

# Novelties in the Flora of the Bohemian Forest

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Dedicated to the memory of František Procházka

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## Abstract

Ongoing floristic research in the Bohemian Forest mostly supported by the Czech-Bavarian project Květena Šumavy / Flora des Böhmerwaldes is evaluated and most interesting finds are presented. Flow cytometry approach revealed occurrence of morphologically difficult to distinguish species: *Achillea pratensis*, *Anthoxanthum alpinum*, *Galium elongatum*, *Juncus ranarius*. New localities of rare species were found and current occurrence of rare and declining species at historical localities were confirmed: *Cardamine trifolia*, *Carex diandra*, *C. dioica*, *C. lasiocarpa*, *Carlina vulgaris*, *Cephalanthera damasonium*, *C. longifolia*, *Coeloglossum viride*, *Corallorhiza trifida*, *Dactylorhiza sambucina*, *D. incarnata*, *Dryopteris cristata*, *Eriophorum latifolium*, *Hypochaeris maculata*, *Juncus squarrosus*, *Ligusticum mutellina*, *Lilium bulbiferum*, *Listera cordata*, *Luzula sudetica*, *Malaxis monophyllos*, *Moneses uniflora*, *Myosotis caespitosa*, *Myosotis discolor*, *Phleum nodosum*, *Polygala chamaebuxus*, *P. multicaulis*, *Polystichum aculeatum*, *Pyrola rotundifolia*, *Ranunculus lingua*, *Sagina saginoides*, *Trollius altissimus*. New species or hybrids of genera *Hieracium* and *Pilosella* as well as new localities of rare species or hybrids were discovered. New adventive localities of rather thermophilous species or rare alien species were found. New alien species within studied area were noticed: *Anthemis cretica*, *Bromus carinatus*, *Galium rivale*, *Oenothera issleri*, *Oenothera rubricaulis*, *Rumex longifolius*, *Scabiosa ochroleuca*, *Vicia grandiflora*. Several planted species were discovered in nature conditions as well.

*Key words:* Bohemian Forest, floristics, flow cytometry, rare species, alien species

## INTRODUCTION

Bohemian Forest belongs to the few biologically extremely important areas of Central Europe. It was split by an impermeable Iron Curtain for decades. Despite of the long tradition of floristic research of the area as a whole (e.g., STERNBERG 1806, TAUSCH 1819, see also PROCHÁZKA 2000a), the possibility of joint research had practically disappeared at the time when the crossing of the state border was intended only for the chosen ones. Moreover, on the Czech side, the research was complicated also by a large border zone and two similarly inaccessible military areas. Therefore, it is not surprising that immediately after the fall of Iron Curtain, an effort arose to join international forces and describe the flora of Bohemian Forest regardless of the state border.

The intellectual father of this idea was František Procházka, under whose leadership a broad team of botanists from the Czech Republic, Bavaria and Austria was formed. They began to work on the Flora of Bohemian Forest without limitations by state borders (KIRSCHNEROVÁ & PROCHÁZKA 1998). During the 1990s, intensive field research took place on all sides of the border (NESVADBOVÁ & SOFRON 1998a, 1998b, 2001, ŽÍLA & ŠTECH 1998). It was discovered plenty of new species within the area as well as many occurrences of rare or so far overlooked species and also a considerable number of findings were published (GAGGERMEIER et al. 1992, KOVÁŘIKOVÁ 1998, PROCHÁZKA 1998a, PROCHÁZKA & PAVLÍČKO 1998, ŘEPKA & LUSTYK 1998, HORN et al. 1999, PROCHÁZKA & KOVÁŘIKOVÁ 1999, DIEWALD & HORN 2001, PROCHÁZKA 2001, PROCHÁZKA et al. 2001, PROCHÁZKA 2004).

Special attention was paid to critical taxa (SUDA 1998, ŠIDA 1998a, 1998b, VĚTVIČKA & PROCHÁZKA 1998, PROCHÁZKA 2001, 2004, HAVLÍČEK et al. 2003) as well as to adventive plant species (BUFKOVÁ 1998, PROCHÁZKA 1998b). A large amount of historical literary and herbarium data was excerpted into a floristic database on the flora of Šumava (KOLEKTIV 1995–2004), which served as a basis for the preparation of texts for a special part of the intended Flora Silvae Gabretae. Based on historical sources, an overview of species, which were considered extinct or missing, was prepared (PROCHÁZKA 1998c) and the history of the discovery of some memorable species was elaborated in detail (PROCHÁZKA 2000b). Publication Annotated black and red list of vascular plants of the Czech Bohemian forest (the Šumava Mts.) (PROCHÁZKA & ŠTECH 2002) was probably the most remarkable action of this period. At the same time, extensively formulated general chapters were written under the guarantee of Jaromír Sofron. Unfortunately, the whole ambitious project was interrupted by the death of his founder František Procházka in 2004.

However, floristic research in Šumava did not stop in any case. The most significant contribution to the research were two articles with new botanical findings in the Czech part of Bohemian Forest (EKRT & PŮBAL 2008, 2009) and also many data on endangered and rare species were also included in the Red book of the southern part of Bohemia (LEPŠÍ et al. 2013). Many new findings were published as part of new and significant findings in South Bohemian flora (more data from Šumava e.g., LEPŠÍ & LEPŠÍ 2015, 2016, 2019) or in the flora of the whole Czech Republic in the form of national Additamenta (more data from Šumava e.g., HADINEC et al. 2004, HADINEC & LUSTYK 2006, 2009, 2011, 2015).

Special attention was paid to aquatic biotopes (BUFKOVÁ & RYDLO 2008) and some rare and endangered species (LEPŠÍ et al. 2018). There were also extensive conservation mapping and inventory projects, the outputs of which are collected in to on-line database of Agency for Nature and Landscape Protection of the Czech Republic (AOPK ČR 2021). Research did neither stop in Bavaria, where a number of articles on new species or new or rediscovered localities were published (GAGGERMEIER 2007, DIEWALD 2011, HORN et al. 2012, 2017, DIEWALD & SCHLEIER 2013).

Although the work on the intended Flora of the Bohemian Forest never really stopped (ŠTECH 2006), it was the acquisition of a joint Czech-Bavarian transboundary project (Program přeshraniční spolupráce Česká republika – Svobodný stát Bavorsko, cíl EÚS 2014–2020, Projekt č. 216, Květena Šumavy / Flora des Böhmerwaldes), which gave it a new impulse. With regard to the possibilities and needs of the time, it is built on the sharing of national databases of plant distribution of the Czech Republic – Pladias (WILD et al. 2019) and Bavaria (Arbeitsgemeinschaft Flora von Bayern – AFVB 2018). The aim of the project

is to collect all available data on the distribution of vascular plants and make it available to the public in the form of a website with grid maps of the distribution and comments on all species (<https://www.florasilvaegabretae.eu/>). The intention is to include the Austrian part of the Bohemian Forest in the researched area as well, although it cannot be part of the Czech-Bavarian project formally. The output will be a joint red list of rare and endangered species of the entire Bohemian Forest, as well as active conservation management to support the most threatened species. The final goal of the project is to prepare all the intended content and publish the Flora of the Bohemian Forest after the project is finished and thus fulfill the dream of František Procházka and all other botanists who ever worked in the Bohemian Forest.

Due to the fact that in many respects the occurrence of plants is a very dynamic process, floristic research of any territory is never completed. Thus, although a really large amount of floristic data was collected from Šumava in the past, the current field survey again brought many new and often surprising findings. The method of flow cytometry, which is able to detect differences in the genome size of the examined plants, has helped to solve a number of long-controversial issues and ambiguities regarding taxonomic affiliation or distribution of critical plant species in the current stage of floristic research of the Bohemian Forest.

The aim of this paper is to provide an overview of current research and highlight the most important findings of both native and alien species in the flora of the Bohemian Forest. It is certainly not a complete list of all new findings for the whole area or particular quadrants because nowadays data are effectively collected in electronic databases.

## **METHODS**

The study area of the Flora of the Bohemian Forest mainly includes the mountain zone of the Bohemian Forest, given on the Czech side by the boundary of oreophyticum (SKALICKÝ 1988), to which some parts of mesophyticum with a significant representation of mountain characters were added. The border on the Czech side is therefore largely the same as the definition of the territory at work by PROCHÁZKA & ŠTECH (2002). In Bavaria and Austria, the border runs more or less at the foot of the main ridges of the Bohemian Forest, although the southwestern slopes fall relatively steeply towards the Danube. Therefore, these foothills are usually rather warmer. The border of the area runs from the northwestern edge of Královský Hvozd via Ottenzell to Grafenwiesen. From there it turns south and southeast between Bad Kötzing and Arndorf and southwestern foothills of the Kötzingen Senke to Außenried. It continues north from Zwiesel to Zwieselau and Frauenau. Further it continues along the river Flanitz to Klängenbrunn-Bahnhof and then it follows the railway line to Rosenau. Then it continues through the valley to Hohenau and north from Freyung further southeast to Neureichenau. It goes through the river valley Großer Michelbach/Große Mühl all the way to Austrian Haslach an der Mühl. Finally, it rises up through the Sternsteiner Mühl river valley to the southern foot of the Hirschenstein-Sternstein and it returns back to Czech on its eastern foothill.

In this area all native and alien vascular plant species will be evaluated and described for the Flora of the Bohemian Forest, including planted ones, which either rejuvenate or grow outside the maintained flower beds. This paper includes important findings i) of the native species, which have not been recorded from the study area yet, ii) rare and important species

which have been so far known from other parts of the study area or from other localities, iii) important species on historical localities, whose condition has not been known for a long time, iv) new non-native species that are beginning to spread in the study area. The findings were carried out mostly since 2017. There are only few older records, which preceded current verification of occurrence. In addition, some traditional mistakes have been pointed out and refuted. Flow cytometry method (hereafter usually FCM) was used to verify taxonomic identification of difficult groups of plants (DOLEŽEL et al. 2007). Two step procedure of Otto and staining by AT-specific 4',6-diamidino-2-phenylindole dye (DAPI) was used (OTTO 1990). A choice of FCM standards for particular plant groups followed ŠMARDÁ et al. (2019). Used FCM standards and average sample/standard ratio for presented findings tested by FCM are summarized in Table 1.

The nomenclature of taxa follows the second edition of the Key to the Flora of the Czech Republic (KAPLAN et al. 2019). For localities, a short description, altitude, geographical coordinates in decimal degrees format and in the WGS 84 datum are given. Localities are assigned to a quadrant of the traditional Central European mapping grid (EHRENDORFER & HAMANN 1965), to an administrative district and in the Czech side they are classified to phytochorions (SKALICKÝ 1988). Date of finding and finder are given also. If the finding was documented by the herbarium voucher, the abbreviation of the herbarium where the item is stored is given (acronyms follow THIERS 2021). Brief comments on the importance of the findings are often attached. The authors of the comment are listed at the end of the comment if they differ from the main authors of the article.

## RESULTS AND DISCUSSION

### Using of flow cytometry in the floristic research

Significant advances in knowledge about the occurrence and distribution of difficult-to-distinguish taxa have also been brought by the use of FCM in current research. For example, for the first time, the presence of diploid *Vaccinium microcarpum* on the Bavarian side of the Šumava Mountains at the Zwieselter Filz peat bog, and thus throughout Germany, was proved (DIEWALD et al. 2020). Also, a number of new localities were found on the Czech side, which will be compiled after the completion of the research. Furthermore, the sometimes questioned occurrence of the diploid species *Anthoxanthum alpinum* on the Czech and Bavarian side of the Bohemian Forest was clearly demonstrated. So far, the occurrence has been found only in the central part of the Šumava Plains between Modrava and Waldhäuser. Great attention was paid to the critical group *Pulmonaria officinalis* agg. The occurrence *Pulmonaria officinalis* s. str. was confirmed on the Bavarian side of the Šumava, wherefrom the species has not been mentioned yet. Detailed distribution of the whole group is described in a separate paper (VEJVODOVÁ et al. in press).

With the help of FCM approach, the occurrence of the recently overlooked tetraploid species *Achillea pratensis* was confirmed for Czech and Bavarian side of the Bohemian Forest. Its occurrence was known mainly in the Austrian part of the Bohemian Forest so far. One of the most important recent findings is the octoploid *Galium elongatum*, which was found in the Upper Vltava basin. The ploidy level of the plants was again confirmed by FCM. An occurrence of newly spreading halophilous species *Juncus ranarius* was detected. Morphological identification of this species was also supported by ploidy level estimation using FCM.

