

Cytogeography of *Pilosella officinarum* (Compositae): Altitudinal and Longitudinal Differences in Ploidy Level Distribution in the Czech Republic and Slovakia and the General Pattern in Europe

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• **Background and Aims** *Pilosella officinarum* (syn. *Hieracium pilosella*) is a highly structured species with respect to the ploidy level, with obvious cytogeographic trends. Previous non-collated data indicated a possible differentiation in the frequency of particular ploidy levels in the Czech Republic and Slovakia. Therefore, detailed sampling and ploidy level analyses were assessed to reveal a boundary of common occurrence of tetraploids on one hand and higher ploids on the other. For a better understanding of cytogeographic differentiation of *P. officinarum* in central Europe, a search was made for a general cytogeographic pattern in Europe based on published data.

• **Methods** DNA-ploidy level and/or chromosome number were identified for 1059 plants using flow cytometry and/or chromosome counting on root meristem preparations. Samples were collected from 336 localities in the Czech Republic, Slovakia and north-eastern Hungary. In addition, ploidy levels were determined for plants from 18 localities in Bulgaria, Georgia, Ireland, Italy, Romania and Ukraine.

• **Key Results** Four ploidy levels were found in the studied area with a contrasting pattern of distribution. The most widespread cytotype in the western part of the Czech Republic is tetraploid (4x) reproducing sexually, while the apomictic pentaploids and mostly apomictic hexaploids (5x and 6x, respectively) clearly prevail in Slovakia and the eastern part of the Czech Republic. The boundary between common occurrence of tetraploids and higher ploids is very obvious and represents the geomorphologic boundary between the Bohemian Massif and the Western Carpathians with the adjacent part of Pannonia. Mixed populations consisting of two different ploidy levels were recorded in nearly 11% of localities. A statistically significant difference in a vertical distribution of penta- and hexaploids was observed in the Western Carpathians and the adjacent Pannonian Plain. Hexaploid populations tend to occur at lower elevations (usually below 500 m), while the pentaploid level is more or less evenly distributed up to 1000 m a.s.l. For the first time the heptaploid level (7x) was found on one site in Slovakia. In Europe, the sexual tetraploid level has clearly a sub-Atlantic character of distribution. The plants of higher ploidy level (penta- and hexa-) with mostly apomictic reproduction prevail in the northern part of Scandinavia and the British Isles, the Alps and the Western Carpathians with the adjacent part of Pannonia. A detailed overview of published data shows that extremely rare records on existence of diploid populations in the south-west Alps are with high probability erroneous and most probably refer to the closely related diploid species *P. peleteriana*.

• **Conclusions** The recent distribution of *P. officinarum* in Europe is complex and probably reflects the climatic changes during the Pleistocene and consequent postglacial migrations. Probably both penta- and hexaploids arose independently in central Europe (Alps and Carpathian Mountains) and in northern Europe (Scandinavia, Great Britain, Ireland), where the apomictic plants colonized deglaciated areas. We suggest that *P. officinarum* is in fact an amphidiploid species with a basic tetraploid level, which probably originated from hybridizations of diploid taxa from the section *Pilosellina*.

Key words: Amphidiploidy, apomixis, Asteraceae, flow cytometry, geographical parthenogenesis, *Hieracium*, postglacial migration, polyploidy.

INTRODUCTION

The genus *Pilosella* Hill., often treated as a subgenus of *Hieracium* L. [syn. *Hieracium* subgen. *Pilosella* (Hill) Gray], is one of the taxonomically most intricate vascular plant groups of the temperate flora. The reticulate pattern of morphological variation reflected in several thousands of taxa described from the species level to the form (Zahn, 1921–1923) complicates taxonomic treatment.

Widespread polyploidy, various modes of reproduction (sexuality, obligate and facultative apomixis of aposporous type, haploid parthenogenesis, vegetative propagation), inter- and intraspecific hybridization within the same and across different ploidy levels are the most important processes involved in microevolution of the genus (Krahulcová *et al.*, 2000). The ploidy level occurring in natural populations varies from diploid ($2n = 2x = 18$) to octoploid ($2n = 8x = 72$). The most frequent cytotypes are tetraploids, pentaploids and hexaploids. Diploids are less frequent, and triploids, heptaploids, octoploids and aneuploids are rather rare (Schuhwerk and Lippert, 1997;

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Krahulcová *et al.*, 2000). Higher ploidy levels up to dodecaploid ($2n = 12x = 108$) were found in plants obtained by experimental hybridization (Skalińska, 1976). In approximately half of the taxa of the genus *Pilosella* analysed more than one ploidy level was found, even in plants growing together in one locality (Schuhwerk, 1996 and references therein).

Sell and West (1976) recognize 63 'numbered' species (including nothospecies) of *Pilosella* (treated as subgenus of *Hieracium*) in Europe. Six species having only one capitulum per stem (with the exception of hybrids) are members of the section *Pilosellina* Zahn. All but one are diploids occurring mainly in western, southern and central parts of Europe: *P. argyrocoma* (Fries) (southern and central Spain), *P. castellana* (Boiss. & Reuter) F. W. Schultz & Sch. Bip. (Spain and northern Portugal), *P. hoppeana* (Schult.) F. W. Schultz & Sch. Bip. (central and eastern Alps), *P. pseudopilosella* (Ten.) F. W. Schultz & Sch. Bip. (southern Europe, from Portugal and Spain to Bulgaria, Turkey and Romania), *P. peleteriana* (Mérat) F. W. Schultz & Sch. Bip. (northern and western Europe and the western part of central Europe). In addition, some authors distinguish a lowland form of *P. hoppeana* as a distinct diploid taxon – *P. macrantha* (Ten.) F. W. Schultz & Sch. Bip. (central and southern Europe) (e.g. Holub, 1986; Chrtek, 1998, 2002; Gottschlich, 1998; Schuhwerk and Fischer, 2003). The only almost exclusively polyploid species of section *Pilosellina* is *Pilosella officinarum* F. W. Schultz & Sch. Bip. (syn. *Hieracium pilosella* L.). It is distributed much wider than the diploid taxa mentioned above (cf. Hultén and Fries, 1986; Bräutigam, 1992). It extends from the British Isles across the whole of Europe, except the Arctic parts, to western Asia and north-western Siberia. Moreover, it has been introduced into New Zealand, North America and Patagonia, and has become an invasive and troublesome weed (Hultén and Fries, 1986; Chapman *et al.*, 2000; Cárdenas Vergara, 2005; Wilson *et al.*, 2006). *Pilosella officinarum* usually grows on dry, permeable and nutrient-poor soils from sea level to the sub-Alpine belt. The obligate heliofilous species occurs in tussock grassland communities usually with regular disturbance (grazing, mowing). Due to its low competitive ability, it tends to establish itself on open, sparsely vegetated, sites (roadside dykes, eroded slopes, landslides, etc.). Morphologically, *P. officinarum* may be distinguished from other representatives of *Pilosellina* section by long and slender stolons bearing small distant leaves decreasing in size towards the apex, involucre bracts (0.5–)1–2 mm wide, covered by stellate, glandular and eglandular trichomes (Sell and West, 1976). Despite its more or less easy identification in the field, a great phenotypic plasticity has been recorded within the species (Turesson and Turesson, 1960; Gadella, 1987, 1991). A high level of morphological variation is reflected in numerous infraspecific taxa described from the entire distribution range (Nägeli and Peter, 1885; Zahn, 1921–1923). The correlation between some phenotypic characters on one hand (e.g. rosette size, the number and length of stolons) and ploidy level on the other was revealed by Gadella (1991). In total, five cytotypes (2x, 4x, 5x, 6x and 7x) have been

recorded in natural populations of *P. officinarum* (cf. Table 1). The mode of seed reproduction of each particular cytotype depends on the ploidy level. Diploids are sexual. Tetraploid plants reproduce sexually, but several apomictic populations deviate from this general rule (Gadella, 1984, 1987). Pentaploid *P. officinarum* is almost exclusively

TABLE 1. Ploidy levels found in *Pilosella officinarum* in Europe according to the literature and present records

Country	Ploidy level	References
Armenia	4x	Nazarova and Ghukasyan, 2004
Austria	4x, 5x, 6x	Turesson and Turesson, 1960; Gadella, 1972, 1984; Schuhwerk and Lippert, 1997
Belarus	4x, 5x	Dmitrieva, 1987; Parfenov and Dmitrieva, 1988
Belgium	4x	Gadella, 1972, 1984
Bulgaria	4x, 5x, 6x	Mráz <i>et al.</i> , this study
Croatia	6x	Gadella, 1984
Czech Republic	4x, 5x, 6x, 7x	Měsíček and Jarolímová, 1992; Krahulcová and Krahulec, 1999; Krahulcová <i>et al.</i> , 2001; Rotreklová <i>et al.</i> , 2002, 2005; Košťálová, 2004; Mráz <i>et al.</i> , this study
Denmark	4x	Turesson and Turesson, 1960; Gadella, 1972, 1984
Finland	4x, 5x	Turesson and Turesson, 1960; Jalas and Pellinen, 1985
France	2x, 4x, 5x, 6x	Delcourt, 1972; Auquier and Renard, 1979; Natarajan, 1981, 1988; Gadella, 1972, 1984
Georgia	4x, 5x	Mráz <i>et al.</i> , this study
Germany	4x	Turesson and Turesson, 1960; Gadella, 1972; Bräutigam and Bräutigam, 1996; Schuhwerk and Lippert, 1997, 2002; Albers and Pröbsting, 1998; Rotreklová <i>et al.</i> , 2005
Hungary	5x, 6x	Mráz <i>et al.</i> , this study
Ireland	4x, 5x, 6x	Gadella, 1972, 1984; Finch, 2005; Watson, 2005; Mráz <i>et al.</i> , this study
Italy	2x, 4x, 5x, 6x	Gadella, 1972, 1984; Mráz <i>et al.</i> , this study
Luxembourg	4x	Gadella, 1972, 1984
Macedonia	6x	Gadella, 1972
Netherlands	4x, 5x, 7x	Gadella and Kliphuis, 1963; Gadella, 1972, 1984
Norway	4x, 5x	Gadella, 1972
Poland	4x, 5x, 6x	Skalińska, 1967; Skalińska <i>et al.</i> , 1971; Gadella, 1972; Pogan <i>et al.</i> , 1987; Pogan and Weislo, 1989; Rotreklová <i>et al.</i> , 2005
Portugal	4x	Fernades and Queirós, 1971; Gadella, 1972
Romania	5x, 6x	Gadella, 1972; Mráz <i>et al.</i> , this study
Russia	6x	Lavrenko and Sereditov, 1991
Slovakia	4x, 5x, 6x, 7x	Májovský <i>et al.</i> , 1970; Uhríková and Feráková, 1977; Mičieta, 1982; Murín, 1986; Píšťanský and Mičieta, 2000; Rotreklová <i>et al.</i> , 2002, 2005; Mráz <i>et al.</i> , this study
Spain	4x	Gadella, 1984
Sweden	4x, 5x, 6x, 7x	Turesson and Turesson, 1960; Turesson, 1972; Lövkvist and Hultgård, 1999
Switzerland	4x, 5x, 6x	Gadella, 1972, 1984
United Kingdom	4x, 5x, 6x	Turesson and Turesson, 1960; Gadella, 1972, 1984; Morton, 1974; Moore, 1982; Edmonds <i>et al.</i> , 2005; Finch, 2005; Grime <i>et al.</i> , 2005; Watson, 2005
Ukraine	4x, 6x	Pashuk, 1987; Mráz <i>et al.</i> , this study

apomictic, although a rare sexual seed production was also reported (Turesson and Turesson, 1960; Turesson, 1972; Gadella, 1984). Facultative apomixis in pentaploids was later confirmed embryologically by Pogan and Wcisło (1995). Recently, two accessions of fully sexual pentaploids have been found in the Czech Republic (Krahulcová *et al.*, 2000; Rotreklová *et al.*, 2002). Hexaploids are either sexual or apomictic, while very rare heptaploids are either apomictic or sterile (Gadella, 1984, 1991). Vegetative reproduction by means of over-ground stolons is common for all cytotypes and, together with apomixis, it might contribute to the uniclonal structure of populations.

Diploid plants of *P. officinarum* are rare and their distribution is considered to be of a relict character (e.g. Gadella, 1984). They were reported from the Valley of Aosta (Italy) (Gadella, 1972) and south-eastern France (Delcourt, 1972), respectively (but see the Discussion below). In most of Europe, the tetraploid and pentaploid populations of *P. officinarum* are by far the most common cytotypes (Gadella, 1984). Tetraploids are widespread in the lowlands of west and central Europe (e.g. Turesson and Turesson, 1960; Gadella, 1972, 1984; Pogan and Wcisło, 1989; Schuhwerk and Lippert, 1997, 2002; Krahulcová and Krahulec, 1999), while the pentaploids occur chiefly in regions that were covered by the Pleistocene glaciation – Scandinavia, the British Isles (Turesson and Turesson, 1960; Gadella, 1972, 1984, 1987; Finch, 2005; Watson, 2005). Several hexaploid populations of *P. officinarum* were found mainly in the Alps, Scandinavia, Balkan Peninsula (e.g. Turesson and Turesson, 1960, Gadella, 1972, 1984, 1991; Lavrenko and Sereditov, 1991; Schuhwerk and Lippert, 1997) and the Western Carpathians (see below). The rare occurrence of heptaploids was reported from only three localities in Sweden (Turesson and Turesson, 1960), one site in the Netherlands (Gadella, 1984) and one population in the Czech Republic (Košťálová, 2004).

Four ploidy levels (tetra-, penta-, hexa- and heptaploid) have been recorded in the Czech Republic and Slovakia (Májovský *et al.*, 1970; Uhríková and Feráková, 1977; Mičieta, 1982; Murín, 1986; Měsíček and Jarolímová, 1992; Krahulcová and Krahulec, 1999; Píšťanský and Mičieta, 2000; Krahulcová *et al.*, 2001; Rotreklová *et al.*, 2002, 2005; Košťálová, 2004). Recently, Píšťanský and Mičieta (2000) recorded tetraploids in approx. 30 localities mainly in southern and western Slovakia, while other authors reported pentaploid and hexaploid plants mostly from eastern, northern and central Slovakia. Most of the chromosome counts coming from the Czech Republic that had been published indicated that the plants analysed were tetraploids.

Almost all published data on ploidy level of *P. officinarum* are based on classical chromosome counting. This precise method is, however, considerably time-consuming. Since routine introduction of the flow cytometry in plant science in the nineties of the last century (Doležal, 1991), this approach has rapidly become popular for estimating DNA-ploidy level (Doležal, 1991). This is mainly due to the very easy sample preparation and the possibility of screening large numbers of

individuals in a very short time. Here, the search which was carried out for a boundary between the area of distribution of the tetraploid cytotype and the range of pentaploid and hexaploids of *P. officinarum* in the territory of Slovakia and the Czech Republic, using mostly a flow cytometric approach, is reported. Moreover, an attempt was made to find out if there was a correlation between the distribution of particular ploidy levels on one hand and the altitude on the other. To understand better the cytogeographic differentiation of *P. officinarum* in central Europe, a search, based on published data, was made for a general cytogeographic pattern in Europe.

The area studied

Research has been carried out in the area of the Czech and Slovak Republics with an adjacent part of north-eastern Hungary. The area studied belongs to two different biogeographic regions, the mountain range of the Western Carpathians and the Bohemian Massif. The border between both regions is situated in the eastern part of the Czech Republic, lying north-north-east to south-south west. These two regions differ in a variety of environmental and historical parameters. In this respect, differences in the cytotype distribution cannot be explained in any easy way. On the other hand, this area covering their border can show that the pattern in cytotype distribution can be very contrasting even across a very narrow zone.

The Bohemian Massif has an old Paleogenic relief, younger areas being only canyons, those areas with Tertiary volcanism in the northern part of Bohemia, and glacial cirques in the Sudetes and the Šumava Mountains. The highest point is Mt Sněžka (1602 m), the lowest is the valley of the River Elbe on the German border at 115 m. Mostly acid Variscian parts were later covered with Permian-Carboniferous or Mesozoic sediments. Base-rich bedrocks are concentrated at lower altitudes. Vegetation cover has a coarser grain (homogeneous on a larger scale) in comparison with the Carpathian Mountains.

The Western Carpathians, including the Intra-Carpathian (Pannonian) Basin, represent the north-west part of the Carpathian arc extending from north-east Austria and south-east Czech Republic to north-east Slovakia and south-east Poland. The relief is young, of Tertiary age, similar to the Alps. The highest point is Gerlach Peak (2655 m). The bedrock is more complicated, mostly of Mesozoic and Tertiary ages. Calcium-rich substrates occur from lowland to the high mountains; e.g. in central Slovakia almost consistent limestone substrates can be found from the xerothermic Slovak Karst to the highest altitudes of the Belaer Tatra with altitudes above 2000 m. Some areas are very continental, with climatic conditions which do not allow the growth of *Fagus sylvatica* as in the area between the High and Low Tatra Mountains. On the other hand, some not distant areas are more oceanic, as in north-west Slovakia. For all these reasons, the vegetation cover is fine-grained (homogeneous in small areas but, on a larger scale, heterogeneous). Large regions with homogeneous vegetation are rare.

The area of the Czech Republic has a rather uniform climate; the warmest month is July and it is also the

month of highest rainfall. This contrasts with Slovakia, where the same condition applies only at higher altitudes. At lower altitudes, the warmest month is also July, but the highest rainfall is distributed from May to September, depending on the exact geographic position (Vesecký, 1961). In this way, the same area is rather oceanic in May–June and more continental in September and vice versa. Slovakia (the Carpathian Mountains with the Pannonian Plain) is therefore fine-grained and more diverse with respect to relief, bedrock and climate.

MATERIALS AND METHODS

Material collection

Plants of *Pilosella officinarum* F. W. Schultz & Sch. Bip. (syn. *Hieracium pilosella* L.) for the present study were collected in 2003–2006 in their natural habitats throughout Slovakia and the Czech Republic, to a lesser extent also in the north-eastern part of Hungary to cover all geographic regions. They were cultivated in pots in the Botanical Garden of P. J. Šafárik University, Košice and in the experimental field of the Institute of Botany, Academy of Sciences of the Czech Republic, Průhonice. For the complete list of localities see Supplementary Information 1 (available online). Besides the plants from the region above mentioned, some plants from a further 18 localities from different parts of Europe have also been analysed (Supplementary Information 4, available online).

As a rule, three or five plants from each population were sampled, three from the pure populations, five in the case of co-occurrence of other potentially hybridizing species of the genus *Pilosella*. Efforts were made to avoid collecting samples originating from one clone. If it was apparent that plants at the collecting site did originate from one plant, they belonged to one clone (usually plants growing very close together in a very small area of several square cm), only one individual plant *per* locality (population) was dug up. In some cases however, several cultivated plants died before analysis. For both these reasons, some populations are represented by only one plant. To determine the proportion of mixed cytotypes in populations, only those populations with two and more plants analysed were involved. Despite the fact that the ploidy level of only one plant had been estimated by us, some localities (marked in Supplementary Information 1, available online) can be considered as collecting sites with two or more analysed plants because the chromosome number of other plant/plants from the same locality was published earlier (see Supplementary Information 2, available online). Therefore, in addition to the data collected for this research, a few previous accounts from the literature (Rotreklová *et al.*, 2005) were used to search for some localities consisting of two different ploidy levels. These plants were not included in the total number of plants analysed in this present study. The voucher specimens have been deposited recently in the herbarium of Patrik Mráz, at the Institute of Biology and Ecology, P. J. Šafárik University, Košice and in the herbarium of the Institute of Botany, Průhonice (PRA).

Chromosome counts

The chromosome counts are based on the somatic mitosis in the root-tip cuttings of pot-cultivated plants. The material was pre-treated at room temperature with a 0.5% solution of colchicine for 1.5–3 h and then fixed in a cold mixture of ethanol and acetic acid (3 : 1) for at least 1 h. The fixed material was stored in 70 % ethanol at 4 °C until processed. The root tips were macerated in 1 N HCl at 60 °C for 7–10 min. The squash and smear method with cellophane replacing the glass covers (Murín, 1960) and with Giemsa solution in a phosphate buffer was used. Selected permanent slides are deposited at the Institute of Biology and Ecology, P. J. Šafárik University in Košice.

Estimation of ploidy level

Flow cytometry was used to detect the DNA-ploidy level (Suda *et al.*, 2006) for most of the plants. An analysis of relative DNA content was performed with a PA II ploidy analyser (Partec GmbH, Münster, Germany) equipped with an HBO-100 mercury arc lamp in the Flow Cytometry Laboratory, Institute of Botany, Academy of Sciences, Průhonice, Czech Republic and FACSCalibur instrument (Becton Dickinson, USA) equipped with an argon-ion laser excitation at 488 nm in the Flow Cytometry Laboratory, Institute of Biology and Ecology, P. J. Šafárik University, Košice. Sample preparations were carried out in a two-step procedure (Otto, 1990; Doležel and Göhde, 1995). Approximately 1 cm² of leaf tissues from both the sample and the reference internal standard were ground together for about 30 s in a Petri dish containing 1 ml of ice-cold Otto I buffer (4.2 g citric acid monohydrate + 1 mL 0.5 % Tween 20 adjusted to 200 mL and filtered through a 42- μ m filter). Filtration through a 42- μ m nylon mesh was followed by centrifugation at 150 g for 5 min. The supernatant was removed and 100 μ L of fresh Otto I buffer was added. The nuclei in the pellet were resuspended and stored for 30 min at room temperature for incubation. For DNA staining 1 mL of Otto II buffer (0.4 M disodium hydrogenphosphate dodecahydrate) including 50 μ L of propidium iodide, 50 μ L ribonuclease, 2 μ L mercaptoethanol (FACSCalibur, Becton Dickinson) or DAPI (4',6-diamidino-2-phenylindole) at a concentration of 4 μ g ml⁻¹ (PA II flow cytometer, Partec GmbH) was used. The clones of previously cytologically studied diploid ($2n = 2x = 18$) plants of *Pilosella lactucella* (Wallr.) P. D. Sell & C. West (Rotreklová *et al.*, 2002, 2005) were used as an internal reference standard for the relative DNA content measurements. Moreover, one tetraploid and several pentaploid and hexaploid plants of *P. officinarum* with known chromosome numbers were used in separate and mixed flow cytometry analysis to determine the exact position of peaks of known polyploids in relation to the diploid standard peak (Fig. 1). Histograms were accumulated at a flow rate of about 20–50 particles per second for a total count of 3000–5000 nuclei. The resulting values were expressed as a peak ratio, which is a ratio of the mean position of the G₀/G₁ peak in the DNA histogram of the tested plant

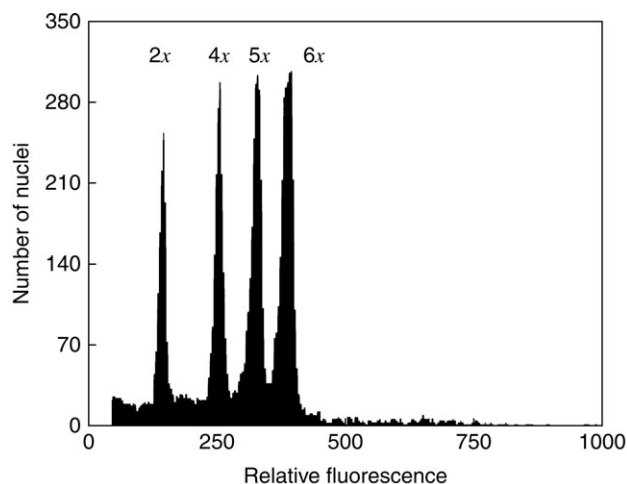


FIG. 1. Histogram of relative DNA content of DAPI-stained nuclei from a diploid plant of *Pilosella lactucella* (2x) used as a reference plant, with tetraploid (4x), pentaploid (5x) and hexaploid (6x) plants of *Pilosella officinarum*.

to the mean position of the G_0/G_1 peak in the histogram of the reference plant.

Maps

The distribution maps of cytotypes/ploidy levels in the Czech Republic and Slovakia are based on the co-ordinates determined by a GPS receiver, or found *ex post facto* from the tourist maps at a scale of 1 : 50 000 (usually old literature data). For most references from Europe for which the appropriate geographical co-ordinates were not given in original sources, the geographical position of collecting sites was estimated using *Microsoft Encarta World Atlas* (1998 Edition) and GeoNet Name Server (<http://gnswww.nga.mil/geonames/GNS/index.jsp>; accessed in December 2005). However, for approx. 10 % of references, estimation of co-ordinates failed (marked by an asterisk in Supplementary Information 3, available online) usually due to the absence of the name of the nearest village/town, or the existence of two or more villages/towns with the same name. Most of the chromosome numbers of the plants from the British Isles were obtained from the online version of Cytological database of the Botanical Society of the British Isles (accessed in February 2005). Distributional maps were prepared using distribution mapping software DMAP (Morton, 2004).

Statistical analysis

One-way analysis of variance (ANOVA) and Tukey's pairwise comparison (using Minitab for Windows Release 11) were applied to determine the significance ($P < 0.05$) of the difference in the altitudinal distribution between pentaploid, hexaploid and mixed populations in the West Carpathians and adjacent Pannonia (Slovakia and the eastern part of the Czech Republic).

RESULTS

Ploidy level distribution in the Czech Republic and Slovakia

The DNA-ploidy levels and/or chromosome numbers were detected for 1059 plants sampled at 336 localities throughout the Czech Republic and Slovakia. Some plants were sampled also in north-eastern Hungary, along the Slovak–Hungarian state border. In total, 1055 plants were analysed by flow cytometric analysis. For eight plants the ploidy level was found using two approaches – by classical counting and by flow cytometry – while another four plants were counted only (cf. Supplementary Information 1, available online).

Altogether, four ploidy levels, tetra-, penta-, hexa- and heptaploid, were revealed in the area on which the study focused. The tetraploid level (4x; altogether 426 plants which represent 40.2 % of all plants analysed) was found to be the most common, followed by pentaploid (5x; 389 plants, 36.7 %) and hexaploid (6x; 241 plants, 22.8 %). Three heptaploid plants (7x) were discovered in a mixed population with one pentaploid plant at only one site in western Slovakia (Fig. 2). The record of heptaploid ploidy level is the first for *P. officinarum* in the territory of the Western Carpathians. The effort made to determine the chromosome number of heptaploid plants was not successful (the plants died), thus the new ploidy level should be considered merely as a DNA-ploidy level, i.e. not based on an exact chromosome count. Estimations of ploidy levels given for the plants from the Hungarian part of the Western Carpathians are the first records of ploidy level for *P. officinarum* for this area. In 32 localities out of 302 (10.6 %), from which at least two plants were analysed, mixed populations consisting of two different ploidies were found.

The distribution of ploidy levels in the Czech Republic is not proportional to that in Slovakia. While tetraploids are the most widespread in the Czech Republic, specifically in its western part, penta- and hexaploids predominated in Slovakia and in the eastern part of the Czech Republic (Fig. 2). The boundary between a common occurrence of the tetraploid cytotype and higher ploidies is very conspicuous and corresponds well with the natural geological and geomorphological boundary between the Bohemian Massif and the Western Carpathians with the adjacent Pannonian Plain (Král, 1999). If the proportion of the particular ploidy level for each geographic region is taken into account separately, i.e. the Bohemian Massif on one hand and the Western Carpathians with Pannonia on the other, then the differences are very striking (Fig. 3).

Apart from latitudinal differentiation in ploidy level distribution in the Czech Republic and Slovakia, a statistically significant difference was also found between the proportion of pentaploids and hexaploids across the altitudes in the territory of the Western Carpathians and adjacent Pannonia (Slovakia, north-east Hungary and the eastern part of the Czech Republic) (Table 2). Generally, pure hexaploid populations tend to occur at lower elevations (usually below 500 m), while the pentaploids are very common above 500 m a.s.l. Mixed populations consisting

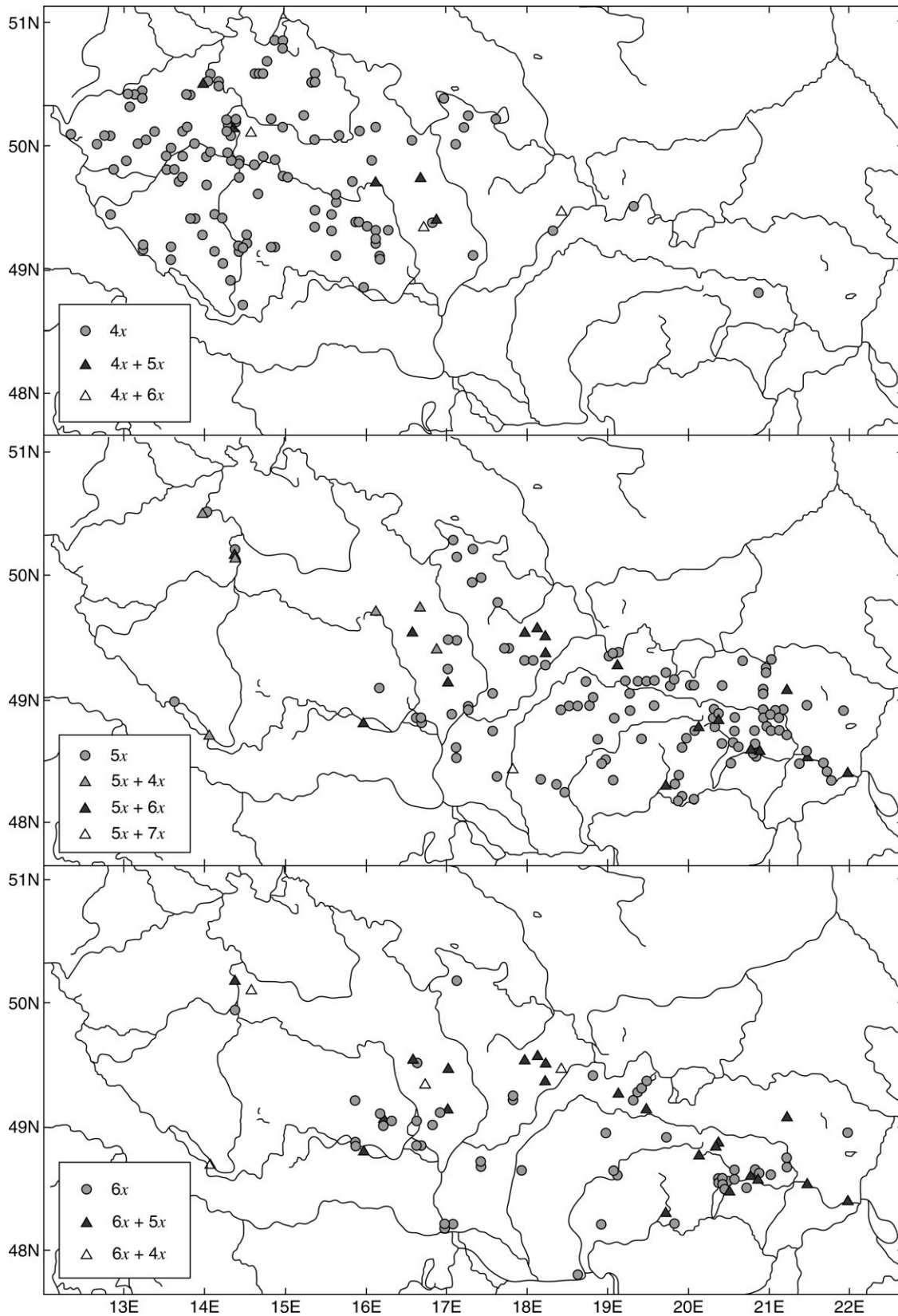


FIG. 2. Distribution of ploidy levels of *Pilosella officinarum* in the Czech Republic, Slovakia and north-east part of Hungary based on present data.

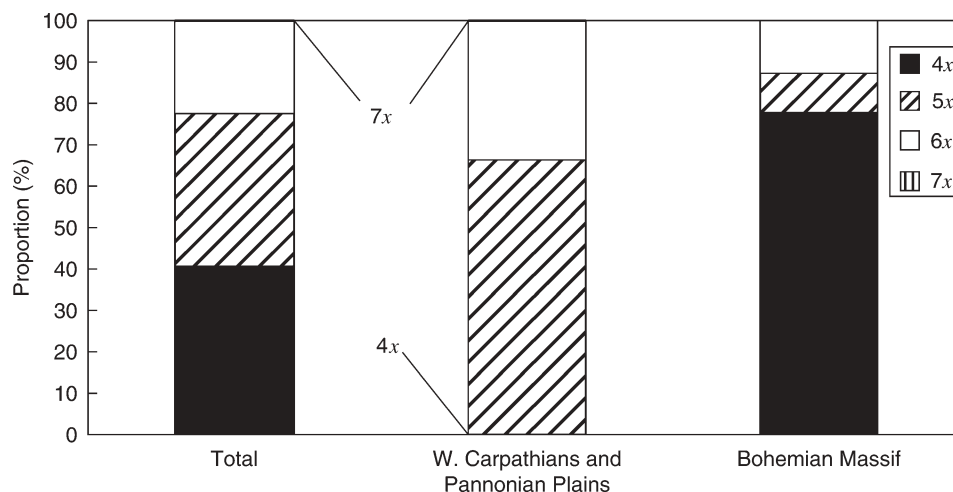


FIG. 3. Proportions of the ploidy level of *Pilosella officinarum* in the Czech Republic, north-east Hungary and Slovakia based on present data, expressed as a portion of plants of a particular ploidy level compared with the total plants analysed. The proportions over the whole area studied are given (total), together with the proportions found in two different geomorphological regions – the Bohemian Massif and the Western Carpathians with the adjacent part of Pannonia.

of two different ploidy levels were found relatively evenly along the altitudinal gradient up to 1000 m (Fig. 4).

General pattern of ploidy level distribution in Europe

Pilosella officinarum is the European taxon most examined by karyology. Chromosome numbers were counted in plants originating from 655 localities, excluding present data, across the whole continent (refer to Supplementary Information 3, available online, and Table 1). It was possible to localize geographically nearly 600 sites (Fig. 5). The most common cytotype, tetraploid (without present data), was reported in 284 localities (43 %), followed by pentaploid found at 257 collecting sites (40 %). The hexaploid ploidy level is obviously rarer, i.e. detected in 74 cases (11 %). Mixed populations consisting of two or more different cytotypes were found on 40 sites (6 %). However, in most publications the number of plants analysed per population was not given and therefore the proportion of mixed populations would

be probably higher if only populations with at least two or more analysed plants per locality were taken in consideration. Tetraploids are distributed mostly in western Europe and the western part of central Europe, being the only cytotype detected in Denmark and Germany. It prevails considerably in the Netherlands (82 %), Poland (71 %) and France (65 %). The pentaploids have two main centres of distribution: at high latitudes in northern Europe (Sweden, 70 %; the British Isles, 64 %) and in major orophytic systems in Europe – the Alps (30 %) and the Carpathian Mountains with the adjacent part of Pannonia (present data for the Western Carpathians indicate 66 % of pentaploids). The predominant ploidy level in the Alps is hexaploid (59 %, in Switzerland even 84 %). The records on diploids and heptaploids are extremely scarce. The former

TABLE 2. Means and standard deviations of altitudes of pure pentaploid (5x), pure hexaploid (6x) and mixed populations (5x + 6x) of *Pilosella officinarum* in the Western Carpathians and adjacent part of Pannonia

Ploidy level	N	$X \pm \text{s.d.}$
5x	86	546 ± 292^a
6x	40	370 ± 189^b
5x + 6x	21	513 ± 253^{ab}

Only populations with two or more analysed plants were included. The tetraploids and heptaploids were, according to their comparatively low abundance, excluded from this analysis. Altitudinal ranges and means are given in metres above sea level. N, Total number of populations; X, mean; s.d., standard deviation. Means in columns sharing the same superscript letters are not significantly different (Tukey's pairwise comparisons, $P = 0.003$, $F = 6.19$).

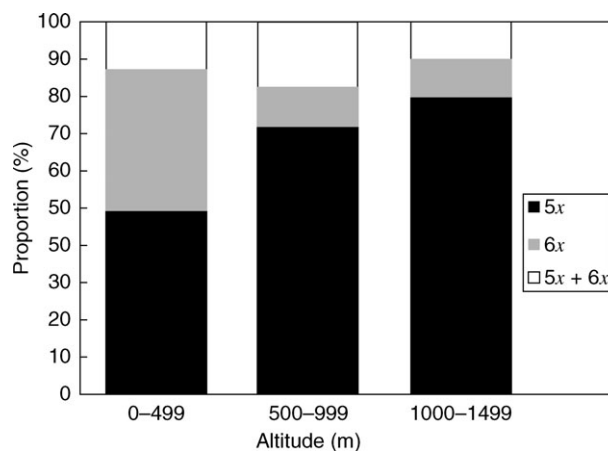


FIG. 4. Proportions of pure pentaploid (5x), pure hexaploid (6x) and mixed populations (5x + 6x) of *Pilosella officinarum* found at different altitudinal ranges in the Western Carpathians and the adjacent part of Pannonia, expressed as a number of populations of the particular ploidy level compared with the total number of populations analysed in the particular altitudinal range.

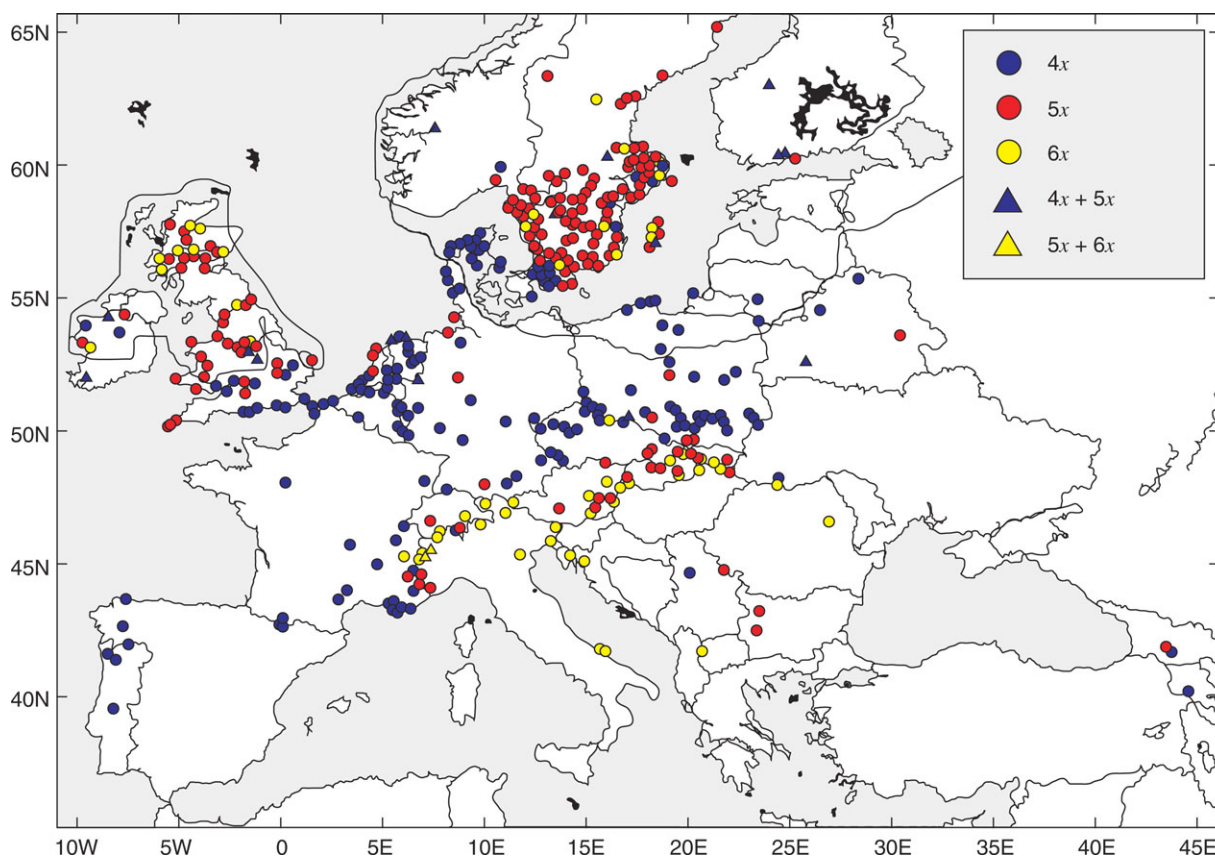


FIG. 5. Cytotype distribution of *Pilosella officinarum* in Europe (based on data from Supplementary Information 2–4, available online; present data from the Czech Republic, Slovakia and Hungary are not included). The rare heptaploid level and rare mixed cytotypic combinations are not given in the map. The bold black line indicates the boundary of Last Glacial Maximum in northern Europe according to Adams (1997).

were found only in the south-west Alps (but see Discussion), the latter mostly in northern and central Europe (Sweden, Netherlands and the Czech Republic; heptaploids are not included in Fig. 5). The new data from 18 European localities confirm this general pattern: Bulgaria 4x, 5x and 6x; Georgia 4x and 5x; Ireland 5x and 6x; Italy 6x; Romania 5x, 6x and mixed 5x + 6x; Ukraine 6x (cf. Table 1 and Supplementary Information 4, available online).

DISCUSSION

Ploidy level distribution in the Czech Republic and Slovakia

According to the results of the present research, the tetraploids strongly prevail in the western part of the Czech Republic, while the pentaploids and hexaploids represent two main cytotypes in Slovakia and the eastern part of the Czech Republic. This corresponds well with scattered data published in previous studies, with the exception of the tetraploids. Our results contradict the data published by Píšťanský and Mičieta (2000), who reported a significant predominance of tetraploid populations in the Western Carpathians, but only a rare occurrence of pentaploid and hexaploid plants (cf. Supplementary Information 2, available online). As preliminary results did not confirm any common occurrence of tetraploids in Slovakia

(Šingliarová and Mráz, 2004), in 2004 five localities were visited from which the tetraploids were published by Píšťanský and Mičieta (2000). However, no tetraploid was detected in any of them. Based on these observations, all data of Píšťanský and Mičieta (2000) were considered as dubious.

The present study revealed a new heptaploid ploidy level in *P. officinarum* in the territory of the Western Carpathians. So far, the heptaploids had been detected only in three localities in Sweden (Turesson and Turesson, 1960), in one site in the Netherlands (Gadella, 1984) and one plant in a population of hexaploid plants near Prague in the Czech Republic (Košťálová, 2004). In the Western Carpathians locality, from four analysed plants three were heptaploid and only one pentaploid. Although pentaploids reproduce the most often via aposporic apomixis, there are some data on facultative apomixis (Turesson and Turesson, 1960; Turesson, 1972) or even full sexuality (Krahulcová *et al.*, 2000; Rotreklová *et al.*, 2002). Moreover, apomictic pentaploids usually produce 2x to 3x pollen grains (Gadella, 1987; Krahulcová and Krahulec, 2000). A possible explanation of an increased ploidy level may be the fusion of reduced and unreduced gametes, as was suggested in the case of a large Dutch heptaploid population situated between two localities – the first occupied by tetra- and the second by pentaploid plants (Gadella, 1988).

