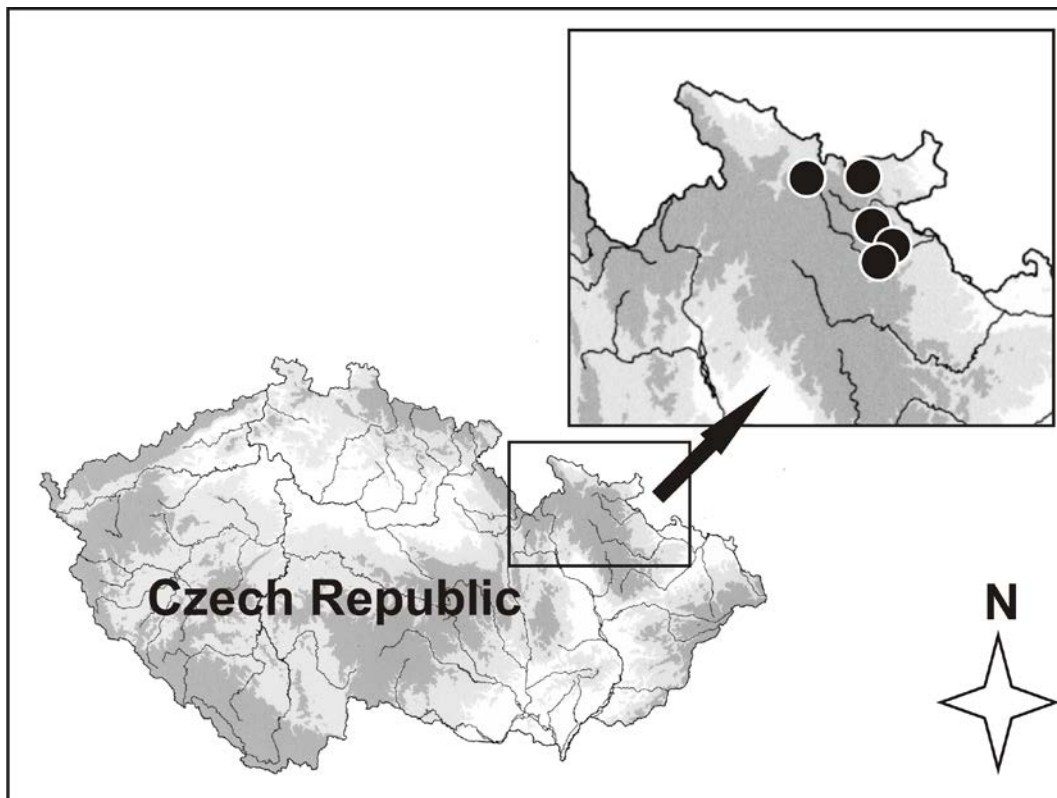
Orthotrichum affine var. *bohemicum* is similar to type *O. affine*, but it can be easily differentiated mainly by 16 endostome segments; whereas the latter species has only 8 ones.

Orthotrichum pallens, which seems superficially related to *O. affine* var. *bohemicum*, can be differentiated due to the cryptopore type of stomates and shorter and blunter ended leaves. In addition, *O. pallens* has endostome segments alternately longer and shorter, whereas in *O. affine* var. *bohemicum* all segments are equally long (practically as long as the exostome teeth).

The area of the Zlatohorská vrchovina highlands has never been purposefully subjected to any bryological research. Almost all the historical records related to this area came from marginal parts along border with phytogeographical district of Hrubý Jeseník Mts (Duda 1950; Vondráček 1993, 1994). From these localities a fairly large number of species within *Orthotrichaceae* family is historically known (10 species from the genus *Orthotrichum*, 4 from *Ulota* and 1 from *Nyhomiella*).

The presence of 12 species and one variety within the *Orthotrichaceae* family (9 species and 1 variety from the genus *Orthotrichum*, 2 from *Ulota* and 1 from *Nyhomiella*) was recently recorded by the first author. Among the most common species, *Orthotrichum pumilum* could be considered. As other abundant species, *O. diaphanum*, *O. anomalum* and *O. affine* were noted. On the contrary, *O. patens*, *O. striatum* and also *O. affine* var. *bohemicum* were observed rarely. To the taxa newly recorded in Zlatohorská vrchovina highlands belong

Orthotrichum patens and *O. affine* var. *bohemicum*. Latter taxon is also newly discovered moss for the whole region of Silesia.



Map 1.: Map of studied area with marked localities with new localities of epiphytic moss *Orthotrichum affine* var. *bohemicum* Plášek & Sawicki.

Conclusions

Detailed bryological research focused on the epiphytic bryophytes in the Czech Republic has recently yielded many new localities of the *Orthotrichum affine* var. *bohemicum* in the territory of NW Bohemia (Marková, not published) and W Bohemia (Plášek & Benešová 2013). In this paper the results of the field monitoring carried out by first author are presented. It appears that the variety is geographically widespread and it is only a matter of time when other localities will be found.

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