**Table 1.** Taxa analysed by FCM, used FCM standards, average sample/standard ratio and estimated DNA ploidy level.

Taxon	Internal standard	Average sample / standard ratio	Estimated DNA ploidy level
<i>Achillea pratensis</i>	<i>Bellis perennis</i>	3.23	2n ~ 4x
<i>Anthoxanthum alpinum</i>	<i>Solanum pseudocapsicum</i>	1.31	2n ~ 2x
<i>Galium elongatum</i>	<i>Bellis perennis</i>	1.15	2n ~ 8x
<i>Juncus ranarius</i>	<i>Bellis perennis</i>	0.57	2n ~ 2x
<i>Stellaria ruderalis</i>	<i>Bellis perennis</i>	0.65	2n ~ 4x

Flow cytometry helped to prove that plants from the Zwieselter Filz peat bog, which were for a long time considered the only occurrence of *Drosera intermedia* in the Bohemian Forest, are actually triploid hybrids between *D. rotundifolia* and *D. anglica* (*D. × obovata*), but not diploid *D. intermedia*.

Furthermore, research continues on the distribution of different species or ploidy levels in groups where the taxonomic affiliation is confirmed by FCM, because morphological determination is not possible or it is not completely reliable. These groups are: *Aconitum plicatum*, *A. variegatum*, *Callitriche palustris* agg., *Caltha palustris*, *Campanula patula*, *Campanula rotundifolia*, *Galeobdolon montanum* and *G. luteum*, *Hylotelephium maximum* agg., *Juncus acutiflorus*, *J. alpinoarticulatus* and *J. articulatus*, *Gnaphalium sylvaticum* and *G. norvegicum*, *Leucanthemum vulgare* agg., *Valeriana officinalis* agg. and *Veronica maritima*.

### New localities and rediscovered localities of rare species

However, an intensive survey of the area also revealed completely new localities of noticeable and easily recognizable species, or it confirmed the occurrence of rare species in historical localities, where the condition has not been known for a long time. One of the most important findings is the confirmation of the occurrence of *Polygala chamaebuxus* near Skelná. Important is also a finding of the second locality of *Dactylorhiza incarnata* near Květušín. Discovery of current localities of *Sagina saginoides* in the mountain group of Trojmezna is another important finding. Confirmation of current occurrence on old localities or findings of new localities are important for rare and threatened species: *Cardamine trifolia*, *Carex diandra*, *Carex dioica*, *Carex lasiocarpa*, *Carlina vulgaris*, *Cephalanthera damasonium*, *Cephalanthera longifolia*, *Coeloglossum viride*, *Corallorhiza trifida*, *Dactylorhiza sambucina*, *Dryopteris cristata*, *Eriophorum latifolium*, *Hypochaeris maculata*, *Juncus squarrosus*, *Ligusticum mutellina*, *Lilium bulbiferum*, *Listera cordata*, *Luzula sudetica*, *Malaxis monophyllos*, *Moneses uniflora*, *Myosotis caespitosa*, *Phleum nodosum*, *Polygala multicaulis*, *Polystichum aculeatum*, *Pyrola rotundifolia*, *Ranunculus lingua*, *Trollius altissimus*.

## Critical groups

Although the study of the critical genera of *Alchemilla*, *Hieracium*, *Pilosella*, *Rubus* and *Taraxacum* received special attention during floristic survey in the 1990s, new research has again brought new discoveries for both new species and many new localities of rare and more important species. Below we present only new data on the occurrence of species from the genera *Hieracium* and *Pilosella*. The overall compilation of the other mentioned critical groups is planned after the end of the project.

## Aliens and newly spreading species

By far the most new species for the area were found among alien species, newly spreading species, casual introduced species as well as species escaped from cultivation. Several species are reliably reported from the study area for the first time (*Anthemis cretica*, *Bromus carinatus*, *Galium rivale*, *Oenothera issleri*, *Oenothera rubricaulis*, *Scabiosa ochroleuca*, *Vicia grandiflora*). Recently described species *Stellaria ruderalis* (LEPŠÍ et al. 2019) was found in the study area too. New localities of until now rare alien species were found (*Atriplex prostrata*, *Bromus sterilis*, *Rumex longifolius*). Several new adventive localities of conspicuous or rather thermophilous species are reported (*Acinos arvensis*, *Aquilegia vulgaris*, *Arabidopsis arenosa*, *Cornus sanguinea* subsp. *australis*, *Lepidium campestre*, *Onopordum acanthium*, *Meum athamanticum*, *Rosa elliptica*, *R. rubiginosa*, *Verbascum chaixii*, *Verbascum densiflorum*). Some ornamental or useful plants, which were recorded as escaped from cultivation or remnants of old cultivation outside of current villages are also reported (*Buddleja davidii*, *Calystegia pulchra*, *Cornus mas*, *Galanthus nivalis*, *Helianthus tuberosus*, *Ilex aquifolium*, *Laburnum anagyroides*, *Leucosium vernum*, *Rosa glauca*, *Solanum lycopersicum*, *Spiraea* × *macrothyrsa*, *Stachys byzantina*). Many new findings have also been done among early flowering species, which are often overlooked and whose distribution has now received more attention (*Myosotis discolor*). Many of these therophytes are recently spreading, typically along railways and roads (*Cardamine hirsuta*, *Cerastium semidecandrum*, *Myosotis ramosissima*, *M. stricta*, *Vulpia myuros*).

## Floristic records

The threat status in the bohemian part of Bohemian Forest (PROCHÁZKA & ŠTECH 2002), in the Czech Republic (GRULICH 2017), in the Ostbayerisches Grenzgebirge and in the whole Bayern (SCHEUERER & AHLMER 2003) is marked. This order is used: CZ-BF/CZ//OG/BY. “FCM” means that ploidy level or identification was confirmed by estimation of genome size by the means of flow cytometry.

### *Achillea pratensis* (-/-/-D)

**CZ, 37c. Nezdické vápence, 6847b, Nezdice na Šumavě** (distr. Klatovy): mesic meadow c. 530 m SE of chapel in the village, 49.17108N, 13.61836E, 660 m a.s.l. (28. 8. 2020 leg. *M. Lepší*, CB), FCM.  
– **37e. Volyňské Předšumaví, 6948a, Masákova Lhota** (distr. Prachatice): mowed mesic meadow next to road c. 700 m SSW of the centre of the village, 49.08132N, 13.67436E, 820 m a.s.l. (20. 9. 2020 leg. *D. Půbal*, herb. D. Půbal), FCM. – **6949a, Svatá Maří** (distr. Prachatice): mowed mesic meadow c. 540 m SSE of the top of the Mařský vrch hill, 49.06859N, 13.85136E, 865 m a.s.l. (5. 9. 2019 leg. *D. Půbal*, herb.

D. Půbal), FCM. – **6949c, Buk** (distr. Prachatice): mowed mesic meadow between roads c. 870 m SE of the chapel in the village, 49.03336N, 13.85504E, 775 m a.s.l. (17. 8. 2019 leg. *M. Lepší*, herb. D. Půbal), FCM – **Buk**: mowed mesic meadow next to road c. 700 m SE of the chapel in the village, 49.03442N, 13.85329E, 750 m a.s.l. (18. 8. 2019 leg. *D. Půbal*, herb. D. Půbal), FCM. – **Šumavské Hoštice** (distr. Prachatice): mowed mesic meadow c. 870 m NW of the church in the village, 49.04360N, 13.86834E, 820 m a.s.l. (20. 9. 2020 leg. *D. Půbal*, herb. D. Půbal), FCM. – **88b. Šumavské Pláně, 6948a, Vimperk** (distr. Prachatice): synanthropic places in the grounds of the former military barracks U Sloupů c. 3.0 km WNW of the church in the town, 49.06199N, 13.73530E, 865 m a.s.l. (22. 10. 2019 leg. *D. Půbal*, herb. D. Půbal), FCM. – **88c. Javorník, 6847b, Nahofánky** (distr. Klatovy): mesic meadow c. 270 m SE of chapel in the village, 49.17958N, 13.65234E, 730 m a.s.l. (28. 8. 2020 leg. *M. Lepší*, CB), FCM. – **6848a, Maleč** (distr. Klatovy): mesic meadow c. 1.3 km SE of chapel in the village, 49.16369N, 13.68612E, 790 m a.s.l. (28. 8. 2020 leg. *M. Lepší*, CB), FCM.

**BY, 6843a, Schönbuchen** (distr. Cham): SW edge of village, meadow, 49.19409N, 12.90122E, 560 m a.s.l. (8. 9. 2019 leg. *M. & P. Lepší*, CB), FCM. – **6844d, Lohberg** (distr. Cham): path edge on the northern bank of the Kleiner Arbersee lake eastern from the Weißer Regen stream outlet, 49.12870N, 13.11991E, 925 m a.s.l. (24. 9. 2019 leg. *M. Štech*, CBFS), FCM.

Overlooked tetraploid species, which has not been known from the Czech part of the Bohemian Forest at all.

### *Acinos arvensis* (-/-/3/V)

**CZ, 88c. Javorník, 6847a, Žlíbek** (distr. Klatovy): surroundings of the castle ruin of Pustý hrádek and sparse shrub at southwestern slope below it, 49.16533N, 13.56939E, 890–905 m a.s.l. (30. 5. 2020 leg. *L. Pivoňková*, PL). – **88e. Trojmezenská hornatina, 7149c, Pěkná** (distr. Prachatice): in railway stop Pěkná, 48.84896N, 13.91005E, 735 m a.s.l. (8. 9. 2020 leg. *K. Boublík*, CB).

Verification of occurrence at the very old historical locality (Pustý hrádek). New synanthropic locality of rather thermophilous species, which are introduced only rarely to the montane zone (Pěkná).

### *Anthemis cretica* (-/-/1/-)

**CZ, 88b. Šumavské Pláně, 6946d, Modrava** (distr. Klatovy): open short-growing grassland c. 650 m NNW of summit of Smrkový vrch hill, 49.03660N, 13.42292E, 1060 m a.s.l. (12. 10. 2019 leg. *M. Lepší* & *K. Boublík*, CB; 1. 7. 2020 leg. *M. Lepší*, CB).

New alien species in the whole studied area.

### *Anthoxanthum alpinum* (-/-/R\*/-)

**CZ, 88b. Šumavské Pláně, 6946d, Modrava** (distr. Klatovy): bank of Roklanský brook about 3.8 km W from the village centre, 49.02424N, 13.44601E, 1020 m a.s.l. (26. 6. 2015 leg. *M. Štech*, CBFS), FCM. – **Modrava**: alluvium on the left bank of the Javoří brook c. 500 m SSE of the extinct solitude of Javoří Pila, 49.03264N, 13.44444E, 1020 m a.s.l. (25. 6. 2020 leg. *M. Štech*, *P. Kunzová* & *K. Vejvodová*, CBFS), FCM. – **7046b, Modrava, Březník** (distr. Klatovy): terrace above the confluence of Luzenský potok and Březnický potok brooks, c. 350 m SE of the former Březník gamekeeper's house, 48.96911N, 13.4861100E, 1120 m a.s.l. (26. 6. 2015 leg. *M. Štech*, CBFS), FCM. – **Modrava, Březník**: peat meadow western of the bridge over the Luzenský potok brook, 48.96840N, 13.48530E, 1135 m a.s.l. (24. 6. 2020 leg. *P. Koutecký* & *V. Dolejšek*, CBFS), FCM. – **Modrava, Březník**: spring in the western edge of the Březová slať peat bog, c. 1.1 km SSW of the former Březník gamekeeper's house, 48.96110N, 13.48000E, 1160 m a.s.l. (24. 6. 2020 leg. *P. Koutecký* & *V. Dolejšek*, CBFS), FCM. – **Modrava, Březník**: along the Březový potok brook between Březová slať peat bog and Luzenské údolí valley bottom, c. 1.1 km SSE of the former Březník gamekeeper's house, 48.96170N, 13.48430E, 1150 m a.s.l. (24. 6. 2020 not. *P. Koutecký* & *V. Dolejšek*). – **Modrava, Březník**: road, meadows and springs in the Luzenské údolí valley between

the Březový potok brook and a path branch to the former Modrý sloup border crossing, c. 1.1–2.2 km SSE of the former Březník gamekeeper's house, 48.95700N, 13.48690E, 1150 m a.s.l. (24. 6. 2020 not. *P. Koutecký & V. Dolejšek*). – **Modrava, Březník**: the beginning of the path to the former Modrý sloup border crossing, c. 2.2 km SSE of the former Březník gamekeeper's house, 48.95180N, 13.48990E, 1160 m a.s.l. (24. 6. 2020 not. *P. Koutecký & V. Dolejšek*). – **Modrava, Březník**: forest clearing along the border path on the mountain ridge SE of the summit of Špičník mountain, c. 160 m ESE of the elevation of 1352 m a.s.l. (Bavarian side, Großer Spitzberg), 2.0 km SSW the former Březník gamekeeper's house, 48.9579N, 13.4642E, 1330 m, (24. 6. 2020 leg. *P. Koutecký & V. Dolejšek*, CBFS), FCM. – **Modrava, Březník**: peat meadow on the eastern edge of the southern part of the Blatenská slaf' peat bog, c. 1.85 km W of the former Březník gamekeeper's house, 48.97140N, 13.45750E, 1250 m a.s.l., (24. 6. 2020 leg. *P. Koutecký & V. Dolejšek*, CBFS), FCM.