A sympatry of two ploidy levels within one population was confirmed in nearly 11 % of populations. The presence of cytotype mixtures is pronounced especially in the Western Carpathians (16.4 %), whereas in the Bohemian Massif a co-occurrence of different ploidy levels is rarer (5.9 %) and confined only to the warmest regions in relict river valleys or in the zone adjacent to the Western Carpathians and the Pannonian Plain. Higher numbers of mixed populations in the Western Carpathians might be explained by a high presence of two different ploidy levels ($5x$ and $6x$) in this territory. However, this is not the case for the Bohemian Massif which has only one completely dominating tetraploid cytotype. Whether the presence of mixed cytotypes is mainly due to the more or less stochastic co-existence of different clones with different ploidy levels or to the local formation from one dominant ploidy level is yet unknown. Undoubtedly, the production of fully or partially reduced or unreduced gametes and gene flow between plants in the locality may contribute to the presence of a cytotype mixture in populations (cf. Krahulcová *et al.*, 2000). Mixed cytotype populations were found previously also in other parts of Europe in 37 localities (cf. Supplementary Information 3, available online), as well as in the Western Carpathians (Skalińska, 1967).

Surprisingly, the boundary between a common occurrence of tetraploids and higher ploids of *P. officinarum* is rather sharp and corresponds well to the natural boundary of two geomorphological units: the Western Carpathians with the adjacent Pannonian Plain and the Bohemian Massif. From the cytological point of view, a similar boundary between two cytotypes of *P. bauhini* was recorded by Rotreklová (2004), albeit, with the reverse pattern in comparison with *P. officinarum*. The tetraploids of *P. bauhini* are more frequent in Slovakia and Hungary and rare in the Czech Republic, Poland or Germany. On the other hand, pentaploid populations prevail in the Czech Republic and Germany. The border between Hercynian (including the Bohemian Massif) and Carpathian regions seems to be an important biogeographic boundary in central Europe as is also seen in the distribution patterns of many plant species. There is a whole set of species reaching this border from the east, from the Carpathian Mountains, e.g. *Cardamine glandulosa*, *Dianthus latifolius*, *Euphorbia serrulata*, *Galium rivale*, *Luzula luzulina*, *Salvia glutinosa* *etc.* (Hendrych, 1987). On the contrary, some species have migrated eastwards but did not enter, or only rarely, the Carpathian Mountains, like *Campanula rotundifolia s.str.* (Kovanda, 1977) and *Cirsium heterophyllum*. Such strong cytological and chorological differentiation between neighbouring geomorphological regions is difficult to explain. Differences in floristic composition suggest that historical processes, such as migration and expansion from different refugial areas using various migration corridors, might have played an important role (see also below). Moreover, the mountainous areas of the Bohemian Massif and the Western Carpathians are separated from each other by the north-west part of the Pannonian Plain (the Intra-Carpathian Basin) and so-called rather narrow Moravia gate, connecting the Pannonian lowland with lowlands of Silesia, Poland. This natural geographic and climatic

barrier might have contributed to the different floristic and cytological patterns of these regions.

A significant difference in the proportion of penta- and hexaploid populations across altitude was found within the Western Carpathians and adjacent Pannonia. While pentaploids are more or less evenly present up to 1000 m, the hexaploids usually grow in regions with a warmer climate, usually below 500 m a.s.l. However, there are several regional deviations. Prevailing populations of the pentaploid level are present in the Zemplínske vrchy Mountains (south-east Slovakia) belonging to the warmest region of the Western Carpathians situated in the neighbouring zone with the Pannonian Plain. On the other hand, several hexaploid populations were recorded at a high elevation with a cold and humid climate in the Oravská Magura Mountains. In the Bohemian Massif, rare penta- and hexaploids or mixed populations are confined mostly to the warm, low-elevated, regions, such as river valleys, or to the adjacent zone with the Pannonian Plain (Fig. 2). One hexaploid population was found on the top of the Hrubý Jeseník Mountains (eastern part of the Sudetes range, Czech Republic). It seems that there are at least two hexaploid types in the area studied, differing in distribution and breeding systems (T. Urfus, unpubl. res.). The first one is confined mostly to thermophilous vegetation in the Carpathian Mountains and has an apomictic breeding system; it is probably related to apomictic hexaploids occurring throughout the Carpathian Mountains to the Balkan. The second hexaploid type is confined to relict river valleys in the Bohemian Massif and is sexual; this type is probably related to sexual hexaploids of the Alps (Gadella, 1984).

Amphidiploid origin of Pilosella officinarum?

Diploids of *P. officinarum* that are considered to have a relict distribution were found by Delcourt (1972) and by Gadella (1972) only in the south-western Alps. However, 16 records of data from the French Alps published by the former author were doubted later due to mis-identification as a closely related but different diploid species from the section *Pilosellina* – *P. peleteriana* (Gadella, 1984). Nevertheless, two diploid plants of *P. officinarum* counted by Gadella might belong to this species, as it is obvious from the photograph of these plants (Gadella, 1972: 362). These diploids originating from a very widely defined locality ‘the valley of Aosta’ (north-west Italy) have long stolons with decreasing leaf size towards the stolon apex. On the other hand, these plants could also represent the hybrids between true *P. officinarum* and some diploid taxon from *P. section Pilosellina*. These questionable data on existence of diploids of *P. officinarum* may suggest that a well-established diploid cytotype within *P. officinarum* does not really exist in nature. Another fact supports this hypothesis: most of the diploid species of *Pilosella* that had been counted up to the present, including the closely related taxa from the section *Pilosellina*, have been found usually in several if not many localities and occupied much wider ranges (e.g. Zahn, 1921–1923; Bräutigam, 1992; Schuhwerk, 1996). Moreover, polyploidy

in diploid taxa of section *Pilosellina* is either unknown or very scattered records of polyploids might be regarded as mis-identifications with *P. officinarum* or interspecific hybrids. The almost exclusive presence of polyploid populations with the tetraploid ones being the commonest leads to the hypothesis that *P. officinarum* is likely to be an amphidiploid species originated from one or more crosses between diploid members of section *Pilosellina*. Both place and time of this hybridization are difficult to estimate. Analysis of ITS sequences showed low differentiation between diploid taxa (Fehrer *et al.*, 2007a), which suggests a relatively low age of the particular members of this group. With respect to chloroplast haplotypes, diploid members of the section *Pilosellina* share both main types. *Pilosella hoppeana*, *P. macrantha* and *P. peleteriana* share the haplotype typical of steppe and mountain species such as *P. onegensis*, *P. alpicola*, *P. glacialis*, *P. echioides*, etc., i.e. those species, which occurred together during the Glacial Period in steppic and tundra-like habitats in the area of central Europe. The other diploids confined to southern Europe (*P. castellana*, *P. argyrocoma* and *P. pseudopilosella*) share the haplotype with *P. lactucella*, *P. vahlii* and *P. breviscapa* (Fehrer *et al.*, 2007a). Central European populations of *P. officinarum* exhibit the same haplotype as *P. hoppeana* and *P. macrantha* (Krahulec *et al.*, 2004, Fehrer *et al.*, 2007a, b). The close relationship of diploid *P. peleteriana* and *P. officinarum* has been proven by an allozyme pattern observed in the plants originating from Scandinavia (Tyler, 2005). The possible polyphyletic and polytopic origin of polyploid populations of *P. officinarum* is supported by its enormous morphological variation. Zahn, a monographer of the genus, distinguished about 600 subspecies (Zahn, 1921–1923, 1922–1930). Morphologically, the tetraploid plants of *P. officinarum* found recently in Bulgaria resemble hybrids between hexaploid *P. officinarum* and diploid *P. macrantha*. To understand the origin of *P. officinarum* it is necessary to know more about the detailed distribution of haplotypes in the whole distribution area of *P. officinarum* and its diploid relatives. Recently Trewick *et al.* (2004) included several plants from their natural European range of distribution in their study on the origin of the introduction of *P. officinarum* into New Zealand. They found a mixed distribution of two common chloroplast haplotypes with no clear geographic pattern. However, three rare haplotypes were distributed mainly in the Alps, Sudeten Mountains, the Carpathian Mountains and Finland.

General pattern of ploidy level distribution in Europe and its relationship with polyploidy and apomixis

Gadella (1984, 1987, 1991) studied the distribution of particular cytotypes of *P. officinarum* in Europe and tried to explain its pattern. The revision presented in this paper (Fig. 5) showed that this pattern is more complex and fine grained (as was shown in the area of the Slovak and Czech Republics) than that suggested by Gadella. Despite the fact that *P. officinarum* is the most karyologically studied vascular plant species, it is realized that the

published data cover only some parts of its natural distribution range sufficiently (western, central and northern Europe). Large areas in southern, south-eastern and eastern Europe have scarce or almost no data.

In total, four different cytotypes of *P. officinarum* were found in Europe (see Table 1 and Fig. 5). The records on diploids are highly questionable (see above). The most common ploidy levels are 4x, 5x and 6x. The range of sexual tetraploid cytotypes clearly separates the higher ploidy levels (5x and 6x) into two groups occurring in geographically different regions – into northern Europe and the mountains of central and south-east Europe (the Alps and the Carpathian Mountains, mountains in Bulgaria). Such a pattern of ploidy level distribution suggests an independent origin of penta- and hexaploids. Concerning the results from the Czech Republic and Slovakia, it seems that they match the general pattern in central Europe. While the prevailing tetraploid cytotype in the Bohemian Massif shows linkage to the tetraploid populations in the western part of central Europe, penta- and hexaploid populations in the Western Carpathians and the Pannonian Plain are likely to be related to the high ploids found in the Alps and in the Balkans (cf. Fig. 5).

It was hypothesized that the prevailing occurrence of high ploids (5x and 6x) correlates with either high latitudes or high altitudes and that their common distribution in northern Europe and in the Alps may be the result of the last Pleistocene glaciation (Gadella, 1984, 1987, 1991). The detailed map given in Fig. 5 shows that the tetraploid level is confined to western Europe and the western part of central Europe and that it has a sub-Atlantic distribution character. Northwards, sexual tetraploids are rare or completely missing and they are replaced by apomictically reproducing penta- and hexaploids (cf. Turesson and Turesson, 1960). The boundary of tetraploids and high ploids matches well with the border of the ice-sheet during the Last Glacial Maximum (cf. Adams, 1997) in the British Isles and it is very close to this geographic position in Scandinavia. Interestingly, the same pattern of cytotype distribution was found in *Parnassia palustris* L. (Parnassiaceae), where the boundary between diploids and tetraploids more or less correlates with the limit of Last Glacial Maximum (Gornall and Wentworth, 1993; Borgen and Hultgård, 2003). It therefore seems that the relationship between the presence of high ploidy apomictic plants (5x and 6x) in northern Europe and glaciations might have a real basis and suggests evolutionary advantages of polyploidy associated with apomixis in the colonization of deglaciated areas in Scandinavia (cf. Asker and Jerling 1992). Merxmüller (1975) pointed out that diploid, sexually reproducing taxa of the closely related genera *Hieracium* and *Pilosella* are mostly confined to the southern latitudes, while there was a tendency for polyploids, mostly apomictic species, to prevail in northerly situated regions. Such geographically limited parthenogenesis is known also in other sexual–apomictic genera and was summarized by Bierzychudek (1985) (for thorough recent revision on complex causality of geographical parthenogenesis, see Hörandl, 2006). The diploid members of section *Pilosellina* have a more restrained range of distribution in

comparison with polyploid *P. officinarum* and are confined mostly to southern and central Europe (see Introduction). This recalls the situation of several other groups of polyploid vascular plants associated with apomixis, e.g. *Antennaria* L. (Bayer and Stebbins 1987), *Ranunculus auricomus* group (Hörandl, 2006) and *Taraxacum* (den Nijs *et al.* 1990), where polyploid apomicts tend to have larger ranges than sexuals. In the present case, the colonizing success of *P. officinarum* might be attributed to the combinations of different factors, such as its probable allopolyploid origin (see above), increased heterozygosity and the existence of a high number of genetically different clones, the presence of an apomictic mode of reproduction in high ploids (5x and 6x) with the occurrence of residual sexuality, vegetative reproduction via above-ground stolons, the possibility of long-distance dispersal via achenes with a pappus, and the opportunity of recurrent formation of novel genotypes via hybridization. It is possible that all these factors have played an important role in shaping the present cytogeographic patterns of *P. officinarum*.

SUPPLEMENTARY INFORMATION

Supplementary information is available online at www.aob.oxfordjournals.org and contains the lists of *Pilosella officinarum* localities accompanied by geographical co-ordinates, ploidy levels and/or chromosome numbers (and references) for data (1) presented in this study for the areas of the Czech Republic, Slovakia and Hungary; (2) for previously reported data from the Czech Republic and Slovakia; (3) for previously published data from the rest of European area; and (4) for new data from Europe outside of Slovakia, Czech Republic and Hungary.

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SUPPLEMENTARY INFORMATION 1

List of the localities of *Pilosella officinarum* investigated by flow cytometric analyses or karyologically in the Czech Republic, Slovakia and Hungary. Number/abbreviation under which the plant was cultivated or collected is given in the first column. Abbreviations used: Sk = Slovakia, Hu = Hungary, Cz = Czech Republic, TU = Tomáš Urfus, BŠ = Barbora Šingliarová, PM = Patrik Mráz, VM = Viera Mrázová, DB = Drahoš Blanár, KC = Kateřina Čiháková, MD = Michal Ducháček, PL = ploidy level detected by flow cytometry. Chromosome numbers of the plants marked by ‘!’ have been previously published in Rotreklová *et al.* (2005). All Slovak and Hungarian localities belong to the Western Carpathians and/or Panonian plain. Czech localities are indicated by B.M.= Bohemian Massif or W.C. = Western Carpathians.

Number	PL	2n	Locality	Latitude, longitude
886		36	Sk, Volovské vrchy Mts, village of Prakovce, <i>loco dicto</i> Hutno, rocks, 400 m a.s.l., PM, 19 November 2000	N 48°48'48.24'', E 20°53'53.16''
871		4x 36	Sk, Javorníky Mts, Mt Malý Javorník, 1018 m a.s.l., PM & VM, 14 October 2000	N 49°18'24'', E 18°18'15''
923		4x	Sk, Oravské Beskydy Mts, Mt Pilsko, near the path from the village of Sihelné, 1250 m a.s.l., PM, August 2000	N 49°31'34'', E 19°20'31''
1463, 1464, 1465		5x	Sk, Juhoslovenská kotlina basin, village of Ožďany, slope above the road in S part of the village, 272 m a.s.l., PM & BŠ, 1 June 2004	N 48°22'33.4'', E 19°53'56.8''
1467, 1468, 1469, 1470, 1471		5x	Sk, Juhoslovenská kotlina basin, village of Šávoľ, pasture, 251 m a.s.l., PM & BŠ, 1 June 2004	N 48°18'06'', E 19°49'30''
1473, 1474, 1475, 1476		5x	Sk, Cerová vrchovina Mts, village of Šurice, pasture ca 300 m SE of Soví hrad castle, 171 m a.s.l., PM & BŠ, 1 June 2004	N 48°13'31.5'', E 19°55'00''
1477		5x	Hu, Cserhát Mts, Somosko castle, S slope, 405 m a.s.l., PM & BŠ, 1 June 2004	N 48°10'19.7'', E 19°51'28.5''
957		5x	Sk, Slovenský kras Mts, village of Silica, ca 4.5 km NE of Mt Delené (500.7), 480 m a.s.l., PM, 13 June 2001	N 48°34'47'', E 20°31'02''
1323, 1324, 1325		5x	Sk, Slovenský kras Mts, Plešivecká planina plateau, Mt Veľký vrch, 721 m a.s.l., coll. PM, 5 June 2003	N 48°38'39'', E 20°26'09''
1328, 1329, 1330		5x	Sk, Slovenský kras Mts, Plešivecká planina plateau, the margin of the road between Mt Veľký vrch and Mt Gerlašská skala, 748 m a.s.l., PM, 5 June 2003	N 48°38'58.5'', E 20°25'54.1''
1333, 1334, 1335		5x	Sk, Slovenský kras Mts, Zádielska planina plateau, 1 km SE of the elevation point 780.8, 700 m a.s.l., PM, 12 June 2003	N 48°38'38'', E 20°49'46''
1726, 1727		5x	Sk, Slovenský kras Mts, village of Lipovník, Horný vrch plateau, <i>loco dicto</i> Soroška, in the saddle, 530 m a.s.l., PM & VM, 28 August 2004	N 48°37'03'', E 20°37'57''
ZP2		5x	Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 597 m a.s.l., PM, 29 October 2004	N 48°37'58'', E 20°50'05''
947		5x	Sk, Slovenský kras Mts, village of Krásnohorské Podhradie, lower part of the castle hill “Krásna Hôrka”, W slope, 380 m a.s.l., PM, 29 May 2001	N 48°39'40'', E 20°35'51''

1191, 1192	5x	Sk, Slovenský kras Mts, village of Krásnohorské Podhradie, W slopes of the castle hill "Krásna Hôrka", 423 m a.s.l., PM, 29 May 2002	N 48°39'26'', E 20°35'55.5''
1520, 1521	5x	Sk, Borská nížina lowland, village of Studienka, fallow, 190 m a.s.l., BŠ, 3 June 2004	N 48°32'10.6'', E 17°08'03.4''
1530	5x	Sk, Borská nížina lowland, village of Studienka, ca 3 km SW of the village, margin of the road, 188 m a.s.l., BŠ, 5 June 2004	N 48°30'10'', E 17°07'01''
1596, 1597, 1598	5x	Sk, Borská nížina lowland, village of Šaštín-Stráže, <i>loco dicto</i> Gazárka, blowing sands, 191 m a.s.l., BŠ, 8 June 2004	N 48°37'51.4'', E 17°08'20''
1571, 1572, 1574, 1575	5x	Sk, Podunajská pahorkatina upland, village of Mlyňany, mowned meadow near the cemetery, 139 m a.s.l., BŠ, 7 June 2004	N 48°18'49'', E 18°21'49''
1582,	5x 45	Sk, Podunajská pahorkatina upland, village of Mochovce, slope near the road to power-station, 137 m a.s.l., BŠ, 7 June 2004	N 48°15'09'', E 18°27'19''
1581, 1583, 1584, 1585	5x		
1611, 1612, 1613	5x		
906	5x	Sk, Východoslovenská nížina lowland, village of Veľký Kamenec, Tarbucka Hill, 268 m a.s.l., PM, 16 April 2004	N 48°21'32'', E 21°47'31''
910, 909!	5x 45	Sk, Zemplínske vrchy Mts, village of Veľká Bara, former vineyards, ca 100 m N of Mt Piliš (277.6), 240 m a.s.l., PM & VM, 15 April 2001	N 48°25'47.07'', E 21°42'28.30''
914!	5x 45	Sk, Zemplínske vrchy Mts, village of Veľká Trňa, 1.5 km NNW of village, pasture, 180 m a.s.l., PM & VM, 14 April 2001	N 48°28'35.04'', E 21°40'24.53''
1541, 1542, 1543	5x	Sk, Myjavská pahorkatina upland, town of Myjava, the margin of the road, 338 m a.s.l., BŠ, 5 June 2004	N 48°45'11'', E 17°35'18''
730	5x	Sk, Malé Karpaty Mts, city of Bratislava, the areal of the Institute of Botany SAS, Dúbravská cesta No. 14, 200 m a.s.l., PM, 28 April 2000	N 48°10'21'', E 20°03'21''
1567, 1568, 1569, 1570	5x	Sk, Podunajská pahorkatina upland, village of Žirany, slope, 250 m a.s.l., BŠ, 7 June 2004	N 48°20'32.8'', E 18°10'19''
CAV1, CAV2, CAV3	5x	Sk, Strážovské vrchy Mts, village of Čavoj, ca 5 km W of the village, 511 m a.s.l., BŠ, 11 September 2004	N 48°54'00'', E 18°26'57''
CIC1, CIC2, CIC3, CIC4	5x	Sk, Strážovské vrchy Mts, village of Čičmany, rocks in the W part of the village, 655 m a.s.l., BŠ, 12 September 2004	N 48°57'03'', E 18°30'28''
889	45	Sk, Kremnické vrchy Mts, village of Lúčky, meadow near the road at the end of the village towards to the town of Kremnica, 580 m a.s.l., PM & VM, 2 January 2001	N 48°41'48.24'', E 18°53'53.16''
POL1, POL2, POL3	5x	Sk, Poľana Mts, village of Kyslinky, meadow, <i>loco dicto</i> Majerová, 700 m a.s.l., BŠ, 17 July 2003	N 48°40'11'', E 19°25'48''
CS1, CS2, CS3	5x	Sk, Štiavnické vrchy Mts, town of Banská Štiavnica, <i>loco dicto</i> Červená studňa, crossroad, the	N 48°28'38'', E 18°54'25''

HN1, HN2, HN3	5x	margins of the path, 791 m a.s.l., BŠ, 10 July 2004 Sk, Štiavnické vrchy Mts, village of Banská Belá, slope at the shore of the Halčianska nádrž reservoir, 472 m a.s.l., BŠ, 11 July 2004	N 48°28'01'', E 18°56'58''
KOZ1, KOZ2	5x	Sk, Štiavnické vrchy Mts, village of Kozelník, mouth of the Radošovo brook, 390 m a.s.l., BŠ, 11 July 2004	N 48°30'40'', E 18°58'59''
1554, 1555, 1556, 1557	5x	Sk, Krupinská planina plateau, town of Krupina, clearing, 248 m a.s.l., BŠ, 6 June 2004	N 48°21'10'', E 19°04'26''
944	5x	Sk, Volovské vrchy Mts, village of Krásnohorské Podhradie, dry meadow under Sitárka Hill, 420 m a.s.l., PM, 29 May 2001	N 48°39'39'', E 20°35'14''
878	5x	Sk, Volovské vrchy Mts, village of Smolnícka Huta, ca 0.7 km N of Mt Lastovičí vrch, forest road, 975 m a.s.l., PM, 14 October 2000	N 48°44'45.31'', E 20°48'42.53''
951, 952	5x	Sk, Volovské vrchy Mts, Jahodná, end of the ski-lift, 720 m a.s.l., PM & VM, 9 June 2001	N 48°45'41'', E 21°07'22''
JAH	5x	Sk, Volovské vrchy Mts, Jahodná, ski-lift, 720 m a.s.l., PM, 11 August 2004	N 48°45'41'', E 21°06'55''
954	5x	Sk, Volovské vrchy Mts, village of Zlatá Idka, the margins of the forest, 700 m a.s.l., PM & VM, 9 June 2001	N 48°45'01'', E 21°00'51''
958, 959!	5x 45	Sk, Volovské vrchy Mts, village of Čučma, ca 200 m SW of the top of Mt Skalisko, 1250 m a.s.l., PM & VM, 12 June 2001	N 48°44'38.4'', E 20°34'35.36''
1431, 1432	5x 45	Sk, Volovské vrchy Mts, town of Gelnica, part Turzov, 455 m a.s.l., PM, 24 August 2003	N 48°51'32.5'', E 20°54'32.5''
1433, 1434, 1435, 1436	5x 45	Sk, Revúcka vrchovina Mts, village of Brdárka, pasture NE of the village, 500 m a.s.l., PM, 26 August 2003	N 48°46'11.9'', E 20°20'13.3''
1438, 1439	5x	Sk, Volovské vrchy Mts, village of Hnilčík, part Roztoky, <i>loco dicto</i> Poľana, 735 m a.s.l., PM, 24 August 2003	N 48°51'32.4'', E 20°33'42''
1441, 1442	5x	Sk, Volovské vrchy Mts, village of Kojšov, Mt Kojšovská hoľa, the margin of the road near the Erika chalet, 1174 m a.s.l., PM, 19 September 2003	N 48°46'52.3'', E 20°58'46.8''
1458, 1459, 1460, 1462	5x	Sk, Revúcka vrchovina Mts village of Španie Pole, pasture, 353 m a.s.l., PM & BŠ, 1 June 2004	N 48°43'43.3'', E 21°13'56.7''
MARG1, MARG2, MARG3, MARG4	5x	Sk, Volovské vrchy Mts, village of Margecany, <i>loco dicto</i> Margecianska transgresia, 330 m a.s.l., PM & BŠ, 6 October 2004	N 48°53'12.7'', E 21°00'21.5''
1624, 1625, 1626	5x	Sk, Muránska planina plateau, village of Muráň, <i>loco dicto</i> Biele Vody, pasture, 475 m a.s.l., DB, 11 June 2004	N 48°44'46'', E 20°04'58''
1628, 1629, 1630, 1631	5x	Sk, Muránska planina plateau, town of Tisovec, <i>loco dicto</i> Podhrad, pasture, 475 m a.s.l., DB, 9 June 2004	N 48°40'23'', E 19°57'59''
1636, 1637, 1638, 1639, 1640	5x	Sk, Muránska planina plateau, town of Tisovec, <i>loco dicto</i> Podhrad, pasture, 470 m a.s.l., DB, 9 June 2004	N 48°37'33'', E 19°54'58''

1643, 1644	5x	Sk, Slovenský raj Mts, Veľký Sokol valley, 685 m a.s.l., BŠ, 18 June 2004	N 48°55'49.1'', E 20°20'08.6''
1645, 1649, 1652	5x	Sk, Slovenský raj Mts, another locality in Veľký Sokol valley, 685 m a.s.l., BŠ, 18 June 2004	N 48°55'26.5'', E 20°20'30.9''
1653	5x	Sk, Slovenský raj Mts, village of Dedinky, the shore of the Palcmanová Maša dam, 814 m a.s.l., BŠ, 19 June 2004	N 48°52'22.6'', E 20°21'39.8''
1670, 1672, 1674	5x	Sk, Slovenský raj Mts, village of Stratená, Stratená valley, <i>loco dicto</i> "Pod Hanisej", pasture, 900 m a.s.l., BŠ, 19 June 2004	N 48°51'24'', E 20°18'42''
928	45	Sk, Čierna hora Mts, city of Košice, Podhradová, grass-plot near road to the village of Kavečany, 236 m a.s.l., PM, 20 May 2001	N 48°44'44.02'', E 21°14'43.01''
1443, 1444, 1445, 1446	5x	Sk, Čierna hora Mts, the margin of the road to Mt Sivec, 400 m a.s.l., BŠ, 18 May 2004	N 48°51'54'', E 21°06'07''
LAC1, LAC2, LAC4	5x	Sk, Branisko Mts, village of Lačnov, 625 m a.s.l., PM & BŠ, 6 October 2004	N 49°04'04.3'', E 20°55'47''
KLUK1, KLUK2, KLUK3, KLUK4	5x	Sk, Šarišská vrchovina Mts, village of Kluknava, 428 m a.s.l., PM & BŠ, 6 October 2004	N 48°55'26.6'', E 20°55'58.08''
LIP1, LIP2, LIP3	5x	Sk, Branisko Mts, village of Lipovce, 587 m a.s.l., PM & BŠ, 6 October 2004	N 49°03'17'', E 20°56'40''
VIT2, VIT3, VIT4	5x	Sk, Šarišská vrchovina Mts, village of Vítaz, 455 m a.s.l., PM & BŠ, 6 October 2004	N 48°54'48.1'', E 21°05'07.4''
1721, 1722, 1723, 1724	5x	Sk, Slanské vrchy Mts, vilage of Kalša, E shore of the Izra lake, 437 m a.s.l., PM, 21 October 2004	N 48°34'13'', E 21°29'42''
ZB1, ZB2, ZB3	5x	Sk, Slanské vrchy Mts, village of Zlatá Baňa, Pusté pole saddle, 650 m a.s.l., PM & BŠ, 6 October 2004	N 48°57'15'', E 21°27'12'',
926!	5x 45	Sk, Vihorlat Mts, village of Jasenov, ca 0.5 km NE of the village, pasture, 150 m a.s.l., PM, 13 May 2001	N 48°54'14.71'', E 21°54'36.57''
F1, F2, F3, F4	5x	Sk, Malá Fatra Mts, village of Fačkov, Fačkovské sedlo saddle, the margin of the path, 802 m a.s.l., BŠ, 3 August 2003	N 48°57'48'', E 18°36'48''
KPZ1, KPZ2, KPZ3, KPZ4	5x	Sk, Malá Fatra Mts, village of Kláštor pod Znievom, slope in the spruce forest, 570 m a.s.l., BŠ, 11 September 2004	N 48°57'54'', E 18°47'41''
RT1, RT2, RT3	5x	Sk, Malá Fatra Mts, village of Rajecké Teplice, part "Poluvsie", margin of the road to the city of Žilina, 450 m a.s.l, BŠ, 12 September 2004	N 49°57'49'', E 18°42'55''
VAL1, VAL2, VAL3	5x	Sk, Malá Fatra Mts, village of Valča, Valčianska dolina valley, dry slope under the pine forest, 510 m a.s.l., BŠ, 11 September 2004	N 49°01'25'', E 18°48'33''
1370, 1371, 1372, 1373	5x	Sk, Veľká Fatra Mts, town of Ružomberok, <i>loco dicto</i> Baničné, margin of the road, 495 m a.s.l., BŠ, 9 July 2003	N 49°03'46'', E 19°17'33''
1374, 1375, 1376	5x	Sk, Veľká Fatra Mts, town of Ružomberok, <i>loco dicto</i> Baničné, rocks, 500 m a.s.l., BŠ, 9 July 2003	N 49°03'45'', E 19°16'35''
TUR1, TUR2,	5x	Sk, Veľká Fatra Mts, village of Turecká, meadow, ski-lift, 805 m a.s.l., BŠ, 11 July 2004	N 48°51'30'', E 19°05'42''

TUR3, TUR4					
1391, 1392, 1393	5x		Sk, Veľká Fatra Mts, village of Žaškov, near the forest road ca 3 km SE of the village, 595 m a.s.l., BŠ, 27 June 2003	N 49°09'56'', E 19°12'00''	
1381, 1382, 1383	5x		Sk, Chočské vrchy Mts, village of Valaská Dubová, Mt Veľký Choč, <i>loco dicto</i> Stredná poľana, the meadow in the spruce forest, 1260 m a.s.l., BŠ, 29 June 2003	N 49°09'04'', E 19°19'43''	
LUC1, LUC2, LUC3	5x		Sk, Chočské vrchy Mts, village of Lúčky, slope near the road to the village of Malatiná, 620 m a.s.l., BŠ, 13 July 2004	N 49°08'19'', E 19°23'22''	
JAS1, JAS2	5x		Sk, Nízke Tatry Mts, Demänovská dolina valley, tourist centre Jasná, margin of the path, 1320 m a.s.l., BŠ, 14 July 2004	N 48°57'52'', E 19°35'17''	
KOR1, KOR2, KOR3, KOR4	5x		Sk, Nízke Tatry Mts, village of Korytnica, meadow in the Malá Krivá valley, 800 m a.s.l., BŠ, 11 July 2004	N 48°54'07'', E 19°16'30''	
972	45		Sk, Západné Tatry Mts, Račkova dolina valley, crossroad of the road and brook, 1143 m a.s., VM, 18 June 2001	N 49°09'36.15'', E 19°48'29.30''	
976	5x		Sk, Západné Tatry Mts, village of Pribylina, pasture near the river of Belá, Kokavský most bridge, 800 m a.s.l., VM, 20 June 2001	N 49°06'21'', E 20°25'04''	
979	5x		Sk, Západné Tatry Mts, Račkova dolina valley, meadow near the chalet of the Agriculture	N 49°07'57.04'', E 19°46'59.55''	
978!	45		University of Nitra, 940 m a.s.l., VM, 18 June 2001		
1385, 1386, 1387	5x		Sk, Západné Tatry Mts, village of Zuberec, Roháčska dolina valley, the margins of the road to the Ťatliakova chata chalet, 1250 m a.s.l., BŠ, 6 July 2003	N 49°12'36'', E 19°44'47''	
1388, 1389, 1390	5x		Sk, Západné Tatry Mts, village of Zuberec, Roháčska dolina valley, the margin of the road ca 20 m from the parking place, 1200 m a.s.l., BŠ, 6 July 2003	N 49°13'28'', E 19°43'47''	
838!	5x	45	Sk, Vysoké Tatry Mts, village of Tatranská Štrba, ca 1.5 km NW of Štrbské pleso tarn, 1400 m a.s.l., PM & VM, 7 July 2000	N 49°07'47.95'', E 20°02'26.70''	
974	5x		Sk, Vysoké Tatry Mts, Štrbské pleso tarn, near the hotel Patria, 1355 m a.s.l., VM, 19 June 2001	N 49°07'22.37'', E 20°04'09.35''	
LA1, LA2	5x		Sk, Liptovská kotlina basin, village of Liptovská Anna, forest road above the village, 690 m a.s.l., BŠ, 13 July 2004	N 49°09'22'', E 19°28'01'',	
MH1, MH2, MH3	5x		Sk, Liptovská kotlina basin, village of Liptovské Matiašovce, <i>loco dicto</i> Matiašovské háje, the margin of the spruce forest, 600 m a.s.l., BŠ, 14 July 2004	N 49°08'36'', E 19°33'51''	
869!	5x	45	Cz, Javorníky Mts, ca 0.5 km of the Portáš chalet, 900 m a.s.l., M & VM, 14 October 2000	N 49°17'47.29'', E 18°14'40.22''	
BES1, BES2, BES3, BES4	5x		Sk, Oravské Beskydy Mts, village of Oravská Lesná, Beskyd saddle, margin of the lane, 900 m a.s.l., BŠ, 4 July 2004	N 49°23'19'', E 19°07'27''	
NB1, NB2, NB3, NB5	5x		Sk, Oravské Beskydy Mts, village of Nová Bystrica, ca 0.5 km of the dam, 526 m a.s.l., BŠ, 3 July 2004	N 49°20'39'', E 19°02'31''	
VYCH1, VYCH2,	5x		Sk, Oravské Beskydy Mts, village of Vychylovka, lane near the bus-stop, 615 m a.s.l., BŠ, 3	N 49°22'23'', E 19°04'06''	

VYCH3			July 2004		
LEN1, LEN2	5x		Sk, Čergov Mts, village of Lenartov, mowned meadow near the bus-stop, 477 m a.s.l., BŠ, 10 June 2004		N 49°18'38'', E 21°00'55''
STL1, STL2, STL3	5x		Sk, Spišská Magura Mts, town of Stará Lubovňa, castle hill, meadow between pines, 710 m a.s.l., BŠ, 11 June 2004		N 49°18'48'', E 20°41'43''
LUB1, LUB2, LUB4	5x		Sk, Šarišská vrchovina Mts, village of Lubovec, 332 m a.s.l., PM & BŠ, 6 October 2004		N 48°54'53'', E 21°09'20.2''
SAK1, SAK2, SAK3	5x		Sk, Šarišská vrchovina Mts, village of Sedlice, between the villages of Klenov and Sedlice, 477 m a.s.l., PM & BŠ, 6 October 2004		N 48°54'48.1'', E 21°05'07.4''
CMM1, CMM2, CMM3	5x		Sk, Čergov Mts, village of Lenartov, Mt Malý Minčol, meadow in the spruce forest, 1054 m a.s.l., BŠ, 10 June 2004		N 49°15'39'', E 20°58'37'',
CVM1, CVM2	5x		Sk, Čergov Mts, village of Kyjov, Mt Veľký Minčol, the margin of the tourist path, 1150 m a.s.l., BŠ, 11 June 2004		N 49°13'55'', E 20°59'31''
1478, 1480	6x		Sk, Cerová vrchovina Mts, village of Radzovce, xerothermic slope with pines, 191 m a.s.l., PM & BŠ, 1 June 2004		N 48°13'07.3'', E 19°50'11.2''
932,	6x	54	Sk, Slovenský kras Mts, Plešivecká planina plateau, ca 1 km of the town of Plešivec, a margin		N 48°33'23.82'', E 20°24'37.04''
933	6x		of the road, 240 m a.s.l., PM, 30 May 2001		
935,	6x		Sk, Slovenský kras Mts, Plešivecká planina plateau, on the forest route ca 0.5 km NE from the		N 48°34'22.37'', E 20°25'09.35''
934!		54	Zbojnická priepasť chasm, 545 m a.s.l., PM, 30 May 2001		
965,	6x	54	Sk, Slovenský kras Mts, village of Silická Brezová, 0.2 km NE of Mt Delené (500,7), 490 m		N 48°32'24.20'', E 20°29'39.20''
966	6x		a.s.l., PM, 13 June 2001		
1201,	6x		Sk, Slovenský kras Mts, village of Kečovo, Silická planina plateau, xerothermic slopes on the		N 48°29'45'', E 20°29'20''
1200!		54	N margin of the village, 350 m a.s.l., PM, 30 May 2002		
1513,1514, 1515	6x		Sk, Slovenský kras Mts, village of Pašková, Koniarska planina plateau, 518 m a.s.l., PM, 8 June 2004		N 48°34'06'', E 20°22'52''
1516, 1517, 1518, 1519	6x		Sk, Slovenský kras Mts, town of Plešivec, the margin of the path to the Koniarska planina plateau, 350 m a.s.l., PM, 8 June 2004		N 48°32'56'', E 20°23'30''
ZP1	6x		Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 617 m a.s.l., PM, 29 October 2004		N 48°38'07'', E 20°49'50''
ZP3	6x		Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 591 m a.s.l., PM, 29 October 2004		N 48°37'34'', E 20°50'05''
ZP4	6x		Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 613 m a.s.l., PM, 29 October 2004		N 48°37'16'', E 20°50'18''
ZP5	6x		Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 573 m a.s.l., PM, 29 October 2004		N 48°37'07'', E 20°50'41''

1309, 1310, 1311	6x	Sk, Slovenský kras Mts, village of Krásnohorské Podhradie, castle hill Krásna Hôrka, W slope, 423 m a.s.l., PM, 14 May 2003	N 48°34'35'', E 20°35'45''
1314, 1316	6x	Sk, Rožnavská kotlina basin, W part of the village of Krásnohorské Podhradie, slope near the	N 48°39'04.5'', E 20°34'49.6''
1315	6x	road, 393 m a.s.l., PM, 16 May 2003	
BOD1, BOD3	6x	Hu, Aggteleki Karszt Mts, village of Bodvaszilás, S of the village, 157 m a.s.l., BŠ, 19 October 2004	N 48°31'43.5'', E 20°43'48''
1586, 1587, 1588, 1590	6x	Sk, Chvojnícka pahorkatina upland, town of Skalica, mowned meadow near the vineyards, 313 m a.s.l., BŠ, 8 June 2004	N 48°13'22'', E 17°03'07''
1522, 1523, 1524, 1525	6x	Sk, Malé Karpaty Mts, city of Bratislava, Mt Devínska Kobyla, meadow, 206 m a.s.l., BŠ, 5 June 2004	N 48°12'04'', E 16°58'46''
1526, 1527, 1528	6x	Sk, Malé Karpaty Mts, city of Bratislava, Mt Devínska Kobyla, sandy slope, 274 m a.s.l., BŠ, 5 June 2004	N 48°11'55.3'', E 16°58'35.5''
1544, 1545, 1546	6x	Sk, Podunajská pahorkatina upland, town of Štúrovo, ca 2 km W of the town, vineyards, 146 m a.s.l., BŠ, 6 June 2004	N 47°48'56'', E 18°38'39''
931	6x	Sk, Košická kotlina basin, village of Čečejevce, dry slope along the road, ca 1 km of the Moldavský most bridge, 210 m a.s.l., PM, 1 June 2001	N 48°36'20'', E 21°00'43''
1312, 1313	6x	Sk, Košická kotlina basin, village of Turňa nad Bodvou, 204 m a.s.l., PM, 16 May 2003	N 48°36'19'', E 20°52'26.6''
1500, 1501, 1502, 1503, 1504	6x	Sk, Košická kotlina basin, city of Košice, near the road between city of Košice and village of Pereš, 250 m a.s.l., PM, 9 June 2004	N 48°41'20'', E 21°13'24''
912	6x	Sk, Zemplínske vrchy Mts, village of Luhyňa, N slopes of Ondrejský kopec Hill, margin of oak forest, 160 m a.s.l., PM & VM, 14 April 2001	N 48°30'03.80'', E 21°38'01.37''
1599, 1601, 1602, 1603, 1604	6x	Sk, Myjavská pahorkatina upland, village of Podbranč, stone pit, 420 m a.s.l., BŠ, 8 June 2004	N 48°43'47'', E 17°26'28''
1532, 1533, 1534, 1535	6x	Sk, Malé Karpaty Mts, village of Prietrž, ca 1 km W of the village, slope near the road, 328 m a.s.l., BŠ, 5 June 2004	N 48°40'37'', E 17°26'30''
1537, 1538, 1539, 1540	6x	Sk, Malé Karpaty Mts, village of Krajné, dry slope in front of family house, 250 m a.s.l., BŠ, 5 June 2004	N 48°11'57.5'', E 16°58'40''
1591, 1592, 1593, 1594, 1595	6x	Sk, Malé Karpaty Mts, village of Záhorská Bystrica, margin of the path to the stone pit, 183 m a.s.l., BŠ, 8 June 2004	N 48°15'31.2'', E 16°59'39''
1605, 1606, 1608, 1609, 1610	6x	Sk, Považský Inovec Mts, village of Stará Lehota, xerothermic slope at the S margin of the village, 349 m a.s.l., BŠ, 8 June 2004	N 48°38'52'', E 17°56'38''
KOV1, KOV2	6x	Sk, Zvolenská kotlina basin, village of Kováčová, gravelly slope near the road between the village of Kováčová and city of Zvolen, 300 m a.s.l., BŠ, 11 July 2004	N 48°36'41'', E 19°07'23''
S1, S2	6x	Sk, Kremnické vrchy Mts, village of Sielnica, margin of the road, ca 3 km NW of the village, 400 m a.s.l., BŠ, 12 September 2003	N 48°38'20'', E 19°05'27''