**BY, 7046b, Waldhäuser** (distr. Freyung-Grafenau): forest clearing c. 40 m SSW of the summit of the Plattenhausenriegel mountain, 48.96366N, 13.45004E, 1370 m a.s.l. (12. 6. 2020 leg. *W. Diewald*, CBFS), FCM. – **7046d, Waldhäuser**: forest clearing along the border path c. 180 m SE of the former Modrý sloup border crossing (Bei den blauen Säulen), 48.94351N, 13.49142E, 1210 m a.s.l. (12. 6. 2020 leg. *W. Diewald*, CBFS), FCM. – **Waldhäuser**: forest clearing along the Böhmweg c. 750 m S of the former Modrý sloup border crossing (Bei den blauen Säulen), 48.93807N, 13.48915E, 1200 m a.s.l. (12. 6. 2020 leg. *W. Diewald*, CBFS), FCM.

The first records on occurrence of this arctic-alpine species proved by flow cytometry.

### *Aquilegia vulgaris* (C3/C3//2/V)

**CZ, 34. Plánický hřeben, 6744d, Hamry na Šumavě** (distr. Klatovy): surroundings of the church of Kollerův kostel and the Koller hotel, 49.22928N, 13.16044, 580 m a.s.l. (17. 5. 2020 not. *I. Matějková*). – **6745c, Zelená Lhota** (distr. Klatovy), road edges along the road between the Montana pension and the main road in the southern part of the village, 49.24062N, 13.17455E, 560 m a.s.l. (15. 5. 2020 *I. Matějková & M. Šandová*). – **88b. Šumavské pláně, 6946d, Modrava** (distr. Klatovy): ditch along the road from the former Javoří Pila to Tříjezerní slaf' peat bog, c. 0.6 km NE of the crossroads at Javoří Pila, 49.03944N, 13.45000E, 1075 m a.s.l. (22. 8. 2020 not. *P. Koutecký, J. Janáková, M. Lepší & M. Kotlínek*). – **88c. Javorník, 6847b, Nahořánky** (distr. Klatovy): in the village southern of the main road, 49.18160N, 13.65022E, 710 m a.s.l. (30. 5. 2020 not. *L. Pivoňková*).

New mostly synanthropic localities of rather demanding species rarely introduced to acidic and nutrient pure conditions.

### *Arabidopsis arenosa* (-/-//Vn/3n)

**CZ, 88b. Šumavské pláně, 6946c, Modrava** (distr. Klatovy): forest road (Střelecký průsek) c. 1.1 km SW of the Smrkový vrch hill (1112 m a.s.l.) north of the Rokytecká slaf' bog, 49.02517N, 13.41170E, 1130 m a.s.l. (13. 10. 2019 not. *K. Boublík & M. Lepší*). – **88e. Trojmezenská hornatina, 7249a, Nov Pec** (distr. Prachatice): forest road along the Schwarzenberg Floating Canal c. 2.9 km W of the railway station in the village, 48.78330N, 13.91460E, 845 m a.s.l. (13. 10. 2019 leg. *M. Štech, R. Roučková & K. Máchalová Zemanová*, CBFS). – **88g. Hornovltavská kotlina, 7249b, Horní Planá, Bližší Lhota** (distr. Český Krumlov): exposed forest edge along the newly reconstructed road between the villages of the Nová Pec and the village of the Bližší Lhota, 48.75880N, 13.99210E, 795 m a.s.l. (21. 5. 2020 not. *D. Půbal*).

Other localities of the recently spreading species.

### *Atriplex prostrata* subsp. *latifolia* (-/C4a///-)

**CZ, 88f. Želnavská hornatina, 7149b, Nové Chalupy** (distr. Prachatice): in southern part of the settlement, 48.87202N, 13.94777E, 955 m a.s.l. (8. 9. 2020 leg. *K. Boublík*, CB).

The first locality of rather thermophilous species in the Czech side of the Bohemian Forest.



### *Bromus carinatus* (-/-/-/-)

**CZ, 88a. Královský hvozd, 6845c, Železná Ruda** (distr. Klatovy): road edge in the W edge of the along the road to the village of Alžbětín (ca 20 individuals), 49.13640N, 13.22400E, 750 m a.s.l. (7. 9. 2019 leg. *M. Lepší*, CB). – **88b. Šumavské Pláně, 6946d, Modrava** (distr. Klatovy): near bridge over Roklanský brook; grassland, 49.02370N, 13.49300E, 985 m a.s.l. (11. 10. 2019 leg. *M. Lepší* & *K. Boublík*, CB). – **88g. Hornovltavská kotlina, 7250a, Horní Planá** (distr. Český Krumlov): ferry dock c. 1.2 km SW of the church in the town of Horní Planá, 48.76039N, 14.02141E, 725 m a.s.l. (21. 4. 2019 leg. *M. Štech* & *T. Štechová*, CBFS).

A neophyte that is currently spreading in the foothills. New localities are the first records within the study area.

### *Bromus sterilis* (-/-/V/-)

**CZ, 371. Českokrumlovské Předšumaví, 7250d, Černá v Pošumaví** (distr. Český Krumlov): by the church, 48.73806N, 14.11056E, 727 m a.s.l. (2. 7. 2019 not. *K. Boublík* & *M. Lepší*).

The first reliable record of occurrence of this thermophilous archaeophyte in the Czech side of the Bohemian Forest.

### *Buddleja davidii* (-/-/-/-)

**BY, 7146a, Höhenbrunn** (distr. Freyung-Grafenau): in the centre of the village, 48.89564N, 13.40919E, 810 m a.s.l., escaped (8. 8. 2019 not. *K. Boublík*).

Ornamental species currently spreading in nature in lower altitudes but still rare in higher altitudes.

### *Calystegia pulchra* (-/-/-/-)

**BY, 7146b, Sankt Oswald** (distr. Freyung-Grafenau): in the village, 48.89183N, 13.42845E, 800 m a.s.l. (7. 8. 2019 not. *K. Boublík*).

The first record from the bavarian part of the Bohemian Forest.

### *Cardamine hirsuta* (-/-/-/-)

**CZ, 34. Plánický hřeben, 6744b, Stará Lhota** (distr. Klatovy), western part of the village c. 290 m S of the chapel, 49.26497N, 13.14406E, 490 m a.s.l. (15. 5. 2020 leg. *S. Pecháčková* & *L. Pivoňková*, PL).

– **6744d, Hamry na Šumavě** (distr. Klatovy): surroundings of the church of Kollerův kostel and the Koller hotel, 49.22928N, 13.16044E, 580 m a.s.l. (17. 5. 2020 not. *I. Matějková*). – **6745c, Zelená Lhota** (distr. Klatovy): road sites in the middle part of the village, 49.24209N, 13.17486E, 555 m a.s.l. (15. 5. 2020 not. *I. Matějková* & *M. Šandová*). – **Zelená Lhota**: surroundings of the Montana Pension in the southern part of the village, 49.23983N, 13.17484E, 565 m a.s.l. (16. 5. 2020 not. *I. Matějková*). – **37c. Nezdické vápence, 6847b, Nezdice na Šumavě** (distr. Klatovy): spruce forest margin c. 260–300 m SE of the centre of the village, 49.17097N, 13.61537E, 650 m a.s.l. (29. 5. 2020 leg. *L. Pivoňková*, PL). – **37m. Vyšebrodsko, 7351c, Lipno nad Vltavou** (distr. Český Krumlov): margin of a parking place by the railway station, 48.63328N, 14.24194E, 705 m a.s.l. (17. 5. 2020 not. *P. Koutecký*). – **Lipno nad Vltavou**: railway station, 48.63402N, 14.24386E, 710 m a.s.l. (27. 4. 2020 not. *M. Lepší*). – **Lipno nad Vltavou**: car park near railway station, 48.63330N, 14.24190E, 710 m a.s.l. (27. 4. 2020 not. *P. Koutecký* & *J. Janáková*). – **Loučovice** (distr. Český Krumlov): railway embankment c. 130 m NE of the St. Oldřich church in the village, 48.61953N, 14.24515E, 675 m a.s.l. (27. 4. 2020 not. *M. Lepší*). – **7351d, Loučovice** (distr. Český Krumlov): on railway embankment c. 700 m ENE of St. Oldřich church in village, 48.61991N, 14.25321E, 675 m a.s.l. (27. 4. 2020 leg. *M. Lepší*, CB). – **88a. Královský hvozd, 6745c, Hojsova Stráž** (distr. Klatovy): former brewery c. 970 m E–ENE of the church in the village,

49.21139N, 13.21230E, 820 m a.s.l. (17. 5. 2020 not. *I. Matějková*). – **Hojsova Stráž**: cemetery in the southern margin of the village, 49.20899N, 13.19897E, 900 m a.s.l. (17. 5. 2020 not. *I. Matějková*). – **88c. Javorník, 6847b, Nezdice na Šumavě** (distr. Klatovy): sparse spruce forest c. 450 m south of the village centre, 49.16886N, 13.61257E, 660 m a.s.l. (29. 5. 2020 not. *L. Pivoňková*). – **88f. Želnavská hornatina, 7053c, Křišťanov** (distr. Prachatice): road margin in the village, 48.90930N, 14.01975E, 920 m a.s.l. (8. 5. 2020 not. *M. Štech*). – **88g. Hornovtavská kotlina, 7149d, Želnavá** (distr. Prachatice): disturbed grassland near St. Jakub church, 48.8133N, 13.9645E, 785 m a.s.l. (4. 5. 2020 not. *M. Lepší*). – **7250d, Hůrka** (distr. Český Krumlov): along railway c. 460 m E of the train station in the village, 48.74310N, 14.09298E, 730 m a.s.l. (7. 5. 2020 not. *M. Lepší*). – **Černá v Pošumaví** (distr. Český Krumlov): ruderal grassland on road embankment c. 800 m WNW of the Neposkvrněné početí P. Marie church in the village, 48.74015N, 14.10055E, 730 m a.s.l. (19. 5. 2020 not. *M. Lepší*).

**BY, 7147c, Kreuzberg** (distr. Freyung-Grafenau): graveyard, gravel path, 48.83872N, 13.55284E, 810 m a.s.l. (16. 5. 2019 not. *W. Diwald & C. Straubinger*).

New localities represent a current rapid spreading of this species, which is not native in the area.

### *Cardamine trifolia* (C2/C3//R\*/-)

**CZ, 88f. Želnavská hornatina, 6851d, Volary** (distr. Prachatice): western slopes of spot height 918.5 m, in the source area of the tributary of the Mlýnský brook. In two places: a) the rest of beech forest above the forest road, 3.1 km ENE from the church in the city, 48.91711N, 13.93497E, 900 m a.s.l. (22. 4. 2020 leg. *V. Grulich & A. Vydrová*, BRNU); b) the edge of the forest spring under the forest road, 3.0 km ENE from the church in the town, 200 m NW from the previous locality, 48.91811N, 13.93264E, 870 m a.s.l. (24. 4. 2020 leg. *V. Grulich & A. Vydrová*, BRNU). – **88h. Svatotomášská hornatina, 7451d, Studánky** (distr. Český Krumlov): edge of forest spring above crossroad Bombardiště, on WNW slope of the Jezeví vrch spot height (984 m), 3.3 km W–WSW from the chapel in the settlement, 48.58761N, 14.28168E, 800 m a.s.l. (5. 5. 2020 leg. *V. Grulich & A. Vydrová*, BRNU).

Verification of the current occurrence of this rare species on historical localities.

### *Carex diandra* (C2/C2t//1/2)

**CZ, 88g. Hornovtavská kotlina, 7048d, Lenora** (distr. Prachatice): minerotrophic part of the pine forest in the northern half of the National Nature Reserve Velká Niva, 2.4 km E from the chateau in Lenora, 48.92392N, 13.82550E, 755 m a.s.l., size of fertile population about 3 m<sup>2</sup> (24. 7. 2020 leg. *J. Vaníček*, PRC).

New locality of the rare species.

### *Carex dioica* (C1/C1b//2/2)

**CZ, 88d. Boubínsko-stožecká hornatina, 6948d, Pravětín** (distr. Prachatice): acidic moss-rich fen with springs in a forest clearing, 2.8 km South of Pravětín (near the town of Vimperk), 49.01773N, 13.80439E, 920 m a.s.l. (24. 7. 2019 not. *J. Janáková* et al.). – **88g. Hornovtavská kotlina 7048d, Lenora** (distr. Prachatice): minerotrophic part of the pine forest in the northern half of the National Nature Reserve Velká Niva, 2.4 km E from the chateau in Lenora, a strip about 10 m wide between the coordinates 48.92393N, 13.82542E and 48.92362N, 13.8255E, 755 m a.s.l., size of population 10 m<sup>2</sup> (17. 8. 2020 leg. *J. Vaníček*, PRC).

Confirmation of occurrence at a historical locality (Pravětín) and new locality (Velká Niva) of very rare species.

### *Carex lasiocarpa* (C2/C3//3/3)

**CZ, 88g. Hornovtavská kotlina 7048d, Lenora** (distr. Prachatice): minerotrophic part of the pine forest in the northern half of the National Nature Reserve Velká Niva, 2.4 km E from the chateau in Lenora,

48.92388N, 13.82531E, 755 m a.s.l., size of sterile population about 30 m<sup>2</sup> (17. 8. 2020 not. *J. Vaniček*).  
New locality of the rare species.

### *Carlina vulgaris* (A2/-/3/V)

**CZ, 88a. Královský hvozd, 6745c, Hojsova Stráž** (distr. Klatovy): spruce forest margin c. 860 m ESE of the church in the village, 49.20646N, 13.21081E, 930 m a.s.l. (17. 5. 2020 not. *I. Matějková*).  
Confirmation of a species occurrence in the studied area after many years.

### *Cephalanthera damasonium* (C2/C4a//3/V)

**CZ, 88e. Trojmezenská hornatina, 7148b, Stožec** (distr. Prachatice): area of former army compound near road Údolská cesta, 100 m SW of the crossroad Údolská cesta and Oslí cesta, 48.85081N, 13.81942E, 893 m a.s.l. (26. 6. 2020 not. *J. Kuneš*).  
New synanthropic occurrence of this calciphilous orchid.

### *Cephalanthera longifolia* (C2/C3//2/3)

**CZ, 88h. Svatotomášská hornatina, 7350b, Přední Výtoň** (distr. Český Krumlov): mesic meadow, 2.7 km NNW of the church in Přední Výtoň, 48.65316N, 14.15004E, 770 m a.s.l., 1 fertile plant (30. 6. 2019 photo *J. Janáková*).  
New occurrence of this rare orchid in the whole area on small and temporary limited localities.

### *Cerastium semidecandrum* (-/-/3/-)

**CZ, 37m. Vyšebrodsko, 7351c, Lipno nad Vltavou** (distr. Český Krumlov): railway station, 48.63402N, 14.24386E, 710 m a.s.l. (27. 4. 2020 not. *M. Lepší*). – **Lipno nad Vltavou**: margin of a parking place by the railway station, 48.63328N, 14.24194E, 705 m a.s.l. (17. 5. 2020 not. *P. Koutecký*). – **Lipno nad Vltavou**: disturbed grassland at dam of Lipno water reservoir, 48.63245N, 14.23708E, 725 m a.s.l. (27. 4. 2020 not. *M. Lepší*). – **7351c, Loučovice** (distr. Český Krumlov): railway embankment c. 130 m NE of St. Oldřich church in village, 48.61953N, 14.24515E, 670 m a.s.l. (27. 4. 2020 leg. *M. Lepší*, CB). – **7351d, Loučovice** (distr. Český Krumlov): on railway embankment c. 560 m E of St. Oldřich church in village, 48.61928N, 14.25122E, 675 m a.s.l. (27. 4. 2020 not. *M. Lepší*). – **Loučovice**: on railway embankment c. 700 m ENE of St. Oldřich church in village, 48.61991N, 14.25321E, 675 m a.s.l. (27. 4. 2020 leg. *M. Lepší*, CB). – **88g. Hornovltavská kotlina, 7049c, Volary** (distr. Prachatice): on railway embankment near the train station, 48.90815N, 13.88629E, 750 m a.s.l. (4. 5. 2020 leg. *M. Lepší*, CB). – **7250d, Černá v Pošumaví** (distr. Český Krumlov): open disturbed sandy place c. 650 m WNW of the Neposkvrněné početí P. Marie church in the village, 48.73902N, 14.10220E, 725 m a.s.l. (19. 5. 2020 leg. *M. Lepší*, CB).

The first reliable records for the studied area.

### *Coeloglossum viride* (C1/C2t//1/3)

**CZ, 88c. Javorník, 6847b, Pohorsko** (distr. Klatovy): wet meadow 350–380 m SSW of the chapel in the village, NW of the Pohorsko nature monument, 49.15989N, 13.62554E, 740 m a.s.l., 4 flowering plants (30. 5. 2020 not. *L. Pivoňková*). – **88d. Boubínsko-stožecká hornatina, 7048b, Arnoštka** (distr. Prachatice): lower part of a mowed species-rich meadow, 910 m N from railway bridge in Kubova Huť, 48.99655N, 13.77055E, 895 m a.s.l., 11 flowering plants (3. 6. 2020 not. *D. Půbal*).  
Current occurrence of the rare and declining species.

### *Corallorhiza trifida* (C2/C2b//2/3)

**CZ, 88d. Boubínsko-stožecká hornatina, 7048b, Včelná pod Boubínem** (distr. Prachatice): grass ditch along asphalt road Lukenská cesta, 60 m WNW from the crossroad "U Zeleného křížku", 48.99885N, 13.83292E, 1040 m a.s.l., 6 flowering plants together with more abundant *Moneses uniflora* (28. 6. 2020 not. *D. Půbal*). – **88h. Svatotomášská hornatina, 7350d, Pasečná** (distr. Český Krumlov): shrubby margin of the old pass c. 1.4 km WSW of the road cross in the village, 48.60414N, 14.08508E, 825 m a.s.l., 3 plants (13. 6. 2020 not. *V. Grulich* et al.).

New localities of the rare and inconspicuous species.

### *Cornus mas* (-/C4a//u/3)

**CZ, 88d. Boubínsko-stožecká hornatina, 7148b, České Žleby** (distr. Prachatice): close to marked hiking trail c. 1.0 km SSW of the chapel in the village, 48.87041N, 13.77031E, 965 m a.s.l., one shrub, probably cultivated (25. 10. 2019 not. *K. Boublík* & *P. Lepší*).

Probably rest of cultivation of thermophilous species in surprisingly high altitude.

### *Cornus sanguinea* subsp. *australis* (-/C4b//-/)

**BY, 6945a, Ludwigsthal** (distr. Regen): vicinity of the railway station, 49.05972N, 13.23778E, 630 m a.s.l. (19. 6. 2019 leg. *K. Boublík*, *M. Lepší* & *M. Kotlínek*, CB 86290). – **7146b, Rosenau** (distr. Freyung-Grafenau): shrubs close to the forest edge c. 900 m NE of the village, 48.87737N, 13.42226E, 665 m a.s.l. (7. 8. 2019 leg. *K. Boublík*, CB).

Interesting occurrence of an thermophilous species. Synantropic occurrence is mentioned from the bavarian part of the Bohemian Forest only.

### *Dactylorhiza incarnata* (C1/C1r//1/3)

**CZ, 37l. Českokrumlovské Předšumaví, 7250b, Květušín** (distr. Český Krumlov): edge of the forest path c. 1275 m SSW of the centre of the village, 48.77201N, 14.13266E, 770 m a.s.l. (17. 6. 2016 photo *T. Štechová*).

The second locality of very rare species in the study area. During a visit in 2020 one flowering plant and about 20 sterile plants were recorded (16. 6. 2020 not. *M. Štech*). The population is seriously endangered by a timber store nearby.

### *Dactylorhiza sambucina* (C2/C2t//2/2)

**CZ, 88b. Šumavské pláně, 6947c, Filipova Hut'** (distr. Klatovy): edge of meadow near former road, near a group of trees, 320 m W of the bus stop in Filipova Hut', 49.02934N, 13.51547E, 1105 m a.s.l. (5. 6. 2019 not. *R. Roučková*).

The first record from the central part of the phytogeographical subdistrict Šumavské pláně.

### *Dryopteris cristata* (A1/C1t//2/2)

**CZ, 88g. Hornovltavská kotlina, 7250b, Černá v Pošumaví** (distr. Český Krumlov): Nature reserve Olšov, moss-rich fen at the forest edge near the margin of the Lipno water dam, 2.3 km NNW of Černá v Pošumaví, 48.75836N, 14.10161E, 725 m a.s.l. (7. 6. 2020 leg. et photo *J. Janáková*).

New record of the rare species in the new quadrant.

### *Eriophorum latifolium* (C1/C2t//3/3)

**CZ, 88h. Svatotomášská hornatina, 7350d, Přední Výtoň** (distr. Český Krumlov): spring area in Nature reserve Niva Horského potoka, c. 1.6 km NNE of the village of Pasečná, 48.62435N, 14.11175E,

830 m a.s.l. (13. 6. 2020 not. *K. Boublík, M. Konečná, P. Koutecký, M. Lepší, K. Máchalová Zemanová & R. Roučková*).

The new finding of the rare and quickly declining species in the new quadrant.

### *Galanthus nivalis* (-/C3//2/2)

**CZ, 37a. Horní Pootaví, 6847c, Kašperské Hory, Lídlovy Dvory** (distr. Klatovy): Losenice stream valley c. 900 m W of the village, 49.12150N, 13.55220E, 650 m a.s.l. (24. 4. 2021 not. *M. Štech*). – **Kašperské Hory, Lídlovy Dvory**: Pěňivý potok stream valley near the confluence with Losenice stream c. 900 m SSE of the village, 49.11380N 13.57031E, 705 m a.s.l. (24. 4. 2021 not. *M. Štech*). – **37l. Českokrumlovské Předšumaví, 7250d, Černá v Pošumaví** (distr. Český Krumlov): eastern edge of the Vápenný vrch hill c. 945 m SSE of the church in the village, 48.73020N, 14.11660E, 750 m a.s.l. (31. 3. 2021 not. *M. Štech & K. Vějvodová*). – **88d. Boubínsko-stožecká hornatina, 7148a, Horní Světlé Hory** (distr. Prachatice): places of former settlement near road Světlohorská cesta, 1.5 km SW of the village center of Strážný, 48.89746N, 13.70558E; 48.89750N, 13.70605E, 890 m a.s.l. (2. 4. 2021 not. *R. Roučková*). – **Horní Světlé Hory**: place of former settlement near road Světlohorská cesta, 730 m S of the summit of Homole (1056 m a.s.l.), 48.90094N, 13.67636E, 895 m a.s.l. (2. 4. 2021 not. *R. Roučková*). – **Horní Světlé Hory**: place of former settlement near road Světlohorská cesta, 800 m SE of the summit of Homole (1056), 48.90121N, 13.68073E, 910 m a.s.l. (2. 4. 2021 not. *R. Roučková*). – **88c. Javorník, 6848a, Maleč** (distr. Klatovy) edges of meadow path 200–250 m E–ENE of the chapel in the village, 49.17414N, 13.67892E, 810 m a.s.l. (30. 5. 2020 not. *L. Pivoňková*).

New records of remnants of cultivation or escaped plants.

### *Galium elongatum* (-/C4a//-/D)

**CZ, 88g. Hornovltavská kotlina, 7250b, Polná na Šumavě** (distr. Český Krumlov): eastern bank of the Olšina fishpond close to railway crossing, 48.78322N, 14.11331E, 730 m a.s.l., verified by flow cytometry (29. 7. 2019 leg. *K. Boublík & M. Lepší*, CB). – **Polná na Šumavě**: willow bushes on the eastern bank of the Olšina fishpond c. 600 m NW of the railway crossing, 48.78611N, 14.10907E, 730 m a.s.l., (26. 8. 2020 leg. *M. Štech*, CBFS), FCM.