1558, 1559, 1560, 1561	6x	Sk, Krupinská planina plateau, village of Dvorníky, xerothermic meadow at the end of the village, 175 m a.s.l., BŠ, 6 June 2004	N 48°12'08'', E 18°56'15''
1317, 1318, 1319, 1320, 1321, 1322	6x	Sk, Volovské vrchy Mts, city of Košice, <i>loco dicto</i> Červený breh, near the ski-lift, 362 m a.s.l., BŠ, 21 May 2003	N 48°44'23.2'', E 21°13'48.2''
ZŠ 1	6x	Sk, Vihorlat Mts, village of Zálužice, the shore of the Zemplínska Šírava dam, 200 m a.s.l., BŠ, 18 August 2003	N 48°56'32'', E 21°58'20''
GD1, GD2, GD3	6x	Sk, Veľká Fatra Mts, village of Blatnica, Gaderská dolina valley, near the road, ca 1 km NE of the castle, 610 m a.s.l., BŠ, 20 September 2003	N 48°56'53'', E 18°57'22''
1087	6x	Sk, Nízke Tatry Mts, Čertovica saddle, ca 300 m W of the saddle, 1250 m a.s.l., PM & VM, 14 July 2001	N 48°54'24'', E 19°44'07''
1377, 1378, 1379, 1380	6x	Sk, Oravská vrchovina Mts, town of Dolný Kubín, dry slope near the road, N periphery of the town, 470 m a.s.l., BŠ, 9 July 2003	N 49°12'27'', E 19°18'17''
KNK1, KNK2, KNK3, KNK4	6x	Sk, Kysucká vrchovina Mts, village of Krásno nad Kysucou, mowned meadow under the bridge, 364 m a.s.l., BŠ, 3 July 2004	N 49°24'04'', E 18°50'40''
OMI1, OMI2, OMI3	6x	Sk, Oravská Magura Mts, village of Oravský Podzámok, margin of the forest road, ca 2 km N of the village, 540 m a.s.l., BŠ, 17 July 2003	N 49°16'41'', E 19°21'03''
OMII 1, OMII 2, OMII 3, OMII 4	6x	Sk, Oravská Magura Mts, village of Babín, ca 3 km E of the village, meadow in spruce forest, 910 m a.s.l., BŠ, 17 July 2003	N 49°19'32'', E 19°25'05''
OMIII 1, OMIII 2, OMIII 3	6x	Sk, Oravská Magura Mts village of Ťapešovo, Magurka transmitter, slope near the path, 1107 m a.s.l., coll. BŠ, 17 July 2003	N 49°22'05'', E 19°29'13''
1483	5x	Sk, Juhoslovenská kotlina basin, village of Filákovské Kľačany, sunny and dry slope near the road, 130 m a.s.l., PM & BŠ, 1 June 2004	N 48°18'34.1'', E 19°42'45.7''
1481	6x		
1448, 1449	5x	Sk, Slovenský kras Mts, planina Horný vrch plateau, ca 1.5 km W of the elevation point 801.3, 780 m a.s.l., PM, 25 May 2004	N 48°37'16'', E 20°45'03''
1451	6x		
TH2	5x	Sk, Slovenský kras Mts, village of Turňa nad Bodvou, in the saddle W of the castle hill, 300 m a.s.l., PM, 1 October 2004	N 48°36'43'', E 20°52'05''
TH1	6x		
1580	5x	Sk, Podunajská pahorkatina upland, town of Hlohovec, Mt Soroš, meadow, 257 m a.s.l., BŠ, 7 June 2004	N 48°26'53.3'', E 17°49'23.7''
1577, 1578, 1579	7x		
HOS1, HOS3	5x	Sk, Bodvianska pahorkatina upland, village of Host'ovce, 174 m a.s.l., PM & BŠ, 19 October 2004	N 48°35'06.7'', E 20°51'08.2''
HOS2	6x		
904!	5x	45 Sk, Východoslovenská nížina lowland, town of Kráľovský Chlmec, Veľký kopec Hill, 260 m a.s.l., PM & VM, 17 April 2001	N 48°25'01.43'', E 21°57'44.68''
905	6x		
1453, 1454, 1455	5x	Sk, Volovské vrchy Mts, village of Rudná, elevation point 421, ca 1 km SE of the village, 421 m a.s.l., PM, 27 May 2004	N 48°29'35'', E 20°30'01''
1456	6x		
1620, 1621, 1622	5x	Sk, Stolické vrchy Mts, village of Muránska Huta, slope near the church, 695 m a.s.l., DB, 11	N 48°46'38'', E 20°06'31''

1623	6x	June 2004	
1505, 1508, 1510	5x	Sk, Volovské vrchy Mts, town of Dobšiná, Mt Dobšinský kopec, the margin of the tourist path,	N 48°50'53'', E 20°22'51''
1506, 1509	6x	890 m a.s.l., PM, 9 June 2004	
1664	5x	Sk, Slovenský raj Mts, village of Stratená, the path to the pastures "pod Hanisej", 895 m a.s.l.,	N 48°51'24'', E 20°18'42''
1667	6x	BŠ, 19 June 2004	
1687	5x	Sk, Slovenský raj Mts, village of Dedinky, planina Geravy plateau, towards to Mt Gačovská	N 48°52'35'', E 20°23'08''
1683, 1684, 1685	6x	skala, 1000 m a.s.l., PM, 20 June 2004	
TER1, TER2	5x	Sk, Malá Fatra Mts, village of Zázrivá, "Rovná hora" saddle, pasture, 700 m a.s.l., BŠ, 12	N 49°16'02'', E 19°06'18''
TER3	6x	September 2004	
1076!	45	Sk, Chočské vrchy Mts, village of Prosiek, 0.5 km N of the village, pasture, 644m a.s.l., PM, 15	N 49°09'29.9'', E 19°29'54.4''
1075	6x	July 2001	
LS3	5x	Sk, Spišsko-Šarišské medzihorie Mts, village of Hubošovce, NW slope of the Lysá stráž Hill,	N 49°05'26.6'', E 21°13'17.7''
LS1, LS2, LS4	6x	670 m a.s.l., PM & BŠ, 6 October 2004	
HGA1, HGA3, HGA4	5x	Hu, Aggteleki Karszt Mts, village of Hidvégdó, 162 m a.s.l., PM & BŠ, 19 October 2004	N 48°33'56.3'', E 20°50'45.3''
HID1, HID2, HID3, HID4	5x	Hu, Aggteleki Karszt Mts, SE of the village of Hidvégdó, 173 m a.s.l., PM & BŠ, 19 October	N 48°32'34.2'', E 20°50'27.9''
JOS3	5x	Hu, Aggteleki Karszt Mts, village of Josvafó, 300 m a.s.l., PM & BŠ, 19 October 2004	N 48°28'15'', E 20°31'56''
FUZ1, FUZ4	5x	Hu, Zemplényi hegység Mts, village of Füzér, meadow under the castle hill, 445 m a.s.l., PM &	N 48°32'40.6'', E 21°27'44.2''
FUZ2, FUZ3	6x	BŠ, 19 October 2004	
TEL4	5x	Hu, Zemplényi hegység Mts, village of Telkibánya, the slope under the church, 292 m a.s.l.,	N 48°29'00.6'', E 21°21'38.3''
		PM & BŠ, 19 October 2004	
869!	5x	45 Cz, W.C., Javorníky Mts, ca 0.5 km of the Portáš chalet, 900 m a.s.l., M & VM, 14 October	N 49°17'47.29", E 18°14'40.22"
		2000	
TU1 (1,2,3)	4x	Cz, B.M., Český kras Mts, village of Lištice, diabase rocks 100 m of the village, near the road	N 49°57'41.9", E 14°05'55.3"
		to the town of Beroun, 284 m a.s.l., TU, 15 May 2004	
TU2 (1,2)	4x	Cz, B.M., Cidlinská pánev basin, village of Činěves - the main road to Poděbrady, 500 m S of	N 50°14'05.0", E 15°13'18.5"
		the side cut to the village of Činěves, 207 m a.s.l., TU, 18 May 2004	
TU3 (1,2,3,4)	4x	Cz, B.M., Pražská plošina plain, Motolská kalvárie calvary, 30 m S of the stone sideways cross,	N 50°04'58,8", E 14°19'39,2"
		297 m a.s.l., TU, 21 May 2004	
TU4 (1)	6x	Cz, B.M., Dolní Povltaví river basin, town of Roztoky- heather moor above the left bank of the	N 50°10'13,7", E 14°22'49,0"
		Vltava river, between the towns of Roztoky and Levý Hradec, 223 m a.s.l., TU, 22 May 2004	
TU5 (1,2,3,4)		Cz, B.M., Moravian foothills of Vysočina Mts, <i>loco dicto</i> Pašerácká stezka (SW of the village	N 48°52'57,1", E 15°51'00,9"

	6x	of Čížov), 50 m below the road, 385 m a.s.l., KC, 29 May 2004	
TU6 (1,2,3)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, 2 km SE of the village of Podmolí, yellow-marked hiking path, oak forest near the path, 408 m a.s.l., MD, 30 May 2004	N 48°50'21,4", E 15°57'10,8"
TU7 (1,2,3,4,5)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, <i>loco dicto</i> Malšovické nivky, near the crossroad of the hiking paths, 387 m a.s.l., TU, 30 May 2004	N 48°50'35,0", E 15°58'28,8"
TU8 (1,2,3)	4x	Cz, B.M., Křivoklátsko region, Baba Hill, above the Berounka river, 373 m a.s.l., TU, 1.6.2004	N 50°01'31,2", E 13°52'45,7"
TU9 (1,2,3,4)	4x	Cz, B.M., Slavkovský les Mts., Tajga moor, NE of Lázně Kynžvart spa, 100 m N of the crossroad with Rota brook, 827 m a.s.l., TU, 2 June 2004	N 0°01'57,2", E 12°41'25,3"
TU10 (1,2,3,4)	4x	Cz, B.M., Slavkovský les Mts., <i>loco dicto</i> Dominova skalka, 3 km W of the village of Bečov nad teplou, 751 m a.s.l., TU, 2 June 2004	N 50°04'16,6", E 12°47'10,0"
TU11 (1,2,3,4)	4x	Cz, B.M., Slavkovský les Mts., <i>loco dicto</i> Bečovské louky, 2 km NE of the village of Bečov n. Teplou, 643 m a.s.l., 2 June 2004	N 50°05'10,7" E 12°49'22,0"
TU12 (1,2,3,4)	4x	Cz, B.M., Lounsko-labské středohoří Mts, Oblík Hill, 400 m SW below the top, meadow with Stipa zalesskii, 357 m a.s.l., TU, 3 June 2004	N 50°24'31,3" E 13°48'19,3"
TU13 (1,2,3)	4x	Cz, B.M., Ralsko-bezděžská tabule table, near the Břežyňský rybník lake, side cut to the village of Strážov from the road Doksy-Mimoň, the margin of the road, 281 m a.s.l., TU, 4 June 2004	N 50°35'10,7" E 14°43'41,9"
TU14 (1,2,3)	4x	Cz, B.M., Střední Polabí region, <i>loco dicto</i> Hrabanovská černava, sand dune, 187 m a.s.l., TU, 5 June 2004	N 50°13'07,8" E 14°49'51,5"
TU15 (2,3)	4x	Cz, B.M., Křivoklátsko region, near the Baba Hill, slope with the pines, ca 3 km of the road to the Baba Hill, 400 m a.s.l., TU, 1 June 2004	N 50°01'31,3" E 13°52'19,3"
TU16 (1) (2,3,4,5)	5x 4x	Cz, B.M., Lounsko-labské středohoří Mts, SW slope of the Mt Boreč, 50 m W of the path, 428 m a.s.l., TU, 11 June 2004	N 50°30'49,1" E 13°59'14,3"
TU17 (1,2,3,4)	4x	Cz, B.M., Lounsko-labské středohoří Mts, Holý vrch Hill near the Sutom - rock 50 m below the top, 447 m a.s.l., TU, 11 June 2004	N 50°30'10,1" E 13°58'41,2"
TU18 (1,2,3)	4x	Cz, B.M., Středočeská tabule table, Tuchoměřická hůrka Hill, near the village of Tuchoměřice, 292 m a.s.l., TU, 23 June 2004	N 50°07'45,9" E 14°16'36,6"
TU19 (1,2,3,4)	4x	Cz, B.M., Středočeská tabule table, village of Svrkyně, the rock above the football field, 309 m a.s.l., TU, 23 June 2004	N 50°10'20,5" E 14°18'02,8"
TU20 (1,2,3)	4x	Cz, B.M., Říčanská plošina plain, village of Pecerady, the crossroad of the blue-marked hiking path and the route in the village, near the lane, 302 m a.s.l., TU, 24 June 2004	N 49°50'07,8" E 14°37'05,3"
TU21 (1,2,3)	4x	Cz, B.M., Říčanská plošina plain, village of Sázava, the crossroad of the hiking paths, 340 m a.s.l., TU, 24 June 2004	N 49°52'16,3" E 14°53'57,0"
TU22 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, village of Horní Kněžeklady-Hněvkovice, the margin of the road, 294 m a.s.l., TU, 26 June 2004	N 49°11'40,4" E 14°27'59,9"
TU23 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, village of Hrušov, 484 m a.s.l., TU, 26 June 2004	N 49°12'33,1" E 14°31'50,3"

TU24 (1,2,3,4)	4x	Cz, B.M., Střední Povltaví river basin, village of Horní Kněžeklady, 492 m a.s.l., TU, 26 June 2004	N 49°11'37,7" E 14°28'50,8"
TU25 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, dam in the village of Hněvkovice, the meadow in front of the chalet, 387 m a.s.l., TU, 26 June 2004	N 49°11'56,5" E 14°26'32,3"
TU26 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, village of Jeznice, near the road, 374 m a.s.l., TU, 27 June 2004	N 49°09'13,6" E 14°26'29,8"
TU27 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, village of Litoradlice, near the former shooting-gallery, 474 m a.s.l., TU, 27 June 2004	N 49°10'38,9" E 14°25'11,4"
TU28 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, lake 1,5 km S of the village of Zvíkovského podhradí, margin of the road, 397 m a.s.l., TU, 27 June 2004	N 49°24'48,8" E 14°12'33,2"
TU29 (1,2,3)	4x	Cz, B.M., Podbrdsko region, gas station in the village of Řitka, 359 m a.s.l., TU, 27 June 2004	N 49°53'53,0" E 14°19'14,7"
TU30 (1,2,3,4,5)	4x	Cz, B.M., Český ráj Mts, village of Plouznice, near the village of Lomnice nad Popelkou, near the road, 514 m a.s.l., TU, 1 July 2004	N 50°30'43,0" E 15°23'09,5"
TU31 (1,2,3)	4x	Cz, B.M., Český ráj Mts, village of Rváčov, near the village of Lomnica, Krčkův kostel church, 564 m a.s.l., TU, 1 July 2004	N 50°31'51,9" E 15°19'58,8"
TU32 (1,2,3)	4x	Cz, B.M., Jesenicko-rakovnická plošina plain, periphery of the town of Rakovník, direction to village of Lišany, near the sculpture of St. Adalbert, 369 m a.s.l., TU, 6 July 2004	N 50°06'36,8" E 13°44'02,1"
TU33 (1,2,3)	4x	Cz, B.M., Jesenicko-rakovnická plošina plain, between the Hlaváčov stone pit and <i>loco dicto</i> Na cikámce, 304 m a.s.l., TU, 6 July 2004	N 50°07'20,6" E 13°44'13,4"
TU34 (1,2,3)	4x	Cz, B.M., Jesenicko-rakovnická plošina plain, 100 m of the <i>loco dicto</i> Sládkov kříž, blue-marked hiking path, near the village of Stará Lužná, 394 m a.s.l., TU, 6 July 2004	N 50°09'09,0" E 13°46'58,8"
TU35 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, 200 m S of the village of Zborná (close to the town of Jihlava), margin of the road, 559 m a.s.l., TU, 7 July 2004	N 49°26'06,5" E 15°34'22,6"
TU36 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, village of Štoky, Smilov settlement, near the bus stop, 475 m a.s.l., TU, 8 July 2004	N 49°32'11,8" E 15°37'53,0"
TU37 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, lane near the main road between the villages of Šlapanov and Smilov, 474 m a.s.l., TU, 8 July 2004	N 49°32'11,1" E 15°38'29,3"
TU38 (1,2,3,4)	5x	Cz, B.M., Hrubý Jeseník Mts, village of Revíz, meadows S of the village, cairn of the rocks, 754 m a.s.l., TU, 11 July 2004	N 50°13'31,5" E 17°18'13,6"
TU39 (1,2,3,4)	5x	Cz, B.M., Hrubý Jeseník Mts, <i>loco dicto</i> Vřesová studánka, foundations of the church, 1286 m a.s.l., TU, 12 July 2004	N 50°08'44,9" E 17°08'04,9"
TU40 (1,2,3,4,5)	6x	Cz, B.M., Hrubý Jeseník Mts, tourist chalet Šerák, 1324 m a.s.l., TU, 12 July 2004	N 50°11'13,1" E 17°06'31,4"
TU41 (1,2,3)	4x	Cz, B.M., Hanušovicko-rychlebská vrchovina Mts, 1 km NE of the castle Rychleeb, near the village of Uhelná, 442 m a.s.l., TU, 14 July 2004	N 50°22'00,9" E 16°59'30,3"
TU42 (1,2,3)	5x	Cz, B.M., Hanušovicko-rychlebská vrchovina Mts, former limestone pit above the village of	N 50°16'59,5" E 17°05'32,0"

TU43 (1,2,3)	4x	Vápenná, 448 m a.s.l., TU, 15 July 2004	
		Cz, B.M., Hrubý Jeseník Mts, village of Chebží, meadows, 533 m a.s.l., TU, 16 July 2004	N 50°14'44,4" E 17°15'42,8"
TU44 (1,2,3)	4x	Cz, B.M., Horažďovická pahorkatina Mts, periphery of the town of Blatná, near the crossroad Praha-Písek, 452 m a.s.l., TU, 28 July 2004	N 49°25'26,4" E 13°51'45,2"
TU45 (1,2,3,4)	4x	Cz, B.M., Horažďovická pahorkatina Mts, lane 4 km of the town of Blatná, green-marked hiking path, 495 m a.s.l., TU, 28 July 2004	N 49°24'56,2" E 13°50'07,5"
TU46 (1,2,3,4,5)	4x	Cz, B.M., Horažďovická pahorkatina Mts, Velký Pálenec lake, meadow over the field hydrologic station, 472 m a.s.l., TU, 28 July 2004	N 49°24'56,1" E 13°49'01,6"
TU47 (1,2,3)	4x	Cz, B.M., Horažďovická pahorkatina Mts, reserve so called Smyslovské louky meadows, near the Smyslov lake, 455 m a.s.l., TU, 28 July 2004	N 49°25'07,3" E 13°48'04,6"
TU48 (1,2,3)	4x	Cz, B.M., Podbrdsko region, periphery of the town of Příbram, road to towns of Milín and Písek, 491 m a.s.l., TU, 23 August 2004	N 49°40'25,0" E 14°00'19,1"
TU49 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, 500 m W of the Varvažovský most bridge across the Skalica river, 303 m a.s.l., TU, 23 August 2004	N 49°26'20,1" E 14°06'53,2"
TU50 (1)	5x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Dukovany, Templštejn castle, W slope	
(2,3)	6x	above the Jihlava river, 359 m a.s.l., TU, 6 September 2004	N 49°05'23,9" E 16°14'52,3"
TU51 (1,2,3,4,6)	4x	Cz, B.M., Žďárské vrchy Mts, <i>loco dicto</i> Pustá Rybná, 12 km of the town of Polička, meadow	
(5)	5x	NW of the Damašek settlement, 635 m a.s.l., TU, 11 September 2004	N 49°42'49,3" E 16°07'24,4"
TU52 (1,2,3)	6x	Cz, W.C., Zlínské vrchy Mts, village of Zádveřice u Vizovic, in front of the evangelical church, 271 m a.s.l., TU, 21 September 2004	N 49°12'58,0" E 17°98'11,8"
TU53 (1,2)	5x	Cz, Střední pobečví basin, town of Vsetín, near the main road to Valašské Meziříčí, 353 m	
(3)	5x	a.s.l., TU, 21 September 2004	N 49°19'55,1" E 17°59'41,1"
TU54 (1,2,3)	4x	Cz, B.M., Horní Poohří basin, Komorní hůrka Hill, bottom of the exploited pit, 481 m a.s.l., TU, 22 September 2004	N 50°05'58,9" E 12°20'23,3"
TU55 (1,2,3)	4x	Cz, B.M., Ralsko-bezděžská tabule plateau, town of Doksy, near the railway station, 275 m a.s.l., TU, 3 October 2004	N 50°34'25,2" E 14°38'54,5"
TU56 (1,2)	4x	Cz, B.M., Ralsko-bezděžská tabule plateau, pine forest below the Havířov vrch Hill, between the Máchove jezero lake and Břehyňský rybník fishpond, 292 m a.s.l., TU, 3 October 2004	N 50°35'11,1" E 14°40'29,7"
TU57		Cz, B.M., Dolní Povltaví river basin, town of Roztoky, heather moor above the left bank of the Vltava river, between the town of Roztoky and Levý Hradec, 223 m a.s.l., TU, 9 October 2004	
(1,2,3,4,5,6,7,8,9,12)	6x	(vide TU 004)	N 50°10'13,7" E 14°22'49,0"
TU58 (1,2,3,4,6,7,8)	4x	Cz, B.M., Dolní Povltaví river basin, rocks between the village of Zámky and Drahaňské údolí valley, 229 m a.s.l., TU, 12 October 2004 (vide TU 016)	N 0°08'38,3" E 14°23'59,5"
(5)	5x		
TU59 (1,2,3,4)	4x	Cz, B.M., Lounsko-labské středohoří Mts, Boreč Hill, SW slope, 50 m W of the path, at the top of scree, 428 m a.s.l., TU, 17 October 2004	N 50°30'49,1" E 13°59'14,3"

TU60 (1,2,3,4)	4x	Cz, B.M., Dolní Povltaví river basin, <i>loco dicto</i> Větrušické skály, 500 m N of the village of Větrušice 255 m a.s.l., TU, 22. October 2004	N 50°11'53,3" E 14°22'31,9"
TU61 (1,2,3)	5x	Cz, B.M., Dolní Povltaví river basin, Větrušické skály, another locality, edge of oak forest and rocky heath, 246 m a.s.l., TU, 22 October 2004	N 50°12'02,0" E 14°22'15,2"
TU62 (1,2,3)	4x	Cz, B.M., Dolní Povltaví river basin, village of Otvovice, <i>loco dicto</i> Otšovická skála rock, top of the rock, 259 m a.s.l., TU, 23 October 2004	N 50°12'57,4" E 14°17'00,7"
TU63 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, rocks between village Živohošť and Živohošťský most bridge, 200 m below the green-marked hiking path, 329 m a.s.l., TU, 30 October 2004	N 49°45'18,8" E 14°26'00,3"
TU64 (1,2,3)	4x	Cz, B.M., B.M., Tereziňská kotlina fold, hill in the village of Oleško, near the tlen of Tereziň, 151 m a.s.l., TU, 30 October 2004	N 50°31'00,0" E 14°09'00,0"
TU65 (1,2,3)	4x	Cz, B.M., Český kras Mts, <i>loco dicto</i> Krásná stráň hillside, E margin, the beginning of the river terrace, 327 m a.s.l., TU, 23 April 2005	N 49°56'34,4" E 14°16'41,5"
TU66 (1,2,3)	4x	Cz, B.M., Střední polabí river basin, village of Písty, near the sand dune, 274 m a.s.l., TU, 30.4.2005	N 50°09'44,7" E 14°59'41,7"
TU67 (1,2,3,4)	4x	Cz, B.M., Střední Povltaví river basin, village of Štěchovice, 218 m a.s.l., TU, 6 April 2005	N 49°51'16,5" E 14°24'38,1"
TU69 (1,2,3)	4x	Cz, B.M., Český kras Mts, Koukolova hora Hill, 200 m N of the stone pit, yellow-marked hiking path, 443 m a.s.l., TU, 7 May 2005	N 49°55'13,7" E 14°01'28,0"
TU70 (1,2,3,4,5)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Dukovany, Templštejn castle, W slope above the Jihlava river, 359 m a.s.l., TU, 12 May 2005 (vide TU 050)	N 49°05'23,9" E 16°14'52,3"
TU71 (1,2,3)	4x	Cz, B.M., Lounsko-labské středohoří Mts, N margin of the village of Dolné Zálezly, green-marked hiking path, in the chalet colony , 218 m a.s.l., TU, 16 May 2005	N 50°35'55,5" E 14°03'32,8"
TU72 (1,2,3,4)	4x	Cz, B.M., Lounsko-labské středohoří Mts, lower top of Lovoše Hill, 473 m a.s.l., TU, 17 May 2005	N 50°31'43,8" E 14°01'25,0"
TU73 (1)	5x	Cz, B.M., Lounsko-labské středohoří Mts, top of Lovoš Hill, the crossroad of blue- and green-	
(2,3)	5x	marked hiking path, 543 m a.s.l., TU, 17 May 2005	N50°31'38,4" E014°01'08,2"
TU74 (1,2,3)	4x	Cz, B.M., Střední Povltaví, N margin of the tlen of Davle, right bank of the river, the rock cca 30 m above the Vltava River, 235 m a.s.l., TU, 21 May 2005	N49°53'53,7" E014°24'08,2"
TU75 (1,2,3)	6x	Cz, B.M., Střední Povltaví river basin, 500 m N of the village of Vrané, road near the Vltava River, 214 m a.s.l., TU, 21 May 2005	N49°56'40,0" E014°23'49,3"
TU76 (1,3,5)	5x	Cz, B.M., Šumava Mts, margin of the road in the village of Františkov, 929 m a.s.l., TU, 2 June 2005	N48°59'59,8" E013°37'41,6"
(2,4, 6)	5x		
TU77 (1,2,3,4,5)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Dukovany, Templštejn castle, W slope above the Jihlava river, 359 m a.s.l., TU, 5 June 2005	N 49°05'23,9" E 16°14'52,3"
TU78 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, E periphery of the vilage of Měřín, margin of the road near the cemetery, 509 m a.s.l., TU, 8 June 2005	N 49°23'09,2" E 15°53'14,8"

TU79 (1,2,3,4,5)	6x	Cz, B.M., Českomoravská vrchovina Mts, town of Třebíč, rock above the jewish ward, 414 m a.s.l., TU, 8 June 2005	N 49°13'04,6" E 15°52'48,6"
TU80 (1,2,3,4)	4x	Cz, B.M., Českomoravská vrchovina Mts, rock near the road above Oslava River, between the villages of Naloučovice and Jedovský mlýn, 350 m a.s.l., TU, 8 June 2005	N 49°13'40,9" E 16°08'31,3"
TU81 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, margin of the road 1 km N of the village of Naloučany, 436 m a.s.l., TU, 8 June 2005	N 49°14'57,1" E 16°08'08,9"
TU82 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, periphery of the town of Velké Meziříčí, rock above the bus stop "Lihovar", 422 m a.s.l., TU, 8 June 2005	N 49°20'21,6" E 16°01'53,4"
TU83 (1,2,3,4)	4x	Cz, B.M., Českomoravská vrchovina Mts, small chapel between the villages of Blížkov and Měřín, 501 m a.s.l., TU, 8 June 2005	N 49°23'52,2" E 15°54'09,1"
TU84 (1,2,3)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, blue-marked hiking path from the Mohelnská step heath to the Jihlava River bank, 200 m of the edge of the heath, 286 m a.s.l., TU, 11 June 2005	N 49°06'23,3" E 16°10'57,3"
TU85 (1,3)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, 400 m N of the Mohelno dam, rock near the trail, 305 m a.s.l., TU, 11 June 2005	N 49°05'58,0" E 16°10'41,1"
TU86 (1,2,3,4,5)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, <i>loco dicto</i> Kozí stezky, rock above the Dyje River, 391 m a.s.l., TU, 12 June 2005	N 48°51'41,5" E 15°52'15,2"
TU87 (1,2,3,4) (5)	6x 5x	Cz, B.M., Znojensko-brněnská pahorkatina Mts, Havraníky heather moor, 339 m a.s.l., TU, 12 June 2005	N 48°48'43,1" E 15°59'38,6"
TU88 (1,2,3,4)	6x	Cz, W.C., Mikulovská pahorkatina-Pálava Mts, blue-marked hiking path to the Děvín Hill, edge between oak forest and the heath, 371 m a.s.l., TU, 13 June 2005	N 48°51'52,2" E 16°39'07,9"
TU89 (1,2,3,4)	6x	Cz, W.C., Mikulovská pahorkatina-Pálava Mts, canyon „Soutěska“ near the Děvín Hill, 100 m below the country-sight, 429 m a.s.l., TU, 13 June 2005	N 48°51'51,9" E 16°38'36,8"
TU90 (1,2,3,4,5,6)	5x	Cz, W.C., Mikulovská pahorkatina-Pálava Mts, canyon near the Děvín, another locality, 200 m of the previous locality, 383 m a.s.l., TU, 13 June 2005	N 48°51'47,2" E 16°38'40,0"
TU91 (1,2,3)	5x	Cz, W.C., Jihomoravský úval ravine, reserve „Důbrava u Hodonína“, near the town of Hodonín, near the former main road to the Brno city, 235 m a.s.l., TU, 14 June 2005	N 48°53'05,9" E 17°05'13,2"
TU92 (1,2,3,4)	5x	Cz, W.C., Jihomoravský úval ravine, village of Bzenec, reserve „Váté písky“, sand dunes, pine forest near the railway station, 199 m a.s.l., TU, 14 June 2005	N 48°56'01,3" E 17°16'58,3"
TU93 (1,2,3,4)	5x	Cz, W.C., Jihomoravský úval ravine, village of Bzenec, another locality, 300 m of the previous locality, near the train line, 194 m a.s.l., TU, 15 June 2005	N 48°55'50,4" E 17°16'37,5"
TU95 (1,2,3)	4x	Cz, B.M., Hrubý Jeseník Mts, village of Bělá pod Pradědem, convalescent home, near the bridge across the brook, 643 m a.s.l., TU, 17 June 2005	N 50°08'10,1" E 17°12'29,3"
TU96 (1,2,3)	5x	Cz, B.M., Hrubý Jeseník Mts, village of Rejvíz, margin of the road, 775 m a.s.l., TU, 17 June 2005	N 50°13'45,9" E 17°18'07,8"

TU97 (1,2,3,4,5,6)	6x	Cz, B.M., Hrubý Jeseník Mts, tourist chalet Šerák, 1324 m a.s.l., TU, 24 June 2005 (videTU 40)	N 50°11'13,1" E 17°06'31,4"
TU98 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, 1 km W of the village of Strašice (direction: town of Rokycany), 496 m a.s.l., TU, 27 June 2005	N 49°44'06,3" E 13°44'27,0"
TU99 (1,2,3,4)	4x	Cz, B.M., Plzeňská pahorkatina Mts, near the road from the village of Mirošov to the town of Rokycany, 432 m a.s.l., TU, 27 June 2005	N 49°43'10,2" E 13°39'17,8"
TU100 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, near the road from the village of Březina to the village of Bezděkov, 481 m a.s.l., TU, 27 June 2005	N 49°49'04,2" E 13°36'09,2"
TU101 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, village of Kozojedy, 50 m of the church, 365 m a.s.l., TU, 27 June 2005	N 49°55'57,9" E 13°32'39,1"
TU102 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, village of Všehrady, rocks below the village, 372 m a.s.l., TU, 27 June 2005	N 49°58'01,8" E 13°35'07,4"
TU103 (1,2,3)	4x	Cz, B.M., Křivoklátsko region, stone pit near the village Mléčice, direction: village of Zbiroh, 368 m a.s.l., TU, 27 June 2005	N 49°54'44,1" E 13°42'06,1"
TU104 (1,2,3)	4x	Cz, B.M., Hornosázavská pahorkatina Mts, periphery of the town of Havlíčkův Brod, the bus stop near the main exit road to the town of Pardubice, 436 m a.s.l., TU, 29 June 2005	N 49°36'39,3" E 15°36'49,2"
TU105 (1,2,3,4)	4x	Cz, B.M., Hornosázavská pahorkatina Mts, 300 m E of the town of Ždírc nad Doubravou, near the road, TU, 29 June 2005	N 49°42'01,4" E 15°49'12,7"
TU106 (1,2,4) (3)	4x 5x	Cz, B.M., Českomoravské meziohří upland, rocks between the village of Linhartice and the town of Moravská Třebová, 349 m a.s.l., TU, 29 June 2005	N 49°45'39,5" E 16°40'37,4"
TU107 (1,2,3,4)	5x	Cz, W.C., Jesenické podhůří foothills, rocks 1 km E of the town of Budišov nad Budišovkou, near the road direction: Vítkov, 527 m a.s.l., TU, 29 June 2005	N 49°47'42,5" E 17°38'50,4"
TU108 (1,2,3) (4)	5x 6x	Cz, W.C., area called Moravská brána, village of Straník, above the chapel, 382 m a.s.l., TU, 29.6.2005	N 49°32'55,5" E 17°59'20,4"
TU109 (1,2,3)	5x	Cz, W.C., Haná region, town of Prostějov, lawn over the cinema Metro70, 221 m a.s.l., TU, 30.6.2005	N 49°28'24,7" E 17°06'36,7"
TU110 (2,4) (1,3)	5x 6x	Cz, W.C., Dražanská vrchovina Mts, village of Mostkovice, W periphery of the village, slope near road direction: Blansko, 269 m a.s.l., TU, 30 June 2005	N 49°28'21,6" E 17°02'03,6"
TU111 (1,2,3,4)	5x	Cz, W.C., Dražanská vrchovina Mts, village of Plumlov, rock between the fishpond and the football field, 280 m a.s.l., TU, 30 June 2005	N 49°28'05,1" E 17°00'22,9"
TU112 (1,3,4) (2)	4x 5x	Cz, B.M., Dražanská vrchovina Mts, village of Otiněves, rocks between fishpond and the garages, 560 m a.s.l., TU, 30 June 2005	N 49°25'02,0" E 16°51'58,8"
TU113 (1,2,3,4)	4x	Cz, B.M., Dražanská vrchovina Mts, village of Rozstání, rock in the centre of the village, 546 m a.s.l., TU, 30 June 2005	N 49°23'45,0" E 16°50'52,5"
TU114 (1,3) (2,4,5)	4x	Cz, B.M., Moravský kras Mts, village of Lažánky, limestone rock above the village, 456 m	N 49°21'03,8" E 16°42'30,0"

	6x	a.s.l., TU, 30 June 2005	
TU115 (1,2,3)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, rock near the road between the villages of Pánov and Křoví, 487 m a.s.l., TU, 30 June 2005	N 49°18'48,3" E 16°16'33,5"
TU116 (1,2)	4x	Cz, B.M., Hornosázavská pahorkatina Mts, xeric balk near the lane 1 km W of the village of Černýš, 360 m a.s.l., TU, 30 June 2005	N 49°44'33,9" E 15°02'16,5"
TU117 (1,2,3)	4x	Cz, B.M., Hornosázavská pahorkatina Mts, E of the lumber-mill near the village of Psáře, in the bend of the road, 477 m a.s.l., TU, 30 June 2005	N 49°44'48,9" E 14°58'15,4"
TU118 (1,2,3)	4x	Cz, B.M., Třeboňská pánev basin, trail 20 m N of the road from the town of Kardašovy Řečice to the town of Jindřichuv Hradec, 491 m a.s.l., TU, 4 July 2005	N 49°10'28,7" E 14°53'32,4"
TU119 (1,2,3)	4x	Cz, B.M., Třeboňská pánev basin, rock in the field 100 m NE of the village of Nítovice, 482 m a.s.l., TU, 4 July 2005	N 49°10'35,3" E 14°49'32,1"
TU120 (1,2,3)	4x	Cz, B.M., Votická vrchovina Mts, margin of the road near the nature park between the villages of Nová ves and Sodoměřice u Bechyně, 334 m a.s.l., TU, 4 July 2005	N 49°16'18,0" E 14°32'23,8"
TU121 (1,2,3)	4x	Cz, B.M., Východní Polabí river basin, rock above the train line SEE of the village of Týnec nad Labem, 228 m a.s.l., TU, 6 July 2005	N 50°02'27,7" E 15°21'58,7"
TU122 (1,2,3)	4x	Cz, B.M., Východní Polabí river basin, hillside between the villages of Luže and Střemošice, W of the town of Chrudim, 451 m a.s.l., TU, 24 July 2005	N 49°53'28,7" E 16°04'30,3"
TU123 (1,2,3)	4x	Cz, B.M., Šumavsko-novohradské podhůří foothills, 1km W of the village of Pražák, rock near the road opposite to fishpond, 396 m a.s.l., TU, 25 July 2005	N 49°08'29,7" E 14°06'55,7"
TU124 (1,2,3)	4x	Cz, B.M., Podkrkonoší Mts, xeric slope near the road on the E periphery of the village of Košťálov, 357 m a.s.l., TU, 4 August 2005	N 50°34'34,5" E 15°23'11,5"
TU125 (1,2,3)	4x	Cz, B.M., Lužická kotlina fold, ruin of the wind mill on the yellow-marked hiking path near the village of Machnín, NW of the town of Liberec, 345 m a.s.l., TU, 4 August 2005	N 50°47'14,3" E 14°58'30,9"
TU126 (1,2,3)	4x	Cz, B.M., Lužická kotlina fold, reconstructed castle called Wothanburg near the village of Horní Vítkov, 513 m a.s.l., TU, 4.8.2005	N 50°51'23,9" E 14°58'46,9"
TU127 (1,2,3)	4x	Cz, B.M., Lužická kotlina fold, settlement of Uhelná near the village of Václavice, 331 m a.s.l., TU, 4 August 2005	N 50°51'51,1" E 14°53'53,4"
TU128 (1,2,3)	4x	Cz, B.M., Ralsko-bezděžská tabule plateau, village of Noviny pod Ralskem, canyon of the Ploučnice River, 309 m a.s.l., TU, 4 August 2005	N 50°41'12,4" E 14°45'49,0"
TU129 (1,2,3,4)	4x	Cz, B.M., Lounsko-labské středohoří Mts, 300 m W below the top of the Mt Raná, 400 m a.s.l., TU, 9 August 2005	N 50°24'21,4" E 13°46'10,5"
TU130 (1,2,3)	4x	Cz, B.M., Krušné hory Mts, village of Výsluní between Vejprt and Chomutov, slope with heather near the road, 1 km W of the village, 775 m a.s.l., TU, 9 August 2005	N 50°27'41,8" E 13°13'30,8"
TU131 (1,2,3)	4x	Cz, B.M., Krušné hory Mts, village of Měděnec, W slope of the Mt Mědník, 896 m a.s.l., 9 August 2005	N 50°25'26,6" E 13°06'40,2"

TU132 (1,2,3)	4x	Cz, B.M., Krušné hory Mts, village of Klášterec nad Ohří, the village of Mýtinka, road below the village, 748 m a.s.l., TU, 9 August 2005	N 50°24'03,4" E 13°04'29,3"
TU133 (1,2,3)	4x	Cz, B.M., Krušnohorské podhůří Mts, chalet colony 2 km W of the town of Klášterec nad Ohří, rock near the Ohře River, 310 m a.s.l., TU, 9 August 2005	N 50°22'57,7" E 13°13'06,6"
TU134 (1,2,3,4)	4x	Cz, B.M., Šumavsko-novohradské podhůří Mts, 1.5 km E of the village of Křemže, 569 m a.s.l., TU, 13 August 2005	N 48°54'55,2" E 14°19'22,1"
TU135 (1,2,3)	4x	Cz, B.M., Šumavsko-novohradské podhůří Mts, village of Babice u Netolic, dike of the fishpond, NW of the village, 508 m a.s.l., TU, 13 August 2005	N 49°02'29,0" E 14°13'10,3"
TU136 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, village of Mysletín, N of the town of Humpolec, slope near the fishpond, 479 m a.s.l., TU, 17 August 2005	N 49°28'33,2" E 15°22'14,5"
TU137 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, village of Řeženčice, rockery near the road, 634 m a.s.l., TU, 17 August 2005	N 49°21'50,2" E 15°21'16,8"
TU138 (1,2,3,4)	4x	Cz, B.M., Českomoravská vrchovina Mts, heath-moor near the village of Suchá, 200 m of the village, yellow-marked hiking path, 569 m a.s.l., TU, 17 August 2005	N 49°18'03,6" E 15°34'54,0"
TU139 (1,2,3,4)	4x	Cz, B.M., Českomoravská vrchovina Mts, between the villages of Želetava and Krasonice, edge of the forest, lane joining to the main road, 549 m a.s.l., TU, 17 August 2005	N 49°07'13,4" E 15°37'56,8"
TU140 (1,2,3)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, the town of Moravský Krumlov, surrounding of stone pit near the village of Džbánice, 351 m a.s.l., TU, 17 August 2005	N 49°00'18,2" E 16°12'22,5"
TU141 (1,2)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, town of Moravský Krumlov, rock of the amphitheatre, below the chapel, 301 m a.s.l., TU, 17 August 2005	N 49°02'51,5" E 16°19'10,8"
TU142 (1,2,3)	6x	Cz, W.C., Jihomoravský úval ravine, village of Židlochovice, Výhon Hill, former orchard, 257 m a.s.l., TU, 17 August 2005	N 49°02'20,0" E 16°37'43,1"
TU143 (1,2,3,4)	6x	Cz, W.C., Jihomoravská pahorkatina Mts, the village of Velké Hostěrádky, near the crossroad of the roads Nr. 480 and 422, 256 m a.s.l., TU, 17 August 2005	N 49°00'54,9" E 16°49'55,5"
TU 144	6x	Cz, W.C., Středomoravské Karpaty Mts, Ždánický les, reserve "u Křížanovického potoka", slope between the villages of Heršpice and Rašovice, 240 m a.s.l., TU, 17 August 2005	N 49°07'19,3" E 16°56'10,4"
TU145 (1,2,3)	5x	Cz, W.C., Jihomoravská pahorkatina Mts, reserve near the village of Zouvalka, orchard, 319 m a.s.l., TU, 17 August 2005	N 49°14'55,7" E 17°01'10,3"
TU146 (1,2)	5x	Cz, W.C., Jihomoravská pahorkatina Mts, 500 m W of the village of Nesovice, xeric hillside near the stone pit, 236 m a.s.l., TU, 18 August 2005	N 49°08'16,4" E 17°01'51,3"
(3)	6x	Cz, W.C., Středomoravské Karpaty Mts, the Buchlov castle, edge of the forest, red-marked hiking path, 438 m a.s.l., TU, 18 August 2005	N 49°06'22,7" E 17°18'31,6"
TU147 (1,2,3)	4x	Cz, W.C., Bílé Karpaty Mts, village of Lhotka Hradčovice, orchard in the centre of the village, 217 m a.s.l., TU, 18 August 2005	N 49°02'57,9" E 17°35'17,2"
TU148 (1,2,3)	5x		N 49°02'57,9" E 17°35'17,2"
TU149 (1,2,3,4)	6x	Cz, W.C., Zlínské vrchy Mts, village of Slušovice, xeric slope near the road 0.5 km N of the	N 49°15'31,0" E 17°48'12,8"

		village, 309 m a.s.l., TU, 18 August 2005	
TU150 (1,2,3)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Svitávka (near the town of Boskovice), slope on the E periphery of the village, 325 m a.s.l., TU, 18 August 2005	N 49°30'31,7" E 16°36'22,4"
TU151 (1,2)	5x	Cz, B.M., Moravian foothills of Vysočina Mts, W periphery of the village of Letovice, pine forest and sandstone rocks, 361 m a.s.l., TU, 18 August 2005	N 49°32'25,4" E 16°33'47,3"
	(3) 6x	Cz, B.M., Dolní Poorličí river basin, the village of Chvojenec, edge of the forest, 274 m a.s.l., TU, 18.8.2005	N 50°07'03,4" E 15°55'58,7"
TU152 (1,2,3)	4x	Cz, B.M., Říčanská plošina plain, the village of Mirošovice, N of the town of Benešov, highway D1, lawn, 381 m a.s.l., MD, 10 August 2005	N 49°54'49.00" E 14°42'38.00"
TU153 (1,2,3,4)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Lhotka, WNW of the village of Velká Bíteš, exit from the highway D1, meadow, 540 m a.s.l., MD, 11 August 2005	N 49°18'34.00" E 16°07'01.00"
TU154 (1,2,3,4)	4x	Cz, W.C., Střední Pobečví river basin, village of Losovy, N of the village of Husleneky, 478 m a.s.l., KC, 1 October 2005	N 49°19'02,0" E 18°05'48,0"
TU155 (1,2,3,4)	5x	Cz, Střední Pobečví river basin, village of Husleneky, settlement "u Sivků", below the cote with broadcaster, 684 m a.s.l., KC, 1 October 2005	N 49°19'29,0" E 18°04'43,0"
TU156 (1,2,3,4)	5x	Cz, W.C., Javorníky Mts, the village of Hustisko-Solanec, near the town of Rožnov pod Radhoštěm, 572 m a.s.l., KC, 1 October 2005	N 49°23'59,8" E 18°14'59,1"
TU157 (1)	6x	Cz, B.M., Plzeňská pahorkatina Mts, village of Černošín u Stříbra, edge of the Černošínský bor forest, 543 m a.s.l., TU, 3 october 2005	N 49°48'41,5" E 12°52'29,5"
	(2,3) 5x	Cz, B.M., Tepelské vrchy Mts, settlement Starý Mlýn near the village of Potín, near the town of Konstantinovy lázně , 496 m a.s.l., TU, 3 october 2005	N 49°53'25,2" E 13°01'09,8"
TU158 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, the town of Manětín, <i>loco dicto</i> Chlumská hora, 610 m a.s.l., TU, 3 October 2005	N 50°00'41,3" E 13°11'42,9"
TU159 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, the town of Rabštejn nad Střelou, near the bridge across the Střela River, above the sculpture of St. Jan Nepomuk, 459 m a.s.l., TU, 3 October 2005	N 50°02'52,4" E 13°17'48,2"
TU160 (1,2,3)	4x	Cz, B.M., Pražská plošina plain, Prague periphery, town district Černý Most, E slope above the highway R11, 241 m a.s.l., TU, 15 October 2005	N 50°06'50,3" E 14°35'21,7"
TU161 (1,2,3)	4x	Cz, B.M., Votická vrchovina Mts, the village of Oldřichovec near the town of Votice, dike of the fishpond, 694 m a.s.l., TU, 1 November 2005	N 49°36'00,6" E 14°39'57,3"
TU162 (1,4,5)	4x	Cz, B.M., Doupovské vrchy Mts, 3 km E of the village of Jakubov, near the town of Ostrov nad Ohří, 636 m a.s.l., TU, 3 November 2005	N 50°18'14,0" E 13°04'30,1"
	(2,3,6) 6x	Cz, B.M., Dolní Povltaví river basin, Větrušické skály, another locality, edge of oak forest and rocky heath, 246 m a.s.l., MD, 5 November 2005 (vide TU 61)	N 50°12'02,0" E 14°22'15,2"
TU163 (1,2,3)	4x	Cz, B.M., Dolní Povltaví river basin, 200 m N of the previous locality, 258 m a.s.l., MD, 5 November 2005	N 50°12'04,9" E 14°22'11,0"
TU164 (1,2,3)	4x		
TU165 (1,2,3,4,5)	5x		
TU166 (1,2,3)	5x		