Important discovery of the new native species for the studied area was made by Martin Lepší. Despite searching in other parts of the phytocorion Hornovltavská kotlina the species was not found. A species occurrence is probably restricted to the surroundings of the Olšina fishpond. The second locality was found close to the first one.

### *Galium rivale* (-/C4a//-/)

**CZ, 88e. Trojmezenská hornatina, 7148d, Nové Údolí** (distr. Prachatice): ruderal vegetation c. 70 m S of the railway station, 48.82917N, 13.79407E, 805 m a.s.l. (22. 7. 2019 not. *P. Petřík*; 6. 8. 2019 leg. *M. Štech*, CBFS). Ruderal character of species composition was described by the following vegetation relevé (author *P. Petřík*):

Size 16 m<sup>2</sup>, slope 12°, NW, Abundance E1 90 %, *Tanacetum vulgare* 4, *Dactylis glomerata* 2b, *Urtica dioica* 2m, *Festuca rubra* 2m, *Veronica chamaedrys* 1, *Galium rivale* 1, *Lathyrus pratensis* 1, *Lupinus polyphyllus* 1, *Agrostis capillaris* +, *Alopecurus pratensis* +, *Anthriscus sylvestris* +, *Elymus repens* +, *Galium uliginosum* +, *Heracleum sphondylium* +, *Holcus mollis* +, *Hypericum maculatum* +, *Potentilla anserina* +, *Ranunculus repens* +, *Cirsium palustre* +, *Scrophularia nodosa* +, *Stellaria graminea* +, *Vicia sepium* +, *Alchemilla micans* r, *Artemisia vulgaris* r, *Deschampsia cespitosa* r, *Rumex acetosa* r, *Securigera varia* r.

Interesting adventive occurrence of species, which has a main distribution area in eastern Europe and is only rarely introduced outside of its western distribution limit running through western Moravia. It is worth mentioning, there is a very old record of this species from the

abandoned Adolfova pila settlement near Strážný, but this record is considered unreliable by ČELAKOVSKÝ 1873.

P. Petřík & M. Štech

### *Helianthus tuberosus* (-/!//-/)

**BY, 7046d, Guglöd** (distr. Freyung-Grafenau): western margin of the village, 48.92682N, 13.42749E, 790 m a.s.l. (9. 8. 2019 not. K. Boublík). – **Waldhäuser** (distr. Freyung-Grafenau): Graupsäge settlement 1.6 km W of the village, 48.92443N, 13.44486E, 760 m a.s.l. (9. 8. 2019 not. K. Boublík).

New records of this neophyte in the new quadrant.

### *Hieracium bifidum* (-/C3//0\*/V)

**CZ, 34 Plánický hřeben, 6744d, Hamry na Šumavě** (distr. Klatovy): along the road c. 1.6 km W of the alcove chapel in the Gubrův Dvorec settlement, 49.24450N, 13.11770E, 650 m a.s.l. (21. 6. 2019 leg. M. Kotlínek, rev. J. Chrtek, CB).

**BY, 6844d, Kl. Arber** (distr. Cham): in the Seewand of lake Kl. Arbersee, 49.11907N, 13.12216E, 1000 m a.s.l. (26. 6. 2020 leg. W. Diewald, det. G. Gottschlich, herb. W. Diewald, WD2020-37).

The first records of *Hieracium bifidum* in the Bohemian Forest.

M. Kotlínek & J. Chrtek

### *Hieracium saxifragum* (-/C2r//2/2)

**CZ, 37a. Horní Pootaví, 6846d, Rejštejn** (distr. Klatovy): on the Dračí Skály rocks above the road, c. 2.4 km SSW of the alcove chapel in the village, 49.12370N, 13.49560E, 600 m a.s.l. (16. 6. 2020 leg. M. Kotlínek, det. J. Chrtek, CB).

The first record of *Hieracium saxifragum* in the Bohemian Forest.

M. Kotlínek & J. Chrtek

### *Hypochaeris maculata* (A2/C3//1/3)

**CZ, 37i. Chvalšinské Předšumaví, 7150b, zaniklá osada Pražačka** (distr. Český Krumlov): surrounding of spot height 889.2 m. In two places: a) pine and fir forest above the overgrown path on the W slope of spot height, 7.1 km W from the church in Chvalšiny, 48.85493N, 14.11387E, 880 m a.s.l. (14. 6. 2020 not. V. Grulich, A. Vydrová & L. Zdařil); b) edge of birch shrub N from the spot height, 7.0 km W from the church in Chvalšiny, 100 m NE from the previous locality, 48.85576N, 14.11439E, 880 m a.s.l. (7. 6. 2020 not. V. Grulich & A. Vydrová).

Confirmation of current occurrence of this rare and declining species in the study area.

### *Ilex aquifolium* (-/!/u/3)

**CZ, 88h. Svatotomášská hornatina, 7451b, Loučovice** (distr. Český Krumlov): mixed forest 3.4 km S of the railway station in the village, 48.61148N, 14.24590E (accuracy 60 m), 910 m a.s.l., 1 shrub (15. 11. 2018 not. M. Kubišta & J. Janáková).

Interesting finding, probably a remnant of old cultivation.

### *Juncus ranarius* (-/C3//-/)

**BY, 6844d, Lohberg** (distr. Cham): along the road north of the Hindenburgkanzel Park place c. 4.8 km SE of the church in the village, 49.14830N, 13.15800E, 1055 m a.s.l. (24. 9. 2019 leg. M. Štech), FCM.

The first record about an occurrence of this rather halophilous species currently spreading along salted roads.

### *Juncus squarrosus* (-/-/V/3)

**CZ, 88h. Svatotomášská hornatina, 7350d, Přední Výtoň** (distr. Český Krumlov): western slope of Bukový vrch hill, at the edge of a spring above a forest path, 48.63620N, 14.13160E, 910 m a.s.l. (30. 6. 2019 leg. *J. Janáková*).

**BY, 6844b, Zwercheck** (distr. Cham): forest clearing along forestry road, 49.17367N, 13.16357E, 1310 m a.s.l. (4. 9. 2020 not. *W. Diewald & C. Straubinger*).

The first record for the phytogeographical subdistrict Svatotomášská hornatina.

### *Laburnum anagyroides* (-/-/u/-\*)

**CZ, 88d. Boubínsko-stožecká hornatina, 7048b, Horní Vltavice** (distr. Prachatice): close to forest road on the eastern slope of the Obrovec Mt. c. 1.0 km W of the Kubova Huť railway station, 48.98420N, 13.76075E, 1073 m a.s.l. (27. 10. 2019 not. *K. Boublík & P. Lepší*). – **88h. Svatotomášská hornatina, 7350d, Přední Výtoň** (distr. Český Krumlov): eastern slope of Bukový vrch hill, at the edge of a forest path, 48.63930N, 14.14440E, 865 m a.s.l., 1 shrub (30. 6. 2019 photo *J. Janáková*).

New records on occurrence of this ornamental species, which is usually cultivated in lower altitudes, where it escapes often.

### *Lepidium campestre* (-/-/V/V)

**CZ, 88b. Šumavské pláně, 6946b, Srní** (distr. Klatovy): dump at the northern edge of the village c. 350 m N of the church, 49.08972N, 13.48083E, 850 m a.s.l. (25. 7. 2019 not. *K. Boublík*).

The first record for the phytogeographical subdistrict of Šumavské pláně.

### *Leucojum vernum* (-/C3//3/3)

**CZ, 37a. Horní Pootaví, 6847c, Kašperské Hory, Lídlovy Dvory** (distr. Klatovy): Losenice stream valley near the confluence with Pěnivý potok stream c. 920 m SSE of the village, 49.11400N, 13.57120E, 705 m a.s.l. (24. 4. 2021 not. *M. Štech*). – **88e. Trojmezenská hornatina, 7249b, Nová Pec** (distr. Prachatice): Jezerní potok stream valley c. 2.0 km W of the railway station in the village, 48.79120N, 13.92590E, 750 m a.s.l. (26. 4. 2019 not. *M. Štech, R. Roučková & K. Máchalová Zemanová*). – **88g. Hornovltavská kotlina, 7249d, Zvonková** (distr. Český Krumlov): forest margin c. 1.0 km S of the church in the former village of Zadní Zvonková, 48.71383N, 13.98301E, 810 m a.s.l. (1. 4. 2021 leg. *V. Grulich & A. Vydrová, BRNU*).

Probably remnants of old cultivations.

### *Ligusticum mutellina* (C3/C3//3/-)

**CZ, 88a. Královský hvozd, 6744d, Hamry na Šumavě** (distr. Klatovy): Nardus grasslands in the western part of village (former Fenzelhof), between blue marked tourist path and Bílý potok brook, 49.21473N, 13.15456E, 610 m a.s.l. (17. 5. 2020 not. *I. Matějková*).

Rather isolated locality, one of the most western localities in the Bohemian Forest.

### *Lilium bulbiferum* (C2/C2b//u/2)

**CZ, 88a. Královský hvozd, 6745c, Městiště** (distr. Klatovy): Alder carrs with a transition to a mountain beech forest in the northern edge of the nature reserve Městišské rokle, c. 1.3 km SE of the chapel in the village, 49.23837N, 13.24976E, 670 m a.s.l. (17. 5. 2020 not. *I. Matějková*). – **88h. Svatotomášská hornatina, 7350c, Přední Výtoň** (distr. Český Krumlov): former pasture and edge of road, 1.5 km SW from crossroad “U Korandy”, around the point 48.64104N, 14.02874E, 810 m a.s.l., several sterile shoots (25. 7. 2019 not. *A. Pavlíčko*).

Verification of current occurrence of rare species and new record in the new quadrant (7350c).

### *Listera cordata* (C1/C1t//2/3)

**CZ, 88g. Hornovltavská kotlina, 7048d, Lenora** (distr. Prachatice): spruce forest on the left bank of the Olšinka stream in the National Nature Reserve Velká Niva, 2.6 km E of the chateau in Lenora, 48.92216N, 13.82857E, 760 m a.s.l., 3 fertile and 14 sterile plants (22. 7. 2020 not. *J. Vaníček*). – **88d. Boubínsko-stožecká hornatina, 7048b, Horní Vltavice** (distr. Prachatice), the bank of a nameless forest stream in the National Nature Reserve Boubínský prales (outside the fenced part), 370 m WSW from a wooden bridge on the dam called Boubínské jezírko, 48.97179N, 13.81490E, 990 m a.s.l., withered sterile plants scattered on 10 m<sup>2</sup> site (26. 7. 2019 not. *D. Půbal*). – **Horní Vltavice**: the rest of virgin forest in the spring area on the eastern slope of Červený vrch (spot height 1203 m a.s.l.), outside the National Nature Reserve Boubínský prales, 610 m NE of Červený vrch, 48.96400N, 13.80286E, 1085 m a.s.l., several spots with few plants around the coordinates (6. 8. 2013, 14. 7. 2020 not. *D. Půbal*).

**BY, 7046b, Gr. Spitzberg** (distr. Freyung-Grafenau): spruce forest S of the peat bog Gr. Filz, 48.95934N, 13.46004E, 1350 m a.s.l., c. 100 fertile plants (12. 6. 2020 not. *W. Diwald & C. Straubinger*).

Verification of current occurrence of very rare and overlooked species. The record at Gr. Spitzberg is a recovery of an old report by SENDTNER (1860).

### *Luzula sudetica* (C3/C3//3/G)

**BY, 6844a, Lam** (distr. Cham): meadows N of the settlement Vorderwaldeck, 49.17444N, 13.05389E, 745 m a.s.l. (21. 6. 2019 not. *K. Boublik, M. Lepší & M. Kotlínek*).

The first record within the quadrant and the northwestern occurrence of the species in the Bavarian side of the Bohemian Forest.

### *Malaxis monophyllos* (C1/C1t//1/3)

**CZ, 88h. Svatomášká hornatina, 7350b, Přední Výtoň** (distr. Český Krumlov): mesic meadow on a north-facing slope, 2.8 km NW of the church in Přední Výtoň, 48.65340N, 14.14800E, 770 m a.s.l., dozens of individuals (30. 6. 2019 photo *J. Janáková*). – **Přední Výtoň**: open patch in a mixed forest on a north-facing slope, 2.9 km NW of the church in Přední Výtoň, 48.65390N, 14.14780E, 765 m a.s.l., rare (30. 6. 2019 not. *J. Janáková*). – **7350c, Přední Výtoň** (distr. Český Krumlov): mossy patch under solitary spruce in meadows on a ridge SW from the former village of Jasánky (Asang), c. 3.1 km WSW of the summit of Medvědí vrch (1017 m a.s.l.), 48.62491N, 14.05230E, 725 m a.s.l., four flowering individuals and one sterile (13. 6. 2020 not. *K. Boublik, M. Konečná, P. Koutecký, M. Lepší, K. Máchalová Zemanová & R. Roučková*). – **7350d, Pasečná** (distr. Český Krumlov): shrubby margin of the old pass c. 1.4 km WSW of the road cross in the village, 48.60414N, 14.08508E, 825 m a.s.l., 5 fertile and 6 sterile plants (13. 6. 2020 not. *V. Grulich et al.*).

New records on current occurrence of very rare and overlooked species.

### *Meum athamanticum* (-/C3//3/3)

**BY, 7148d, Haidmühle** (distr. Freyung-Grafenau): meadows c. 650 m NE of the church, 48.83111N, 13.78270E, 800 m a.s.l., c. 30 plants of which 13 flowering (22. 6. 2020 leg. *K. Boublik, M. Kotlínek, M. Lepší & D. Půbal*, CB).

Record of an adventive occurrence in the new quadrant.

### *Moneses uniflora* (C1/C1b//1/3)

**CZ, 88b. Šumavské pláně, 6946d, Modrava** (distr. Klatovy): edge of the road c. 500 m WNW of the former settlement of Javoří Pila, 49.03862N, 13.43651E, 1035 m a.s.l., 5 flowering plants (26. 6. 2020 not. *M. Štech*) – **88d. Boubínsko-stožecká hornatina, 7048b, Horní Vltavice** (distr. Prachatice): the bank of a nameless forest stream in the National Nature Reserve Boubínský prales (inside the fenced part), 335 m Z a wooden bridge on the dam called Boubínské jezírko, 48.97352N, 13.81473E, 980 m a.s.l.,



7 sterile plants (14. 7. 2020 not. *D. Půbal*). – **Včelná pod Boubínem** (distr. Prachatice), the bank of the Boubín stream in the spring area on the eastern slope of the Boubín summit (1362 m a.s.l.), 780 m NE of the top of Boubín summit, 48.99519N, 13.82583E, 1040 m a.s.l., dozens of plants together with *Ranuncullus platanifolius* (14. 7. 2020 not. *D. Půbal*).

Current occurrences of very rare and declining species.

### *Myosotis caespitosa* (C4a/C4a//G/G)

**CZ, 88g. Hornovltavská kotlina, 7149d, Pěkná** (distr. Prachatice): oxbow on the left bank of the Vltava River, c. 0.8 km WSW-SW of the church in the village, 48.84778N, 13.92447E, 730 m a.s.l. (17. 7. 2019 not. *P. Koutecký & E. Koutecká*).

New record from the new quadrant.

### *Myosotis discolor* (C4a/C2b//2/2)

**CZ, 34. Plánický hřeben, 6745c, Zelená Lhota** (distr. Klatovy), the middle part of the village, along the road between Zelená Lhota and Nýrsko, 49.24209N, 13.17486E, 555 m a.s.l. (15. 5. 2020 not. *I. Matějková & M. Šandová*). – **88c. Javorník, 6847b, Nahořánky** (distr. Klatovy): meadow c. 130–140 m S of the chapel in the village, 49.18063N, 13.65058E, 725 m a.s.l. (30. 5. 2020 not. *L. Pivoňková*). – **Nezdice na Šumavě** (distr. Klatovy): sparse spruce forest c. 450 m S of the village centre, 49.16886N, 13.61257E, 660 m a.s.l. (29. 5. 2020 leg. *L. Pivoňková*, PL). – **6848a, Maleč** (distr. Klatovy): dry part of wet meadows 200–450 m NNW of the chapel in the village, 49.17710N, 13.67581E, 830 m a.s.l. (30. 5. 2020 not. *L. Pivoňková*). – **88g. Hornovltavská kotlina, 7250a, Horní Planá, Bližší Lhota** (distr. Český Krumlov): road embankment c. 1.2 km NE of summit of Lhotský vrch hill, 48.75754N, 14.01412E, 725 m a.s.l. (14. 6. 2020 leg. *A. Lepší*, CB). – **88g. Želnavská hornatina, 7250a, Horní Planá, Maňávka** (distr. Český Krumlov): ruderal places along the road c. 810 m ENE of the former settlement of Maňávka, 48.79194N, 14.05542E, 865 m a.s.l. (5. 6. 2020 leg. *M. Štech*, CBFS)

New records on occurrence of the rarest one of the thermophilous annual *Myosotis* species.

### *Myosotis ramosissima* (-/-//2/3)

**CZ, 37m. Vyšebrodsko, 7351c, Loučovice** (distr. Český Krumlov): railway embankment c. 130 m NE of St. Oldřich church in village, 48.61953N, 14.24515E, 670 m a.s.l. (27. 4. 2020 not. *M. Lepší*). – **7351d, Loučovice**: on railway embankment c. 700 m ENE of St. Oldřich church in village, 48.61991N, 14.25321E, 675 m a.s.l. (27. 4. 2020 not. *M. Lepší*). – **Loučovice**: near railway station in the village, 48.62042N, 14.25575E, 675 m a.s.l. (27. 4. 2020 leg. *M. Lepší*, CB). – **88a. Královský hvozd, 6845a, Špičák** (distr. Klatovy): meadow path in the ski slope of Alpalouka c. 730 m SSE of the railway station of Špičák, 49.15630N, 13.22830E, 850 m a.s.l. (6. 6. 2020 not. *L. Pivoňková*). – **6845c, Alžbětín** (distr. Klatovy): grasslands and railway track in the railway station of Železná Ruda-Alžbětín, 49.12250N, 13.21080E, 720 m a.s.l. (17. 6. 2017 not. *K. Boublik & M. Lepší*). – **88c. Javorník, 6847b, Strašín** (distr. Klatovy): pastures c. 250–450 m SSW–WSW of the chapel in the village of Nahořánky, 49.18045N, 13.64642E, 690 m a.s.l. (30. 5. 2020 not. *L. Pivoňková*).

New localities of recently spreading thermophilous species, typically along railways and roads.

### *Myosotis stricta* (-/-//3/3)

**CZ, 34. Plánický hřeben, 6745a, Oldřichovice near Děpoltice** (distr. Klatovy): edges of the red marked forest road in direction of Křížový vrch hill, 49.25933N, 13.21948E, 665 m a.s.l. (16. 5. 2020 leg. *I. Matějková*, PL). – **6745c, Zelená Lhota** (distr. Klatovy), the middle part of the village, along the road between Zelená Lhota and Nýrsko, 49.24209N, 13.17486E, 555 m a.s.l. (15. 5. 2020 not. *I. Matějková & M. Šandová*). – **37m. Vyšebrodsko, 7351c, Lipno nad Vltavou** (distr. Český Krumlov): on bridge over Vltava River near railway station, 48.63295N, 14.24176E, 705 m a.s.l. (27. 4. 2020 not. *M. Lepší*). – **7351d, Loučovice** (distr. Český Krumlov): on railway embankment c. 700 m ENE of St. Oldřich church

in village, 48.61991N, 14.25321E, 675 m a.s.l. (27. 4. 2020 leg. *M. Lepší*, CB). – **88a. Královský hvozd, 6744d, Hamry na Šumavě** (distr. Klatovy): ruderal places on the railway station, 49.21159N, 13.17484E, 740 m a.s.l. (17. 5. 2020 not. *I. Matějková*). – **88g. Hornovltavská kotlina, 7049c, Volary** (distr. Prachatic): on railway embankment near the train station, 48.90815N, 13.88629E, 750 m a.s.l. (4. 5. 2020 not. *M. Lepší*, CB). – **Černá v Pošumaví** (distr. Český Krumlov): open disturbed sandy place c. 650 m WNW of the Neposkvrněné početí P. Marie church in the village, 48.73902N, 14.10220E, 725 m a.s.l. (19. 5. 2020 leg. *M. Lepší*, CB).

New localities of recently spreading thermophilous species, typically along railways and roads.

### *Oenothera issleri* (-/-/-/-)

**CZ, 37m. Vyšebrodsko, 7351c, Loučovice**: near the railway station of Loučovice zastávka, 48.62450N, 14.24530E, 675 m a.s.l. (4. 9. 2019 not. *M. Lepší* & *P. Lepší*). – **88a. Královský hvozd, 6845c, Alžbětín** (distr. Klatovy): railway station Železná Ruda-Alžbětín, 49.12250N, 13.21083E, 720 m a.s.l. (17. 6. 2019 leg. *K. Boublík* & *M. Lepší*, CB 86305). – **88g. Hornovltavská kotlina, 7250b, Olšina** (distr. Český Krumlov): railway stop Hodňov, 48.77944N, 14.10528E, 735 m a.s.l. (29. 7. 2019 not. *K. Boublík* & *M. Lepší*).

The first records on occurrence of this species in the Bohemian Forest.

### *Oenothera rubricaulis* (-/-/-/-)

**CZ, 88g. Hornovltavská kotlina, 7250b, Olšina** (distr. Český Krumlov): railway stop Hodňov, 48.77944N, 14.10528E, 735 m a.s.l. (29. 7. 2019 not. *K. Boublík* & *M. Lepší*). – **7249b, Bělá** (distr. Prachatic): in surroundings of gravel dump in S edge of the village, 48.79468N, 13.95916E, 750 m a.s.l. (15. 8. 2020 leg. *M. Lepší*, *P. Lepší* & *M. Kotlínek*, CB).

The first records on occurrence of this species in the Bohemian Forest.

### *Onopordum acanthium* (-/-/2/V)

**CZ, 37m. Vyšebrodsko, 7351c, Lipno nad Vltavou** (distr. Český Krumlov): ruderal vegetation near the recently built cycle route, c. 950 m WNW of the railway station, 48.63668N, 14.23135E, 745 m a.s.l., c. 20 leaf rosettes (17. 5. 2020 not. *P. Koutecký*).

New record from the new quadrat and verification of the current occurrence of this thermophilous archaeophyte in the Bohemian Forest.

### *Phleum nodosum* (-/-/D/D)

**CZ, 37a. Horní Pootaví, 6847c, Kašperské Hory** (distr. Klatovy): pasture NW of the Císařský Dvůr settlement c. 1.7 km SSW of the square in the town of Kašperské Hory, 49.12889N, 13.54939E, 730 m a.s.l. (23. 7. 2019 leg. *K. Boublík*, CB).

Confirmation of current occurrence of this regionally rare species.

### *Pilosella aurantiaca* × *P. officinarum* (-/-/-/-)

**CZ, 88a. Královský hvozd, 6745a, Hojsova Stráž** (distr. Klatovy): pastures c. 850 m SSE of train stop Hojsova Stráž-Brčálník, 49.18516N, 13.22907E, 750 m a.s.l. (23. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **6745c, Hojsova Stráž**: meadows in the surroundings of a solitary house c. 2.4 km E of the church in Hojsova Stráž, 49.21310N, 13.22590E, 910 m a.s.l. (23. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **Hojsova Stráž**: pastures SE of Denkův Dvůr, c. 3.3 km SE train station Zelená Lhota, 49.22390N, 13.20240E, 750 m a.s.l. (23. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **6845b, Pancíř** (distr. Klatovy): upper part of meadows in the Prameniště Řezné protected area, c. 880 m SSW of the Pancíř observation tower, 49.17100N, 13.25860E, 1110 m a.s.l. (13. 6. 2019, 22. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB; 26. 6. 2020 leg. *J. Chrtek* & *M. Kotlínek*, PRA).

**BY, 7148d, Haidmühle** (distr. Freyung-Grafenau): verge of meadows 950 m E of the church in Haidmühle, 49.22390N, 13.20240E, 750 m a.s.l. (22. 6. 2020 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **7248b, Frauenberg** (distr. Freyung-Grafenau): pastures SW of Frauenberg, c. 2.4 km NE of the church in Neureichenau, 48.78630N, 13.75720E, 750 m a.s.l. (23. 6. 2020 leg. *M. Kotlínek* & *M. Lepší*, rev. *J. Chrtek*, CB).

Combination *Pilosella aurantiaca* × *P. officinarum* includes two hybridogenous species, *P. rubra* and *P. stoloniflora*. However, it is difficult to assign part of the primary hybrids to one of this species. In the past, both were recorded in studied area very rarely in the surroundings of Zhůří near Keply, Zhůří near Horská Kvilda and Modrava.