TU167 (1,2,3,4,5,6)	4x	Cz, B.M., Dolní Povltaví river basin, rocky heath above the chalets near the Vltava River, 300 m N of the village of Zlončice, near the town of Kralupy nad Vltavou, 203 m a.s.l., TU, 5 November 2005	N 50°13'37,3" E 14°21'12,5"
TU168 (1,2,3)	4x	Cz, B.M. Ralsko-bezděžská table plateau, peak of Ralsko Mountain, 665 m a.s.l., TU, 14 April 2006	N 50°40'26,6" E 14°45'59,0"
TU169 (1,2,3)	4x	Cz, B.M. Jesenicko-rakovnická plošina plain, the village of Blatno near the town of Jesenice-dam of pond Blatno, 420 m a.s.l., TU, 15 April 2006	N 50°06'64,2" E 13°23'57,0"
TU170 (1,2,3)	6x	Cz, W.C., Mikulovská pahorkatina - Pálava Mts the heath-blue-marked hiking path, 700m N of the village of Klentnice, 393 m a.s.l., TU, 22 April 2006	N 48°51'29,5" E 16°38'16,5"
TU171 (1,2,3)	5x	Cz, W.C., Mikulovská pahorkatina - Pálava Mts limestone pit on the Mt Sv. Kopeček, 331 m a.s.l., TU, 22 April 2006	N 48°48'35,7" E 16°39'19,0"
TU172 (1,2)	4x	Cz, B.M., Plzeňská pahorkatina Mts, the village of Darová near the town Rokycany, 330 m a.s.l., TU, 4 May 2006	N 49°49'58,2" E 13°31'32,4"
TU173 (1,2)	4x	Cz, B.M., Hrubý Jeseník Mts, near the village of Sobotín, <i>loco dicto</i> Ztracenka, 750 m a.s.l., TU, 4 May 2006	N 50°00'25,8" E 17°08'05,5"
TU174 (1,2,3)	4x	Cz, B.M., foothills of Novohradské hory Mts, town Kaplice, pine wood near the petrol station, 562 m a.s.l., TU, 21 May 2006	N 48°43'47,2" E 14°28'57,0"
TU175 (1,2,3)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, serpentine steppe near the town of Mohelno, 378 m a.s.l., TU, 26 May 2006	N 49°06'27,2" E 16°11'22,4"
TU176 (1,2,3)	4x	Cz, B.M., Východolabská tabule plateau, the village of Semtín, between towns Pardubice and Lázně Bohdaneč, 221 m a.s.l., TU, 3 June 2006	N 50°04'05,0" E 15°41'35,4"
TU177 (1,2,3)	4x	Cz, B.M., Orlická tabule table plateau, town of Týniště nad Orlicí, meadows SW of the village of Rašovice, 284 m a.s.l., TU, 15 June 2006	N 50°08'42,5" E 16°07'53,7"
TU178 (1,2,3)	4x	Cz, B.M., Orlická tabule table plateau, village of Nekoř - Bredůvka, xeric slope in the village, 253 m a.s.l., TU, 15 June 2006	N 50°02'40,4" E 16°33'55,6"
TU179 (1,2,3)	5x	Cz, B.M., Nízký Jeseník Mts, village of Malá Štáhle near the town of Rýmařov, next to column of the crucification in the centre of village, 606 m a.s.l., TU, 15 June 2006	N 49°57'06,5" E 17°20'28,6"
TU180 (1,2,3,4,5)	5x	Cz, B.M., Nízký Jeseník Mts, nearby town of Bruntál, puff-stone quarry in Uhlířský vrch, 640 m a.s.l., TU, 16 June 2006	N 49°58'19,8" E 17°26'28,6"
TU181 (1,2,3)	4x	Cz, B.M., Zlatohorská vrchovina Mts., village of Liptáň near the town of Třemešná, 345 m a.s.l., TU, 16 June 2006	N 50°13'51,2" E 17°37'01,4"
TU182 (1,2,4)	5x	Cz, W.C., Moravskoslezské Beskydy Mts, village of Trojanovice near the town of Frenštát pod Radhoštěm, xeric slope above road, 461 m a.s.l., 16 June 2006	N 49°30'58,7" E 18°12'32,5"
(3)	6x		
TU183 (1)	4x	Cz, W.C., Moravskoslezské Beskydy Mts, sinuous road next to dam Šance, between the village of Ostravice and Staré Hamry, stone pit, 503 m a.s.l., TU, 16 June 2006	N 49°29'00,1" E 18°25'20,6"
(2,3,4)	6x		

TU184 (1,2,3)	5x	Cz, W.C., Hostýnsko-vsetínská hornatina Mts., village of Podhradní Lhota near the town of Bystřice pod Hostýnem, xeric slope near the road, brook called Juhyně, 545 m a.s.l., TU, 16 June 2006	N 49°25'12,9" E 17°47'58,8"
TU185 (1,2,3)	5x	Cz, W.C., Hostýnsko-vsetínská hornatina Mts., village of Osíčko near the town of Bystřice pod Hostýnem, xeric slope in the centre of the village, 406 m a.s.l., TU, 16 June 2006	N 49°25'30,5" E 17°44'44,4"
TU186 (2) (1)	5x 6x	Cz, W.C., Podbeskydská pahorkatina Upland, saddle of Mt Kotouč near the town of Štramberk, 501 m a.s.l., TU, 18 June 2006	N 49°35'03,6" E 18°06'56,0"
TU187 (1,2,3)	4x	Cz, B.M., Podčeskoleská pahorkatina upland, village of Nový Pařezov near the town of Domažlice, stone pit next to road, 429 m a.s.l., TU, 15 July 2006	N 49°27'53,3" E 12°50'20,3"
TU188 (1,2)	4x	Cz, B.M., Šumava Mts., Mt Špičák, ski slope, near the village of Železná Ruda, 868 m a.s.l., TU, 15 July 2006	N 49°09'54,1" E 13°13'12,7"
TU189 (1,2)	4x	Cz, B.M., Šumava Mts., Mt Špičák, in the middle of ski slope, near the village of Železná Ruda, 938 m a.s.l., 15 July 2006	N 49°10'04,5" E 13°12'48,7"
TU190 (1,2,3)	4x	Cz, B.M., Šumava Mts., pasture by the village of Klepačka, near the town of Kašperské Hory, 777 m a.s.l., TU, 16 July 2006	N 49°10'20,0" E 13°35'10,0"
TU191 (1,2,3)	4x	Cz, B.M., Šumava Mts., village of Zhůří, near the town of Horská Kvilda, meadows near the cross-road, 1149 m a.s.l., TU, 16 July 2006	N 49°04'51,0" E 13°33'27,6"
TU192 (1,2,3)	4x	Cz, B.M., Šumava Mts., village of Kbelnice, xeric slope above road, 452 m a.s.l., TU, 16 June 2006	N 49°17'46,2" E 13°59'25,3"

SUPPLEMENTARY INFORMATION 2

Previously published data on chromosome numbers of *Pilosella officinarum* from the Western Carpathians, Pannonia Plain and the Czech Republic. Localities are given as in the original sources. Completed data based on our searching are given in square brackets. Localities marked by an asterisk were not included in the map of cytotype distribution (Fig. 5) for several reasons (see Material and Methods, Results and Discussion). Abbreviations used: Cz = Czech Republic, Pl = Poland, Sk = Slovakia.

<i>2n</i>	Locality	Latitude, longitude	Source
36	Pl, Beskid Wyspovy Mts, Rzeki, alt. c. 450 m, coll. A. Jankun	[N 49°35', E 20°13']	Pogan and Wcisło, 1989
36	Pl, Gorce Mts, slope of the Mt Mogielnica, coll. A. Joachimiak	[N 49°59', E 21°54']	
36	Sk, Slovenský raj, Gačovská skala, Geravy	[N 48°52'35", E 20°23'08"]	Murín, 1986
36	Sk, Ipeľsko-rimavská brázda, Antalova pustatina, 260 m n.m., 28.8.1998, leg. Pišťanský*		Pišťanský and Mičieta, 2000
36	Sk, Ipeľsko-rimavská brázda, Ratka, 200 m n.m., 27.8.1998, leg. Pišťanský*		
36	Sk, Ipeľsko-rimavská brázda, Petrovce, 240 m n.m., leg. Pišťanský*		
36	Sk, Ipeľsko-rimavská brázda, Hodejovec, 205 m n.m., 26.8.1998, leg. Pišťanský*		
36	Sk, Ipeľsko-rimavská brázda, Šiatorská Bukovinka, 240 m n.m., 26.8.1998, leg. Pišťanský *		
36	Sk, Záhorská nížina, Šaštín-Stráže, Gazárka, 190 m n.m., 4.4.1997, leg. Pišťanský*		
36	Sk, Záhorská nížina, Prietrž, 280 m n.m., 4.9.1997, leg. Pišťanský *		
36	Sk, Považský Inovec, Hlohovec, Soroš, 260 m n.m., 15.7.1997, leg. Pišťanský*		
36	Sk, Devínska Kobyla, vrch Devínska Kobyla, 300 m n.m., 29.5.1998, leg. Pišťanský*		
36	Sk, Malé Karpaty, Lančár, 260 m n.m., 9.8.1997, leg. Pišťanský *		
36	Sk, Malé Karpaty, Veľký Plešivec, 460 m n.m., 14.8.1997, leg. Pišťanský*		
36	Sk, Malé Karpaty, Záhorská Bystrica, 220 m n.m., 19.8.1997, leg. Pišťanský *		
36	Sk, Malé Karpaty, Dobrá Voda, 360 m n.m., leg. Pišťanský *		
36	Sk, Malé Karpaty, Brezová pod Bradlom, 320 m n.m., 4.9.1997, leg. Pišťanský*		
36	Sk, Malé Karpaty, Hradište pod Vrátnom, 300 m n.m., 3.9.1997, leg. Pišťanský*		
36	Sk, Považský Inovec, Lúka, Babia hora, 380 m n.m., 16.7.1997, leg. Pišťanský *		
36	Sk, Považský Inovec, Lúka, Pod Vinohrady, 320 m n.m., 16.7.1997, leg. Pišťanský*		
36	Sk, Považský Inovec, Havran, 400 m n.m., 12.8.1997, leg. Pišťanský*		
36	Sk, Považský Inovec, Pod Skalinami, 600 m n.m., 12.8.1997, leg. Pišťanský *		
36	Sk, Slovenské rudohorie, Španie pole, 370 m n.m., 24.8.1998, leg. Pišťanský *		
36	Sk, Javorníky, Čertov, 570 m n.m., 19.7.1998, leg. Pišťanský*		
36	Sk, Javorníky, Frňovské sedlo, 940 m n.m., 20.7.1998, leg. Pišťanský*		
36	Sk, Javorníky, Kohútka, 880 m n.m., 22.7.1998, leg. Pišťanský*		
36	Sk, Javorníky, Holýš, 440 m n.m., 18.7.1982, leg. Mičieta*		
36	Sk, Javorníky, Veľký vrch, pri obci Divinka, 360 m n.m., 15.6.1987, leg. Mičieta*		

36	Sk, Javorníky, Medzihony, pri obci Stupné, 400 m n.m., 12.8.1988, leg. Mičieta*		
36	Sk, Javorníky, Jakubovský vrch, 830 m.n.m., 16.8.1988, leg. Mičieta *		
36	Sk, Javorníky, Považský Chlmec, 370 m n.m., 370 m n.m., leg. Mičieta, (Mičieta, 1978) *		
45	Pl, Tatra Mts, Polana Bialý potok, dry parts of the meadow, among low vegetation, alt. c. 940 m	[N 49°18', E 19°56']	Skalińska, 1967
45	Pl, Tatra Mts, sunny slope over the road from Przyslop Miętusi to Kobylarz, at the bottom of the young spruce wood, alt. c. 1170 m	[N 49°14', E 19°51']	
45	Pl, Tatra Mts, valley Jaworzynka, sunny slope over the road, near the entrance to the valley, alt. c. 1000 m	[N 49°34', E 20°00']	
45	Pl, Tatra Mts, Kasprowa Polana, over valley Jaworzynka, drier parts of a meadow, alt. c. 1100 m	[N 49°15', E 19°54']	
45	Pl, Tatra Mts, higher parts of valley Olczyska, near the road, alt. c. 1100 m	[N 49°19', E 20°00']	
45	Pl, Tatra Mts, Kopa Magury, among calcareous rocks in the top part, alt. c. 1700 m	[N 49°15', E 20°02']	
45	Pl, Tatra Mts, vicinity of Łysa Polana, in the meadow with low vegetation, alt. c. 960 m	[N 49°16', E 20°07']	
45	Pl, Tatra Mts, vicinity of Łysa Polana, a different part of the same meadow, alt. c. 960 m	[N 49°16', E 20°07']	
45	Pl, Pieniny Mts, Wąwóz Sobzański, in gorge, alt. c. 600 m*		Skalińska <i>et al.</i> , 1971
45	Pl, Gorce Mts, Lubomierz, alt. c. 500 m, coll. L. Przywara	[N 49°37', E 20°11']	Pogan and Wcisło, 1989
45	Pl, Gorce Mts, Polana Jaworzyna, alt. c. 1000 m, coll. L. Przywara *		
45	Pl, Gorce Mts, slope of the Mt. Jasień, alt. c. 600 m, coll. A. Joachimiak *		
45	Pl, Tatra Mts, Toporowa Cyrla, alt. c. 1100 m, coll. R. Izmailow, A. Jankun*		
45	Pl, Tatra Mts, Dolina Chochołowska, alt. c. 1100 m, coll. R. Izmailow	[N 49°14', E 19°49']	
45	Sk, Devínska Kobyla	[N 48°11', E 17°00']	Uhríková and Feráková, 1977
45	Sk, Južné Biele Karpaty, Myjava, Turá Lúka, 300 m n.m., 4.9.1997, leg. Píšťanský*		Píšťanský and Mičieta, 2000
45	Sk, Malé Karpaty, Bukovec, 400 m n.m., 4.9.1997, leg. Píšťanský *		
45	Sk, Považský Inovec, Hôrka nad Váhom, Medzihorie, 31. m n.m., 11.8.1997, leg. Píšťanský *		
45	Sk, Považský Inovec, Bezovec, 540 m n.m., 29.6.1998, leg. Píšťanský*		
45	Sk, Vtáčnik Mts, valley of Pokulský potok brook, in the grassy place 1 km E of the village of Ostrý Grúň, 490 m a.s.l., coll. F. Krahulec, 18 September 1998	N 48°33'50", E 18°41'00"	Rotreklová <i>et al.</i> , 2002
45	Sk, Vtáčnik Mts, valley of Jastrebský potok brook, ca 2.1 km S of the church in the village of Prochoť, 500 m a.s.l., coll. F. Krahulec, 18 September 1998	N 48°35'30", E 18°42'40"	
45	Cz, distr. Zlín, meadow 1.2 km SE of the railway station in the village of Valašské Klobouky, 510 m a.s.l., coll. F. Krahulec, 17 August 1999	N 49°08'10", E 18°02'10"	
45	Sk, Volovské vrchy Mts, Cechy, on the medieval copper heaps ca 0.5 km N of the center of the town of Gelnica, 500 m a.s.l., coll. P. Mráz & M. Bačkor	N 48°51'28", E 20°55'24"	

45	Sk, Západné Tatry Mts, Pribylina village, Račkova dolina valley, meadow near the of Agriculture University of Nitra chalet, 940 m a.s.l., coll. V. Mrázová, 18 June 2001	N 49°07'57", E 19°46'59"	Rotreklová <i>et al.</i> , 2005
45	Sk, Zemplínske vrchy Mts, Kráľovský Chlmec village, Veľký kopec Hill (263.9), 260 m a.s.l., coll. P. Mráz & V. Mrázová, 17 April 2001	N 48°25'01", E 21°57'44.7"	
45	Sk, Zemplínske vrchy Mts, Streda nad Bodrogom village, ca. 1 km SE of the village centre, <i>loco dicto</i> Veterné piesky on the Tarbucka Hill massive, ca 140 m a.s.l., coll. P. Mráz & V. Mrázová, 16 April 2001	N 48°22'40", E 21°47'02.4"	
45	Sk, Západné Tatry Mts, Pribylina village, Račkova dolina valley, near the crossroad with Jamnická dolina valley, 960 m a.s.l., coll. V. Mrázová, 18 June 2001	N 49°07'57", E 19°46'59"	
45	Sk, Volovské vrchy Mts, Hnilčík village, on the phyllite rocks near the crossroad to Hnilčík-Roztoky quarter, 640 m a.s.l., coll. P. Mráz & V. Mrázová, 3 July 2000	N 48°51'24.4", E 20°34'28.6"	
45	Sk, Zemplínske vrchy Mts, Veľká Bara village, former vineyards, ca 100 m N from Piliš Hill (277,6), 240 m a.s.l., coll. P. Mráz & V. Mrázová, 15 April 2001	N 48°25'47", E 21°42'28.3"	
45	Sk, Vysoké Tatry Mts, ca. 1.5 km NW of Štrbské pleso tarn, 1400 m a.s.l., coll. P. Mráz & V. Mrázová, 7 August 2000	N 49°07'48", E 20°02'27"	
45	Sk, Ostrôžky Mts, Polichno village, meadow on the top of the Mt Bralce, 817 m a.s.l., coll. P. Mráz & V. Mrázová, 17 April 2001	N 48°25'27", E 19°27'44"	
45	Sk, Chočské vrchy Mts, Prosiek village, 0.5 km N of the village, pasture, 644 m a.s.l., coll. P. Mráz, 15 July 2000	N 49°09'30", E 19°29'54"	
45	Sk, Vysoké Tatry Mts, on the tourist path between Štrbské pleso tarn and Jamské pleso tarn, 1450 m a.s.l., coll. P. Mráz & V. Mrázová, August 2001	N 49°07'56", E 20°02'28"	
45	Sk, Volovské vrchy Mts, Čučma village, ca 200 m SW of the top of Mt Skalisko, 1250 m a.s.l., coll. P. Mráz & V. Mrázová, 12 June 2001	N 48°44'38", E 20°34'35"	
45	Sk, Volovské vrchy Mts, Čučma village, S slopes of Mt Skalisko, <i>loco dicto</i> Doboška ca 1 km N from elevation marker 874.2, 890 m a.s.l., coll. P. Mráz & V. Mrázová, 12 June 2001	N 48°43'50", E 20°35'25"	
45	Sk, Volovské vrchy Mts, Úhorná village, on the forest route from the Panské sedlo saddle to Mt Biele skaly, NW of the village, 1100 m a.s.l., coll. P. Mráz, June 2002	N 48°43'19", E 20°39'01"	
45	Sk, Volovské vrchy Mts, Prakovce village, <i>loco dicto</i> Hutno on E margin of the village, near the forest road, 400 m a.s.l., coll. P. Mráz, September 2000	N 48°49'08", E 20°55'25"	
45	Sk, Volovské vrchy Mts, Kojšov village, <i>loco dicto</i> Strieborná lúka ca 2.5 km NW of the village, 700 m a.s.l., coll. P. Mráz, 20 July 2000	N 48°50'25", E 20°59'20"	
45	Sk, Vihorlat Mts, Jasenov village, ca 0.5 km NE of the village, pasture, 150 m a.s.l., coll. P. Mráz & V. Mrázová, 13 May 2001	N 48°54'14.7", E 21°54'36"	
45	Sk, Zemplínske vrchy Mts, Veľká Třňa village, xerothermic margins of the road 1.5 km NNW of village, pasture, 180 m a.s.l., coll. Mráz & V. Mrázová, 14 April 2001	N 48°28'35", E 21°40'24"	

45	Cz, Javorníky Mts, on the main ridge near the Portáš chalet, 900 m a.s.l., coll. P. Mráz & V. Jurkovičová, 14 October 2000	N 49°17'47", E 18°14'40"	
45	Sk, Považský Inovec, Topolčany, Podhradie	[N 48°34', E 18°10']	Májovský <i>et al.</i> , 1970
54	Sk, Považský Inovec, Nová Lehota – Dolina, 300 m n.m., 15.8.1998, leg. Píšťanský *		Píšťanský and Mičieta, 2000
54	Sk, Považský Inovec, Podhradie, 450 m n.m., 16.8.1998, leg. Píšťanský*		
54	Sk, Velká Fatra Mts, Mt Král'ova studňa, meadow near the hiking path 150 m NW of the chalet, 7 km W of the village of Staré hory, 1270 m a.s.l., coll. F. Krahulec & A. Krahulcová, 24 July 1999	N 48°52'40", E 19°02'30"	Rotreklová <i>et al.</i> , 2002
54	Sk, Ostrôžky Mts, ca 0.7 km SW of village of Luboreč, along the road between the villages of Luboreč a Závada, 250 m a.s.l., coll. P. Mráz & V. Jurkovičová, 23 April 2000	N 48°18'08", E 19°30'35"	
54	Sk, Slovenský kras Mts, Zádiel village, Zádielska planina plateau, ca 0.5 km NW from elevation point 591.2	N 48°37'58", E 20°41'57"	Rotreklová <i>et al.</i> , 2005
54	Sk, Volovské vrchy Mts, Čučma village, S slopes of Mt Skalisko, 1220 m a.s.l., coll. coll. P. Mráz & V. Jurkovičová, 13 June 2000	N 48°44'47", E 20°34'33"	
54	Sk, Volovské vrchy Mts, Vyšný Klátov village, Mt Predná Holica, meadow bellow the Lajoška chalet, 900 m a.s.l., coll. P. Mráz, June 2002	N 48°45'47", E 21°04'38"	
54	Sk, Volovské vrchy Mts, Košice city, Botanical garden grounds, 236 m a.s.l., coll. P. Mráz, May 2000	N 48°44'03", E 21°14'15"	
54	Sk, Slovenský kras Mts, Plešivec town, Plešivecká planina plateau, on the forest route ca 0.5 km NE of Zbojnická priepasť chasm, 545 m a.s.l., coll. P. Mráz, 30 May 2000	N 48°34'22", E 20°25'09"	
54	Sk, Slovenský kras Mts, Kečovo village, Silická planina plateau, xerothermic slopes on the N margin of the village, 350 m a.s.l., coll. P. Mráz, 30 May 2002	N 48°29'45", E 20°29'20"	
54	Sk, Zemplínske vrchy Mts, Luhyňa village, N slopes of Ondrejský kopec Hill, oak forest margin, 160 m a.s.l., coll. Mráz & V. Mrázová, 14 April 2001	N 48°30'03", E 21°38'01"	
54	Pl, Tatra Mts, vicinity of Łysa Polana, higher parts of the meadow, alt. c. 970 m	[N 49°16', E 20°07']	Skalińska, 1967
45, 54	Pl, Tatra Mts, along the road valley Kościeliska to valley Tomanowa, alt. c. 1100 m	[N 49°12', E 19°52']	
45, 54	Pl, Tatra Mts, vicinity of Łysa Polana, among rocks scattered in a meadow, alt. c. 960 m	[N 49°16', E 20°07'] [N 50°23', E 15°38']	Měsíček and Jarolímová, 1992
36	Cz, Jičín, town Hořice, meadow near the forest ca 0.5 km N of the town, 400 m a.s.l.		
36	Cz, Vítkovice, Horní Mísečky, along the road ca 0.5 km NNW of the settlement, 1070 m a.s.l., coll. F. Krahulec & A. Krahulcová, 15 July 1997	N 50°44'20", E 15°33'50"	Krahulcová and Krahulec, 1999
36	Cz, Pec pod Sněžkou, Velká Úpa, meadow near the settlement Janovy Boudy, 1.5 km E of the church, 860 m a.s.l., coll. F. Krahulec, 20 June 1995	N 50°41'20", E 15°48'00"	
36	Cz, Pec pod Sněžkou, the grassland area Velká pláň in the N part of the village in the northern part of the village, 830 m a.s.l., coll. F. Krahulec, 18 June 1999	N 50°41'50", E 15°43'50"	Krahulcová <i>et al.</i> , 2001

36	Cz, Horní Malá Úpa, Pomezí Boudy, the meadow beside the road opposite to bus stop, 160 m S of Padolská bouda chalet, 950 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 30 June 1999	N 50°44'10", E 15°48'50"	
36	Cz, Pec pod Sněžkou, Velká Úpa, the grassland area Přední Výsluní, close to woodland edge, ca. 1.3 km SEE of the church, 890 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 1 July 1999	N 50°41'20", E 15°47'30"	
36	Cz, Špindlerův Mlýn, in the meadow beside the touring path, between Petrova bouda and Moravská bouda chalets, ca 100 m NE of Moravska bouda chalet, 1240 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 2 July 1999	N 50°46'10", E 15°36'30"	
36	Cz, Benecko, in the lawn in the central part of the village ca 0,4 km W of the parking place, 800 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 2 July 1999	N 50°40'00", E 15°33'00"	
36	Cz, Benecko, the upper part of the meadow bellow Jindrova skála hill, S slope, in the southwestern periphery of the village, 770 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 2 July 1999	N 50°39'50", E 15°32'40"	
36	Cz, distr. Louny, W edge of Vroutecký les wood near the village of Valov, 2.2 km S of the church in the town of Podborany, 350 m a.s.l., coll. F. Krahulec, 2. June 1998	N 50°12'50", E 13°25'00"	Rotreklová <i>et. al.</i> , 2002
36	Cz, distr. Cheb, nature reserve Pluhův bor, 1.7 km N of the church in the village of Mnichov, 700 m a.s.l., coll. O. Rotreklová & P. Šmarda, 13 July 2000	N 50°03'12", E 12°47'07"	
36	Cz, Bohemian Karst, distr. Beroun, grassland above the road N of the village of Srbsko, 1.3 km NE of the railwaz station, 310 m a.s.l., coll. F. Krahulec, 13 June 1998	N 49°56'40", E 14°08'50"	
36	Cz, Šumava, distr. Prachatice, slope above the railway in the village of Stožec, 50 m E of the railwaz station, 780 m a.s.l., coll. F. Krahulec, 11 August 1999	N 48°51'30", E 13°49'20"	
36	Cz, distr. Náchod, grassland and the former sand pit in the N periphery of the village of Vršovka, 330 m a.s.l., coll. F. Krahulec, 21 May 1999	N 50°19'30", E 16°07'00"	
36	Cz, Krušné hory Mts, the former tin mine 3.5 km NNE of the village Přebuz, 890 m a.s.l., coll. F. Krahulec, 8 June 2000	N 50°24'00", E 12°30'00"	Rotreklová <i>et. al.</i> , 2005
36	Cz, Ještědský hřeben Mts, distr. Liberec, in the S periphery of the village of Křištofovo Údolí ca 5.5 km SSW of the town of Chrastava, 440 m a.s.l., coll. F. Krahulec & S. Bräutigam, 7 July 2001	N 50°46'04", E 14°55'57"	
36	Cz, Praha city, part Řeporyje	N 50°03.232', E 14°18.619'	Košťálová, 2004
36	Cz, Praha city, part Hrdlořezy	N 50°05.747', E 14°31.343'	
36	Cz, Praha city, part Kyje	N 50°05.769', E 14°32.828'	
36	Cz, Praha city, part Braník	N 50°02.251', E 14°27.004'	
36	Cz, Praha city, part Řevnice	N 49°55.204', E 14°14.967'	
36	Cz, Praha city, part Šeberov	N 50°00.5', E 14°30.55'	

54	Cz, distr. Rychnov nad Kněžnou, meadow at the edge of Halín wood, 0.5 km NW of the crossroads near the village of Běstviný, 310 m a.s.l., coll. F. Krahulec, 21 May 1999	N 50°19'30", E 16°08'40"	
36, 45	Cz, distr. Olomouc, grassland on the E slope of Malý Kosíř hill, 0,6 km SW of the church in the village of Slatinice na Hané, 270 m a.s.l., coll. F. Krahulec, 25 May 1998	N 50°33'30", E 17°05'40"	Rotreklová <i>et. al.</i> , 2002
36, 45	Cz, Praha, slope above the railway W of the railway station Praha-Vysočany, 210 m a.s.l., coll. F. Krahulec & J. Chrtek, 18 May 2000	N 50°06'45", E 14°29'50"	
54+63	Cz, Praha city, part Černý most*	N 50°06.874', E 14°35.276'	Košťálová, 2004

SUPPLEMENTARY INFORMATION 3

Published chromosome numbers of *Pilosella officinarum* in Europe, with exception of the data given in Supplementary Information 2. Localities are given as in the original sources. Completed data based on our searching are given in square brackets. Localities marked by an asterisk were not included in the maps of cytotype distribution (Figure 5), for several reasons (see Material and Methods, Results and Discussion). CD-BSBI = Cytological database of the Botanical Society of the British Isles (accessed February 2005).

2n	Country	Locality	Latitude, longitude	Source
18	France	Htes-Alpes, Région de Guillestre, Lac du Séguret, pelouse à <i>Festuca spadicea</i> , alt. 1200 m*	[N 44°56', E 06°28']	Delcourt, 1972
18		Htes-Alpes, Région de Vars, au pied du Châtelieret, alt. 2000 m*	[N 44°37', E 06°41']	
18		Htes-Alpes, Région de Ceillac, bords d'un torrent eu sous-bois de Mélézes, alt. 1900 m*	[N 44°40', E 06°46']	
18		B.-Alpes, Col de Larche, Réserves du Lausannier, bords d'un sentier, en sous-bois de Mélézes, alt. 1700-1800 m*	[N 44°27', E 06°51']	
18		Htes-Alpes, Val d'Escreins, sous-bois de <i>Pinus sylvestris</i> , alt. 1600 m*	[N 44°37', E 05°47']	
18		Htes-Alpes, Vars-les-Claux, derrière le village, tapis herbeux en sous-bois de Mélézes, alt. 1800 m*	[N 44°34', E 06°34']	
18		Htes-Alpes, Vars-les-Claux, en bordure d'une pelouse à <i>Festuca spadicea</i> , alt. 1800 m*	[N 44°34', E 06°34']	
18		Htes-Alpes, Col de Vars, pelouse à <i>Festuca spadicea</i> , alt. 2000*	[N 44°32', E 06°41']	
18		Htes-Alpes, Vars, St-Marcellin, au lieu dit Le Rocher du chateau, pelouses pâturées, alt. 1800 m*		
18		Htes-Alpes, Région de Guillestre, lavandaie à <i>Lavandula vera</i> , sur cailloutis consolidés des alluvions de la Durance, alt. 1000-1100 m*	[N 44°39', E 06°37']	
18		Htes-Alpes, Plateau de Peyrol, Région de Vars, pelouses en pré-bois de Mélézes, alt. 2200 m*	[N 44°37', E 06°39']	
18		Htes-Alpes, Région de Vars. Au lieu dit Les Escondus, sur éboulis plus ou moins siliceux avec rares pâturages, alt. 2300 m*		
18		Htes-Alpes, Région de Vars, Les Cuniets, pelouse à Fétuques, alt. 2000 m*		
18		Htes-Alpes, Région de Lautaret, pelouses à <i>Festuca spadicea</i> , alt. 2000 m*	[N 45°02', E 06°23']	
36	Armenia	Yerevan, Botanicheskij sad	[N 40°11', E 44°31']	Nazarova and Ghukasyan, 2004
36	Austria	Deutschlandsberg (Steiermark)	[N 46°49', E 15°13']	Gadella, 1972

36	Belarus	Grodnenskaija obl., Smorgonskij reg., okr. Rybaki	[N 54°32', E 26°24']	Dmitrieva, 1987
36		1 km JZ ot der. Domzheritsy*	[N 55°44', E 28°19']	Parfenov and Dmitrieva, 1988
36	Belgium	De Panne (W. Vlaanderen)	[N 51°06', E 02°35']	Gadella, 1972
36		Eupen (Liège)	[N 50°38', E 06°02']	
36		near Houffalize (prov. Luxembourg)	[N 50°08', E 05°47']	Gadella, 1984
36		near Vise, (prov. Liège)	[N 50°44', E 05°42']	
36	Denmark	Brömsholm, H. Nordenskiöld, 1951	[N 55°55', E 12°29']	Turesson and Turesson, 1960
36		Lögstör, H. Nordenskiöld, 1951	[N 56°58', E 09°15']	
36		Oserild, H. Nordenskiöld, 1951	[N 57°02', E 08°50']	
36		Ribe, H. Nordenskiöld, 1951	[N 55°19', E 08°50']	
36		Rödning, H. Nordenskiöld, 1951	[N 53°19', E 08°50']	
36		Skibsted, H. Nordenskiöld, 1951	[N 56°52', E 10°05']	
36		Viborg, H. Nordenskiöld, 1951	[N 56°27', E 09°22']	
36		Talne, S. O. Björkman, 1949*		
36		Millinge (Fyn)	[N 55°08', E 20°13']	Gadella, 1972
36		Agger (Jylland)	[N 56°47', E 08°15']	
36		Ebeltoft (Jylland)	[N 56°12', E 10°41']	
36		Gladved (Jylland)	[N 56°19', E 10°50']	
36		Helsingör (Sjaelland)	[N 56°02', E 12°37']	
36		Hennestrand (Jylland)	[N 55°44', E 08°10']	
36		Hvide Sande (Jylland)	[N 55°59', E 08°08']	
36		Klim (Jylland)	[N 57°06', E 09°10']	
36		Lakolk (Römö)	[N 55°08', E 08°30']	
36		Lögstör (Jylland)	[N 56°58', E 09°15']	
36		Lokken (Jylland)	[N 57°22', E 09°43']	
36		Rebild (Jylland)	[N 56°50', E 09°51']	
36		Slettestrand (Jylland)	[N 57°09', E 09°22']	
36		Stege (Mön)	[N 54°59', E 12°18']	
36		Stenbjerg (Jylland)	[N 56°55', E 08°22']	
36		Thorupstrand (Jylland)*	[N 57°08', E 09°07']	
36		Hjimmelberget near Silkeborg (Jylland)	[N 56°10', E 09°34']	Gadella, 1984
36	France	Bouches-du-Rhône, Région de Marseille, Vallée de l'Huveaune, Les Camoins, alt. 0-50 m	[N 43°18', E 05°30']	Delcourt, 1972

36	Bouches-du-Rhône, Vallée de la Durance, au niveau du Pont-de-Mirabeau, sur cailloutis consolidés par un petite pelouse xérophile, alt. 0-100 m	[N 44°55', E 04°44']	
36	Htes-Alpes, non loin de Guillestre, au Plan de Fazy, alt. 500-700 m	[N 44°40', E 06°39']	
36	Htes-Alpes, Région d'Embrun à Boseodon, sur pelouses sèches de type méditerranéen	[N 44°34', E 06°29']	
36	Htes-Alpes, Vallée de la Durance, non loin de la Roche-de-Rame, alt. 800 m	[N 44°55', E 04°44']	
36	Bouches-du-Rhône, Bassin d'Aix-en-Provence, région des Milles, pelouses sèches en bordure de route, alt. 50-100 m	[N 43°32', E 05°26']	
36	Var, Evenos, sur basalte, dans un pelouse avec <i>Lavandula stoechas</i>	[N 43°10', E 05°51']	
36	Var, entre Flassans et le Luc, bords de route sur pelouses à graminées, terrains calcaireo-marneux, alt. 100 m	[N 43°22', E 06°13']	
36	Ste-Victoire, Champ en friche non loin du barrage de Bimont	[N 50°33', E 01°54']	
36	Var, bassin de Bausset, sur marnes ligériennes, alt. 100 m*	[N 43°12', E 05°47']	
36	Ste-Victoire – St. Marc, jaumegarde, aeniennes cultures abandonnées*	[N 43°33', E 05°32']	
36	Ste-Victoire, au lieu dit le "Domaine de l'Etang", pelouses pâturées sous quelques chênes verts, terrains plus ou moins dolomitiques*	[N 43°31', E 05°36']	
36	Les Milles, , croisement de St.-Pons, dans un <i>Deschampsietum mediae</i>	[N 43°30', E 05°23']	
36	Echenerex (Ain)	[N 46°19', E 06°02']	Gadella, 1972
36	Virieu le Grand (Ain)	[N 45°51', E 05°39']	
36	Cap Blanc Nez (Artois)	[N 50°53', E 01°38']	
36	Nant (Aveyron)	[N 44°01', E 03°18']	
36	Plage de Loon (Flandres)	[N 51°00', E 02°14']	
36	Hohneck, Vosges, (Haut Rhin)	[N 48°02', E 07°01']	
36	Collobrières, Massif de Maures (Var)	[N 43°16', E 06°23']	
36	Egliseneuve près Billon (dep. du Puy-de-Dôme)	[N 45°43', E 03°24']	Aquier and Renard, 1979
36	France: garrigue, environs de Montpellier	[N 43°37', E 02°50']	Natarajan 1981
36	St. Julien de Verdon (Ht. Prov.)	[N 43°55', E 06°31']	Gadella, 1984
36	Le Mans (Ht. Alpes)	[N 48°00', E 00°12']	
36	Col de Tourmalet, alt. 1700 m	[N 42°54', E 00°09']	
36	near Obéost (Pyren. Atlantiques)*		
36	Marlestein (Ht. Rhin)*		
36	Germany Obermoss, Zugsp., H. Nordenskiöld, 1950	[N 49°40', E 08°55']	Turesson and Turesson, 1960

36		St. Blasien, Schwarzwald (Baden-Württemberg)	[N 47°46', E 08°08']	Gadella, 1972
36		Borken (Nordrhein-Westfalen)	[N 51°03', E 09°16']	
36		Konzen (Nordrhein-Westfalen)	[N 50°35', E 06°15']	
36		Monschau (Nordrhein-Westfalen)	[N 50°34', E 06°15']	
36		Bluchertal, near Kaub*	[N 50°06', E 07°47']	Gadella, 1984
36		Regierungsbezirk Oberbayern, Kiesgrube rechts der Strasse von Kreuzstrasse nach Eching	[N 48°17', E 11°35']	Schuhwerk and Lippert, 1997
36		Regierungsbezirk Oberpfalz, Landkreis Regensburg, Mittelberg nördlich Tegerheim	[N 50°20', E 11°02']	
36		Regierungsbezirk Oberbayern, Landkreis Traunstein, von der Thoraualm südöstlich des Hochfelln zur Nesselauer Schneid, Lippert, 19.6.1996	[N 48°01', E 11°05']	Schuhwerk and Lippert, 2002
36		Regierungsbezirk Niederbayern, Landkreis Straubing-bogen, Bayerischer Wald, Steinbruch im Südhang des Welchenberges bei Espern, 340 m, 27.5.1998, Schuhwerk	N 48°52'42", E 12°46'04"	
36		Saxonia, 12 km SSW of Görlitz	[N 51°03', E 14°54']	Bräutigam and Bräutigam, 1996
36		Sachsen, Niederspree village, on the margin of the forest route along the lake bank	N 51°24'10", E 14°52'60"	Rotreklová <i>et al.</i> , 2005
36	Ireland	Lanesborough (Ct. Roscommon)	[N 53°40', W 07°59']	Gadella, 1972
36		Longford (Ct. Roscommon)	[N 53°44', W 07°48']	
36		Furnace, Lough Feeagh (Ct. Mayo)	[N 53°57', W 09°35']	
36	Luxembourg	near Vianden	[N 49°56', E 06°12']	
36		Müllertal near Larochette	[N 49°46', E 06°13']	Gadella, 1984
36		Château de Beaufort near Beaufort	[N 49°50', E 06°17']	
36	The Netherlands	Utrecht, Maarn-Maarnsbergen	[N 52°04', E 05°23']	Gadella and Kliphuis, 1963
36		Friesland, Island of Ameland	[N 53°27', E 05°43']	Gadella, 1972
36		Friesland, Oosterwolde	[N 53°00', E 06°18']	
36		Drente, Diphorn	[N 52°46', E 06°49']	
36		Drente, Emmen	[N 52°47', E 06°54']	
36		Drente, Noordsleen	[N 52°47', E 06°48']	
36		Drente, Oosterhesselen	[N 52°46', E 06°49']	
36		Drente, Schoonebeek	[N 52°40', E 06°43']	
36		Drente, Sleen	[N 52°46', E 06°48']	
36		Overijssel, Ommen	[N 52°31', E 06°25']	

36	Gelderland, Bennekom	[N 52°00', E 05°41']	
36	Gelderland, Culemborg	[N 51°57', E 05°14']	
36	Gelderland, Harderwijk	[N 52°21', E 05°38']	
36	Gelderland, Heesum	[N 51°59', E 05°46']	
36	Gelderland, Speuld	[N 52°16', E 05°43']	
36	Utrecht, de Bilt	[N 52°07', E 05°11']	
36	Utrecht, Rhenen	[N 51°58', E 05°34']	
36	Noord Holland, Bergen	[N 52°40', E 04°42']	
36	Noord Holland, Hilversum	[N 52°14', E 05°11']	
36	Zuid Holland, Island of Goeree	[N 51°49', E 03°57']	
36	Noord Brabant, Cromvoirt	[N 51°39', E 05°18']	
36	Noord Brabant, Drunen	[N 51°41', E 05°10']	
36	Noord Brabant, Heesch	[N 51°45', E 05°32']	
36	Noord Brabant, Helvoirt	[N 51°39', E 05°17']	
36	Noord Brabant, Lage Mierde	[N 51°24', E 05°09']	
36	Noord Brabant, Ossendrecht	[N 51°24', E 04°20']	
36	Limburg, Bemelen	[N 50°51', E 06°46']	
36	Limburg, Brunssum	[N 50°57', E 05°57']	
36	Limburg, Epen	[N 50°47', E 05°55']	
36	Limburg, Eys	[N 50°55', E 05°46']	
36	Limburg, Gulpen	[N 50°54', E 05°38']	
36	Limburg, Heerlen	[N 50°55', E 06°02']	
36	Limburg, Kunrade	[N 50°52', E 05°56']	
36	Limburg, Maastricht	[N 50°51', E 05°41']	
36	Limburg, Slenaken	[N 50°46', E 05°51']	
36	Limburg, Waubach	[N 50°55', E 06°03']	
36	Limburg, Wittem	[N 50°50', E 05°59']	
36	Noord Holland, Laren	[N 52°15', E 05°14']	
36	Gelderland, Opheusden	[N 51°56', E 05°38']	
36	Zuid Holland, Voorne	[N 51°54', E 04°07']	
36	Zeeland, Oostkapelle	[N 51°34', E 03°33']	
36	Limburg, Tierziet*		
36	Loonse en Drunense Duinen (prov. Noord Holland)	[N 51°39', E 05°08']	Gadella, 1984

36		Noord Holland, Bulk near Hilversum	[N 52°14', E 05°11']	
36		Limburg, near Brunssum*	[N 50°57', E 05°58']	
36		Limburg, near Gulpen*	[N 50°49', E 05°54']	
36	Norway	near Oslo	[N 59°55', E 10°46']	Gadella, 1972
36	Poland	near Opole (Lublin)	[N 50°40', E 17°57']	
36		district Przemyśl, Huta Złomy, near Narol, coll. A. Jankun	[N 50°21', E 23°19']	Pogan and Weisło, 1989
36		district Przemyśl, Wola Wielka, near Narol, coll. A. Jankun	[N 50°12', E 23°24']	
36		district Katowice, Płoki near Trzebinia, coll. R. Izmailow	[N 50°12', E 19°31']	
36		district Słupsk, in the vicinity of Reservation Ruchome Wydmy, coll. E. Kuta	[N 54°28', E 17°02']	
36		district Słupsk, Ulinia, near the Lake Sarbsko, coll. E. Kuta	[N 54°46', E 17°38']	
36		district Siedlce, Pecowiec near Siedlce, coll. E. Kuta	[N 52°10', E 22°17']	
36		district Zamość, Roztocze, Zwierzyniec, coll. E. Kuta *	[N 50°37', E 22°57']	
36		district Gdańsk, Karwia, way to Czarny Młyn,	[N 54°50', E 18°13']	
36		district Gdańsk, Ostrowo	[N 54°50', E 18°15']	
36		district Gdańsk, Jastrzębia Góra	[N 54°50', E 18°22']	
36		district Gdańsk, Świecino near Wejherowo	[N 54°45', E 18°11']	
36		district Gdańsk, Rozewie	[N 54°50', E 18°20']	
36		district Toruń, Toruń	[N 53°01', E 18°37']	
36		district Suwałki, Wiersnie near Giby	[N 53°47', E 19°34']	
36		district Suwałki, way from Zelwy to the lake Pomorze in vicinity of Giby	[N 54°52', E 23°22']	
36		district Włocławek, Widoń near Włocławek	[N 52°34', E 19°04']	
36		district Częstochowa, Sułostowice	[N 50°49', E 19°07']	
36		district Częstochowa, Romanów near Częstochowa	[N 50°41', E 19°23']	
36		district Kielce, Chęciny	[N 51°54', E 21°47']	
36		district Kielce, Koniecmosty near Pińczów	[N 50°20', E 20°40']	
36		district Kielce, Kije near Pińczów	[N 50°37', E 20°36']	
36		district Tarnobrzeg, Staszów	[N 50°33', E 21°07']	
36		district Katowice, Chrzastowice near Wolbrom	[N 50°20', E 19°41']	
36		district Kraków, Kraków-Kostrze	[N 50°03', E 19°57']	
36		district Bielsko-Biała, Maków Podhalański; Kamienna Góra,	[N 44°38', E 20°03']	
36		district Tarnobrzeg, Świniary, coll. Z. Sawicka	[N 50°33', E 21°35']	
36		district Tarnobrzeg, Połaniec, coll. Z. Sawicka	[N 50°26', E 21°19']	
36		district Kraków, Ruszcza near Kraków	[N 50°05', E 20°09']	

36		district Kraków, Niepołomice, coll. L. Przywara	[N 50°02', E 20°16']	
36		district Suwałki, Sejny, coll. R. Czapik	[N 54°06', E 23°21']	
36		district Skierniewice, Budy Grabskie, Primeval forest-Puszcza Bolimowska, coll. R. Czapik	[N 52°01', E 20°17']	
36		district Włocław, Milicz, coll. J. Małecka	[N 51°32', E 17°16']	
36		district Gdańsk, near Jastrzębia Góra	[N 54°50', E 18°22']	
36		district Gdańsk, Losniewo*		
36		district Suwałki, Michnowce near Sejny, in the vicinity of Lake Płaskie	[N 53°47', E 19°34']	
36		district Tarnobrzeg, Żarabki, coll. Z. Sawicka	[N 50°16', E 21°47']	
36		district Włocław, Ruda Malicka, coll. R. Izmailow*		Skalińska <i>et al.</i> , 1971
36		Stronie Śląskie, Sudetien Mts	[N 50°18', E 16°53']	
36		Wielogłowy near Pelplin	[N 53°55', E 18°42']	Pogan <i>et al.</i> , 1987
36		district Kielce, Pińczów	[N 50°32', E 20°32']	
36		Beskid Śląski Mts, grassland above chalet ca 3.8 km ESE of the of the station in the town of Ustroń	N 49°43'20", E 18°51'20"	Rotreklová <i>et al.</i> , 2002
36		Beskid Śląski Mts, grassland along the road 0.5 km SW of the chalet ca 3.25 km SE of the of the station in the town of Ustroń	N 49°43'00", E 18°50'40"	
36		Jizerské hory Mts, near the settlement of Orle 3.5 km W of the village of Jakuszyce	N 50°48'45", E 15°23'50"	Rotreklová <i>et al.</i> , 2005
36	Portugal	near Paradela (Tras os Montes)	[N 41°15', W 07°51']	Gadella, 1972
36		Serre do Gerês, Carris (no. 1385)	[N 39°30', W 08°06']	Fernades and Queirós, 1971
36		2km de Barracão vers Braga (no. 1386)	[N 41°33', W 08°26']	
36	Spain	Ordesa, alt. 1300 m	[N 42°38', E 00°02']	Gadella, 1984
36		Galicia, near Verin, alt. 650	[N 41°57', W 07°27']	
36		Galicia, Ria Euviane, N. of Chantada	[N 42°38', W 07°46']	
36		Galicia, Vieilro, alt. 850 m	[N 43°39', W 07°37']	
36		Ordesa Soaso, alt. 1750 m*	[N 42°40', W 00°04']	
36	Sweden	Scania, Ljungbyhed, G. Turesson, 1949	[N 56°04', E 13°13']	Turesson and Turesson, 1960
36		Scania, Dalby, G. Turesson, 1945	[N 59°32', E 17°21']	
36		Scania, Simrishamn, G. Turesson, 1945	[N 55°33', E 14°21']	
36		Scania, Gunnarp, G. Turesson, 1945	[N 57°19', E 12°39']	
36		Scania, Sätaröd, G. Turesson, 1945	[N 55°57', E 13°53']	
36		Scania, Ludvigsborg, B. Turesson, 1945	[N 55°54', E 13°36']	
36		Scania, S. Rörum, G. Turesson, 1945	[N 55°56', E 13°40']	

36		Scania, Stenestad, G. Turesson, 1945	[N 56°03', E 13°05']	
36		Scania, Kaffatorp, G. Turesson, 1945*		
36		Småland, Gränna, G. Turesson, 1945	[N 58°32', E 14°28']	
36		Småland, Forserum, G. Turesson, 1953	[N 57°43', E 14°19']	
36		Scania, Båstad, G. Turesson, 1953	[N 56°46', E 12°54']	
36		Scania, Landskrona, G. Turesson, 1949	[N 55°52', E 12°50']	
36		Scania, Axelvold, H. Nordenskiöld, 1951	[N 55°58', E 13°06']	
36		Scania, Barseback, G. Turesson, 1953	[N 55°46', E 12°54']	
36		Scania, Vankiva, G. Turesson, 1953	[N 56°11', E 13°44']	
36		Scania, Högstad, H. Nordenskiöld, 1951	[N 55°30', E 13°45']	
36		Scania, Falsterbo, G. Turesson, 1951	[N 57°39', E 16°22']	
36		Scania, Skanor, G. Turesson, 1951	[N 55°25', E 12°51']	
36		Scania, Tjornarp, G. Turesson, 1953	[N 56°00', E 13°38']	
36		Scania, Skillinge, G. Turesson, 1951	[N 55°28', E 14°17']	
36		Scania, Sjöbo, G. Turesson, 1951	[N 55°38', E 13°42']	
36		Scania, Hohög, G. Turesson, 1953	[N 55°26', E 13°05']	
36		Scania, Bjerred, G. Turesson, 1952	[N 55°42', E 13°02']	
36		Scania, Viktorshög, G. Turesson, 1952*		
36		Scania, Domsten, G. Turesson, 1952	[N 56°07', E 12°36']	
36		Scania, Forstavallen, G. Turesson, 1953*		
36		Scania, Klagshamn, G. Turesson, 1951	[N 55°32', E 12°55']	
36		Scania, Sanekulla, G. Turesson, 1951*		
36		Scania, Knutstorp, H. Nordenskiöld, 1951*		
36		Scania, Hovs Hallar, G. Turesson, 1954	[N 56°28', E 12°42°]	
36		Scania, Malen, G. Turesson, 1949*		
36		Scania, Tunbyholm, G. Turesson, 1945	[N 55°36', E 14°07']	
36		Scania, Hylla, B. Turesson, 1945	[N 55°33', E 13°38']	
36		Scania, Östarp, G. Turesson, 1945	[N 55°36', E 13°33']	
36		Scania, Haväng, G. Turesson, 1956	[N 55°43', E 06°00']	
36		Halland, Högaskog, G. Turesson, 1949*		
36	Switzerland	Tessin: Val Verzasco near Sonogno, alt. 900 m	[N 46°15', E 08°35']	Gadella, 1984
36	Ukraine	Chornogora, v fitotsenozakh lednikovych kotlov Goverla-Breskul, Breskul-Pozhizhevskaja, Pozhizhevskaja-Dantser, Rebra-Gutin-	[N 48°10', E 24°24']	Pashuk, 1987

		Tomnatek, <i>Festucetum-rubrae</i> , 1430-1600 m		
36	United Kingdom	England, Sussex, H.G. Baker, 1950	[N 50°55', W 00°10']	Turesson and Turesson, 1960
36		England, Bristol	[N 51°28', W 02°36']	Finch, 2005 (CD-BSBI)
36		England, E. Sussex, Fairligh sand quarry	[N 50°54', E 00°13']	
36		England, E. Kent, Dungeness	[N 51°12', E 01°10']	
36		England, N. Wilts., Vale of Pewsey, Walker Hill	[N 51°21', W 01°47']	
36		England, W. Gloucs., Avon Gorge, N side, 0.5 mi below Clifton Bridge	[N 51°56', W 02°15']	
36		England, Cambs., Babraham Hall Estate	[N 52°08', E 00°10']	
36		England, S. Hants., Christchurch	[N 50°44', W 01°45']	
36		England, Glam., Caerphilly	[N 51°40', W 03°11']	
36		England, S. Devon, Berry Head	[N 50°27', E 03°51']	
36		England, Berks., Wytham Wood, near Oxford	[N 51°45', W 01°14']	
36		England, Wight., Carisbrooke Castle	[N 50°42', W 01°18']	
36		England, S. Hants., Portsmouth	[N 50°50', W 01°05']	
36		England, E. Gloucs., Birdlip	[N 51°55', W 02°07']	Watson, 2005 (CD-BSBI)
36		England, W. Suffolk, Lakenheath Warren	[N 52°25', E 00°31']	Edmond, <i>et al.</i> , 2005 (CD-BSBI)
45	Austria	Fischbach, Styria, B. Nordensiöld, 1950	[N 47°27', E 15°39']	Turesson and Turesson, 1960
45		Maria Trost, Graz, B. Nordensiöld, 1950	[N 47°05', E 15°26']	
45		Katschberg, B. Nordensiöld, 1953	[N 47°03', E 13°37']	
45		Bernstein (Burgenland)	[N 47°24', E 16°16']	Gadella, 1972
45		Oberwart (Burgenland)	[N 47°17', E 16°12']	
45		Niederösterreich, Retz, Windmühlenberg nördlich Retz	[N 48°45', E 15°57']	Schuhwerk and Lippert, 1997
45	Belarus	Mogilevskaja obl., Slavgorodskij, okr.Rabinovichi	[N 53°35', E 30°20']	Dmitrieva, 1987
45	France	Alpes-Maritimes, localités entre Berthemon et St-Martin V0subie, talus eu bordure de la route, alt. 1300 m	[N 44°04', E 07°15']	Delcourt, 1972
45		Alpes-Maritimes, entre St-Martin v0subie et Bor0on, talus en bordure de la route, pelouse pâtures avec <i>Gentiana lutea</i> , alt. 1500 m	[N 44°04', E 07°15']	
45		Alpes-Maritimes, St-Etienne-de-Tinée, sur cailloutis en bordure de la Tin0e, alt. 1170-1200 m	[N 44°15', E 06°55']	
45		B.-Alpes, Vallée de l'Ubaye, route de Maurin, alt. 1400 m	[N 44°33', E 06°53']	
45		B.-Alpes, Vallée de l'Ubaye, Tornoux, 1200 m	[N 44°28', E 06°18']	
45		Alpes-Maritimes, en descendant de la Madonede Fenestre, alt. 1800 m*	[N 44°07', E 07°21']	
45		Alpes-Maritimes, Thorene, alt. 1200 m*		

45	Finland	Nätö, Åland, E. Hesselman, 1948*		Turesson and Turesson, 1960
45		Ostersundom, B. Nordensiöld, 1947	[N 60°15', E 25°11']	
45		Vädö, B. Nordensiöld, 1947*		
45	Ireland	Knochnareah, Granche House (Co. Sligo)*	[N 54°16', E 08°28']	Gadella, 1984
45		Port Runny Bay, (Ct. Roscommon)*	[N 53°38', E 08°13']	Gadella, 1972
45		Ben Bulbin (Co. Sligo), H. McAllister 68/40		Watson (2005, CD BSBI)
45		Near Enniskillen (Co. Fermanagh)		Finch (2005, CD BSBI)
45	The Netherlands	Noord Holland, Camperduin	[N 52°44', E 04°34']	
45		Zuid Holland, Wassenaar	[N 52°09', E 04°24']	
45		Gelderland, near Winterswijk	[N 51°56', E 08°43']	
45		Noord Holland, Island Texel, de Muy	[N 53°05', E 04°50']	Gadella, 1984
45		Noord Holland, Island Texel, de Krim	[N 53°05', E 04°50']	
45	Norway	Oslofjord, Island of Boroya	[N 59°21', E 10°35']	Gadella, 1972
45	Poland	near Kuźnice	[N 52°02', E 19°04']	
45	Sweden	Gotland, Lojsta Hed, G. Turesson, 1957	[N 57°21', E 18°22']	Turesson and Turesson, 1960
45		Gotland, Vike, G. Turesson, 1957	[N 63°20', E 18°45']	
45		Gotland, Fårösund, O. Hedberg, 1949	[N 57°53', E 16°06']	
45		Scania, Kaffatorp, G. Turesson, 1951	[N 56°12', E 14°17']	
45		Scania, Skälderviken, G. Turesson, 1949	[N 56°25', E 12°42']	
45		Scania, V. Ströo, B. Lövkvist, 1949*		
45		Småland, Pataholm, B. Turesson, 1952	[N 56°55', E 16°25']	
45		Scania, Hallands Väderö, B. Lövkvist, 1949	[N 56°51', E 12°54']	
45		Scania, Bollerup, G. Turesson, 1951	[N 55°30', E 14°02']	
45		Scania, Sibbarp, G. Turesson, 1952	[N 57°21', E 12°42']	
45		Scania, Vittsjö, G. Turesson, 1953	[N 56°20', E 13°39']	
45		Scania, Osby, G. Turesson, 1953	[N 56°22', E 13°59']	
45		Blekinge, Bräkne-Hoby, G. Turesson, 1951	[N 56°13', E 15°07']	
45		Blekinge, Karlskrona, G. Turesson, 1956	[N 56°10', E 15°35']	
45		Halland, Tolarp, O. Gelin, 1952	[N 55°56', E 13°58']	
45		Halland, Skrea strand, G. Turesson, 1952	[N 56°53', E 12°30']	
45		Halland, Steninge, G. Turesson, 1952	[N 56°47', E 12°40']	
45		Halland, Åsa, G. Turesson, 1952	[N 57°21', E 12°08']	
45		Halland, Tönnersjö, G. Turesson, 1952	[N 56°38', E 13°04']	

45	Öland, Resmo, B. Turesson, 1952	[N 56°33', E 16°26']
45	Småland, Vassmolösa, B. Turesson, 1950	[N 56°35', E 16°10']
45	Småland, Jönköping, B. Nordensiöld, 1950	[N 57°47', E 14°10']
45	Småland, Tännö, B. Nordensiöld, 1950	[N 57°07', E 14°00']
45	Småland, Almhult, G. Turesson, 1953	[N 57°14', E 14°17']
45	Småland, Markaryd, B. Nordensiöld, 1950	[N 56°27', E 13°36']
45	Småland, Bellö, G. Turesson, 1954	[N 57°35', E 15°20']
45	Småland, Svinshult, G. Turesson, 1954	[N 57°39', E 15°05']
45	Småland, Råshult, G. Turesson, 1953	[N 57°27', E 15°28']
45	Småland, Urshult, G. Turesson, 1953	[N 56°32', E 14°49']
45	Småland, Ravamåla, G. Turesson, 1953	[N 56°33', E 15°16']
45	Småland, Ryningsnäs, G. Turesson, 1953	[N 59°36', E 13°07']
45	Småland, Lenhovda, G. Turesson, 1953	[N 57°00', E 15°17']
45	Småland, Oskarshamn, G. Turesson, 1953	[N 57°16', E 16°28']
45	Småland, Vimmerby, G. Turesson, 1953	[N 57°40', E 15°51']
45	Småland, Eksjö, G. Turesson, 1953	[N 57°40', E 14°58']
45	Småland, Bankeryd, G. Turesson, 1953	[N 57°53', E 14°06']
45	Småland, Vrå, G. Turesson, 1954	[N 57°22', E 12°20']
45	Bohuslän, Munkedal, G. Turesson, 1948	[N 58°28', E 11°41']
45	Bohuslän, Stenungsund, G. Turesson, 1952	[N 58°04', E 11°49']
45	Bohuslän, Svanesund, G. Turesson, 1952	[N 58°08', E 11°50']
45	Bohuslän, Lysekil, G. Turesson, 1948	[N 58°16', E 11°27']
45	Östergötland, Ringstad, G. Turesson, 1949	[N 59°36', E 13°07']
45	Östergötland, Omberg, O. S. Björkman, 1949	[N 58°19', E 14°41']
45	Östergötland, Grensholmen, A. Gustafsson, 1949	[N 58°31', E 15°48']
45	Östergötland, Borghamn, A. Gustafsson, 1949	[N 58°23', E 14°41']
45	Västergötland, Läckö, O. S. Björkman, 1949	[N 58°41', E 13°13']
45	Östergötland, Åtvidaberg, G. Turesson, 1954	[N 58°12', E 16°01']
45	Västergötland, Udenäs, G. Turesson, 1953	[N 58°39', E 14°25']
45	Västergötland, Hindås, B. Nordensiöld, 1950	[N 57°43', E 12°30']
45	Västergötland, Alingsås, B. Nordensiöld, 1950	[N 57°56', E 12°32']
45	Västergötland, Falköping, G. Turesson, 1951	[N 58°10', E 13°34']
45	Västergötland, Trollhättan, G. Turesson, 1952	[N 58°17', E 12°18']

45	Öland, Djupvik, Föra, N. Erlandsson, 1954	[N 57°18', E 18°09']
45	Bohuslän, Uddevalla, G. Turesson, 1952	[N 58°36', E 11°25']
45	Dalsland, Ed, Stora Le, S. Odén, 1951	[N 59°05', E 11°53']
45	Dalsland, Mellerud, G. Turesson, 1952	[N 58°42', E 12°27']
45	Dalsland, Bengtsfors, G. Turesson, 1952	[N 59°02', E 12°13']
45	Närke, Degerfors, S. Odén, 1951	[N 65°09', E 21°29']
45	Närke, Olshammar, G. Turesson, 1953	[N 58°45', E 14°48']
45	Närke, Askersund, G. Turesson, 1953	[N 58°53', E 14°55']
45	Södermanland, Kila, B. Nordensiöld, 1948	[N 57°53', E 15°58']
45	Södermanland, Tystberga, G. Turesson, 1949	[N 58°51', E 17°15']
45	Södermanland, Sjösa, B. Nordensiöld, 1949	[N 58°46', E 17°05']
45	Södermanland, Römora, Trosa, B. Nordensiöld, 1952	[N 58°54', E 17°34']
45	Södermanland, Sparreholm, B. Turesson, 1952	[N 59°04', E 16°48']
45	Södermanland, Simonstorp, G. Turesson, 1954	[N 58°47', E 16°10']
45	Västmanland, Harbo, B. Lökvist, 1949	[N 60°07', E 17°13']
45	Södermanland, Klastorp, G. Turesson, 1954	[N 58°44', E 17°12']
45	Värmland, Valnäs, G. Turesson, 1952	[N 60°29', E 17°46']
45	Värmland, Karlstad, G. Turesson, 1954	[N 59°23', E 13°31']
45	Värmland, Brattfors, G. Turesson, 1954	[N 59°40', E 14°01']
45	Västmanland, Hjulsjö, G. Turesson, 1952	[N 59°47', E 14°46']
45	Västmanland, Arboga, G. Turesson, 1953	[N 59°24', E 15°21']
45	Uppland, Bäcklösa, G. Turesson, 1945	[N 60°22', E 17°23']
45	Uppland, Ärna, B. Nordensiöld, 1948*	
45	Uppland, Toroslunda, G. Turesson, 1950	[N 59°32', E 17°56']
45	Uppland, Uppsala, B. Turesson, 1950	[N 59°51', E 17°38']
45	Uppland, Gårdskär, B. Lökvist, 1950	[N 60°38', E 17°37']
45	Uppland, Biludden, B. Lökvist, 1950*	
45	Uppland, Vittinge, G. Turesson, 1951	[N 59°54', E 17°03']
45	Uppland, Månkarbo, G. Turesson, 1951	[N 60°14', E 17°28']
45	Uppland, Österbybruk, G. Turesson, 1951	[N 60°12', E 17°54']
45	Uppland, Älvkarleby, G. Turesson, 1951	[N 60°34', E 17°26']
45	Uppland, Norrtälje, G. Turesson, 1952	[N 59°46', E 18°42']
45	Uppland, Grisslehamn, B. Turesson, 1952	[N 60°06', E 18°48']

45	Uppland, Gottsunda, B. Turesson, 1952	[N 50°29', E 18°13']
45	Gästrikland, Storkvik, G. Turesson, 1952	[N 60°35', E 16°31']
45	Gästrikland, Gävle, G. Turesson, 1952	[N 60°40', E 17°07']
45	Jämtland, Äre, G. Turesson, 1949	[N 63°24', E 13°06']
45	Dalarna, Säter, G. Turesson, 1948	[N 62°31', E 17°05']
45	Medelpad, Ange, A. Gustafsson, 1948	[N 62°31', E 15°37']
45	Medelpad, Norrhassel, A. Gustafsson, 1948	[N 62°16', E 16°43']
45	Småland, Ljungby, G. Turesson, 1954*	
45	Småland, Lindas, G. Turesson, 1952*	
45	Småland, Hornsborg, O. Gelin, 1952	[N 56°38', E 13°48']
45	Småland, Oskarshamn, Gränsö, G. Turesson, 1956	[N 57°16', E 16°27']
45	Småland, Oskarshamn, Gunarsö, G. Turesson, 1956	[N 57°16', E 16°27']
45	Småland, Oskarshamn, Rotvik, G. Turesson, 1956	[N 57°16', E 16°27']
45	Småland, Visingsö, G. Turesson, 1945	[N 58°09', E 14°20']
45	Öland, Vickleby, N. Erelandsson, 1949	[N 56°35', E 16°28']
45	Öland, Böda, B. Turesson, 1952	[N 60°15', E 18°23']
45	Scania, Nybroan, G. Turesson, 1949	[N 55°26', E 13°55']
45	Gotland, Lummelunda, B. Nordensiöld, 1950	[N 57°46', E 18°27']
45	Västergötland, Kleva, G. Turesson, 1951	[N 58°33', E 13°15']
45	Västergötland, Bjurum, G. Turesson, 1953	[N 57°14', E 12°15']
45	Västergötland, Mariestad, G. Turesson, 1953	[N 58°42', E 13°49']
45	Östergötland, Näkna, G. Turesson, 1954	[N 58°43', E 16°09']
45	Småland, Växjö, D. Bertman, 1948*	
45	Västergötland, Granvik, G. Turesson, 1953*	
45	Bohuslän, Svälte, G. Turesson, 1952	[N 58°25', E 11°17']
45	Scania, Gyllebo, G. Turesson, 1957	[N 55°35', E 14°13']
45	Gotland, Hoburg, G. Turesson, 1957	[N 56°58', E 18°08']
45	Bohuslän, Harleby, G. Turesson, 1952	[N 58°10', E 11°38']
45	Dalsland, Laxarby, S. Odén, 1951	[N 59°02', E 12°19']
45	Närke, Säbylund, B. Lövkvist, 1951	[N 59°10', E 15°10']
45	Södermanland, Vaxaker, B. Nordensiöld, 1949*	
45	Södermanland, Södertälje G. Turesson, 1951	[N 59°12', E 17°37']
45	Södermanland, Slemna, G. Turesson, 1954*	

45		Värmland, Blankheden, A. Gustafsson *		
45		Värmland, Noppen, A. Gustafsson	[N 47°57', E 10°00']	
45		Värmland, Bro, S. Odén, 1951*		
45		Värmland, Saxa, G. Turesson, 1954*		
45		Uppland, Lidingö, B. Nordensiöld, 1948	[N 59°22', E 19°11']	
45		Uppland, Uddeböo, B. Lövkvist, 1949*		
45		Uppland, Hummeldal, G. Turesson, 1950	[N 60°15', E 18°26']	
45		Uppland, Hjällstaviken, B. Nordensiöld, 1950*		
45		Uppland, Funbo, G. Turesson, 1950	[N 59°51', E 17°49']	
45		Uppland, Hammarby G. Turesson, 1954*		
45		Uppland, Osby, B. Lövkvist, 1950*	[N 59°57', E 18°06']	
45		Uppland, Ultuna, G. Turesson, 1951	[N 59°49', E 17°40']	
45		Medelpad, Nordanede, A. Gustafsson, 1948	[N 62°33', E 17°21']	
45		Uppland, Frötuna, G. Turesson, 1952	[N 60°37', E 17°21']	
45		Uppland, Gottröra, G. Turesson, 1952	[N 59°44', E 18°09']	
45		Dalarna, Rämshytan, G. Turesson, 1952*		
45		Dalarna, Hösjo, G. Turesson, 1952*		
45		Brantevik	[N 55°31', E 14°21']	Lövkvist and Hutlgård, 1999
45	Switzerland	Val Verzasca, near Sonogno (Tessin)	[N 46°21', E 08°47']	Gadella, 1972
45		Breil (Graubünden)	[N 46°46', E 09°03']	
45		Jaunpass	[N 46°35', E 07°20']	
45	United Kingdom	England, W. Lancs., Bardsea Wood	[N 54°04', W 02°51']	Watson, 2005 (CD-BSBI)
45		England, Anglesey, Newborough Warren	[N 53°18', W 04°24']	
45		England, Angus, 1 mi NW of Forfar	[N 56°39', W 02°53']	
45		England, Angus, Auchmithie	[N 56°45', W 02°48']	
45		England, Carms., Llanoverly, on A40	[N 51°59', W 03°47']	
45		England, Co. Durham, Quarrington	[N 54°43', W 01°48']	
45		England, Co. Durham, Sunderland	[N 54°53', E 01°26']	
45		England, Co. Durham, Teesdale, Slapstone Sike	[N 54°38', W 02°07']	
45		England, Derbys., Cressbrook	[N 53°16', E 01°43']	
45		England, Derbys., Derwent	[N 52°53', W 01°17']	
45		England, Derbys., Padley Woods	[N 53°12', W 01°12']	
45		England, E. Norfolk, Howeshill	[N 52°43', E 01°33']	

45	England, E.Gloucs., Opposite Crickley Hill	[N 51°51', W 01°39']	
45	England, Glam., Oxwich Burrows	[N 51°33', W 04°10']	
45	England, Glam., Whiteford Burrows*		
45	England, Cheshire, Northwich, Witton	[N 53°16', W 02°32']	
45	England, Merioneth, Dolgellau	[N 52°45', W 03°53']	
45	England, Monts., Llangurig	[N 52°24', W 03°36']	
45	England, N.W. Yorks, 1 mi SE of Middleton-in-Teesdale	[N 54°38', W 02°05']	
45	England, Pembs., near Trevine	[N 51°57', W 05°08']	
45	England, S. Lancs., Ainsdale	[N 53°36', W 03°02']	
45	England, S. Lancs., Formby	[N 53°33', W 03°04']	
45	England, Staffs., Cheddleton Hospital	[N 53°04', W 02°02']	
45	England, Staffs., Cheddleton, Canal Pool Bridge	[N 53°04', W 02°02']	
45	England, Staffs., Cheddleton, Pumphouse Field	[N 53°04', W 02°02']	
45	England, Staffs., Cheddleton, River Churnet	[N 52°56', W 01°52']	
45	England, Staffs., Leek, Leekbrook, Wallgrange railway embankment	[N 53°07', W 02°02']	
45	England, W. Cornwall, Newlyn East railway	[N 50°06', W 05°33']	
45	England, W. Cornwall, Perranporth	[N 50°21', W 05°09']	
45	England, W. Cornwall, Treskillard*		
45	England, W. Norfolk, Scott Head	[N 52°33', W 00°11']	
45	Scotland, E. Perth, Cairnwell	[N 56°53', W 03°25']	
45	Scotland, E.Perth, Ben Vrackie	[N 56°27', W 03°39']	
45	Scotland, Mid Ebudes, Mull, near Dervaig	[N 56°23', W 06°00']	
45	Scotland, Mid Perth, Glen Lochay, near power station	[N 56°24', W 03°39']	
45	Scotland, Mid Perth, Loch Tummel	[N 56°43', W 04°02']	
45	Scotland, Mid Perth, River Coninish, near Tyndrum	[N 56°26', W 04°43']	
45	England, Westmorland, Scout Scar and Kendal	[N 54°20', W 02°46']	Finch, 2005 (CD-BSBI)
45	England, Fermanagh, near Enniskillen	[N 54°21', W 07°38']	
45	England, Cambs., Gamlingay, Hayley Wood	[N 52°10', W 00°11']	
45	England, Anglesey, Bywrrdd Arthur	[N 53°18', W 04°21']	
45	England, Main Argyll, Oban	[N 56°25', W 05°30']	
45	England, Main Argyll, Ledaig	[N 56°07', W 04°52']	
45	England, Burbage, Hathersage (Wiltshire)	[N 51°21', W 01°41']	Gadella, 1984
45	England, W. Cornwall, Gwinear road station	[N 50°11', W 05°22']	Gadella, 1972

45		Scotland, Glen Affric Valley (Inverness)	[N 57°29', W 04°42']	
45		Scotland, Loch Ness (Inverness)	[N 57°11', W 04°34']	
45		Scotland, St. Cyrus (Kincardines)	[N 56°04', W 03°43']	
45		Scotland, Ben Lawers Mt. (Perth)	[N 56°33', W 04°14']	
45		Scotland, Ben Eighe, Loch Maree (West Ross)	[N 57°42', W 05°28']	
54	Austria	Lanser Alm, Insbr., B. Nordensiöld, 1950	[N 47°17', E 16°25']	Turesson and Turesson, 1960
54		Glasshuten, Koralpe, B. Nordensiöld, 1950	[N 48°04', E 16°02']	
54		Stockacher, Insbr., B. Nordensiöld, 1949*	[N 47°16', E 11°24']	
54		Polster, Hochschwab., B. Nordensiöld, 1950	[N 47°32', E 15°03']	
54		Hebalm, NW from Deutschlandsberg (Burgenland)	[N 46°51', E 15°10']	Gadella, 1972
54		Ruster Hiigelland bei Oslip (Burgenland)	[N 47°50', E 16°37']	
54		Ötztal, Obergurgl, Tirol, alt. 1925 m	[N 46°52', E 11°01']	Gadella, 1984
54		Klein Walsertal, Vorarlberg, alt. 1350 m	[N 47°12', E 10°00']	
54		Ötztal, Untergurgl, Tirol, alt. 1800 m*	[N 46°53', E 11°02']	
54		between Zundorf and Nickelsdorf	[N 47°58', E 17°03']	Schuhwerk and Lippert, 1997
54	Croatia	between Senj and Kratnik, alt. 300 m	[N 45°00', E 14°55']	Gadella, 1984
54		Plensvika near Senj, alt. 220 m	[N 45°04', E 14°57']	
54		Vela Ucka, Istra, alt. 1000 m	[N 45°17', E 14°12']	
54	France	near Lac du Mont Cenis (Savoie), 1850 m	[N 45°15', E 06°55']	
54		near Bessans (Savoie), 1700 m	[N 45°19', E 07°00']	
54		Mont Cenis (Savoie), 2500 m	[N 45°15', E 05°64']	
54	Ireland	Strandhill near Sligo (Ct. Sligo)	[N 54°17', W 08°27']	
54	Italy	between S. Michele and Doberda (Venezia Giulia)*	[N 45°49', E 13°15']	
54	Macedonia	near Mavrovo	[N 41°39', E 20°43']	Gadella, 1972
54	Romania	near Bacau	[N 46°34', E 26°55']	Gadella, 1972
54	Russia	Komi Republic, Syktyvkar	[N 61°43', E 50°46']	Lavrenko and Sereditov, 1991
54	Sweden	Scania, Vankiva, G. Turesson, 1953	[N 56°11', E 13°43']	Turesson and Turesson, 1960
54		Småland, Vimmerby, G. Turesson, 1953	[N 57°40', E 15°52']	
54		Gotland, Vastergarn, G. Turesson, 1957	[N 57°27', E 18°09']	
54		Gotland, Eksta, G. Turesson, 1957	[N 57°17', E 18°12']	
54		Uppland, Bergshamra, G. Turesson, 1945	[N 59°38', E 18°38']	
54		Uppland, Hallstavik, G. Turesson, 1952	[N 60°03', E 18°35']	
54		G]strikland, Forsbacka, G. Turesson, 1952	[N 60°37', E 16°49']	

54		Medelpad, Ostavall, A. Gustafsson, 1947	[N 62°25', E 15°29']	
54		Öland, Karlevi, G. Turesson, 1952	[N 56°36', E 16°28']	
54		Gotland, Högklint, G. Turesson, 1957	[N 57°36', E 18°12']	
54	Switzerland	near Waltensburg	[N 46°47', E 09°07']	Gadella, 1972
54		Lej da Staz near St. Moritz, Graubünden, , alt. 1800 m	[N 46°30', E 09°50']	Gadella, 1984
54		Pontresina, Graubünden, alt. 1800 m	[N 46°29', E 09°52']	
54		Samedan, Graubünden, alt. 1725 m	[N 46°32', E 09°45']	
54		Bernina Lagalp, Graubünden, alt. 2000 m *		
54		Between Sils Maria and Crasta, Graubünden, alt. 1850 m	[N 46°27', E 09°45']	
54		Sils Maria, Graubünden, alt. 1800 m*		
54		Bernina Lagalp, Graubünden, alt. 2200 m	[N 46°23', E 09°54']	
54		Brigels, Graubünden, alt. 1250 m	[N 46°46', E 09°04']	
54		Morteratsch near Pontresina, Graubünden	[N 46°29', E 09°54']	
54		Alp Languard, Graubünden, alt. 2300 m*		
54		Val Roseg, Graubünden, alt. 2000 m*		
54		St. Moritz, Graubünden, alt. 1800 m	[N 46°30', E 09°50']	
54		Muottes Muragl, Graubünden, alt. 2450 m*		
54		Muottas da Pontraschigna, Graubünden, alt. 2200 m*		
54		Val Fex, Graubünden, alt. 1900 m*	[N 46°26', E 09°46']	
54		Crasta, Val Fex, Graubünden, alt. 1850 m	[N 46°25', E 09°46']	
54		Hohschuggen near Grächen, Wallis, alt. 2000 m*		
54		Gäsenried near Grächen, Wallis, alt. 1800 m	[N 46°11', E 07°50']	
54		Niedergrachen, Wallis, alt. 1600 m*		
54		Flue, Wallis*	[N 46°01', E 07°46']	
54		Riedgleschel near Grächen, Wallis, alt. 1800 m *	[N 46°11', E 07°49']	
54	United Kingdom	Scotland, Loch Rescobie, (Perthshire)	[N 56°39', W 02°48']	
54		England, Mid Ebudes, Mull, Glengorm Castle	[N 56°26', W 05°58']	Watson, 2005 (CD-BSBI)
54		England, E. Ross, River Carron	[N 57°53', W 04°21']	
54		England, Co. Durham, Westgate-in-Weardale	[N 54°44', W 02°08']	Morton, 1974
54		Scotland, Westerness, Glengarry, between Loch Garry and Invergarry	[N 56°48', W 05°01']	Finch, 2005 (CD-BSBI)
54		Scotland, Main Argyll, Glencoe, W end	[N 56°02', W 05°52']	
54		Scotland, Westerness, Ben Nevis, Meall an Suidhe	[N 56°48', W 04°14']	
54		Scotland, Moray, between Nairn and Elgin, Findhorn	[N 57°35', W 03°53']	

63	The Netherlands	Friesland, Vuurboetsduin, Island of Vlieland	[N 53°16', E 04°58']	Gadella, 1984
63	Sweden	Scania, Stenshuvud, B. Turesson, 1956	[N 55°40', E 14°17']	Turesson, 1972
18,36	Italy	Valley of Aosta, near Ville sur Nus, alt. 1400 m	[N 45°45', E 07°20']	Gadella, 1972
36,45	Belarus	Brestskaija obl., der. Vygonoshchi	[N 52°39', E 25°43']	Dmitrieva, 1987
36,45	Finland	Vihti, Ojakkala-Otalampi, gravel pit	[N 60°25', E 24°20']	Jalas and Pellinen, 1985
36,45		Nurmijärvi, Kiljavannumi	[N 60°28', E 24°48']	
36,45		Porvoo, Linnanmäki	[N 63°00', E 23°55']	
36,45	Ireland	Killarney (Ct. Kerry)	[N 52°03', W 09°31']	Gadella, 1972
36,45		Elphin (Ct. Roscommon)	[N 53°03', W 05°01']	
36,45		Benbulbin (Ct. Roscommon)	[N 54°22', W 08°28']	
36,45	The Netherlands	Friesland, Island of Terschelling	[N 53°25', E 05°20']	
36,45		Friesland, Island of Schiermonnikoog	[N 53°30', E 06°12']	
36,45		Gelderland, Winterswijk	[N 51°58', E 06°43']	
36,45		Zuid Holland, Wassenaar	[N 52°09', E 04°23']	
36,45	Norway	near Skjolden	[N 61°30', E 07°36']	Gadella, 1972
36,45	Sweden	Östergötland, Åby, G. Turesson, 1954	[N 58°40', E 16°11']	Turesson and Turesson, 1960
36,45		Broby, B. Lökvist, 1949*		
36,45		Kungsmarken*		
36,45		Uppland, Mösseberg	[N 58°12', E 13°30']	
36,45	United Kingdom	England, Derbys., Dovedale	[N 52°55', W 01°30']	Watson, 2005 (CD-BSBI)
36,45		England, Staffs., Wetton Mill	[N 56°26', W 06°17']	Finch, 2005 (CD-BSBI)
36,45		England, Leics., Charnwood forest, Bradgate Park	[N 52°42', W 01°03']	Watson, 2005 (CD-BSBI)
45,54	France	Near Bonneval sur Arc (Savoie), 1850 m	[N 45°22', E 07°08']	Gadella, 1972
45,54		between Bonneval sur Arc and l'Ecot (Savoie), 1950 m	[N 45°22', E 07°08']	
45,54	Italy	National Park Gran Paradiso: near Rifugio Vittorio Sella	[N 45°30', E 07°19']	
45,54		between Valnontey and Rifugio Vittorio Sella, ca 2200 m	[N 45°30', E 07°19']	
45,54	Sweden	Västergötland, Göteborg, G. Turesson, 1948	[N 57°43', E 12°00']	Turesson et Turesson 1960
45,54		Uppland, Vaddö Huvud, B. Turesson, 1952	[N 60°00', E 18°49']	
45,54		Dalarna, Hedemora, B. Turesson, 1949	[N 60°17', E 15°59']	
45,54		Uppland, Bogesund, G. Turesson, 1948	[N 59°24', E 18°17']	
45,54		Västergötland, Kleva, G. Turesson, 1951	[N 58°12', E 12°26']	
45,54		Ångermanland, Gansvik, G. Turesson, 1949	[N 57°08', E 18°25']	
45,54	United Kingdom	England, Main Argyll, Glencoe village	[N 56°02', W 05°52']	Finch, 2005 (CD-BSBI)

45,54		England, Sheffield area	[N 53°24', W 01°29']	Grime <i>et al.</i> , 2005 (CD-BSBI)
36,45,54		Island of Vlieland	[N 53°16', E 04°59']	Gadella, 1972
36,45,54		Island of Texel	[N 53°05', E 04°49']	
54,63	Sweden	Blekinge, Tjurkö, B. Turesson, 1956	[N 56°07', E 15°37']	Turesson and Turesson, 1960

SUPPLEMENTARY INFORMATION 4

New published data on DNA-ploidy level of *Pilosella officinarum* based on flow cytometric analysis from different countries of Europe. Abbreviations used: TU = Tomáš Urfus; AK, FK, VV = Anna Krahulcová, František Krahulec, Vladimír Vladimirov; ZS, HS = Zdeněk Skála, Hana Skálová; JK FR = Jan Kirschner, Frederick Rooks; JZ Jaroslav Zahradníček.