*M. Kotlínek* & *J. Chrtek*

### ***Pilosella blyttiana* (*P. aurantiaca* – *P. lactucella*) (-/C1r//-/3)**

**CZ, 88a. Královský hvozd, 6845b, Pancíř** (distr. Klatovy): upper part of meadows in the Prameniště Řezné protected area, c. 850 m SSW of the Pancíř observation tower, 49.17080N, 13.25780E, 1110 m a.s.l. (13. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **Pancíř**: lower part of meadows in the Prameniště Řezné protected area, margin and shrubs on their eastern border, c. 1.1 km ESE of the cableway station Hofmanky, 49.16310N, 13.25780E, 915 m a.s.l. (22. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **88b. Šumavské Pláně, 6947a, Zhůří** (distr. Klatovy): meadows along the route on ridge, 0.4 km SE–SSE from the summit of the Hutská hora mountain, 49.08780N, 13.55470E, 1170 m a.s.l. (10. 6. 2017 leg. *V. Grulich*, *A. Vydrová*, det. *O. Rotreklová*, BRNU).

**BY, 6645c, Rabenstein** (distr. Regen): meadows southward of Rabenstein, c. 300 m S of church in village, 49.03690N, 13.20240E, 650 m a.s.l. (16. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB).

This species was not mentioned from Šumava and Böhmerwald before, firstly was recorded at Zhůří near Horská Kvilda during herbarium revision (Grulich, Vydrová 2017, BRNU). All populations are probably formed by primary hybrids.

*M. Kotlínek* & *J. Chrtek*

### ***Pilosella erythrochrista* (*P. caespitosa* – *P. piloselloides*) (-/C3//-/)**

**BY, 6844d, Bayerisch Eisenstein** (distr. Regen): along the path between slopes on Großer Arber, c. 400 m SW of the lower cableway station, 49.11720N, 13.14240E, 1180 m a.s.l. (15. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB).

The second record of this hybridogenous species in the studied area. The first one was recorded at square 7047c (1898, AFvB 2018).

*M. Kotlínek* & *J. Chrtek*

### ***Pilosella macranthela* (*P. glomerata* > *P. officinarum*) (-/C1r//u/2)**

**CZ, 88d. Boubínsko-stožecká hornatina, 7047b, Borová Lada** (distr. Prachatice): upper part of meadow on S foot of Vyhlička hill, c. 1.6 km SW of way of the cross in Borová Lada, 48.97970N, 13.64960E, 965 m a.s.l. (7. 6. 2019 leg. *R. Paulič*, *M. Kotlínek*, rev. *J. Chrtek*, CB).

**BY, 6944b, Bodenmais** (distr. Regen): along the Risslochweg in Bodenmais, c. 300 m NNE of the train station, 49.07300N, 13.10450E, 690 m a.s.l. (19. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **7247b, Grainet** (distr. Freyung-Grafenau): pasture c. 400 m SW church of Grainet, 48.79406N, 13.64980E, 670 m a.s.l. (29. 5. 2020 leg. *W. Diewald*, det. *G. Gottschlich*, herb. W. Diewald WD2020-15, WD2020-16, WD2020-17).

*Pilosella macranthela* is a very rare species, known only in surrounding of Modrava, Nové Hutě and Prášíly in the past. All populations are probably formed by primary hybrids.

*M. Kotlínek* & *J. Chrtek*

***Pilosella norrliniiformis* (*P. aurantiaca* – *P. glomerata*) (-/!/-/-)**

**CZ, 88h Svatotomášská hornatina, 7350c, Přední Výtoň** (distr. Český Krumlov): meadows N of the vanished settlement Rožnov, c. 7.2 km WSW of the church in Přední Výtoň, 48.60772N, 14.07973E, 835 m a.s.l. (13. 6. 2020 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB).

This is the third record of this hybridogenous species in the studied area. Previous records are known from Finsterau (2006, AFvB 2018 and Zhůří near Horská Kvilda (*Kotlínek* 2017, CB). Population is formed by primary hybrids.

*M. Kotlínek & J. Chrtek*

***Pilosella officinarum* × *P. scandinavica* (-/!/-/-)**

**CZ, 88a. Královský hvozď, 6745c, Hojsova Stráž** (distr. Klatovy): meadows in the surroundings of settlement Pod Můstkem, c. 980 m NNW of the train stop Hojsova Stráž-Brčálník, 49.19990N, 13.21710E, 890 m a.s.l. (23. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB).

The first record of hybrid between *Pilosella officinarum* × *P. scandinavica*.

*M. Kotlínek & J. Chrtek*

***Pilosella scandinavica* (*P. floribunda* – *P. glomerata*) (-/C2r//G/G)**

**CZ, 37e. Volyňské Předšumaví, 6847d, Úbislav** (distr. Prachatice): edge of the upper part of meadow ("Machů louka") in the protected area Nad Zavírkou, c. 900 m S of the alcove chapel in Javorník, 49.12920N, 13.65990E, 890 m a.s.l. (5. 6. 2018 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **88a. Královský hvozď, 6745c, Hojsova Stráž** (distr. Klatovy): meadows in the surroundings of settlement Pod Můstkem, c. 980 m NNW of the train stop Hojsova Stráž-Brčálník, 49.19990N, 13.21710E, 890 m a.s.l. (23. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **Hojsova Stráž**: on the wall around the church and graveyard in Hojsova Stráž, 49.20920N, 13.19940E, 890 m a.s.l. (23. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **6845b, Pancíř** (distr. Klatovy): lower part of meadows in the Prameniště Řezné protected area, margin and shrubs on their eastern border, c. 1.1 km ESE of the cableway station Hofmanky, 49.16310N, 13.25780E, 915 m a.s.l. (22. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **6845c, Železná Ruda** (distr. Klatovy): margin between the pasture c. 300 m SE of the train station Železná Ruda Centrum, 49.13360N, 13.23960E, 815 m a.s.l. (13. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **88h Svatotomášská hornatina, 7350c, Přední Výtoň** (distr. Český Krumlov): meadows NW of the vanished settlement Dolní Hraničná, c. 5.8 km W of the church in Svatý Tomáš, 48.63468N, 14.02816E, 790 m a.s.l. (13. 6. 2020 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB).

**BY, 6945a, Frauenberg** (distr. Freyung-Grafenau): along the cycle route NE of Brantweinhäuser, c. 1.7 km NE of the church in Neureichenau, 48.78355N, 13.74827E, 640 m a.s.l. (23. 6. 2020 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **Ludwigsthal** (distr. Regen): along the tourist path near the train stop Ludwigsthal, 49.05990N, 13.23790E, 640 m a.s.l. (19. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB).

*Pilosella scandinavica* is considered as rare species, probably is neglected. Most of the previous records were noticed at NW part of Šumava.

*M. Kotlínek & J. Chrtek*

***Pilosella schultesii* (*P. lactucella* – *P. officinarum*) (-/C3//u/-)**

**CZ, 88b. Šumavské pláň, 6946b, Srní** (distr. Klatovy): meadows in surrounding of settlement 1.9 km W of the alcove chapel in Antýgl, 49.05418N, 13.48475E, 890 m a.s.l. (16. 6. 2020 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **6946d, Modrava** (distr. Klatovy): verge of the road in Rokytecká slať, c. 6.0 km W of alcove chapel in Modrava, 49.01693N, 13.41789E, 1095 m a.s.l. (15. 6. 2020 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **88d. Boubínsko-stožecká hornatina, 7047b, Borová Lada** (distr. Prachatice): upper part of meadow on the east foot of the Vyhlička hill, c. 1.0 km W of way of the cross in Borová Lada, 48.98470N, 13.65550E, 940 m a.s.l. (7. 6. 2019 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB).

**BY, 7148d, Haidmühle** (distr. Freyung-Grafenau): verge of meadows near the border crossing, c. 1.0 km E of the church in Haidmühle, 48.82849N, 13.79020E, 800 m a.s.l. (22. 6. 2020 leg. *M. Kotlínek*, rev. *J. Chrtek*, CB). – **Haidmühle**: wet meadow on the bank of Mirasatbach, c. 1.5 km SW of the church in Haidmühle, 48.81561N, 13.76547E, 835 m a.s.l. (22. 6. 2020 leg. *M. Kotlínek*, *M. Lepší*, rev. *J. Chrtek*, CB).

Records within study area are scarce, only at Zhůří near Keply. This species is usually overlooked. All populations are probably formed by primary hybrids.

*M. Kotlínek & J. Chrtek*

### *Polygala chamaebuxus* (C1/C3//2/V)

**CZ, 88b, Šumavské Pláně, 6846a, Prášily** (distr. Klatovy): heathland vegetation near next to bike path c. 180 m S of the crossroad in the former village of Skelná, 49.15526N, 13.38355E, 880 m a.s.l. (16. 5. 2020 photo *M. Štech*).

Confirmation of occurrence in the Bohemian Forest after many years.

### *Polygala multicaulis* (C3/C3//G/3)

**CZ, 88b, Šumavské pláně, 6946d, Modrava** (distr. Klatovy): dry margin of a meadow (by the former balk with tree-growth), N of the village, c. 1.0 km ESE of the summit of Adamova hora (1078), 49.03806N, 13.49583E, 1110 m a.s.l. (22. 8. 2020 not. *P. Koutecký*, *J. Janáková*, *M. Lepší* & *M. Kotlínek*). – **88h, Svatotomášská hornatina, 7350b, Přední Výtoň** (distr. Český Krumlov): mesic meadow, 2.7 km NNW of the church in Přední Výtoň, 48.65510N, 14.15520E, 755 m a.s.l. (30. 6. 2019 photo *J. Janáková*).

New records of regionally rare species from new quadrants.

### *Polystichum aculeatum* (C3/C4a//2/V)

**CZ, 137h, Prachatické Předšumaví, 7049b, Cudrovice** (distr. Prachatice): the edge of the forest road near the former limestone quarries, 350 m N from the cemetery of Cudrovice, 48.95785N, 13.92603E, 750 m a.s.l. (11. 4. 2020 not. *D. Půbal*). – **88e, Trojmezenská hornatina, 7149c, Nová Pec** (distr. Prachatice): Jelenské údolí, wall under the road, 700 m NE from Jelenský vrch (summit 823 m), 48.80066N, 13.89814E, 775 m a.s.l., (26. 4. 2019 not. *R. Roučková*, *M. Štech*, *K. Máchalová Zemanová*).

**BY, 6945a, Regenhütte** (distr. Regen): mixed forest S of Kl. Deffernik c. 700 m WSW church of Regenhütte, 49.07315N, 13.19608E, 700 m a.s.l. (26. 7. 2019 not. *W. Diewald* & *C. Straubinger*, leg. *W. Diewald*, herb. W. Diewald WD2019-109).

New records on current occurrence of regionally rare species from new quadrants.

### *Pyrola rotundifolia* (C1/C2t//2/3)

**CZ, 88d, Boubínsko-stožecká hornatina, 6948a, Vimperk** (distr. Prachatice): part of Vimperk village U Sloupů, between former storehouse and former military quarters, 2.5 km WNW from bell tower on Vimperk square, 49.05791N, 13.74156E, 855 m a.s.l. (25. 6. 2019 not. *J. Hromas*, rev. *D. Půbal*).

Only two historical records of *P. rotundifolia* (Lipka – J. Moravec 1955 PRA and Včelná pod Boubínem – SKALICKÝ 1993) are known from phytochorion Boubínsko-stožecká hornatina. After the year 2000, the species was found near Lipka (EKRT & PŮBAL 2009) and in two localities near Včelná pod Boubínem (PŮBAL in HADINEC et al. 2004). The finding above thus represents only the fourth recent locality from phytochorion Boubínsko-stožecká hornatina.

*David Půbal*

### *Ranunculus lingua* (-/C1t//1/2)

**CZ, 88g, Hornovltavská kotlina, 7250b, Polná na Šumavě** (distr. Český Krumlov): clearing among the *Salix cinerea*-growth (ca 400 m<sup>2</sup>), on the N bank of Olšina fishpond, c. 1.6 km NNE of the centre of its

dam, 48.79272N, 14.10508E, 730 m a.s.l. (17. 8. 2020 not. P. Koutecký, K. Hustáková & B. Koutecký). This is the only possibly native occurrence of this species in the Šumava Mts. The newly found subpopulation is about 40 m SW of the original site found in 2016 (48.79297N, 14.10469E; KOUTECKÝ in LUSTYK & DOLEŽAL 2020, at which the *Salix cinerea*-growth become very dense since then. *Ranunculus lingua* is still present at the original site with c. 20 stems but mostly sterile due to shade. The new subpopulation is very vital, with c. 50 richly flowering stems. For long-term conservation, occasional cutting of shrubs at the site seems to be ample.

Petr Koutecký

### *Rosa elliptica* (-/C4b//1/2)

**BY, 7146b, Rosenau** (distr. Freyung-Grafenau): shrubs close to the forest edge c. 960 m NE of the centre of the village, 48.87758N, 13.42239E, 670 m a.s.l. (10. 8. 2019 leg. K. Boublík, CB).

New record from the Bavarian side of the Bohemian Forest. Origin of the locality in not clear.

### *Rosa glauca* (-/!/u/3)

**BY, 6945a, Ludwigsthal** (distr. Regen): vicinity of the railway station, 49.05972N, 13.23778E, 630 m a.s.l. (19. 6. 2019 leg. K. Boublík, M. Lepší & M. Kotlínek, CB 86291).

New record on probably synanthropic occurrence for the studied area.

### *Rosa rubiginosa* (-/!/V/-)

**BY, 6945a, Ludwigsthal** (distr. Regen): vicinity of the railway station, 49.05972N, 13.23778E, 630 m a.s.l. (19. 6. 2019 not. K. Boublík, M. Lepší & M. Kotlínek).

New record from the bavarian side of the Bohemian Forest. Origin of the locality in not clear.

### *Rumex longifolius* (-/!/R\*/R\*)

**CZ, 88b, Šumavské pláně, 6947a, Horská Kvilda** (distr. Klatovy): northern part of the village, 49.05867N, 13.55786E, 1065 m a.s.l. (24. 7. 2019 leg. K. Boublík, CB). – **88d, Boubínsko-stožecká hornatina, 7047b,**

**Borová Lada** (distr. Prachatice): crossroads at the forest margin in the Vltavský potok valley c. 800 m S of the village centre, 48.98256N, 13.66011E, 895 m a.s.l. (31. 8. 2019 not. K. Boublík, M. Lepší, P. Lepší, J. Douša & D. Půbal). – **Borová Lada:** meadow close to the road to Svinná Lada settlement, 48.99130N, 13.65939E, 900 m a.s.l. (31. 8. 2019 not. K. Boublík, M. Lepší, P. Lepší, J. Douša & D. Půbal).

New records on occurrence this neophytic species.

### *Sagina saginoides* (C2/C2b//2/-)

**CZ, 88b, Šumavské pláně, 6946d, Modrava** (distr. Klatovy): eastern part of the woodworking site E of Trýjezemí slat' peat bog, c. 0.8 km WSW of the summit of Adamova hora (1078 m a.s.l.), NW of the village, 49.04147N, 13.47139E, 1065 m a.s.l. (22. 8. 2020 leg. M. Lepší, P. Koutecký, J. Janáková & M. Kotlínek, CB). – **Modrava** (distr. Klatovy): open poor grassland c. 650 m NNW of summit of Smrkový vrch hill, 49.03622N, 13.42125E, 1065 m a.s.l. (1. 7. 2020 leg. M. Lepší, CB). – **88c, Trojmezská hornatina,**

**7249d, Horní Planá, Zadní Zvonková** (distr. Český Krumlov): forest road Saitzova cesta c. 4.4 km NW of the church in the former village of Zadní Zvonková, 48.74474N, 13.93247E, 1190 m a.s.l. (24. 6. 2020 leg. M. Štech & K. Vějvodová, CBFS). – **Zadní Zvonková:** forest road Saitzova cesta c. 1.1 km NE of the summit of the Smrčina mountain, 48.74280N, 13.93330E, 1180 m a.s.l. (28. 7. 2020 leg. K. Boublík, J. Janáková & D. Svoboda, rev. P. Koutecký & M. Lepší, CB). – **Zadní Zvonková:** forest road Saitzova cesta (red marked tourist path) c. 930 m SW of the Kopka hill (1116 m a.s.l.), 48.74474N, 13.93247E, 1115 m a.s.l. (28. 7. 2020 leg. K. Boublík, J. Janáková & D. Svoboda, rev. P. Koutecký & M. Lepší, CB).

**BY, 7248b, Frauenberg** (distr. Freyung-Grafenau): trampled places near the Bergasthof Dreisessel, 48.78122N, 13.80371E, 1300 m a.s.l. (28. 7. 2020 leg. *M. Štech, K. Vejvodová, J. Vrtková & V. Žíla*, CBFS). While current occurrence of *Sagina saginoides* in the central part of the Bohemian Forest is known, only old records were known from the southeastern part. New localities are confirmation of current occurrence in the mountain group of Trojmezna and the first record from the Bavarian side of this area.

### *Scabiosa ochroleuca* (-/-/1n/1n)

**CZ, 88b, Šumavské pláně, 6946d, Modrava** (distr. Klatovy): eastern part of the woodworking site E of Tříjezerní slať peat bog, c. 0.8 km WSW of the summit of Adamova hora (1078), NW of the village, 49.04147N, 13.47139E, 1065 m a.s.l. (22. 8. 2020 leg. *M. Lepší, P. Koutecký, J. Janáková & M. Kotlínek*, CB). The first occurrence of this adventive species in the study area.

### *Solanum lycopersicum* (-/-/-/-)

**CZ, 37a, Horní Pootaví, 6847c, Kašperské Hory** (distr. Klatovy): ruderal grassland c. 200 m SW of the square, 49.143001N, 13.55355E, 725 m a.s.l. (23. 7. 2019 not. *K. Boublík*). – **88a, Královský hvozd, 6745c, Hojsova Stráž** (distr. Klatovy): green marked forest path around the forest glade c. 1.4 km NNE of the church in the village, 49.22053N, 13.20591E, 725 m a.s.l. (18. 9. 2018 photo *M. Štech*). – **88d, Boubínsko-stožecká hornatina, 7047b, Borová Lada** (distr. Prachatice): in the village, 48.98967N, 13.66003E ± 300 m, 900 m a.s.l. (31. 8. 2019 not. *K. Boublík, M. Lepší, P. Lepší, J. Douba & D. Půbal*). The first records on escaped occurrence of this useful plant.

### *Spiraea ×macrothyrsa* (-/-/-/-)

**CZ, 88g, Hornovltavská kotlina, 7250b, Černá v Pošumaví** (distr. Český Krumlov): Nature reserve Olšov, birch wood near the margin of the Lipno water dam, 1.4 km N of Černá v Pošumaví, 48.75058N, 14.10880E, 725 m a.s.l., escaped (24. 8. 2020 leg. et photo *J. Janáková*, rev. *J. Velebil*). The first record from the study area.

### *Stachys byzantina* (-/-/-/-)

**CZ, 88h, Svatotomášská hornatina, 7350d, Přední Výtoň** (distr. Český Krumlov): by the U Lipna pension in the SW part of the village, 48.63043N, 14.16363E, 760 m a.s.l., escaped (12. 6. 2020 not. *K. Boublík* et al.). The first record on escaped occurrence of this ornamental species.

### *Stellaria ruderalis* (-/-/-/-)

**CZ, 37m, Vyšebrodsko, 7351c, Lipno nad Vltavou** (distr. Český Krumlov): grassy stretch along a road on the left bank of Vltava River, S of the railway station, 48.63314N, 14.24325E, 700 m a.s.l. (17. 5. 2020 leg. *P. Koutecký*, CBFS), FCM. – **Lipno nad Vltavou** (distr. Český Krumlov): disturbed grassland at dam of Lipno water reservoir, 48.63245N, 14.23708E, 725 m a.s.l. (27. 4. 2020 not. *M. Lepší*). – **7351d, Loučovice** (distr. Český Krumlov): road verge c. 990 m E of St. Oldřich church in village, 48.61858N, 14.25712E, 675 m a.s.l., (27. 4. 2020 leg. *M. Lepší*, CB). – **88g, Hornovltavská kotlina, 7250a, Horní Planá** (distr. Český Krumlov): ruderal grassland at road verge 250 m SSW of St. Markéta church in the town, 48.76637N, 14.03126E, 760 m a.s.l. (4. 5. 2020 leg. *M. Lepší*, CB). – **7250d, Černá v Pošumaví** (distr. Český Krumlov): ruderal grassland on road embankment c. 800 m WNW of the Neposkvrněné početi P. Marie church in the village, 48.74015N, 14.10055E, 730 m a.s.l. (19. 5. 2020 not. *M. Lepší*). – **Černá v Pošumaví**: grassland in road ditch c. 740 m W of Neposkvrněné početi P. Marie church in village, 48.73777N, 14.10078E, 730 m a.s.l. (19. 5. 2020 not. *M. Lepší*).

The first records on occurrence of this synanthropic species, which was distinguished and described only in 2019.

### *Trollius altissimus* (C3/C3//2/3)

**CZ, 88a. Královský hvozd, 6745c, Hojsova Stráž** (distr. Klatovy): wet meadows and willow scrub along Zelenský potok brook, c. 1.2 km NE of the church in the village, 49.21493N, 13.21263E, 745 m a.s.l. (17. 5. 2020 not. *I. Matějková*). – **88d. Boubínsko-stožecká hornatina, 7148b, Stožec** (distr. Prachatice): Radvanovice, wet meadow c. 1.7 km SSE of the St. Anna chapel in the village of Hlinišť, 48.89545N, 13.75391E, 843 m a.s.l., 180 plants (9. 7. 2012 leg. *A. Vydrová*, BRNU; 30. 5. 2021 leg. *V. Grulich* & *A. Vydrová*, BRNU).

Verification of current occurrence of this rare and declined species.

### *Verbascum chaixii* subsp. *austriacum* (C4a/C4a///-)

**CZ, 88d. Boubínsko-stožecká hornatina, 7048c, Strážný** (distr. Prachatice): close to marked hiking trail (Světlohorská cesta) in the Světlé Hory former village, 48.90096N, 13.67803E, 900 m a.s.l., one plant (26. 10. 2019 not. *K. Boublík* & *P. Lepší*).

The northwestern occurrence of the adventive species in the Bohemian Forest.

### *Verbascum densiflorum* (-/C4a/V/-)

**CZ, 88b. Šumavské pláně, 6846b, Prášíly, former Rovina settlement** (distr. Klatovy): meadow southern of the road 350–450m WSW of the Rovina Pension, 49.15643N, 13.41601E, 910 m a.s.l. (25. 7. 2020 not. *L. Pivoňková*). – **88f. Želnavská hornatina, 7149b, Volary** (distr. Prachatice): former village Sněžná, crossroads c. 400 m NE of the Doupná hora Mt. (1052 m), 48.89582N, 13.94401E, 1020 m a.s.l. (8. 9. 2020 not. *K. Boublík*).

New records from the new quadrants.

### *Vicia grandiflora* (-/-/Rn/-)

**CZ, 37l. Českokrumlovské Předšumaví, 7250d, Černá v Pošumaví** (distr. Český Krumlov): 570 m WSW of Neposkvrněné početí Panny Marie Church in village; edge of mesophilous meadow and shrubs, abundant, 48.73630N, 14.10340E, 760 m a.s.l. (12. 6. 2020 leg. *J. Janáková*, CB).

The first record on occurrence of the species in the studied area.

### *Vulpia myuros* (-/C3//2/3)

**CZ, 88g. Hornovltavská kotlina, 7249b, Nová Pec** (distr. Prachatice): railway station, 48.78994N, 13.95286E, 730 m a.s.l. (26. 6. 2020 not. *K. Boublík*, *M. Lepší* & *D. Půbal*). – **7250d, Černá v Pošumaví** (distr. Český Krumlov): sandy beach on the shore of the Lipno I reservoir by the road I/39 c. 660 m W of the church, 48.73892N, 14.10206E, 725 m a.s.l. (2. 7. 2019 not. *K. Boublík* & *M. Lepší*). – **7250d, Hůrka** (distr. Český Krumlov): beach and meadow close to hotel near by the Černá v Pošumaví railway station, 48.74167N, 14.08639E, 725 m a.s.l. (2. 7. 2019 not. *K. Boublík*, *A. Lepší*, *M. Lepší* & *P. Lepší*). – **88h. Svatomášská hornatina, 7351c, Přední Výtoň** (distr. Český Krumlov): sandy beach on the shore of Lipno I reservoir c. 325 m SE of the church in the village, 48.63096N, 14.17386E, 725 m a.s.l. (13. 6. 2020 leg. *J. Janáková*, *M. Konečná* & *K. Boublík*, CB).

New localities of the rare species, which has been spreading recently.



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