Number of plants	PL	Country	Locality	Latitude, longitude
1	6x	Bulgaria	Vrachanska Planina Mts., meadows along the road from Vratsa to Parshevitsa hut near the hotel "Kiparis", ca. 6 km SW of the town of Vratsa, 1054 m a.s.l., 11 May 2006, AK, FK, VV (No. 1093)	N 43°10'34", E 23°28'55"
2	5x	Bulgaria	Vratschanska Planina Mts., meadow above the road from Vratscha to Parshevitsa hut ca. 7.5 km SW of the town of Vratsa, 1059 m a.s.l., 11 May 2006, AK, FK, VV (Nos. 1086, 1091)	N 43°10'14" E 23°28'50"
4	4x	Bulgaria	wet meadow below the road in the saddle "Petrochan" (between Berkovska Planina Mts. and Koznica Mts.), ca. 12 km S of the town of Berkovitsa, 1394 m a.s.l., 12 May 2006, AK, FK, VV (Nos. 977, 978/2, 1102, 1104)	N 43°07'06" E 23°07'36"
2	5x	Bulgaria	in the valley between the Vitosha Mts. and the Verila Mts., old pasture above the road N of the village of Kovachevichi, 1074 m a.s.l., 30 June 2006, AK, FK, VV (Nos. 1142, 1143)	N 42°27'40" E 23°19'48"
3	4x	Georgia	Bakuriani, 1959 m a.s.l., 1 August 2005, JK, FR	N 47°56'11" E 24°19'31"
3	4x	Georgia	near Tabatskuri lake, 2014 m a.s.l., 3 August 2005, JK, FR	N 41°46'14" E 43°31'07"
3	5x	Georgia	Krestov pass, 2300 m a.s.l., 4 August 2005, JK, FR	N 41°39'15" E 43°41'44"
3	5x	Ireland	western Ireland, Galway, Greatman Bay, 12 m a.s.l., 23 May 2005, TU	N 53°14'40" W 9°37'24"
3	6x	Ireland	Burren, Carnsefin, western Ireland, 53 m a.s.l., 28 May 2005, TU	N 53°08'41" W 09°15'16"
5	6x	Italy	Colli Eugeniei-Monselice, Monte Gargano, 800 m a.s.l., 14 May 2006, TU	N 45°15'48" E 11°41'46"
8	6x	Italy	Monte St. Angelo, Monte Gargano, 722 m a.s.l., 16 May 2006, TU	N 41°42'32" E 15°56'48"
7	6x	Italy	San Marco in Lamis 2 km SZ, Monte Gargano, 523 m a.s.l., 18 May 2006, TU	N 41°43'60" E 15°36'04"
5	6x	Romania	Banat, village of Gârníc, valley on the NW part of the village, near "Filipova díra" cave, April 2005, ZS, HS (Nos. 1058, 1061, 1062, 1067, 1075)	N 44°45'16" E 21°46'48"
3	5x	Romania	Banat, village of Gârníc, pastures on the karst plateau SW of the village, near the road to the village of Sfânta Helena, April 2005, ZS, HS (5x: 1066, 1071, 1072; 6x: 1076)	N 44°44'44" E 21°46'50"
1	6x			

1	5x	Romania	Banat, village of Gârnic, valley NE of the village, near "Petrûv mlýn" mill, pastures	
4	6x		along the brook, April 2005, ZS, HS (Nos. 5x: 1075; 6x: 1063, 1064, 1068, 1069)	N 44°45'35" E 21°47'56"
4	5x	Romania	Roumania, Banat, Sfânta Helena, valley S of the vilage to Dunarea in the vallye of the	
			Ali Beg brook, April 2005, ZS, HS (Nos. 1043, 1045, 1046, 1050)	N 44° 40'23" E 21°42'12"
6	6x	Ukraine	Marmarosh Mts, 0,5 km S of the Mt. Pop Ivan, JZ	N 47°56'11" E 24°19'31"

SUPPLEMENTARY INFORMATION 1

List of the localities of *Pilosella officinarum* investigated by flow cytometric analyses or karyologically in the Czech Republic, Slovakia and Hungary. Number/abbreviation under which the plant was cultivated or collected is given in the first column. Abbreviations used: Sk = Slovakia, Hu = Hungary, Cz = Czech Republic, TU = Tomáš Urfus, BŠ = Barbora Šingliarová, PM = Patrik Mráz, VM = Viera Mrázová, DB = Drahoš Blanár, KC = Kateřina Čiháková, MD = Michal Ducháček, PL = ploidy level detected by flow cytometry. Chromosome numbers of the plants marked by ‘!’ have been previously published in Rotreklová *et al.* (2005). All Slovak and Hungarian localities belong to the Western Carpathians and/or Panonian plain. Czech localities are indicated by B.M.= Bohemian Massif or W.C. = Western Carpathians.

Number	PL	2n	Locality	Latitude, longitude
886		36	Sk, Volovské vrchy Mts, village of Prakovce, <i>loco dicto</i> Hutno, rocks, 400 m a.s.l., PM, 19 November 2000	N 48°48'48.24'', E 20°53'53.16''
871		4x 36	Sk, Javorníky Mts, Mt Malý Javorník, 1018 m a.s.l., PM & VM, 14 October 2000	N 49°18'24'', E 18°18'15''
923		4x	Sk, Oravské Beskydy Mts, Mt Pilsko, near the path from the village of Sihelné, 1250 m a.s.l., PM, August 2000	N 49°31'34'', E 19°20'31''
1463, 1464, 1465		5x	Sk, Juhoslovenská kotlina basin, village of Ožďany, slope above the road in S part of the village, 272 m a.s.l., PM & BŠ, 1 June 2004	N 48°22'33.4'', E 19°53'56.8''
1467, 1468, 1469, 1470, 1471		5x	Sk, Juhoslovenská kotlina basin, village of Šávoľ, pasture, 251 m a.s.l., PM & BŠ, 1 June 2004	N 48°18'06'', E 19°49'30''
1473, 1474, 1475, 1476		5x	Sk, Cerová vrchovina Mts, village of Šurice, pasture ca 300 m SE of Soví hrad castle, 171 m a.s.l., PM & BŠ, 1 June 2004	N 48°13'31.5'', E 19°55'00''
1477		5x	Hu, Cserhát Mts, Somosko castle, S slope, 405 m a.s.l., PM & BŠ, 1 June 2004	N 48°10'19.7'', E 19°51'28.5''
957		5x	Sk, Slovenský kras Mts, village of Silica, ca 4.5 km NE of Mt Delené (500.7), 480 m a.s.l., PM, 13 June 2001	N 48°34'47'', E 20°31'02''
1323, 1324, 1325		5x	Sk, Slovenský kras Mts, Plešivecká planina plateau, Mt Veľký vrch, 721 m a.s.l., coll. PM, 5 June 2003	N 48°38'39'', E 20°26'09''
1328, 1329, 1330		5x	Sk, Slovenský kras Mts, Plešivecká planina plateau, the margin of the road between Mt Veľký vrch and Mt Gerlašská skala, 748 m a.s.l., PM, 5 June 2003	N 48°38'58.5'', E 20°25'54.1''
1333, 1334, 1335		5x	Sk, Slovenský kras Mts, Zádielska planina plateau, 1 km SE of the elevation point 780.8, 700 m a.s.l., PM, 12 June 2003	N 48°38'38'', E 20°49'46''
1726, 1727		5x	Sk, Slovenský kras Mts, village of Lipovník, Horný vrch plateau, <i>loco dicto</i> Soroška, in the saddle, 530 m a.s.l., PM & VM, 28 August 2004	N 48°37'03'', E 20°37'57''
ZP2		5x	Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 597 m a.s.l., PM, 29 October 2004	N 48°37'58'', E 20°50'05''
947		5x	Sk, Slovenský kras Mts, village of Krásnohorské Podhradie, lower part of the castle hill “Krásna Hôrka”, W slope, 380 m a.s.l., PM, 29 May 2001	N 48°39'40'', E 20°35'51''

1191, 1192	5x	Sk, Slovenský kras Mts, village of Krásnohorské Podhradie, W slopes of the castle hill "Krásna Hôrka", 423 m a.s.l., PM, 29 May 2002	N 48°39'26'', E 20°35'55.5''
1520, 1521	5x	Sk, Borská nížina lowland, village of Studienka, fallow, 190 m a.s.l., BŠ, 3 June 2004	N 48°32'10.6'', E 17°08'03.4''
1530	5x	Sk, Borská nížina lowland, village of Studienka, ca 3 km SW of the village, margin of the road, 188 m a.s.l., BŠ, 5 June 2004	N 48°30'10'', E 17°07'01''
1596, 1597, 1598	5x	Sk, Borská nížina lowland, village of Šaštín-Stráže, <i>loco dicto</i> Gazárka, blowing sands, 191 m a.s.l., BŠ, 8 June 2004	N 48°37'51.4'', E 17°08'20''
1571, 1572, 1574, 1575	5x	Sk, Podunajská pahorkatina upland, village of Mlyňany, mowned meadow near the cemetery, 139 m a.s.l., BŠ, 7 June 2004	N 48°18'49'', E 18°21'49''
1582,	5x 45	Sk, Podunajská pahorkatina upland, village of Mochovce, slope near the road to power-station, 137 m a.s.l., BŠ, 7 June 2004	N 48°15'09'', E 18°27'19''
1581, 1583, 1584, 1585	5x		
1611, 1612, 1613	5x		
906	5x	Sk, Východoslovenská nížina lowland, village of Veľký Kamenec, Tarbucka Hill, 268 m a.s.l., PM, 16 April 2004	N 48°21'32'', E 21°47'31''
910, 909!	5x 45	Sk, Zemplínske vrchy Mts, village of Veľká Bara, former vineyards, ca 100 m N of Mt Piliš (277.6), 240 m a.s.l., PM & VM, 15 April 2001	N 48°25'47.07'', E 21°42'28.30''
914!	5x 45	Sk, Zemplínske vrchy Mts, village of Veľká Trňa, 1.5 km NNW of village, pasture, 180 m a.s.l., PM & VM, 14 April 2001	N 48°28'35.04'', E 21°40'24.53''
1541, 1542, 1543	5x	Sk, Myjavská pahorkatina upland, town of Myjava, the margin of the road, 338 m a.s.l., BŠ, 5 June 2004	N 48°45'11'', E 17°35'18''
730	5x	Sk, Malé Karpaty Mts, city of Bratislava, the areal of the Institute of Botany SAS, Dúbravská cesta No. 14, 200 m a.s.l., PM, 28 April 2000	N 48°10'21'', E 20°03'21''
1567, 1568, 1569, 1570	5x	Sk, Podunajská pahorkatina upland, village of Žirany, slope, 250 m a.s.l., BŠ, 7 June 2004	N 48°20'32.8'', E 18°10'19''
CAV1, CAV2, CAV3	5x	Sk, Strážovské vrchy Mts, village of Čavoj, ca 5 km W of the village, 511 m a.s.l., BŠ, 11 September 2004	N 48°54'00'', E 18°26'57''
CIC1, CIC2, CIC3, CIC4	5x	Sk, Strážovské vrchy Mts, village of Čičmany, rocks in the W part of the village, 655 m a.s.l., BŠ, 12 September 2004	N 48°57'03'', E 18°30'28''
889	45	Sk, Kremnické vrchy Mts, village of Lúčky, meadow near the road at the end of the village towards to the town of Kremnica, 580 m a.s.l., PM & VM, 2 January 2001	N 48°41'48.24'', E 18°53'53.16''
POL1, POL2, POL3	5x	Sk, Poľana Mts, village of Kyslinky, meadow, <i>loco dicto</i> Majerová, 700 m a.s.l., BŠ, 17 July 2003	N 48°40'11'', E 19°25'48''
CS1, CS2, CS3	5x	Sk, Štiavnické vrchy Mts, town of Banská Štiavnica, <i>loco dicto</i> Červená studňa, crossroad, the	N 48°28'38'', E 18°54'25''

HN1, HN2, HN3	5x	margins of the path, 791 m a.s.l., BŠ, 10 July 2004 Sk, Štiavnické vrchy Mts, village of Banská Belá, slope at the shore of the Halčianska nádrž reservoir, 472 m a.s.l., BŠ, 11 July 2004	N 48°28'01'', E 18°56'58''
KOZ1, KOZ2	5x	Sk, Štiavnické vrchy Mts, village of Kozelník, mouth of the Radošovo brook, 390 m a.s.l., BŠ, 11 July 2004	N 48°30'40'', E 18°58'59''
1554, 1555, 1556, 1557	5x	Sk, Krupinská planina plateau, town of Krupina, clearing, 248 m a.s.l., BŠ, 6 June 2004	N 48°21'10'', E 19°04'26''
944	5x	Sk, Volovské vrchy Mts, village of Krásnohorské Podhradie, dry meadow under Sitárka Hill, 420 m a.s.l., PM, 29 May 2001	N 48°39'39'', E 20°35'14''
878	5x	Sk, Volovské vrchy Mts, village of Smolnícka Huta, ca 0.7 km N of Mt Lastovičí vrch, forest road, 975 m a.s.l., PM, 14 October 2000	N 48°44'45.31'', E 20°48'42.53''
951, 952	5x	Sk, Volovské vrchy Mts, Jahodná, end of the ski-lift, 720 m a.s.l., PM & VM, 9 June 2001	N 48°45'41'', E 21°07'22''
JAH	5x	Sk, Volovské vrchy Mts, Jahodná, ski-lift, 720 m a.s.l., PM, 11 August 2004	N 48°45'41'', E 21°06'55''
954	5x	Sk, Volovské vrchy Mts, village of Zlatá Idka, the margins of the forest, 700 m a.s.l., PM & VM, 9 June 2001	N 48°45'01'', E 21°00'51''
958, 959!	5x 45	Sk, Volovské vrchy Mts, village of Čučma, ca 200 m SW of the top of Mt Skalisko, 1250 m a.s.l., PM & VM, 12 June 2001	N 48°44'38.4'', E 20°34'35.36''
1431, 1432	5x 45	Sk, Volovské vrchy Mts, town of Gelnica, part Turzov, 455 m a.s.l., PM, 24 August 2003	N 48°51'32.5'', E 20°54'32.5''
1433, 1434, 1435, 1436	5x 45	Sk, Revúcka vrchovina Mts, village of Brdárka, pasture NE of the village, 500 m a.s.l., PM, 26 August 2003	N 48°46'11.9'', E 20°20'13.3''
1438, 1439	5x	Sk, Volovské vrchy Mts, village of Hnilčík, part Roztoky, <i>loco dicto</i> Poľana, 735 m a.s.l., PM, 24 August 2003	N 48°51'32.4'', E 20°33'42''
1441, 1442	5x	Sk, Volovské vrchy Mts, village of Kojšov, Mt Kojšovská hoľa, the margin of the road near the Erika chalet, 1174 m a.s.l., PM, 19 September 2003	N 48°46'52.3'', E 20°58'46.8''
1458, 1459, 1460, 1462	5x	Sk, Revúcka vrchovina Mts village of Španie Pole, pasture, 353 m a.s.l., PM & BŠ, 1 June 2004	N 48°43'43.3'', E 21°13'56.7''
MARG1, MARG2, MARG3, MARG4	5x	Sk, Volovské vrchy Mts, village of Margecany, <i>loco dicto</i> Margecianska transgresia, 330 m a.s.l., PM & BŠ, 6 October 2004	N 48°53'12.7'', E 21°00'21.5''
1624, 1625, 1626	5x	Sk, Muránska planina plateau, village of Muráň, <i>loco dicto</i> Biele Vody, pasture, 475 m a.s.l., DB, 11 June 2004	N 48°44'46'', E 20°04'58''
1628, 1629, 1630, 1631	5x	Sk, Muránska planina plateau, town of Tisovec, <i>loco dicto</i> Podhrad, pasture, 475 m a.s.l., DB, 9 June 2004	N 48°40'23'', E 19°57'59''
1636, 1637, 1638, 1639, 1640	5x	Sk, Muránska planina plateau, town of Tisovec, <i>loco dicto</i> Podhrad, pasture, 470 m a.s.l., DB, 9 June 2004	N 48°37'33'', E 19°54'58''

1643, 1644	5x	Sk, Slovenský raj Mts, Veľký Sokol valley, 685 m a.s.l., BŠ, 18 June 2004	N 48°55'49.1'', E 20°20'08.6''
1645, 1649, 1652	5x	Sk, Slovenský raj Mts, another locality in Veľký Sokol valley, 685 m a.s.l., BŠ, 18 June 2004	N 48°55'26.5'', E 20°20'30.9''
1653	5x	Sk, Slovenský raj Mts, village of Dedinky, the shore of the Palcmanová Maša dam, 814 m a.s.l., BŠ, 19 June 2004	N 48°52'22.6'', E 20°21'39.8''
1670, 1672, 1674	5x	Sk, Slovenský raj Mts, village of Stratená, Stratená valley, <i>loco dicto</i> "Pod Hanisej", pasture, 900 m a.s.l., BŠ, 19 June 2004	N 48°51'24'', E 20°18'42''
928	45	Sk, Čierna hora Mts, city of Košice, Podhradová, grass-plot near road to the village of Kavečany, 236 m a.s.l., PM, 20 May 2001	N 48°44'44.02'', E 21°14'43.01''
1443, 1444, 1445, 1446	5x	Sk, Čierna hora Mts, the margin of the road to Mt Sivec, 400 m a.s.l., BŠ, 18 May 2004	N 48°51'54'', E 21°06'07''
LAC1, LAC2, LAC4	5x	Sk, Branisko Mts, village of Lačnov, 625 m a.s.l., PM & BŠ, 6 October 2004	N 49°04'04.3'', E 20°55'47''
KLUK1, KLUK2, KLUK3, KLUK4	5x	Sk, Šarišská vrchovina Mts, village of Kluknava, 428 m a.s.l., PM & BŠ, 6 October 2004	N 48°55'26.6'', E 20°55'58.08''
LIP1, LIP2, LIP3	5x	Sk, Branisko Mts, village of Lipovce, 587 m a.s.l., PM & BŠ, 6 October 2004	N 49°03'17'', E 20°56'40''
VIT2, VIT3, VIT4	5x	Sk, Šarišská vrchovina Mts, village of Vítaz, 455 m a.s.l., PM & BŠ, 6 October 2004	N 48°54'48.1'', E 21°05'07.4''
1721, 1722, 1723, 1724	5x	Sk, Slanské vrchy Mts, vilage of Kalša, E shore of the Izra lake, 437 m a.s.l., PM, 21 October 2004	N 48°34'13'', E 21°29'42''
ZB1, ZB2, ZB3	5x	Sk, Slanské vrchy Mts, village of Zlatá Baňa, Pusté pole saddle, 650 m a.s.l., PM & BŠ, 6 October 2004	N 48°57'15'', E 21°27'12'',
926!	5x 45	Sk, Vihorlat Mts, village of Jasenov, ca 0.5 km NE of the village, pasture, 150 m a.s.l., PM, 13 May 2001	N 48°54'14.71'', E 21°54'36.57''
F1, F2, F3, F4	5x	Sk, Malá Fatra Mts, village of Fačkov, Fačkovské sedlo saddle, the margin of the path, 802 m a.s.l., BŠ, 3 August 2003	N 48°57'48'', E 18°36'48''
KPZ1, KPZ2, KPZ3, KPZ4	5x	Sk, Malá Fatra Mts, village of Kláštor pod Znievom, slope in the spruce forest, 570 m a.s.l., BŠ, 11 September 2004	N 48°57'54'', E 18°47'41''
RT1, RT2, RT3	5x	Sk, Malá Fatra Mts, village of Rajecké Teplice, part "Poluvsie", margin of the road to the city of Žilina, 450 m a.s.l, BŠ, 12 September 2004	N 49°57'49'', E 18°42'55''
VAL1, VAL2, VAL3	5x	Sk, Malá Fatra Mts, village of Valča, Valčianska dolina valley, dry slope under the pine forest, 510 m a.s.l., BŠ, 11 September 2004	N 49°01'25'', E 18°48'33''
1370, 1371, 1372, 1373	5x	Sk, Veľká Fatra Mts, town of Ružomberok, <i>loco dicto</i> Baničné, margin of the road, 495 m a.s.l., BŠ, 9 July 2003	N 49°03'46'', E 19°17'33''
1374, 1375, 1376	5x	Sk, Veľká Fatra Mts, town of Ružomberok, <i>loco dicto</i> Baničné, rocks, 500 m a.s.l., BŠ, 9 July 2003	N 49°03'45'', E 19°16'35''
TUR1, TUR2,	5x	Sk, Veľká Fatra Mts, village of Turecká, meadow, ski-lift, 805 m a.s.l., BŠ, 11 July 2004	N 48°51'30'', E 19°05'42''

TUR3, TUR4					
1391, 1392, 1393	5x		Sk, Veľká Fatra Mts, village of Žaškov, near the forest road ca 3 km SE of the village, 595 m a.s.l., BŠ, 27 June 2003	N 49°09'56'', E 19°12'00''	
1381, 1382, 1383	5x		Sk, Chočské vrchy Mts, village of Valaská Dubová, Mt Veľký Choč, <i>loco dicto</i> Stredná poľana, the meadow in the spruce forest, 1260 m a.s.l., BŠ, 29 June 2003	N 49°09'04'', E 19°19'43''	
LUC1, LUC2, LUC3	5x		Sk, Chočské vrchy Mts, village of Lúčky, slope near the road to the village of Malatiná, 620 m a.s.l., BŠ, 13 July 2004	N 49°08'19'', E 19°23'22''	
JAS1, JAS2	5x		Sk, Nízke Tatry Mts, Demänovská dolina valley, tourist centre Jasná, margin of the path, 1320 m a.s.l., BŠ, 14 July 2004	N 48°57'52'', E 19°35'17''	
KOR1, KOR2, KOR3, KOR4	5x		Sk, Nízke Tatry Mts, village of Korytnica, meadow in the Malá Krivá valley, 800 m a.s.l., BŠ, 11 July 2004	N 48°54'07'', E 19°16'30''	
972	45		Sk, Západné Tatry Mts, Račkova dolina valley, crossroad of the road and brook, 1143 m a.s., VM, 18 June 2001	N 49°09'36.15'', E 19°48'29.30''	
976	5x		Sk, Západné Tatry Mts, village of Pribylina, pasture near the river of Belá, Kokavský most bridge, 800 m a.s.l., VM, 20 June 2001	N 49°06'21'', E 20°25'04''	
979	5x		Sk, Západné Tatry Mts, Račkova dolina valley, meadow near the chalet of the Agriculture	N 49°07'57.04'', E 19°46'59.55''	
978!	45		University of Nitra, 940 m a.s.l., VM, 18 June 2001		
1385, 1386, 1387	5x		Sk, Západné Tatry Mts, village of Zuberec, Roháčska dolina valley, the margins of the road to the Ťatliakova chata chalet, 1250 m a.s.l., BŠ, 6 July 2003	N 49°12'36'', E 19°44'47''	
1388, 1389, 1390	5x		Sk, Západné Tatry Mts, village of Zuberec, Roháčska dolina valley, the margin of the road ca 20 m from the parking place, 1200 m a.s.l., BŠ, 6 July 2003	N 49°13'28'', E 19°43'47''	
838!	5x	45	Sk, Vysoké Tatry Mts, village of Tatranská Štrba, ca 1.5 km NW of Štrbské pleso tarn, 1400 m a.s.l., PM & VM, 7 July 2000	N 49°07'47.95'', E 20°02'26.70''	
974	5x		Sk, Vysoké Tatry Mts, Štrbské pleso tarn, near the hotel Patria, 1355 m a.s.l., VM, 19 June 2001	N 49°07'22.37'', E 20°04'09.35''	
LA1, LA2	5x		Sk, Liptovská kotlina basin, village of Liptovská Anna, forest road above the village, 690 m a.s.l., BŠ, 13 July 2004	N 49°09'22'', E 19°28'01'',	
MH1, MH2, MH3	5x		Sk, Liptovská kotlina basin, village of Liptovské Matiašovce, <i>loco dicto</i> Matiašovské háje, the margin of the spruce forest, 600 m a.s.l., BŠ, 14 July 2004	N 49°08'36'', E 19°33'51''	
869!	5x	45	Cz, Javorníky Mts, ca 0.5 km of the Portáš chalet, 900 m a.s.l., M & VM, 14 October 2000	N 49°17'47.29'', E 18°14'40.22''	
BES1, BES2, BES3, BES4	5x		Sk, Oravské Beskydy Mts, village of Oravská Lesná, Beskyd saddle, margin of the lane, 900 m a.s.l., BŠ, 4 July 2004	N 49°23'19'', E 19°07'27''	
NB1, NB2, NB3, NB5	5x		Sk, Oravské Beskydy Mts, village of Nová Bystrica, ca 0.5 km of the dam, 526 m a.s.l., BŠ, 3 July 2004	N 49°20'39'', E 19°02'31''	
VYCH1, VYCH2,	5x		Sk, Oravské Beskydy Mts, village of Vychylovka, lane near the bus-stop, 615 m a.s.l., BŠ, 3	N 49°22'23'', E 19°04'06''	

VYCH3			July 2004		
LEN1, LEN2	5x		Sk, Čergov Mts, village of Lenartov, mowned meadow near the bus-stop, 477 m a.s.l., BŠ, 10 June 2004		N 49°18'38'', E 21°00'55''
STL1, STL2, STL3	5x		Sk, Spišská Magura Mts, town of Stará Lubovňa, castle hill, meadow between pines, 710 m a.s.l., BŠ, 11 June 2004		N 49°18'48'', E 20°41'43''
LUB1, LUB2, LUB4	5x		Sk, Šarišská vrchovina Mts, village of Lubovec, 332 m a.s.l., PM & BŠ, 6 October 2004		N 48°54'53'', E 21°09'20.2''
SAK1, SAK2, SAK3	5x		Sk, Šarišská vrchovina Mts, village of Sedlice, between the villages of Klenov and Sedlice, 477 m a.s.l., PM & BŠ, 6 October 2004		N 48°54'48.1'', E 21°05'07.4''
CMM1, CMM2, CMM3	5x		Sk, Čergov Mts, village of Lenartov, Mt Malý Minčol, meadow in the spruce forest, 1054 m a.s.l., BŠ, 10 June 2004		N 49°15'39'', E 20°58'37'',
CVM1, CVM2	5x		Sk, Čergov Mts, village of Kyjov, Mt Veľký Minčol, the margin of the tourist path, 1150 m a.s.l., BŠ, 11 June 2004		N 49°13'55'', E 20°59'31''
1478, 1480	6x		Sk, Cerová vrchovina Mts, village of Radzovce, xerothermic slope with pines, 191 m a.s.l., PM & BŠ, 1 June 2004		N 48°13'07.3'', E 19°50'11.2''
932,	6x	54	Sk, Slovenský kras Mts, Plešivecká planina plateau, ca 1 km of the town of Plešivec, a margin		N 48°33'23.82'', E 20°24'37.04''
933	6x		of the road, 240 m a.s.l., PM, 30 May 2001		
935,	6x		Sk, Slovenský kras Mts, Plešivecká planina plateau, on the forest route ca 0.5 km NE from the		N 48°34'22.37'', E 20°25'09.35''
934!		54	Zbojnická priepasť chasm, 545 m a.s.l., PM, 30 May 2001		
965,	6x	54	Sk, Slovenský kras Mts, village of Silická Brezová, 0.2 km NE of Mt Delené (500,7), 490 m		N 48°32'24.20'', E 20°29'39.20''
966	6x		a.s.l., PM, 13 June 2001		
1201,	6x		Sk, Slovenský kras Mts, village of Kečovo, Silická planina plateau, xerothermic slopes on the		N 48°29'45'', E 20°29'20''
1200!		54	N margin of the village, 350 m a.s.l., PM, 30 May 2002		
1513,1514, 1515	6x		Sk, Slovenský kras Mts, village of Pašková, Koniarska planina plateau, 518 m a.s.l., PM, 8 June 2004		N 48°34'06'', E 20°22'52''
1516, 1517, 1518, 1519	6x		Sk, Slovenský kras Mts, town of Plešivec, the margin of the path to the Koniarska planina plateau, 350 m a.s.l., PM, 8 June 2004		N 48°32'56'', E 20°23'30''
ZP1	6x		Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 617 m a.s.l., PM, 29 October 2004		N 48°38'07'', E 20°49'50''
ZP3	6x		Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 591 m a.s.l., PM, 29 October 2004		N 48°37'34'', E 20°50'05''
ZP4	6x		Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 613 m a.s.l., PM, 29 October 2004		N 48°37'16'', E 20°50'18''
ZP5	6x		Sk, Slovenský kras Mts, village of Zádiel, Zádielská planina plateau, 573 m a.s.l., PM, 29 October 2004		N 48°37'07'', E 20°50'41''

1309, 1310, 1311	6x	Sk, Slovenský kras Mts, village of Krásnohorské Podhradie, castle hill Krásna Hôrka, W slope, 423 m a.s.l., PM, 14 May 2003	N 48°34'35'', E 20°35'45''
1314, 1316	6x	Sk, Rožnavská kotlina basin, W part of the village of Krásnohorské Podhradie, slope near the	N 48°39'04.5'', E 20°34'49.6''
1315	6x	road, 393 m a.s.l., PM, 16 May 2003	
BOD1, BOD3	6x	Hu, Aggteleki Karszt Mts, village of Bodvaszilás, S of the village, 157 m a.s.l., BŠ, 19 October 2004	N 48°31'43.5'', E 20°43'48''
1586, 1587, 1588, 1590	6x	Sk, Chvojnícka pahorkatina upland, town of Skalica, mowned meadow near the vineyards, 313 m a.s.l., BŠ, 8 June 2004	N 48°13'22'', E 17°03'07''
1522, 1523, 1524, 1525	6x	Sk, Malé Karpaty Mts, city of Bratislava, Mt Devínska Kobyla, meadow, 206 m a.s.l., BŠ, 5 June 2004	N 48°12'04'', E 16°58'46''
1526, 1527, 1528	6x	Sk, Malé Karpaty Mts, city of Bratislava, Mt Devínska Kobyla, sandy slope, 274 m a.s.l., BŠ, 5 June 2004	N 48°11'55.3'', E 16°58'35.5''
1544, 1545, 1546	6x	Sk, Podunajská pahorkatina upland, town of Štúrovo, ca 2 km W of the town, vineyards, 146 m a.s.l., BŠ, 6 June 2004	N 47°48'56'', E 18°38'39''
931	6x	Sk, Košická kotlina basin, village of Čečejevce, dry slope along the road, ca 1 km of the Moldavský most bridge, 210 m a.s.l., PM, 1 June 2001	N 48°36'20'', E 21°00'43''
1312, 1313	6x	Sk, Košická kotlina basin, village of Turňa nad Bodvou, 204 m a.s.l., PM, 16 May 2003	N 48°36'19'', E 20°52'26.6''
1500, 1501, 1502, 1503, 1504	6x	Sk, Košická kotlina basin, city of Košice, near the road between city of Košice and village of Pereš, 250 m a.s.l., PM, 9 June 2004	N 48°41'20'', E 21°13'24''
912	6x	Sk, Zemplínske vrchy Mts, village of Luhyňa, N slopes of Ondrejský kopec Hill, margin of oak forest, 160 m a.s.l., PM & VM, 14 April 2001	N 48°30'03.80'', E 21°38'01.37''
1599, 1601, 1602, 1603, 1604	6x	Sk, Myjavská pahorkatina upland, village of Podbranč, stone pit, 420 m a.s.l., BŠ, 8 June 2004	N 48°43'47'', E 17°26'28''
1532, 1533, 1534, 1535	6x	Sk, Malé Karpaty Mts, village of Prietrž, ca 1 km W of the village, slope near the road, 328 m a.s.l., BŠ, 5 June 2004	N 48°40'37'', E 17°26'30''
1537, 1538, 1539, 1540	6x	Sk, Malé Karpaty Mts, village of Krajné, dry slope in front of family house, 250 m a.s.l., BŠ, 5 June 2004	N 48°11'57.5'', E 16°58'40''
1591, 1592, 1593, 1594, 1595	6x	Sk, Malé Karpaty Mts, village of Záhorská Bystrica, margin of the path to the stone pit, 183 m a.s.l., BŠ, 8 June 2004	N 48°15'31.2'', E 16°59'39''
1605, 1606, 1608, 1609, 1610	6x	Sk, Považský Inovec Mts, village of Stará Lehota, xerothermic slope at the S margin of the village, 349 m a.s.l., BŠ, 8 June 2004	N 48°38'52'', E 17°56'38''
KOV1, KOV2	6x	Sk, Zvolenská kotlina basin, village of Kováčová, gravelly slope near the road between the village of Kováčová and city of Zvolen, 300 m a.s.l., BŠ, 11 July 2004	N 48°36'41'', E 19°07'23''
S1, S2	6x	Sk, Kremnické vrchy Mts, village of Sielnica, margin of the road, ca 3 km NW of the village, 400 m a.s.l., BŠ, 12 September 2003	N 48°38'20'', E 19°05'27''

1558, 1559, 1560, 1561	6x	Sk, Krupinská planina plateau, village of Dvorníky, xerothermic meadow at the end of the village, 175 m a.s.l., BŠ, 6 June 2004	N 48°12'08'', E 18°56'15''
1317, 1318, 1319, 1320, 1321, 1322 ZŠ 1	6x 6x	Sk, Volovské vrchy Mts, city of Košice, <i>loco dicto</i> Červený breh, near the ski-lift, 362 m a.s.l., BŠ, 21 May 2003	N 48°44'23.2'', E 21°13'48.2''
GD1, GD2, GD3	6x	Sk, Vihorlat Mts, village of Zálužice, the shore of the Zemplínska Šírava dam, 200 m a.s.l., BŠ, 18 August 2003	N 48°56'32'', E 21°58'20''
1087	6x	Sk, Veľká Fatra Mts, village of Blatnica, Gaderská dolina valley, near the road, ca 1 km NE of the castle, 610 m a.s.l., BŠ, 20 September 2003	N 48°56'53'', E 18°57'22''
1377, 1378, 1379, 1380	6x	Sk, Nízke Tatry Mts, Čertovica saddle, ca 300 m W of the saddle, 1250 m a.s.l., PM & VM, 14 July 2001	N 48°54'24'', E 19°44'07''
KNK1, KNK2, KNK3, KNK4	6x	Sk, Oravská vrchovina Mts, town of Dolný Kubín, dry slope near the road, N periphery of the town, 470 m a.s.l., BŠ, 9 July 2003	N 49°12'27'', E 19°18'17''
OMI1, OMI2, OMI3	6x	Sk, Kysucká vrchovina Mts, village of Krásno nad Kysucou, mowned meadow under the bridge, 364 m a.s.l., BŠ, 3 July 2004	N 49°24'04'', E 18°50'40''
OMII 1, OMII 2, OMII 3, OMII 4	6x	Sk, Oravská Magura Mts, village of Oravský Podzámok, margin of the forest road, ca 2 km N of the village, 540 m a.s.l., BŠ, 17 July 2003	N 49°16'41'', E 19°21'03''
OMIII 1, OMIII 2, OMIII 3	6x	Sk, Oravská Magura Mts, village of Babín, ca 3 km E of the village, meadow in spruce forest, 910 m a.s.l., BŠ, 17 July 2003	N 49°19'32'', E 19°25'05''
1483	5x	Sk, Oravská Magura Mts village of Ťapešovo, Magurka transmitter, slope near the path, 1107 m a.s.l., coll. BŠ, 17 July 2003	N 49°22'05'', E 19°29'13''
1481	6x	Sk, Juhoslovenská kotlina basin, village of Filákovské Kľačany, sunny and dry slope near the road, 130 m a.s.l., PM & BŠ, 1 June 2004	N 48°18'34.1'', E 19°42'45.7''
1448, 1449	5x	Sk, Slovenský kras Mts, planina Horný vrch plateau, ca 1.5 km W of the elevation point 801.3, 780 m a.s.l., PM, 25 May 2004	N 48°37'16'', E 20°45'03''
1451	6x	Sk, Slovenský kras Mts, village of Turňa nad Bodvou, in the saddle W of the castle hill, 300 m a.s.l., PM, 1 October 2004	N 48°36'43'', E 20°52'05''
TH2	5x	Sk, Podunajská pahorkatina upland, town of Hlohovec, Mt Soroš, meadow, 257 m a.s.l., BŠ, 7 June 2004	N 48°26'53.3'', E 17°49'23.7''
TH1	6x	Sk, Bodvianska pahorkatina upland, village of Host'ovce, 174 m a.s.l., PM & BŠ, 19 October 2004	N 48°35'06.7'', E 20°51'08.2''
1580	5x	Sk, Podunajská pahorkatina upland, town of Hlohovec, Mt Soroš, meadow, 257 m a.s.l., BŠ, 7 June 2004	N 48°26'53.3'', E 17°49'23.7''
1577, 1578, 1579	7x	Sk, Bodvianska pahorkatina upland, village of Host'ovce, 174 m a.s.l., PM & BŠ, 19 October 2004	N 48°35'06.7'', E 20°51'08.2''
HOS1, HOS3	5x	Sk, Východoslovenská nížina lowland, town of Kráľovský Chlmec, Veľký kopec Hill, 260 m a.s.l., PM & VM, 17 April 2001	N 48°25'01.43'', E 21°57'44.68''
HOS2	6x	Sk, Východoslovenská nížina lowland, town of Kráľovský Chlmec, Veľký kopec Hill, 260 m a.s.l., PM & VM, 17 April 2001	N 48°25'01.43'', E 21°57'44.68''
904!	5x	Sk, Východoslovenská nížina lowland, town of Kráľovský Chlmec, Veľký kopec Hill, 260 m a.s.l., PM & VM, 17 April 2001	N 48°25'01.43'', E 21°57'44.68''
905	6x	Sk, Východoslovenská nížina lowland, town of Kráľovský Chlmec, Veľký kopec Hill, 260 m a.s.l., PM & VM, 17 April 2001	N 48°25'01.43'', E 21°57'44.68''
1453,1454, 1455	5x	Sk, Volovské vrchy Mts, village of Rudná, elevation point 421, ca 1 km SE of the village, 421 m a.s.l., PM, 27 May 2004	N 48°29'35'', E 20°30'01''
1456	6x	Sk, Volovské vrchy Mts, village of Rudná, elevation point 421, ca 1 km SE of the village, 421 m a.s.l., PM, 27 May 2004	N 48°29'35'', E 20°30'01''
1620, 1621, 1622	5x	Sk, Stolické vrchy Mts, village of Muránska Huta, slope near the church, 695 m a.s.l., DB, 11	N 48°46'38'', E 20°06'31''

1623	6x	June 2004	
1505, 1508, 1510	5x	Sk, Volovské vrchy Mts, town of Dobšiná, Mt Dobšinský kopec, the margin of the tourist path,	N 48°50'53'', E 20°22'51''
1506, 1509	6x	890 m a.s.l., PM, 9 June 2004	
1664	5x	Sk, Slovenský raj Mts, village of Stratená, the path to the pastures "pod Hanisej", 895 m a.s.l.,	N 48°51'24'', E 20°18'42''
1667	6x	BŠ, 19 June 2004	
1687	5x	Sk, Slovenský raj Mts, village of Dedinky, planina Geravy plateau, towards to Mt Gačovská	N 48°52'35'', E 20°23'08''
1683, 1684, 1685	6x	skala, 1000 m a.s.l., PM, 20 June 2004	
TER1, TER2	5x	Sk, Malá Fatra Mts, village of Zázrivá, "Rovná hora" saddle, pasture, 700 m a.s.l., BŠ, 12	N 49°16'02'', E 19°06'18''
TER3	6x	September 2004	
1076!	45	Sk, Chočské vrchy Mts, village of Prosiek, 0.5 km N of the village, pasture, 644m a.s.l., PM, 15	N 49°09'29.9'', E 19°29'54.4''
1075	6x	July 2001	
LS3	5x	Sk, Spišsko-Šarišské medzihorie Mts, village of Hubošovce, NW slope of the Lysá stráž Hill,	N 49°05'26.6'', E 21°13'17.7''
LS1, LS2, LS4	6x	670 m a.s.l., PM & BŠ, 6 October 2004	
HGA1, HGA3, HGA4	5x	Hu, Aggteleki Karszt Mts, village of Hidvégdó, 162 m a.s.l., PM & BŠ, 19 October 2004	N 48°33'56.3'', E 20°50'45.3''
HID1, HID2, HID3, HID4	5x	Hu, Aggteleki Karszt Mts, SE of the village of Hidvégdó, 173 m a.s.l., PM & BŠ, 19 October	N 48°32'34.2'', E 20°50'27.9''
JOS3	5x	Hu, Aggteleki Karszt Mts, village of Josvafó, 300 m a.s.l., PM & BŠ, 19 October 2004	N 48°28'15'', E 20°31'56''
FUZ1, FUZ4	5x	Hu, Zemplényi hegység Mts, village of Füzér, meadow under the castle hill, 445 m a.s.l., PM &	N 48°32'40.6'', E 21°27'44.2''
FUZ2, FUZ3	6x	BŠ, 19 October 2004	
TEL4	5x	Hu, Zemplényi hegység Mts, village of Telkibánya, the slope under the church, 292 m a.s.l.,	N 48°29'00.6'', E 21°21'38.3''
		PM & BŠ, 19 October 2004	
869!	5x 45	Cz, W.C., Javorníky Mts, ca 0.5 km of the Portáš chalet, 900 m a.s.l., M & VM, 14 October	N 49°17'47.29", E 18°14'40.22"
		2000	
TU1 (1,2,3)	4x	Cz, B.M., Český kras Mts, village of Lištice, diabase rocks 100 m of the village, near the road	N 49°57'41.9", E 14°05'55.3"
		to the town of Beroun, 284 m a.s.l., TU, 15 May 2004	
TU2 (1,2)	4x	Cz, B.M., Cidlinská pánev basin, village of Činěves - the main road to Poděbrady, 500 m S of	N 50°14'05.0", E 15°13'18.5"
		the side cut to the village of Činěves, 207 m a.s.l., TU, 18 May 2004	
TU3 (1,2,3,4)	4x	Cz, B.M., Pražská plošina plain, Motolská kalvárie calvary, 30 m S of the stone sideways cross,	N 50°04'58,8", E 14°19'39,2"
		297 m a.s.l., TU, 21 May 2004	
TU4 (1)	6x	Cz, B.M., Dolní Povltaví river basin, town of Roztoky- heather moor above the left bank of the	N 50°10'13,7", E 14°22'49,0"
		Vltava river, between the towns of Roztoky and Levý Hradec, 223 m a.s.l., TU, 22 May 2004	
TU5 (1,2,3,4)		Cz, B.M., Moravian foothills of Vysočina Mts, <i>loco dicto</i> Pašerácká stezka (SW of the village	N 48°52'57,1", E 15°51'00,9"

	6x	of Čížov), 50 m below the road, 385 m a.s.l., KC, 29 May 2004	
TU6 (1,2,3)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, 2 km SE of the village of Podmolí, yellow-marked hiking path, oak forest near the path, 408 m a.s.l., MD, 30 May 2004	N 48°50'21,4", E 15°57'10,8"
TU7 (1,2,3,4,5)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, <i>loco dicto</i> Malšovické nivky, near the crossroad of the hiking paths, 387 m a.s.l., TU, 30 May 2004	N 48°50'35,0", E 15°58'28,8"
TU8 (1,2,3)	4x	Cz, B.M., Křivoklátsko region, Baba Hill, above the Berounka river, 373 m a.s.l., TU, 1.6.2004	N 50°01'31,2", E 13°52'45,7"
TU9 (1,2,3,4)	4x	Cz, B.M., Slavkovský les Mts., Tajga moor, NE of Lázně Kynžvart spa, 100 m N of the crossroad with Rota brook, 827 m a.s.l., TU, 2 June 2004	N 0°01'57,2", E 12°41'25,3"
TU10 (1,2,3,4)	4x	Cz, B.M., Slavkovský les Mts., <i>loco dicto</i> Dominova skalka, 3 km W of the village of Bečov nad teplou, 751 m a.s.l., TU, 2 June 2004	N 50°04'16,6", E 12°47'10,0"
TU11 (1,2,3,4)	4x	Cz, B.M., Slavkovský les Mts., <i>loco dicto</i> Bečovské louky, 2 km NE of the village of Bečov n. Teplou, 643 m a.s.l., 2 June 2004	N 50°05'10,7" E 12°49'22,0"
TU12 (1,2,3,4)	4x	Cz, B.M., Lounsko-labské středohoří Mts, Oblík Hill, 400 m SW below the top, meadow with Stipa zalesskii, 357 m a.s.l., TU, 3 June 2004	N 50°24'31,3" E 13°48'19,3"
TU13 (1,2,3)	4x	Cz, B.M., Ralsko-bezděžská tabule table, near the Břežský rybník lake, side cut to the village of Strážov from the road Doksy-Mimoň, the margin of the road, 281 m a.s.l., TU, 4 June 2004	N 50°35'10,7" E 14°43'41,9"
TU14 (1,2,3)	4x	Cz, B.M., Střední Polabí region, <i>loco dicto</i> Hrabanovská černava, sand dune, 187 m a.s.l., TU, 5 June 2004	N 50°13'07,8" E 14°49'51,5"
TU15 (2,3)	4x	Cz, B.M., Křivoklátsko region, near the Baba Hill, slope with the pines, ca 3 km of the road to the Baba Hill, 400 m a.s.l., TU, 1 June 2004	N 50°01'31,3" E 13°52'19,3"
TU16 (1)	5x	Cz, B.M., Lounsko-labské středohoří Mts, SW slope of the Mt Boreč, 50 m W of the path, 428 m a.s.l., TU, 11 June 2004	N 50°30'49,1" E 13°59'14,3"
	4x	Cz, B.M., Lounsko-labské středohoří Mts, Holý vrch Hill near the Sutom - rock 50 m below the top, 447 m a.s.l., TU, 11 June 2004	N 50°30'10,1" E 13°58'41,2"
TU17 (1,2,3,4)	4x	Cz, B.M., Středočeská tabule table, Tuchoměřická hůrka Hill, near the village of Tuchoměřice, 292 m a.s.l., TU, 23 June 2004	N 50°07'45,9" E 14°16'36,6"
TU18 (1,2,3)	4x	Cz, B.M., Středočeská tabule table, village of Svrkyně, the rock above the football field, 309 m a.s.l., TU, 23 June 2004	N 50°10'20,5" E 14°18'02,8"
TU19 (1,2,3,4)	4x	Cz, B.M., Říčanská plošina plain, village of Pecerady, the crossroad of the blue-marked hiking path and the route in the village, near the lane, 302 m a.s.l., TU, 24 June 2004	N 49°50'07,8" E 14°37'05,3"
TU20 (1,2,3)	4x	Cz, B.M., Říčanská plošina plain, village of Sázava, the crossroad of the hiking paths, 340 m a.s.l., TU, 24 June 2004	N 49°52'16,3" E 14°53'57,0"
TU21 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, village of Horní Kněžeklady-Hněvkovice, the margin of the road, 294 m a.s.l., TU, 26 June 2004	N 49°11'40,4" E 14°27'59,9"
TU22 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, village of Hrušov, 484 m a.s.l., TU, 26 June 2004	N 49°12'33,1" E 14°31'50,3"
TU23 (1,2,3)	4x		

TU24 (1,2,3,4)	4x	Cz, B.M., Střední Povltaví river basin, village of Horní Kněžeklady, 492 m a.s.l., TU, 26 June 2004	N 49°11'37,7" E 14°28'50,8"
TU25 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, dam in the village of Hněvkovice, the meadow in front of the chalet, 387 m a.s.l., TU, 26 June 2004	N 49°11'56,5" E 14°26'32,3"
TU26 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, village of Jeznice, near the road, 374 m a.s.l., TU, 27 June 2004	N 49°09'13,6" E 14°26'29,8"
TU27 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, village of Litoradlice, near the former shooting-gallery, 474 m a.s.l., TU, 27 June 2004	N 49°10'38,9" E 14°25'11,4"
TU28 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, lake 1,5 km S of the village of Zvíkovského podhradí, margin of the road, 397 m a.s.l., TU, 27 June 2004	N 49°24'48,8" E 14°12'33,2"
TU29 (1,2,3)	4x	Cz, B.M., Podbrdsko region, gas station in the village of Řitka, 359 m a.s.l., TU, 27 June 2004	N 49°53'53,0" E 14°19'14,7"
TU30 (1,2,3,4,5)	4x	Cz, B.M., Český ráj Mts, village of Plouznice, near the village of Lomnice nad Popelkou, near the road, 514 m a.s.l., TU, 1 July 2004	N 50°30'43,0" E 15°23'09,5"
TU31 (1,2,3)	4x	Cz, B.M., Český ráj Mts, village of Rváčov, near the village of Lomnica, Krčkův kostel church, 564 m a.s.l., TU, 1 July 2004	N 50°31'51,9" E 15°19'58,8"
TU32 (1,2,3)	4x	Cz, B.M., Jesenicko-rakovnická plošina plain, periphery of the town of Rakovník, direction to village of Lišany, near the sculpture of St. Adalbert, 369 m a.s.l., TU, 6 July 2004	N 50°06'36,8" E 13°44'02,1"
TU33 (1,2,3)	4x	Cz, B.M., Jesenicko-rakovnická plošina plain, between the Hlaváčov stone pit and <i>loco dicto</i> Na cikámce, 304 m a.s.l., TU, 6 July 2004	N 50°07'20,6" E 13°44'13,4"
TU34 (1,2,3)	4x	Cz, B.M., Jesenicko-rakovnická plošina plain, 100 m of the <i>loco dicto</i> Sládkov kříž, blue-marked hiking path, near the village of Stará Lužná, 394 m a.s.l., TU, 6 July 2004	N 50°09'09,0" E 13°46'58,8"
TU35 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, 200 m S of the village of Zborná (close to the town of Jihlava), margin of the road, 559 m a.s.l., TU, 7 July 2004	N 49°26'06,5" E 15°34'22,6"
TU36 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, village of Štoky, Smilov settlement, near the bus stop, 475 m a.s.l., TU, 8 July 2004	N 49°32'11,8" E 15°37'53,0"
TU37 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, lane near the main road between the villages of Šlapanov and Smilov, 474 m a.s.l., TU, 8 July 2004	N 49°32'11,1" E 15°38'29,3"
TU38 (1,2,3,4)	5x	Cz, B.M., Hrubý Jeseník Mts, village of Revíz, meadows S of the village, cairn of the rocks, 754 m a.s.l., TU, 11 July 2004	N 50°13'31,5" E 17°18'13,6"
TU39 (1,2,3,4)	5x	Cz, B.M., Hrubý Jeseník Mts, <i>loco dicto</i> Vřesová studánka, foundations of the church, 1286 m a.s.l., TU, 12 July 2004	N 50°08'44,9" E 17°08'04,9"
TU40 (1,2,3,4,5)	6x	Cz, B.M., Hrubý Jeseník Mts, tourist chalet Šerák, 1324 m a.s.l., TU, 12 July 2004	N 50°11'13,1" E 17°06'31,4"
TU41 (1,2,3)	4x	Cz, B.M., Hanušovicko-rychlebská vrchovina Mts, 1 km NE of the castle Rychlebský, near the village of Uhelná, 442 m a.s.l., TU, 14 July 2004	N 50°22'00,9" E 16°59'30,3"
TU42 (1,2,3)	5x	Cz, B.M., Hanušovicko-rychlebská vrchovina Mts, former limestone pit above the village of	N 50°16'59,5" E 17°05'32,0"

TU43 (1,2,3)	4x	Vápenná, 448 m a.s.l., TU, 15 July 2004	
		Cz, B.M., Hrubý Jeseník Mts, village of Chebží, meadows, 533 m a.s.l., TU, 16 July 2004	N 50°14'44,4" E 17°15'42,8"
TU44 (1,2,3)	4x	Cz, B.M., Horažďovická pahorkatina Mts, periphery of the town of Blatná, near the crossroad Praha-Písek, 452 m a.s.l., TU, 28 July 2004	N 49°25'26,4" E 13°51'45,2"
TU45 (1,2,3,4)	4x	Cz, B.M., Horažďovická pahorkatina Mts, lane 4 km of the town of Blatná, green-marked hiking path, 495 m a.s.l., TU, 28 July 2004	N 49°24'56,2" E 13°50'07,5"
TU46 (1,2,3,4,5)	4x	Cz, B.M., Horažďovická pahorkatina Mts, Velký Pálenec lake, meadow over the field hydrologic station, 472 m a.s.l., TU, 28 July 2004	N 49°24'56,1" E 13°49'01,6"
TU47 (1,2,3)	4x	Cz, B.M., Horažďovická pahorkatina Mts, reserve so called Smyslovské louky meadows, near the Smyslov lake, 455 m a.s.l., TU, 28 July 2004	N 49°25'07,3" E 13°48'04,6"
TU48 (1,2,3)	4x	Cz, B.M., Podbrdsko region, periphery of the town of Příbram, road to towns of Milín and Písek, 491 m a.s.l., TU, 23 August 2004	N 49°40'25,0" E 14°00'19,1"
TU49 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, 500 m W of the Varvažovský most bridge across the Skalica river, 303 m a.s.l., TU, 23 August 2004	N 49°26'20,1" E 14°06'53,2"
TU50 (1)	5x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Dukovany, Templštejn castle, W slope	
(2,3)	6x	above the Jihlava river, 359 m a.s.l., TU, 6 September 2004	N 49°05'23,9" E 16°14'52,3"
TU51 (1,2,3,4,6)	4x	Cz, B.M., Žďárské vrchy Mts, <i>loco dicto</i> Pustá Rybná, 12 km of the town of Polička, meadow	
(5)	5x	NW of the Damašek settlement, 635 m a.s.l., TU, 11 September 2004	N 49°42'49,3" E 16°07'24,4"
TU52 (1,2,3)	6x	Cz, W.C., Zlínské vrchy Mts, village of Zádveřice u Vizovic, in front of the evangelical church, 271 m a.s.l., TU, 21 September 2004	N 49°12'58,0" E 17°98'11,8"
TU53 (1,2)	5x	Cz, Střední pobečví basin, town of Vsetín, near the main road to Valašské Meziříčí, 353 m	
(3)	5x	a.s.l., TU, 21 September 2004	N 49°19'55,1" E 17°59'41,1"
TU54 (1,2,3)	4x	Cz, B.M., Horní Poohří basin, Komorní hůrka Hill, bottom of the exploited pit, 481 m a.s.l., TU, 22 September 2004	N 50°05'58,9" E 12°20'23,3"
TU55 (1,2,3)	4x	Cz, B.M., Ralsko-bezděžská tabule plateau, town of Doksy, near the railway station, 275 m a.s.l., TU, 3 October 2004	N 50°34'25,2" E 14°38'54,5"
TU56 (1,2)	4x	Cz, B.M., Ralsko-bezděžská tabule plateau, pine forest below the Havířov vrch Hill, between the Máchove jezero lake and Břehyňský rybník fishpond, 292 m a.s.l., TU, 3 October 2004	N 50°35'11,1" E 14°40'29,7"
TU57		Cz, B.M., Dolní Povltaví river basin, town of Roztoky, heather moor above the left bank of the Vltava river, between the town of Roztoky and Levý Hradec, 223 m a.s.l., TU, 9 October 2004	
(1,2,3,4,5,6,7,8,9,12)	6x	(vide TU 004)	N 50°10'13,7" E 14°22'49,0"
TU58 (1,2,3,4,6,7,8)	4x	Cz, B.M., Dolní Povltaví river basin, rocks between the village of Zámky and Drahaňské údolí valley, 229 m a.s.l., TU, 12 October 2004 (vide TU 016)	N 0°08'38,3" E 14°23'59,5"
(5)	5x	Cz, B.M., Lounsko-labské středohoří Mts, Boreč Hill, SW slope, 50 m W of the path, at the top of scree, 428 m a.s.l., TU, 17 October 2004	N 50°30'49,1" E 13°59'14,3"
TU59 (1,2,3,4)	4x		

TU60 (1,2,3,4)	4x	Cz, B.M., Dolní Povltaví river basin, <i>loco dicto</i> Větrušické skály, 500 m N of the village of Větrušice 255 m a.s.l., TU, 22. October 2004	N 50°11'53,3" E 14°22'31,9"
TU61 (1,2,3)	5x	Cz, B.M., Dolní Povltaví river basin, Větrušické skály, another locality, edge of oak forest and rocky heath, 246 m a.s.l., TU, 22 October 2004	N 50°12'02,0" E 14°22'15,2"
TU62 (1,2,3)	4x	Cz, B.M., Dolní Povltaví river basin, village of Otvovice, <i>loco dicto</i> Otšovická skála rock, top of the rock, 259 m a.s.l., TU, 23 October 2004	N 50°12'57,4" E 14°17'00,7"
TU63 (1,2,3)	4x	Cz, B.M., Střední Povltaví river basin, rocks between village Živohošť and Živohošťský most bridge, 200 m below the green-marked hiking path, 329 m a.s.l., TU, 30 October 2004	N 49°45'18,8" E 14°26'00,3"
TU64 (1,2,3)	4x	Cz, B.M., B.M., Tereziňská kotlina fold, hill in the village of Oleško, near the tlen of Tereziň, 151 m a.s.l., TU, 30 October 2004	N 50°31'00,0" E 14°09'00,0"
TU65 (1,2,3)	4x	Cz, B.M., Český kras Mts, <i>loco dicto</i> Krásná stráň hillside, E margin, the beginning of the river terrace, 327 m a.s.l., TU, 23 April 2005	N 49°56'34,4" E 14°16'41,5"
TU66 (1,2,3)	4x	Cz, B.M., Střední polabí river basin, village of Písty, near the sand dune, 274 m a.s.l., TU, 30.4.2005	N 50°09'44,7" E 14°59'41,7"
TU67 (1,2,3,4)	4x	Cz, B.M., Střední Povltaví river basin, village of Štěchovice, 218 m a.s.l., TU, 6 April 2005	N 49°51'16,5" E 14°24'38,1"
TU69 (1,2,3)	4x	Cz, B.M., Český kras Mts, Koukolova hora Hill, 200 m N of the stone pit, yellow-marked hiking path, 443 m a.s.l., TU, 7 May 2005	N 49°55'13,7" E 14°01'28,0"
TU70 (1,2,3,4,5)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Dukovany, Templštejn castle, W slope above the Jihlava river, 359 m a.s.l., TU, 12 May 2005 (vide TU 050)	N 49°05'23,9" E 16°14'52,3"
TU71 (1,2,3)	4x	Cz, B.M., Lounsko-labské středohoří Mts, N margin of the village of Dolné Zálezly, green-marked hiking path, in the chalet colony , 218 m a.s.l., TU, 16 May 2005	N 50°35'55,5" E 14°03'32,8"
TU72 (1,2,3,4)	4x	Cz, B.M., Lounsko-labské středohoří Mts, lower top of Lovoše Hill, 473 m a.s.l., TU, 17 May 2005	N 50°31'43,8" E 14°01'25,0"
TU73 (1)	5x	Cz, B.M., Lounsko-labské středohoří Mts, top of Lovoš Hill, the crossroad of blue- and green-	
(2,3)	5x	marked hiking path, 543 m a.s.l., TU, 17 May 2005	N50°31'38,4" E014°01'08,2"
TU74 (1,2,3)	4x	Cz, B.M., Střední Povltaví, N margin of the tlen of Davle, right bank of the river, the rock cca 30 m above the Vltava River, 235 m a.s.l., TU, 21 May 2005	N49°53'53,7" E014°24'08,2"
TU75 (1,2,3)	6x	Cz, B.M., Střední Povltaví river basin, 500 m N of the village of Vrané, road near the Vltava River, 214 m a.s.l., TU, 21 May 2005	N49°56'40,0" E014°23'49,3"
TU76 (1,3,5)	5x	Cz, B.M., Šumava Mts, margin of the road in the village of Františkov, 929 m a.s.l., TU, 2 June 2005	N48°59'59,8" E013°37'41,6"
(2,4, 6)	5x		
TU77 (1,2,3,4,5)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Dukovany, Templštejn castle, W slope above the Jihlava river, 359 m a.s.l., TU, 5 June 2005	N 49°05'23,9" E 16°14'52,3"
TU78 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, E periphery of the vilage of Měřín, margin of the road near the cemetery, 509 m a.s.l., TU, 8 June 2005	N 49°23'09,2" E 15°53'14,8"

TU79 (1,2,3,4,5)	6x	Cz, B.M., Českomoravská vrchovina Mts, town of Třebíč, rock above the jewish ward, 414 m a.s.l., TU, 8 June 2005	N 49°13'04,6" E 15°52'48,6"
TU80 (1,2,3,4)	4x	Cz, B.M., Českomoravská vrchovina Mts, rock near the road above Oslava River, between the villages of Naloučovice and Jedovský mlýn, 350 m a.s.l., TU, 8 June 2005	N 49°13'40,9" E 16°08'31,3"
TU81 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, margin of the road 1 km N of the village of Naloučany, 436 m a.s.l., TU, 8 June 2005	N 49°14'57,1" E 16°08'08,9"
TU82 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, periphery of the town of Velké Meziříčí, rock above the bus stop "Lihovar", 422 m a.s.l., TU, 8 June 2005	N 49°20'21,6" E 16°01'53,4"
TU83 (1,2,3,4)	4x	Cz, B.M., Českomoravská vrchovina Mts, small chapel between the villages of Blížkov and Měřín, 501 m a.s.l., TU, 8 June 2005	N 49°23'52,2" E 15°54'09,1"
TU84 (1,2,3)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, blue-marked hiking path from the Mohelnská step heath to the Jihlava River bank, 200 m of the edge of the heath, 286 m a.s.l., TU, 11 June 2005	N 49°06'23,3" E 16°10'57,3"
TU85 (1,3)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, 400 m N of the Mohelno dam, rock near the trail, 305 m a.s.l., TU, 11 June 2005	N 49°05'58,0" E 16°10'41,1"
TU86 (1,2,3,4,5)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, <i>loco dicto</i> Kozí stezky, rock above the Dyje River, 391 m a.s.l., TU, 12 June 2005	N 48°51'41,5" E 15°52'15,2"
TU87 (1,2,3,4) (5)	6x 5x	Cz, B.M., Znojensko-brněnská pahorkatina Mts, Havraníky heather moor, 339 m a.s.l., TU, 12 June 2005	N 48°48'43,1" E 15°59'38,6"
TU88 (1,2,3,4)	6x	Cz, W.C., Mikulovská pahorkatina-Pálava Mts, blue-marked hiking path to the Děvín Hill, edge between oak forest and the heath, 371 m a.s.l., TU, 13 June 2005	N 48°51'52,2" E 16°39'07,9"
TU89 (1,2,3,4)	6x	Cz, W.C., Mikulovská pahorkatina-Pálava Mts, canyon „Soutěska“ near the Děvín Hill, 100 m below the country-sight, 429 m a.s.l., TU, 13 June 2005	N 48°51'51,9" E 16°38'36,8"
TU90 (1,2,3,4,5,6)	5x	Cz, W.C., Mikulovská pahorkatina-Pálava Mts, canyon near the Děvín, another locality, 200 m of the previous locality, 383 m a.s.l., TU, 13 June 2005	N 48°51'47,2" E 16°38'40,0"
TU91 (1,2,3)	5x	Cz, W.C., Jihomoravský úval ravine, reserve „Důbrava u Hodonína“, near the town of Hodonín, near the former main road to the Brno city, 235 m a.s.l., TU, 14 June 2005	N 48°53'05,9" E 17°05'13,2"
TU92 (1,2,3,4)	5x	Cz, W.C., Jihomoravský úval ravine, village of Bzenec, reserve „Váté písky“, sand dunes, pine forest near the railway station, 199 m a.s.l., TU, 14 June 2005	N 48°56'01,3" E 17°16'58,3"
TU93 (1,2,3,4)	5x	Cz, W.C., Jihomoravský úval ravine, village of Bzenec, another locality, 300 m of the previous locality, near the train line, 194 m a.s.l., TU, 15 June 2005	N 48°55'50,4" E 17°16'37,5"
TU95 (1,2,3)	4x	Cz, B.M., Hrubý Jeseník Mts, village of Bělá pod Pradědem, convalescent home, near the bridge across the brook, 643 m a.s.l., TU, 17 June 2005	N 50°08'10,1" E 17°12'29,3"
TU96 (1,2,3)	5x	Cz, B.M., Hrubý Jeseník Mts, village of Rejvíz, margin of the road, 775 m a.s.l., TU, 17 June 2005	N 50°13'45,9" E 17°18'07,8"

TU97 (1,2,3,4,5,6)	6x	Cz, B.M., Hrubý Jeseník Mts, tourist chalet Šerák, 1324 m a.s.l., TU, 24 June 2005 (videTU 40)	N 50°11'13,1" E 17°06'31,4"
TU98 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, 1 km W of the village of Strašice (direction: town of Rokycany), 496 m a.s.l., TU, 27 June 2005	N 49°44'06,3" E 13°44'27,0"
TU99 (1,2,3,4)	4x	Cz, B.M., Plzeňská pahorkatina Mts, near the road from the village of Mirošov to the town of Rokycany, 432 m a.s.l., TU, 27 June 2005	N 49°43'10,2" E 13°39'17,8"
TU100 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, near the road from the village of Březina to the village of Bezděkov, 481 m a.s.l., TU, 27 June 2005	N 49°49'04,2" E 13°36'09,2"
TU101 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, village of Kozojedy, 50 m of the church, 365 m a.s.l., TU, 27 June 2005	N 49°55'57,9" E 13°32'39,1"
TU102 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, village of Všehrady, rocks below the village, 372 m a.s.l., TU, 27 June 2005	N 49°58'01,8" E 13°35'07,4"
TU103 (1,2,3)	4x	Cz, B.M., Křivoklátsko region, stone pit near the village Mléčice, direction: village of Zbiroh, 368 m a.s.l., TU, 27 June 2005	N 49°54'44,1" E 13°42'06,1"
TU104 (1,2,3)	4x	Cz, B.M., Hornosázavská pahorkatina Mts, periphery of the town of Havlíčkův Brod, the bus stop near the main exit road to the town of Pardubice, 436 m a.s.l., TU, 29 June 2005	N 49°36'39,3" E 15°36'49,2"
TU105 (1,2,3,4)	4x	Cz, B.M., Hornosázavská pahorkatina Mts, 300 m E of the town of Ždírc nad Doubravou, near the road, TU, 29 June 2005	N 49°42'01,4" E 15°49'12,7"
TU106 (1,2,4) (3)	4x 5x	Cz, B.M., Českomoravské meziohří upland, rocks between the village of Linhartice and the town of Moravská Třebová, 349 m a.s.l., TU, 29 June 2005	N 49°45'39,5" E 16°40'37,4"
TU107 (1,2,3,4)	5x	Cz, W.C., Jesenické podhůří foothills, rocks 1 km E of the town of Budišov nad Budišovkou, near the road direction: Vítkov, 527 m a.s.l., TU, 29 June 2005	N 49°47'42,5" E 17°38'50,4"
TU108 (1,2,3) (4)	5x 6x	Cz, W.C., area called Moravská brána, village of Straník, above the chapel, 382 m a.s.l., TU, 29.6.2005	N 49°32'55,5" E 17°59'20,4"
TU109 (1,2,3)	5x	Cz, W.C., Haná region, town of Prostějov, lawn over the cinema Metro70, 221 m a.s.l., TU, 30.6.2005	N 49°28'24,7" E 17°06'36,7"
TU110 (2,4) (1,3)	5x 6x	Cz, W.C., Dražanská vrchovina Mts, village of Mostkovice, W periphery of the village, slope near road direction: Blansko, 269 m a.s.l., TU, 30 June 2005	N 49°28'21,6" E 17°02'03,6"
TU111 (1,2,3,4)	5x	Cz, W.C., Dražanská vrchovina Mts, village of Plumlov, rock between the fishpond and the football field, 280 m a.s.l., TU, 30 June 2005	N 49°28'05,1" E 17°00'22,9"
TU112 (1,3,4) (2)	4x 5x	Cz, B.M., Dražanská vrchovina Mts, village of Otiněves, rocks between fishpond and the garages, 560 m a.s.l., TU, 30 June 2005	N 49°25'02,0" E 16°51'58,8"
TU113 (1,2,3,4)	4x	Cz, B.M., Dražanská vrchovina Mts, village of Rozstání, rock in the centre of the village, 546 m a.s.l., TU, 30 June 2005	N 49°23'45,0" E 16°50'52,5"
TU114 (1,3) (2,4,5)	4x	Cz, B.M., Moravský kras Mts, village of Lažánky, limestone rock above the village, 456 m	N 49°21'03,8" E 16°42'30,0"

	6x	a.s.l., TU, 30 June 2005	
TU115 (1,2,3)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, rock near the road between the villages of Pánov and Křoví, 487 m a.s.l., TU, 30 June 2005	N 49°18'48,3" E 16°16'33,5"
TU116 (1,2)	4x	Cz, B.M., Hornosázavská pahorkatina Mts, xeric balk near the lane 1 km W of the village of Černýš, 360 m a.s.l., TU, 30 June 2005	N 49°44'33,9" E 15°02'16,5"
TU117 (1,2,3)	4x	Cz, B.M., Hornosázavská pahorkatina Mts, E of the lumber-mill near the village of Psáře, in the bend of the road, 477 m a.s.l., TU, 30 June 2005	N 49°44'48,9" E 14°58'15,4"
TU118 (1,2,3)	4x	Cz, B.M., Třeboňská pánev basin, trail 20 m N of the road from the town of Kardašovy Řečice to the town of Jindřichuv Hradec, 491 m a.s.l., TU, 4 July 2005	N 49°10'28,7" E 14°53'32,4"
TU119 (1,2,3)	4x	Cz, B.M., Třeboňská pánev basin, rock in the field 100 m NE of the village of Nítovice, 482 m a.s.l., TU, 4 July 2005	N 49°10'35,3" E 14°49'32,1"
TU120 (1,2,3)	4x	Cz, B.M., Votická vrchovina Mts, margin of the road near the nature park between the villages of Nová ves and Sodoměřice u Bechyně, 334 m a.s.l., TU, 4 July 2005	N 49°16'18,0" E 14°32'23,8"
TU121 (1,2,3)	4x	Cz, B.M., Východní Polabí river basin, rock above the train line SEE of the village of Týnec nad Labem, 228 m a.s.l., TU, 6 July 2005	N 50°02'27,7" E 15°21'58,7"
TU122 (1,2,3)	4x	Cz, B.M., Východní Polabí river basin, hillside between the villages of Luže and Střemošice, W of the town of Chrudim, 451 m a.s.l., TU, 24 July 2005	N 49°53'28,7" E 16°04'30,3"
TU123 (1,2,3)	4x	Cz, B.M., Šumavsko-novohradské podhůří foothills, 1km W of the village of Pražák, rock near the road opposite to fishpond, 396 m a.s.l., TU, 25 July 2005	N 49°08'29,7" E 14°06'55,7"
TU124 (1,2,3)	4x	Cz, B.M., Podkrkonoší Mts, xeric slope near the road on the E periphery of the village of Košťálov, 357 m a.s.l., TU, 4 August 2005	N 50°34'34,5" E 15°23'11,5"
TU125 (1,2,3)	4x	Cz, B.M., Lužická kotlina fold, ruin of the wind mill on the yellow-marked hiking path near the village of Machnín, NW of the town of Liberec, 345 m a.s.l., TU, 4 August 2005	N 50°47'14,3" E 14°58'30,9"
TU126 (1,2,3)	4x	Cz, B.M., Lužická kotlina fold, reconstructed castle called Wothanburg near the village of Horní Vítkov, 513 m a.s.l., TU, 4.8.2005	N 50°51'23,9" E 14°58'46,9"
TU127 (1,2,3)	4x	Cz, B.M., Lužická kotlina fold, settlement of Uhelná near the village of Václavice, 331 m a.s.l., TU, 4 August 2005	N 50°51'51,1" E 14°53'53,4"
TU128 (1,2,3)	4x	Cz, B.M., Ralsko-bezděžská tabule plateau, village of Noviny pod Ralskem, canyon of the Ploučnice River, 309 m a.s.l., TU, 4 August 2005	N 50°41'12,4" E 14°45'49,0"
TU129 (1,2,3,4)	4x	Cz, B.M., Lounsko-labské středohoří Mts, 300 m W below the top of the Mt Raná, 400 m a.s.l., TU, 9 August 2005	N 50°24'21,4" E 13°46'10,5"
TU130 (1,2,3)	4x	Cz, B.M., Krušné hory Mts, village of Výsluní between Vejprt and Chomutov, slope with heather near the road, 1 km W of the village, 775 m a.s.l., TU, 9 August 2005	N 50°27'41,8" E 13°13'30,8"
TU131 (1,2,3)	4x	Cz, B.M., Krušné hory Mts, village of Měděnec, W slope of the Mt Mědník, 896 m a.s.l., 9 August 2005	N 50°25'26,6" E 13°06'40,2"

TU132 (1,2,3)	4x	Cz, B.M., Krušné hory Mts, village of Klášterec nad Ohří, the village of Mýtinka, road below the village, 748 m a.s.l., TU, 9 August 2005	N 50°24'03,4" E 13°04'29,3"
TU133 (1,2,3)	4x	Cz, B.M., Krušnohorské podhůří Mts, chalet colony 2 km W of the town of Klášterec nad Ohří, rock near the Ohře River, 310 m a.s.l., TU, 9 August 2005	N 50°22'57,7" E 13°13'06,6"
TU134 (1,2,3,4)	4x	Cz, B.M., Šumavsko-novohradské podhůří Mts, 1.5 km E of the village of Křemže, 569 m a.s.l., TU, 13 August 2005	N 48°54'55,2" E 14°19'22,1"
TU135 (1,2,3)	4x	Cz, B.M., Šumavsko-novohradské podhůří Mts, village of Babice u Netolic, dike of the fishpond, NW of the village, 508 m a.s.l., TU, 13 August 2005	N 49°02'29,0" E 14°13'10,3"
TU136 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, village of Mysletín, N of the town of Humpolec, slope near the fishpond, 479 m a.s.l., TU, 17 August 2005	N 49°28'33,2" E 15°22'14,5"
TU137 (1,2,3)	4x	Cz, B.M., Českomoravská vrchovina Mts, village of Řeženčice, rockery near the road, 634 m a.s.l., TU, 17 August 2005	N 49°21'50,2" E 15°21'16,8"
TU138 (1,2,3,4)	4x	Cz, B.M., Českomoravská vrchovina Mts, heath-moor near the village of Suchá, 200 m of the village, yellow-marked hiking path, 569 m a.s.l., TU, 17 August 2005	N 49°18'03,6" E 15°34'54,0"
TU139 (1,2,3,4)	4x	Cz, B.M., Českomoravská vrchovina Mts, between the villages of Želetava and Krasovice, edge of the forest, lane joining to the main road, 549 m a.s.l., TU, 17 August 2005	N 49°07'13,4" E 15°37'56,8"
TU140 (1,2,3)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, the town of Moravský Krumlov, surrounding of stone pit near the village of Džbánice, 351 m a.s.l., TU, 17 August 2005	N 49°00'18,2" E 16°12'22,5"
TU141 (1,2)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, town of Moravský Krumlov, rock of the amphitheatre, below the chapel, 301 m a.s.l., TU, 17 August 2005	N 49°02'51,5" E 16°19'10,8"
TU142 (1,2,3)	6x	Cz, W.C., Jihomoravský úval ravine, village of Židlochovice, Výhon Hill, former orchard, 257 m a.s.l., TU, 17 August 2005	N 49°02'20,0" E 16°37'43,1"
TU143 (1,2,3,4)	6x	Cz, W.C., Jihomoravská pahorkatina Mts, the village of Velké Hostěrádky, near the crossroad of the roads Nr. 480 and 422, 256 m a.s.l., TU, 17 August 2005	N 49°00'54,9" E 16°49'55,5"
TU 144	6x	Cz, W.C., Středomoravské Karpaty Mts, Ždánický les, reserve "u Křížanovického potoka", slope between the villages of Heršpice and Rašovice, 240 m a.s.l., TU, 17 August 2005	N 49°07'19,3" E 16°56'10,4"
TU145 (1,2,3)	5x	Cz, W.C., Jihomoravská pahorkatina Mts, reserve near the village of Zouvalka, orchard, 319 m a.s.l., TU, 17 August 2005	N 49°14'55,7" E 17°01'10,3"
TU146 (1,2)	5x	Cz, W.C., Jihomoravská pahorkatina Mts, 500 m W of the village of Nesovice, xeric hillside near the stone pit, 236 m a.s.l., TU, 18 August 2005	N 49°08'16,4" E 17°01'51,3"
(3)	6x	Cz, W.C., Středomoravské Karpaty Mts, the Buchlov castle, edge of the forest, red-marked hiking path, 438 m a.s.l., TU, 18 August 2005	N 49°06'22,7" E 17°18'31,6"
TU147 (1,2,3)	4x	Cz, W.C., Bílé Karpaty Mts, village of Lhotka Hradčovice, orchard in the centre of the village, 217 m a.s.l., TU, 18 August 2005	N 49°02'57,9" E 17°35'17,2"
TU148 (1,2,3)	5x		N 49°02'57,9" E 17°35'17,2"
TU149 (1,2,3,4)	6x	Cz, W.C., Zlínské vrchy Mts, village of Slušovice, xeric slope near the road 0.5 km N of the	N 49°15'31,0" E 17°48'12,8"

		village, 309 m a.s.l., TU, 18 August 2005	
TU150 (1,2,3)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Svitávka (near the town of Boskovice), slope on the E periphery of the village, 325 m a.s.l., TU, 18 August 2005	N 49°30'31,7" E 16°36'22,4"
TU151 (1,2) (3)	5x 6x	Cz, B.M., Moravian foothills of Vysočina Mts, W periphery of the village of Letovice, pine forest and sandstone rocks, 361 m a.s.l., TU, 18 August 2005	N 49°32'25,4" E 16°33'47,3"
TU152 (1,2,3)	4x	Cz, B.M., Dolní Poorličí river basin, the village of Chvojenec, edge of the forest, 274 m a.s.l., TU, 18.8.2005	N 50°07'03,4" E 15°55'58,7"
TU153 (1,2,3,4)	4x	Cz, B.M., Říčanská plošina plain, the village of Mirošovice, N of the town of Benešov, highway D1, lawn, 381 m a.s.l., MD, 10 August 2005	N 49°54'49.00" E 14°42'38.00"
TU154 (1,2,3,4)	4x	Cz, B.M., Moravian foothills of Vysočina Mts, village of Lhotka, WNW of the village of Velká Bíteš, exit from the highway D1, meadow, 540 m a.s.l., MD, 11 August 2005	N 49°18'34.00" E 16°07'01.00"
TU155 (1,2,3,4)	5x	Cz, W.C., Střední Pobečví river basin, village of Losovy, N of the village of Husleneky, 478 m a.s.l., KC, 1 October 2005	N 49°19'02,0" E 18°05'48,0"
TU156 (1,2,3,4)	5x	Cz, Střední Pobečví river basin, village of Husleneky, settlement "u Sivků", below the cote with broadcaster, 684 m a.s.l., KC, 1 October 2005	N 49°19'29,0" E 18°04'43,0"
TU157 (1) (2,3)	6x 5x	Cz, W.C., Javorníky Mts, the village of Hustisko-Solanec, near the town of Rožnov pod Radhoštěm, 572 m a.s.l., KC, 1 October 2005	N 49°23'59,8" E 18°14'59,1"
TU158 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, village of Černošín u Stříbra, edge of the Černošínský bor forest, 543 m a.s.l., TU, 3 october 2005	N 49°48'41,5" E 12°52'29,5"
TU159 (1,2,3)	4x	Cz, B.M., Tepelské vrchy Mts, settlement Starý Mlýn near the village of Potín, near the town of Konstantinovy lázně , 496 m a.s.l., TU, 3 october 2005	N 49°53'25,2" E 13°01'09,8"
TU160 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, the town of Manětín, <i>loco dicto</i> Chlumská hora, 610 m a.s.l., TU, 3 October 2005	N 50°00'41,3" E 13°11'42,9"
TU161 (1,2,3)	4x	Cz, B.M., Plzeňská pahorkatina Mts, the town of Rabštejn nad Střelou, near the bridge across the Střela River, above the sculpture of St. Jan Nepomuk, 459 m a.s.l., TU, 3 October 2005	N 50°02'52,4" E 13°17'48,2"
TU162 (1,4,5) (2,3,6)	4x 6x	Cz, B.M., Pražská plošina plain, Prague periphery, town district Černý Most, E slope above the highway R11, 241 m a.s.l., TU, 15 October 2005	N 50°06'50,3" E 14°35'21,7"
TU163 (1,2,3)	4x	Cz, B.M., Votická vrchovina Mts, the village of Oldřichovec near the town of Votice, dike of the fishpond, 694 m a.s.l., TU, 1 November 2005	N 49°36'00,6" E 14°39'57,3"
TU164 (1,2,3)	4x	Cz, B.M., Doupovské vrchy Mts, 3 km E of the village of Jakubov, near the town of Ostrov nad Ohří, 636 m a.s.l., TU, 3 November 2005	N 50°18'14,0" E 13°04'30,1"
TU165 (1,2,3,4,5)	5x	Cz, B.M., Dolní Povltaví river basin, Větrušické skály, another locality, edge of oak forest and rocky heath, 246 m a.s.l., MD, 5 November 2005 (vide TU 61)	N 50°12'02,0" E 14°22'15,2"
TU166 (1,2,3)	5x	Cz, B.M., Dolní Povltaví river basin, 200 m N of the previous locality, 258 m a.s.l., MD, 5 November 2005	N 50°12'04,9" E 14°22'11,0"

TU167 (1,2,3,4,5,6)	4x	Cz, B.M., Dolní Povltaví river basin, rocky heath above the chalets near the Vltava River, 300 m N of the village of Zlončice, near the town of Kralupy nad Vltavou, 203 m a.s.l., TU, 5 November 2005	N 50°13'37,3" E 14°21'12,5"
TU168 (1,2,3)	4x	Cz, B.M. Ralsko-bezděžská table plateau, peak of Ralsko Mountain, 665 m a.s.l., TU, 14 April 2006	N 50°40'26,6" E 14°45'59,0"
TU169 (1,2,3)	4x	Cz, B.M. Jesenicko-rakovnická plošina plain, the village of Blatno near the town of Jesenice-dam of pond Blatno, 420 m a.s.l., TU, 15 April 2006	N 50°06'64,2" E 13°23'57,0"
TU170 (1,2,3)	6x	Cz, W.C., Mikulovská pahorkatina - Pálava Mts the heath-blue-marked hiking path, 700m N of the village of Klentnice, 393 m a.s.l., TU, 22 April 2006	N 48°51'29,5" E 16°38'16,5"
TU171 (1,2,3)	5x	Cz, W.C., Mikulovská pahorkatina - Pálava Mts limestone pit on the Mt Sv. Kopeček, 331 m a.s.l., TU, 22 April 2006	N 48°48'35,7" E 16°39'19,0"
TU172 (1,2)	4x	Cz, B.M., Plzeňská pahorkatina Mts, the village of Darová near the town Rokycany, 330 m a.s.l., TU, 4 May 2006	N 49°49'58,2" E 13°31'32,4"
TU173 (1,2)	4x	Cz, B.M., Hrubý Jeseník Mts, near the village of Sobotín, <i>loco dicto</i> Ztracenka, 750 m a.s.l., TU, 4 May 2006	N 50°00'25,8" E 17°08'05,5"
TU174 (1,2,3)	4x	Cz, B.M., foothills of Novohradské hory Mts, town Kaplice, pine wood near the petrol station, 562 m a.s.l., TU, 21 May 2006	N 48°43'47,2" E 14°28'57,0"
TU175 (1,2,3)	6x	Cz, B.M., Moravian foothills of Vysočina Mts, serpentine steppe near the town of Mohelno, 378 m a.s.l., TU, 26 May 2006	N 49°06'27,2" E 16°11'22,4"
TU176 (1,2,3)	4x	Cz, B.M., Východolabská tabule plateau, the village of Semtín, between towns Pardubice and Lázně Bohdaneč, 221 m a.s.l., TU, 3 June 2006	N 50°04'05,0" E 15°41'35,4"
TU177 (1,2,3)	4x	Cz, B.M., Orlická tabule table plateau, town of Týniště nad Orlicí, meadows SW of the village of Rašovice, 284 m a.s.l., TU, 15 June 2006	N 50°08'42,5" E 16°07'53,7"
TU178 (1,2,3)	4x	Cz, B.M., Orlická tabule table plateau, village of Nekoř - Bredůvka, xeric slope in the village, 253 m a.s.l., TU, 15 June 2006	N 50°02'40,4" E 16°33'55,6"
TU179 (1,2,3)	5x	Cz, B.M., Nízký Jeseník Mts, village of Malá Štáhle near the town of Rýmařov, next to column of the crucification in the centre of village, 606 m a.s.l., TU, 15 June 2006	N 49°57'06,5" E 17°20'28,6"
TU180 (1,2,3,4,5)	5x	Cz, B.M., Nízký Jeseník Mts, nearby town of Bruntál, puff-stone quarry in Uhlířský vrch, 640 m a.s.l., TU, 16 June 2006	N 49°58'19,8" E 17°26'28,6"
TU181 (1,2,3)	4x	Cz, B.M., Zlatohorská vrchovina Mts., village of Liptáň near the town of Třemešná, 345 m a.s.l., TU, 16 June 2006	N 50°13'51,2" E 17°37'01,4"
TU182 (1,2,4)	5x	Cz, W.C., Moravskoslezské Beskydy Mts, village of Trojanovice near the town of Frenštát pod Radhoštěm, xeric slope above road, 461 m a.s.l., 16 June 2006	N 49°30'58,7" E 18°12'32,5"
(3)	6x		
TU183 (1)	4x	Cz, W.C., Moravskoslezské Beskydy Mts, sinuous road next to dam Šance, between the village of Ostravice and Staré Hamry, stone pit, 503 m a.s.l., TU, 16 June 2006	N 49°29'00,1" E 18°25'20,6"
(2,3,4)	6x		

TU184 (1,2,3)	5x	Cz, W.C., Hostýnsko-vsetínská hornatina Mts., village of Podhradní Lhota near the town of Bystřice pod Hostýnem, xeric slope near the road, brook called Juhyně, 545 m a.s.l., TU, 16 June 2006	N 49°25'12,9" E 17°47'58,8"
TU185 (1,2,3)	5x	Cz, W.C., Hostýnsko-vsetínská hornatina Mts., village of Osíčko near the town of Bystřice pod Hostýnem, xeric slope in the centre of the village, 406 m a.s.l., TU, 16 June 2006	N 49°25'30,5" E 17°44'44,4"
TU186 (2) (1)	5x 6x	Cz, W.C., Podbeskydská pahorkatina Upland, saddle of Mt Kotouč near the town of Štramberk, 501 m a.s.l., TU, 18 June 2006	N 49°35'03,6" E 18°06'56,0"
TU187 (1,2,3)	4x	Cz, B.M., Podčeskoleská pahorkatina upland, village of Nový Pařezov near the town of Domažlice, stone pit next to road, 429 m a.s.l., TU, 15 July 2006	N 49°27'53,3" E 12°50'20,3"
TU188 (1,2)	4x	Cz, B.M., Šumava Mts., Mt Špičák, ski slope, near the village of Železná Ruda, 868 m a.s.l., TU, 15 July 2006	N 49°09'54,1" E 13°13'12,7"
TU189 (1,2)	4x	Cz, B.M., Šumava Mts., Mt Špičák, in the middle of ski slope, near the village of Železná Ruda, 938 m a.s.l., 15 July 2006	N 49°10'04,5" E 13°12'48,7"
TU190 (1,2,3)	4x	Cz, B.M., Šumava Mts., pasture by the village of Klepačka, near the town of Kašperské Hory, 777 m a.s.l., TU, 16 July 2006	N 49°10'20,0" E 13°35'10,0"
TU191 (1,2,3)	4x	Cz, B.M., Šumava Mts., village of Zhůří, near the town of Horská Kvilda, meadows near the cross-road, 1149 m a.s.l., TU, 16 July 2006	N 49°04'51,0" E 13°33'27,6"
TU192 (1,2,3)	4x	Cz, B.M., Šumava Mts., village of Kbelnice, xeric slope above road, 452 m a.s.l., TU, 16 June 2006	N 49°17'46,2" E 13°59'25,3"

SUPPLEMENTARY INFORMATION 2

Previously published data on chromosome numbers of *Pilosella officinarum* from the Western Carpathians, Pannonia Plain and the Czech Republic. Localities are given as in the original sources. Completed data based on our searching are given in square brackets. Localities marked by an asterisk were not included in the map of cytotype distribution (Fig. 5) for several reasons (see Material and Methods, Results and Discussion). Abbreviations used: Cz = Czech Republic, Pl = Poland, Sk = Slovakia.

<i>2n</i>	Locality	Latitude, longitude	Source
36	Pl, Beskid Wyspovy Mts, Rzeki, alt. c. 450 m, coll. A. Jankun	[N 49°35', E 20°13']	Pogan and Wcisło, 1989
36	Pl, Gorce Mts, slope of the Mt Mogielnica, coll. A. Joachimiak	[N 49°59', E 21°54']	
36	Sk, Slovenský raj, Gačovská skala, Geravy	[N 48°52'35", E 20°23'08"]	Murín, 1986
36	Sk, Ipeľsko-rimavská brázda, Antalova pustatina, 260 m n.m., 28.8.1998, leg. Pišťanský*		Pišťanský and Mičieta, 2000
36	Sk, Ipeľsko-rimavská brázda, Ratka, 200 m n.m., 27.8.1998, leg. Pišťanský*		
36	Sk, Ipeľsko-rimavská brázda, Petrovce, 240 m n.m., leg. Pišťanský*		
36	Sk, Ipeľsko-rimavská brázda, Hodejovec, 205 m n.m., 26.8.1998, leg. Pišťanský*		
36	Sk, Ipeľsko-rimavská brázda, Šiatorská Bukovinka, 240 m n.m., 26.8.1998, leg. Pišťanský *		
36	Sk, Záhorská nížina, Šaštín-Stráže, Gazárka, 190 m n.m., 4.4.1997, leg. Pišťanský*		
36	Sk, Záhorská nížina, Prietrž, 280 m n.m., 4.9.1997, leg. Pišťanský *		
36	Sk, Považský Inovec, Hlohovec, Soroš, 260 m n.m., 15.7.1997, leg. Pišťanský*		
36	Sk, Devínska Kobyla, vrch Devínska Kobyla, 300 m n.m., 29.5.1998, leg. Pišťanský*		
36	Sk, Malé Karpaty, Lančár, 260 m n.m., 9.8.1997, leg. Pišťanský *		
36	Sk, Malé Karpaty, Veľký Plešivec, 460 m n.m., 14.8.1997, leg. Pišťanský*		
36	Sk, Malé Karpaty, Záhorská Bystrica, 220 m n.m., 19.8.1997, leg. Pišťanský *		
36	Sk, Malé Karpaty, Dobrá Voda, 360 m n.m., leg. Pišťanský *		
36	Sk, Malé Karpaty, Brezová pod Bradlom, 320 m n.m., 4.9.1997, leg. Pišťanský*		
36	Sk, Malé Karpaty, Hradište pod Vrátnom, 300 m n.m., 3.9.1997, leg. Pišťanský*		
36	Sk, Považský Inovec, Lúka, Babia hora, 380 m n.m., 16.7.1997, leg. Pišťanský *		
36	Sk, Považský Inovec, Lúka, Pod Vinohrady, 320 m n.m., 16.7.1997, leg. Pišťanský*		
36	Sk, Považský Inovec, Havran, 400 m n.m., 12.8.1997, leg. Pišťanský*		
36	Sk, Považský Inovec, Pod Skalinami, 600 m n.m., 12.8.1997, leg. Pišťanský *		
36	Sk, Slovenské rudohorie, Španie pole, 370 m n.m., 24.8.1998, leg. Pišťanský *		
36	Sk, Javorníky, Čertov, 570 m n.m., 19.7.1998, leg. Pišťanský*		
36	Sk, Javorníky, Frňovské sedlo, 940 m n.m., 20.7.1998, leg. Pišťanský*		
36	Sk, Javorníky, Kohútka, 880 m n.m., 22.7.1998, leg. Pišťanský*		
36	Sk, Javorníky, Holýš, 440 m n.m., 18.7.1982, leg. Mičieta*		
36	Sk, Javorníky, Veľký vrch, pri obci Divinka, 360 m n.m., 15.6.1987, leg. Mičieta*		

36	Sk, Javorníky, Medzihony, pri obci Stupné, 400 m n.m., 12.8.1988, leg. Mičieta*		
36	Sk, Javorníky, Jakubovský vrch, 830 m.n.m., 16.8.1988, leg. Mičieta *		
36	Sk, Javorníky, Považský Chlmec, 370 m n.m., 370 m n.m., leg. Mičieta, (Mičieta, 1978) *		
45	Pl, Tatra Mts, Polana Bialý potok, dry parts of the meadow, among low vegetation, alt. c. 940 m	[N 49°18', E 19°56']	Skalińska, 1967
45	Pl, Tatra Mts, sunny slope over the road from Przyslop Miętusi to Kobylarz, at the bottom of the young spruce wood, alt. c. 1170 m	[N 49°14', E 19°51']	
45	Pl, Tatra Mts, valley Jaworzynka, sunny slope over the road, near the entrance to the valley, alt. c. 1000 m	[N 49°34', E 20°00']	
45	Pl, Tatra Mts, Kasprowa Polana, over valley Jaworzynka, drier parts of a meadow, alt. c. 1100 m	[N 49°15', E 19°54']	
45	Pl, Tatra Mts, higher parts of valley Olczyska, near the road, alt. c. 1100 m	[N 49°19', E 20°00']	
45	Pl, Tatra Mts, Kopa Magury, among calcareous rocks in the top part, alt. c. 1700 m	[N 49°15', E 20°02']	
45	Pl, Tatra Mts, vicinity of Łysa Polana, in the meadow with low vegetation, alt. c. 960 m	[N 49°16', E 20°07']	
45	Pl, Tatra Mts, vicinity of Łysa Polana, a different part of the same meadow, alt. c. 960 m	[N 49°16', E 20°07']	
45	Pl, Pieniny Mts, Wąwóz Sobzański, in gorge, alt. c. 600 m*		Skalińska <i>et al.</i> , 1971
45	Pl, Gorce Mts, Lubomierz, alt. c. 500 m, coll. L. Przywara	[N 49°37', E 20°11']	Pogan and Wcisło, 1989
45	Pl, Gorce Mts, Polana Jaworzyna, alt. c. 1000 m, coll. L. Przywara *		
45	Pl, Gorce Mts, slope of the Mt. Jasień, alt. c. 600 m, coll. A. Joachimiak *		
45	Pl, Tatra Mts, Toporowa Cyrla, alt. c. 1100 m, coll. R. Izmailow, A. Jankun*		
45	Pl, Tatra Mts, Dolina Chochołowska, alt. c. 1100 m, coll. R. Izmailow	[N 49°14', E 19°49']	
45	Sk, Devínska Kobyla	[N 48°11', E 17°00']	Uhríková and Feráková, 1977
45	Sk, Južné Biele Karpaty, Myjava, Turá Lúka, 300 m n.m., 4.9.1997, leg. Píšťanský*		Píšťanský and Mičieta, 2000
45	Sk, Malé Karpaty, Bukovec, 400 m n.m., 4.9.1997, leg. Píšťanský *		
45	Sk, Považský Inovec, Hôrka nad Váhom, Medzihorie, 31. m n.m., 11.8.1997, leg. Píšťanský *		
45	Sk, Považský Inovec, Bezovec, 540 m n.m., 29.6.1998, leg. Píšťanský*		
45	Sk, Vtáčnik Mts, valley of Pokulský potok brook, in the grassy place 1 km E of the village of Ostrý Grúň, 490 m a.s.l., coll. F. Krahulec, 18 September 1998	N 48°33'50", E 18°41'00"	Rotreklová <i>et al.</i> , 2002
45	Sk, Vtáčnik Mts, valley of Jastrebský potok brook, ca 2.1 km S of the church in the village of Prochoť, 500 m a.s.l., coll. F. Krahulec, 18 September 1998	N 48°35'30", E 18°42'40"	
45	Cz, distr. Zlín, meadow 1.2 km SE of the railway station in the village of Valašské Klobouky, 510 m a.s.l., coll. F. Krahulec, 17 August 1999	N 49°08'10", E 18°02'10"	
45	Sk, Volovské vrchy Mts, Cechy, on the medieval copper heaps ca 0.5 km N of the center of the town of Gelnica, 500 m a.s.l., coll. P. Mráz & M. Bačkor	N 48°51'28", E 20°55'24"	

45	Sk, Západné Tatry Mts, Pribylina village, Račkova dolina valley, meadow near the of Agriculture University of Nitra chalet, 940 m a.s.l., coll. V. Mrázová, 18 June 2001	N 49°07'57", E 19°46'59"	Rotreklová <i>et al.</i> , 2005
45	Sk, Zemplínske vrchy Mts, Kráľovský Chlmec village, Veľký kopec Hill (263.9), 260 m a.s.l., coll. P. Mráz & V. Mrázová, 17 April 2001	N 48°25'01", E 21°57'44.7"	
45	Sk, Zemplínske vrchy Mts, Streda nad Bodrogom village, ca. 1 km SE of the village centre, <i>loco dicto</i> Veterné piesky on the Tarbucka Hill massive, ca 140 m a.s.l., coll. P. Mráz & V. Mrázová, 16 April 2001	N 48°22'40", E 21°47'02.4"	
45	Sk, Západné Tatry Mts, Pribylina village, Račkova dolina valley, near the crossroad with Jamnická dolina valley, 960 m a.s.l., coll. V. Mrázová, 18 June 2001	N 49°07'57", E 19°46'59"	
45	Sk, Volovské vrchy Mts, Hnilčík village, on the phylite rocks near the crossroad to Hnilčík-Roztoky quarter, 640 m a.s.l., coll. P. Mráz & V. Mrázová, 3 July 2000	N 48°51'24.4", E 20°34'28.6"	
45	Sk, Zemplínske vrchy Mts, Veľká Bara village, former vineyards, ca 100 m N from Piliš Hill (277,6), 240 m a.s.l., coll. P. Mráz & V. Mrázová, 15 April 2001	N 48°25'47", E 21°42'28.3"	
45	Sk, Vysoké Tatry Mts, ca. 1.5 km NW of Štrbské pleso tarn, 1400 m a.s.l., coll. P. Mráz & V. Mrázová, 7 August 2000	N 49°07'48", E 20°02'27"	
45	Sk, Ostrôžky Mts, Polichno village, meadow on the top of the Mt Bralce, 817 m a.s.l., coll. P. Mráz & V. Mrázová, 17 April 2001	N 48°25'27", E 19°27'44"	
45	Sk, Chočské vrchy Mts, Prosiek village, 0.5 km N of the village, pasture, 644 m a.s.l., coll. P. Mráz, 15 July 2000	N 49°09'30", E 19°29'54"	
45	Sk, Vysoké Tatry Mts, on the tourist path between Štrbské pleso tarn and Jamské pleso tarn, 1450 m a.s.l., coll. P. Mráz & V. Mrázová, August 2001	N 49°07'56", E 20°02'28"	
45	Sk, Volovské vrchy Mts, Čučma village, ca 200 m SW of the top of Mt Skalisko, 1250 m a.s.l., coll. P. Mráz & V. Mrázová, 12 June 2001	N 48°44'38", E 20°34'35"	
45	Sk, Volovské vrchy Mts, Čučma village, S slopes of Mt Skalisko, <i>loco dicto</i> Doboška ca 1 km N from elevation marker 874.2, 890 m a.s.l., coll. P. Mráz & V. Mrázová, 12 June 2001	N 48°43'50", E 20°35'25"	
45	Sk, Volovské vrchy Mts, Úhorná village, on the forest route from the Panské sedlo saddle to Mt Biele skaly, NW of the village, 1100 m a.s.l., coll. P. Mráz, June 2002	N 48°43'19", E 20°39'01"	
45	Sk, Volovské vrchy Mts, Prakovce village, <i>loco dicto</i> Hutno on E margin of the village, near the forest road, 400 m a.s.l., coll. P. Mráz, September 2000	N 48°49'08", E 20°55'25"	
45	Sk, Volovské vrchy Mts, Kojšov village, <i>loco dicto</i> Strieborná lúka ca 2.5 km NW of the village, 700 m a.s.l., coll. P. Mráz, 20 July 2000	N 48°50'25", E 20°59'20"	
45	Sk, Vihorlat Mts, Jasenov village, ca 0.5 km NE of the village, pasture, 150 m a.s.l., coll. P. Mráz & V. Mrázová, 13 May 2001	N 48°54'14.7", E 21°54'36"	
45	Sk, Zemplínske vrchy Mts, Veľká Třňa village, xerothermic margins of the road 1.5 km NNW of village, pasture, 180 m a.s.l., coll. Mráz & V. Mrázová, 14 April 2001	N 48°28'35", E 21°40'24"	

45	Cz, Javorníky Mts, on the main ridge near the Portáš chalet, 900 m a.s.l., coll. P. Mráz & V. Jurkovičová, 14 October 2000	N 49°17'47", E 18°14'40"	
45	Sk, Považský Inovec, Topolčany, Podhradie	[N 48°34', E 18°10']	Májovský <i>et al.</i> , 1970
54	Sk, Považský Inovec, Nová Lehota – Dolina, 300 m n.m., 15.8.1998, leg. Píšťanský *		Píšťanský and Mičieta, 2000
54	Sk, Považský Inovec, Podhradie, 450 m n.m., 16.8.1998, leg. Píšťanský*		
54	Sk, Velká Fatra Mts, Mt Kráľova studňa, meadow near the hiking path 150 m NW of the chalet, 7 km W of the village of Staré hory, 1270 m a.s.l., coll. F. Krahulec & A. Krahulcová, 24 July 1999	N 48°52'40", E 19°02'30"	Rotreklová <i>et al.</i> , 2002
54	Sk, Ostrôžky Mts, ca 0.7 km SW of village of Luboreč, along the road between the villages of Luboreč a Závada, 250 m a.s.l., coll. P. Mráz & V. Jurkovičová, 23 April 2000	N 48°18'08", E 19°30'35"	
54	Sk, Slovenský kras Mts, Zádiel village, Zádielska planina plateau, ca 0.5 km NW from elevation point 591.2	N 48°37'58", E 20°41'57"	Rotreklová <i>et al.</i> , 2005
54	Sk, Volovské vrchy Mts, Čučma village, S slopes of Mt Skalisko, 1220 m a.s.l., coll. coll. P. Mráz & V. Jurkovičová, 13 June 2000	N 48°44'47", E 20°34'33"	
54	Sk, Volovské vrchy Mts, Vyšný Klátov village, Mt Predná Holica, meadow bellow the Lajoška chalet, 900 m a.s.l., coll. P. Mráz, June 2002	N 48°45'47", E 21°04'38"	
54	Sk, Volovské vrchy Mts, Košice city, Botanical garden grounds, 236 m a.s.l., coll. P. Mráz, May 2000	N 48°44'03", E 21°14'15"	
54	Sk, Slovenský kras Mts, Plešivec town, Plešivecká planina plateau, on the forest route ca 0.5 km NE of Zbojnická priepasť chasm, 545 m a.s.l., coll. P. Mráz, 30 May 2000	N 48°34'22", E 20°25'09"	
54	Sk, Slovenský kras Mts, Kečovo village, Silická planina plateau, xerothermic slopes on the N margin of the village, 350 m a.s.l., coll. P. Mráz, 30 May 2002	N 48°29'45", E 20°29'20"	
54	Sk, Zemplínske vrchy Mts, Luhyňa village, N slopes of Ondrejský kopec Hill, oak forest margin, 160 m a.s.l., coll. Mráz & V. Mrázová, 14 April 2001	N 48°30'03", E 21°38'01"	
54	Pl, Tatra Mts, vicinity of Łysa Polana, higher parts of the meadow, alt. c. 970 m	[N 49°16', E 20°07']	Skalińska, 1967
45, 54	Pl, Tatra Mts, along the road valley Kościeliska to valley Tomanowa, alt. c. 1100 m	[N 49°12', E 19°52']	
45, 54	Pl, Tatra Mts, vicinity of Łysa Polana, among rocks scattered in a meadow, alt. c. 960 m	[N 49°16', E 20°07'] [N 50°23', E 15°38']	Měsíček and Jarolímová, 1992
36	Cz, Jičín, town Hořice, meadow near the forest ca 0.5 km N of the town, 400 m a.s.l.		
36	Cz, Vítkovice, Horní Mísečky, along the road ca 0.5 km NNW of the settlement, 1070 m a.s.l., coll. F. Krahulec & A. Krahulcová, 15 July 1997	N 50°44'20", E 15°33'50"	Krahulcová and Krahulec, 1999
36	Cz, Pec pod Sněžkou, Velká Úpa, meadow near the settlement Janovy Boudy, 1.5 km E of the church, 860 m a.s.l., coll. F. Krahulec, 20 June 1995	N 50°41'20", E 15°48'00"	
36	Cz, Pec pod Sněžkou, the grassland area Velká pláň in the N part of the village in the northern part of the village, 830 m a.s.l., coll. F. Krahulec, 18 June 1999	N 50°41'50", E 15°43'50"	Krahulcová <i>et al.</i> , 2001

36	Cz, Horní Malá Úpa, Pomezní Boudy, the meadow beside the road opposite to bus stop, 160 m S of Padolská bouda chalet, 950 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 30 June 1999	N 50°44'10", E 15°48'50"	
36	Cz, Pec pod Sněžkou, Velká Úpa, the grassland area Přední Výsluní, close to woodland edge, ca. 1.3 km SEE of the church, 890 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 1 July 1999	N 50°41'20", E 15°47'30"	
36	Cz, Špindlerův Mlýn, in the meadow beside the touring path, between Petrova bouda and Moravská bouda chalets, ca 100 m NE of Moravska bouda chalet, 1240 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 2 July 1999	N 50°46'10", E 15°36'30"	
36	Cz, Benecko, in the lawn in the central part of the village ca 0,4 km W of the parking place, 800 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 2 July 1999	N 50°40'00", E 15°33'00"	
36	Cz, Benecko, the upper part of the meadow bellow Jindrova skála hill, S slope, in the southwestern periphery of the village, 770 m a.s.l., coll. F. Krahulec & S. Bräutigam & J. Chrtek, 2 July 1999	N 50°39'50", E 15°32'40"	
36	Cz, distr. Louny, W edge of Vroutecký les wood near the village of Valov, 2.2 km S of the church in the town of Podborany, 350 m a.s.l., coll. F. Krahulec, 2. June 1998	N 50°12'50", E 13°25'00"	Rotreklová <i>et. al.</i> , 2002
36	Cz, distr. Cheb, nature reserve Pluhův bor, 1.7 km N of the church in the village of Mnichov, 700 m a.s.l., coll. O. Rotreklová & P. Šmarda, 13 July 2000	N 50°03'12", E 12°47'07"	
36	Cz, Bohemian Karst, distr. Beroun, grassland above the road N of the village of Srbsko, 1.3 km NE of the railwaz station, 310 m a.s.l., coll. F. Krahulec, 13 June 1998	N 49°56'40", E 14°08'50"	
36	Cz, Šumava, distr. Prachatice, slope above the railway in the village of Stožec, 50 m E of the railwaz station, 780 m a.s.l., coll. F. Krahulec, 11 August 1999	N 48°51'30", E 13°49'20"	
36	Cz, distr. Náchod, grassland and the former sand pit in the N periphery of the village of Vršovka, 330 m a.s.l., coll. F. Krahulec, 21 May 1999	N 50°19'30", E 16°07'00"	
36	Cz, Krušné hory Mts, the former tin mine 3.5 km NNE of the village Přebuz, 890 m a.s.l., coll. F. Krahulec, 8 June 2000	N 50°24'00", E 12°30'00"	Rotreklová <i>et. al.</i> , 2005
36	Cz, Ještědský hřeben Mts, distr, Liberec, in the S periphery of the village of Křištofovo Údolí ca 5.5 km SSW of the town of Chrastava, 440 m a.s.l., coll. F. Krahulec & S. Bräutigam, 7 July 2001	N 50°46'04", E 14°55'57"	
36	Cz, Praha city, part Řeporyje	N 50°03.232', E 14°18.619'	Košťálová, 2004
36	Cz, Praha city, part Hrdlořezy	N 50°05.747', E 14°31.343'	
36	Cz, Praha city, part Kyje	N 50°05.769', E 14°32.828'	
36	Cz, Praha city, part Braník	N 50°02.251', E 14°27.004'	
36	Cz, Praha city, part Řevnice	N 49°55.204', E 14°14.967'	
36	Cz, Praha city, part Šeberov	N 50°00.5', E 14°30.55'	

54	Cz, distr. Rychnov nad Kněžnou, meadow at the edge of Halín wood, 0.5 km NW of the crossroads near the village of Běstviný, 310 m a.s.l., coll. F. Krahulec, 21 May 1999	N 50°19'30", E 16°08'40"	
36, 45	Cz, distr. Olomouc, grassland on the E slope of Malý Kosíř hill, 0,6 km SW of the church in the village of Slatinice na Hané, 270 m a.s.l., coll. F. Krahulec, 25 May 1998	N 50°33'30", E 17°05'40"	Rotreklová <i>et. al.</i> , 2002
36, 45	Cz, Praha, slope above the railway W of the railway station Praha-Vysočany, 210 m a.s.l., coll. F. Krahulec & J. Chrtek, 18 May 2000	N 50°06'45", E 14°29'50"	
54+63	Cz, Praha city, part Černý most*	N 50°06.874', E 14°35.276'	Košťálová, 2004

SUPPLEMENTARY INFORMATION 3

Published chromosome numbers of *Pilosella officinarum* in Europe, with exception of the data given in Supplementary Information 2. Localities are given as in the original sources. Completed data based on our searching are given in square brackets. Localities marked by an asterisk were not included in the maps of cytotype distribution (Figure 5), for several reasons (see Material and Methods, Results and Discussion). CD-BSBI = Cytological database of the Botanical Society of the British Isles (accessed February 2005).

2n	Country	Locality	Latitude, longitude	Source
18	France	Htes-Alpes, Région de Guillestre, Lac du Séguret, pelouse à <i>Festuca spadicea</i> , alt. 1200 m*	[N 44°56', E 06°28']	Delcourt, 1972
18		Htes-Alpes, Région de Vars, au pied du Châtelieret, alt. 2000 m*	[N 44°37', E 06°41']	
18		Htes-Alpes, Région de Ceillac, bords d'un torrent eu sous-bois de Mélézes, alt. 1900 m*	[N 44°40', E 06°46']	
18		B.-Alpes, Col de Larche, Réserves du Lausannier, bords d'un sentier, en sous-bois de Mélézes, alt. 1700-1800 m*	[N 44°27', E 06°51']	
18		Htes-Alpes, Val d'Escreins, sous-bois de <i>Pinus sylvestris</i> , alt. 1600 m*	[N 44°37', E 05°47']	
18		Htes-Alpes, Vars-les-Claux, derrière le village, tapis herbeux en sous-bois de Mélézes, alt. 1800 m*	[N 44°34', E 06°34']	
18		Htes-Alpes, Vars-les-Claux, en bordure d'une pelouse à <i>Festuca spadicea</i> , alt. 1800 m*	[N 44°34', E 06°34']	
18		Htes-Alpes, Col de Vars, pelouse à <i>Festuca spadicea</i> , alt. 2000*	[N 44°32', E 06°41']	
18		Htes-Alpes, Vars, St-Marcellin, au lieu dit Le Rocher du chateau, pelouses pâturées, alt. 1800 m*		
18		Htes-Alpes, Région de Guillestre, lavandaie à <i>Lavandula vera</i> , sur cailloutis consolidés des alluvions de la Durance, alt. 1000-1100 m*	[N 44°39', E 06°37']	
18		Htes-Alpes, Plateau de Peyrol, Région de Vars, pelouses en pré-bois de Mélézes, alt. 2200 m*	[N 44°37', E 06°39']	
18		Htes-Alpes, Région de Vars. Au lieu dit Les Escondus, sur éboulis plus ou moins siliceux avec rares pâturages, alt. 2300 m*		
18		Htes-Alpes, Région de Vars, Les Cuniets, pelouse à Fétuques, alt. 2000 m*		
18		Htes-Alpes, Région de Lautaret, pelouses à <i>Festuca spadicea</i> , alt. 2000 m*	[N 45°02', E 06°23']	
36	Armenia	Yerevan, Botanicheskij sad	[N 40°11', E 44°31']	Nazarova and Ghukasyan, 2004
36	Austria	Deutschlandsberg (Steiermark)	[N 46°49', E 15°13']	Gadella, 1972

36	Belarus	Grodnenskaija obl., Smorgonskij reg., okr. Rybaki	[N 54°32', E 26°24']	Dmitrieva, 1987
36		1 km JZ ot der. Domzheritsy*	[N 55°44', E 28°19']	Parfenov and Dmitrieva, 1988
36	Belgium	De Panne (W. Vlaanderen)	[N 51°06', E 02°35']	Gadella, 1972
36		Eupen (Liège)	[N 50°38', E 06°02']	
36		near Houffalize (prov. Luxembourg)	[N 50°08', E 05°47']	Gadella, 1984
36		near Vise, (prov. Liège)	[N 50°44', E 05°42']	
36	Denmark	Brömsholm, H. Nordenskiöld, 1951	[N 55°55', E 12°29']	Turesson and Turesson, 1960
36		Lögstör, H. Nordenskiöld, 1951	[N 56°58', E 09°15']	
36		Oserild, H. Nordenskiöld, 1951	[N 57°02', E 08°50']	
36		Ribe, H. Nordenskiöld, 1951	[N 55°19', E 08°50']	
36		Rödning, H. Nordenskiöld, 1951	[N 53°19', E 08°50']	
36		Skibsted, H. Nordenskiöld, 1951	[N 56°52', E 10°05']	
36		Viborg, H. Nordenskiöld, 1951	[N 56°27', E 09°22']	
36		Talne, S. O. Björkman, 1949*		
36		Millinge (Fyn)	[N 55°08', E 20°13']	Gadella, 1972
36		Agger (Jylland)	[N 56°47', E 08°15']	
36		Ebeltoft (Jylland)	[N 56°12', E 10°41']	
36		Gladved (Jylland)	[N 56°19', E 10°50']	
36		Helsingör (Sjaelland)	[N 56°02', E 12°37']	
36		Hennestrand (Jylland)	[N 55°44', E 08°10']	
36		Hvide Sande (Jylland)	[N 55°59', E 08°08']	
36		Klim (Jylland)	[N 57°06', E 09°10']	
36		Lakolk (Römö)	[N 55°08', E 08°30']	
36		Lögstör (Jylland)	[N 56°58', E 09°15']	
36		Lokken (Jylland)	[N 57°22', E 09°43']	
36		Rebild (Jylland)	[N 56°50', E 09°51']	
36		Slettestrand (Jylland)	[N 57°09', E 09°22']	
36		Stege (Mön)	[N 54°59', E 12°18']	
36		Stenbjerg (Jylland)	[N 56°55', E 08°22']	
36		Thorupstrand (Jylland)*	[N 57°08', E 09°07']	
36		Hjimmelberget near Silkeborg (Jylland)	[N 56°10', E 09°34']	Gadella, 1984
36	France	Bouches-du-Rhône, Région de Marseille, Vallée de l'Huveaune, Les Camoins, alt. 0-50 m	[N 43°18', E 05°30']	Delcourt, 1972

36	Bouches-du-Rhône, Vallée de la Durance, au niveau du Pont-de-Mirabeau, sur cailloutis consolidés par un petite pelouse xérophile, alt. 0-100 m	[N 44°55', E 04°44']	
36	Htes-Alpes, non loin de Guillemestre, au Plan de Fazy, alt. 500-700 m	[N 44°40', E 06°39']	
36	Htes-Alpes, Région d'Embrun à Boseodon, sur pelouses sèches de type méditerranéen	[N 44°34', E 06°29']	
36	Htes-Alpes, Vallée de la Durance, non loin de la Roche-de-Rame, alt. 800 m	[N 44°55', E 04°44']	
36	Bouches-du-Rhône, Bassin d'Aix-en-Provence, région des Milles, pelouses sèches en bordure de route, alt. 50-100 m	[N 43°32', E 05°26']	
36	Var, Evenos, sur basalte, dans un pelouse avec <i>Lavandula stoechas</i>	[N 43°10', E 05°51']	
36	Var, entre Flassans et le Luc, bords de route sur pelouses à graminées, terrains calcaireo-marneux, alt. 100 m	[N 43°22', E 06°13']	
36	Ste-Victoire, Champ en friche non loin du barrage de Bimont	[N 50°33', E 01°54']	
36	Var, bassin de Bausset, sur marnes ligériennes, alt. 100 m*	[N 43°12', E 05°47']	
36	Ste-Victoire – St. Marc, jaumegarde, aeniennes cultures abandonnées*	[N 43°33', E 05°32']	
36	Ste-Victoire, au lieu dit le "Domaine de l'Etang", pelouses pâturées sous quelques chênes verts, terrains plus ou moins dolomitiques*	[N 43°31', E 05°36']	
36	Les Milles, , croisement de St.-Pons, dans un <i>Deschampsietum mediae</i>	[N 43°30', E 05°23']	
36	Echenerex (Ain)	[N 46°19', E 06°02']	Gadella, 1972
36	Virieu le Grand (Ain)	[N 45°51', E 05°39']	
36	Cap Blanc Nez (Artois)	[N 50°53', E 01°38']	
36	Nant (Aveyron)	[N 44°01', E 03°18']	
36	Plage de Loon (Flandres)	[N 51°00', E 02°14']	
36	Hohneck, Vosges, (Haut Rhin)	[N 48°02', E 07°01']	
36	Collobrières, Massif de Maures (Var)	[N 43°16', E 06°23']	
36	Egliseneuve près Billon (dep. du Puy-de-Dôme)	[N 45°43', E 03°24']	Aquier and Renard, 1979
36	France: garrigue, environs de Montpellier	[N 43°37', E 02°50']	Natarajan 1981
36	St. Julien de Verdon (Ht. Prov.)	[N 43°55', E 06°31']	Gadella, 1984
36	Le Mans (Ht. Alpes)	[N 48°00', E 00°12']	
36	Col de Tourmalet, alt. 1700 m	[N 42°54', E 00°09']	
36	near Obéost (Pyren. Atlantiques)*		
36	Marlestein (Ht. Rhin)*		
36	Germany Obermoss, Zugsp., H. Nordenskiöld, 1950	[N 49°40', E 08°55']	Turesson and Turesson, 1960

36		St. Blasien, Schwarzwald (Baden-Württemberg)	[N 47°46', E 08°08']	Gadella, 1972
36		Borken (Nordrhein-Westfalen)	[N 51°03', E 09°16']	
36		Konzen (Nordrhein-Westfalen)	[N 50°35', E 06°15']	
36		Monschau (Nordrhein-Westfalen)	[N 50°34', E 06°15']	
36		Bluchertal, near Kaub*	[N 50°06', E 07°47']	Gadella, 1984
36		Regierungsbezirk Oberbayern, Kiesgrube rechts der Strasse von Kreuzstrasse nach Eching	[N 48°17', E 11°35']	Schuhwerk and Lippert, 1997
36		Regierungsbezirk Oberpfalz, Landkreis Regensburg, Mittelberg nördlich Tegerheim	[N 50°20', E 11°02']	
36		Regierungsbezirk Oberbayern, Landkreis Traunstein, von der Thoraualm südöstlich des Hochfelln zur Nesselauer Schneid, Lippert, 19.6.1996	[N 48°01', E 11°05']	Schuhwerk and Lippert, 2002
36		Regierungsbezirk Niederbayern, Landkreis Straubing-bogen, Bayerischer Wald, Steinbruch im Südhang des Welchenberges bei Espern, 340 m, 27.5.1998, Schuhwerk	N 48°52'42", E 12°46'04"	
36		Saxonia, 12 km SSW of Görlitz	[N 51°03', E 14°54']	Bräutigam and Bräutigam, 1996
36		Sachsen, Niederspree village, on the margin of the forest route along the lake bank	N 51°24'10", E 14°52'60"	Rotreklová <i>et al.</i> , 2005
36	Ireland	Lanesborough (Ct. Roscommon)	[N 53°40', W 07°59']	Gadella, 1972
36		Longford (Ct. Roscommon)	[N 53°44', W 07°48']	
36		Furnace, Lough Feeagh (Ct. Mayo)	[N 53°57', W 09°35']	
36	Luxembourg	near Vianden	[N 49°56', E 06°12']	
36		Müllertal near Larochette	[N 49°46', E 06°13']	Gadella, 1984
36		Château de Beaufort near Beaufort	[N 49°50', E 06°17']	
36	The Netherlands	Utrecht, Maarn-Maarnsbergen	[N 52°04', E 05°23']	Gadella and Kliphuis, 1963
36		Friesland, Island of Ameland	[N 53°27', E 05°43']	Gadella, 1972
36		Friesland, Oosterwolde	[N 53°00', E 06°18']	
36		Drente, Diphorn	[N 52°46', E 06°49']	
36		Drente, Emmen	[N 52°47', E 06°54']	
36		Drente, Noordsleen	[N 52°47', E 06°48']	
36		Drente, Oosterhesselen	[N 52°46', E 06°49']	
36		Drente, Schoonebeek	[N 52°40', E 06°43']	
36		Drente, Sleen	[N 52°46', E 06°48']	
36		Overijssel, Ommen	[N 52°31', E 06°25']	

36	Gelderland, Bennekom	[N 52°00', E 05°41']	
36	Gelderland, Culemborg	[N 51°57', E 05°14']	
36	Gelderland, Harderwijk	[N 52°21', E 05°38']	
36	Gelderland, Heesum	[N 51°59', E 05°46']	
36	Gelderland, Speuld	[N 52°16', E 05°43']	
36	Utrecht, de Bilt	[N 52°07', E 05°11']	
36	Utrecht, Rhenen	[N 51°58', E 05°34']	
36	Noord Holland, Bergen	[N 52°40', E 04°42']	
36	Noord Holland, Hilversum	[N 52°14', E 05°11']	
36	Zuid Holland, Island of Goeree	[N 51°49', E 03°57']	
36	Noord Brabant, Cromvoirt	[N 51°39', E 05°18']	
36	Noord Brabant, Drunen	[N 51°41', E 05°10']	
36	Noord Brabant, Heesch	[N 51°45', E 05°32']	
36	Noord Brabant, Helvoirt	[N 51°39', E 05°17']	
36	Noord Brabant, Lage Mierde	[N 51°24', E 05°09']	
36	Noord Brabant, Ossendrecht	[N 51°24', E 04°20']	
36	Limburg, Bemelen	[N 50°51', E 06°46']	
36	Limburg, Brunssum	[N 50°57', E 05°57']	
36	Limburg, Epen	[N 50°47', E 05°55']	
36	Limburg, Eys	[N 50°55', E 05°46']	
36	Limburg, Gulpen	[N 50°54', E 05°38']	
36	Limburg, Heerlen	[N 50°55', E 06°02']	
36	Limburg, Kunrade	[N 50°52', E 05°56']	
36	Limburg, Maastricht	[N 50°51', E 05°41']	
36	Limburg, Slenaken	[N 50°46', E 05°51']	
36	Limburg, Waubach	[N 50°55', E 06°03']	
36	Limburg, Wittem	[N 50°50', E 05°59']	
36	Noord Holland, Laren	[N 52°15', E 05°14']	
36	Gelderland, Opheusden	[N 51°56', E 05°38']	
36	Zuid Holland, Voorne	[N 51°54', E 04°07']	
36	Zeeland, Oostkapelle	[N 51°34', E 03°33']	
36	Limburg, Tierziet*		
36	Loonse en Drunense Duinen (prov. Noord Holland)	[N 51°39', E 05°08']	Gadella, 1984

36		Noord Holland, Bulk near Hilversum	[N 52°14', E 05°11']	
36		Limburg, near Brunssum*	[N 50°57', E 05°58']	
36		Limburg, near Gulpen*	[N 50°49', E 05°54']	
36	Norway	near Oslo	[N 59°55', E 10°46']	Gadella, 1972
36	Poland	near Opole (Lublin)	[N 50°40', E 17°57']	
36		district Przemyśl, Huta Złomy, near Narol, coll. A. Jankun	[N 50°21', E 23°19']	Pogan and Weisło, 1989
36		district Przemyśl, Wola Wielka, near Narol, coll. A. Jankun	[N 50°12', E 23°24']	
36		district Katowice, Płoki near Trzebinia, coll. R. Izmailow	[N 50°12', E 19°31']	
36		district Słupsk, in the vicinity of Reservation Ruchome Wydmy, coll. E. Kuta	[N 54°28', E 17°02']	
36		district Słupsk, Ulinia, near the Lake Sarbsko, coll. E. Kuta	[N 54°46', E 17°38']	
36		district Siedlce, Pecowiec near Siedlce, coll. E. Kuta	[N 52°10', E 22°17']	
36		district Zamość, Roztocze, Zwierzyniec, coll. E. Kuta *	[N 50°37', E 22°57']	
36		district Gdańsk, Karwia, way to Czarny Młyn,	[N 54°50', E 18°13']	
36		district Gdańsk, Ostrowo	[N 54°50', E 18°15']	
36		district Gdańsk, Jastrzębia Góra	[N 54°50', E 18°22']	
36		district Gdańsk, Świecino near Wejherowo	[N 54°45', E 18°11']	
36		district Gdańsk, Rozewie	[N 54°50', E 18°20']	
36		district Toruń, Toruń	[N 53°01', E 18°37']	
36		district Suwałki, Wiersnie near Giby	[N 53°47', E 19°34']	
36		district Suwałki, way from Zelwy to the lake Pomorze in vicinity of Giby	[N 54°52', E 23°22']	
36		district Włocławek, Widoń near Włocławek	[N 52°34', E 19°04']	
36		district Częstochowa, Sułostowice	[N 50°49', E 19°07']	
36		district Częstochowa, Romanów near Częstochowa	[N 50°41', E 19°23']	
36		district Kielce, Chęciny	[N 51°54', E 21°47']	
36		district Kielce, Koniecmosty near Pińczów	[N 50°20', E 20°40']	
36		district Kielce, Kije near Pińczów	[N 50°37', E 20°36']	
36		district Tarnobrzeg, Staszów	[N 50°33', E 21°07']	
36		district Katowice, Chrzastowice near Wolbrom	[N 50°20', E 19°41']	
36		district Kraków, Kraków-Kostrze	[N 50°03', E 19°57']	
36		district Bielsko-Biała, Maków Podhalański; Kamienna Góra,	[N 44°38', E 20°03']	
36		district Tarnobrzeg, Świniary, coll. Z. Sawicka	[N 50°33', E 21°35']	
36		district Tarnobrzeg, Połaniec, coll. Z. Sawicka	[N 50°26', E 21°19']	
36		district Kraków, Ruszcza near Kraków	[N 50°05', E 20°09']	

36		district Kraków, Niepołomice, coll. L. Przywara	[N 50°02', E 20°16']	
36		district Suwałki, Sejny, coll. R. Czapik	[N 54°06', E 23°21']	
36		district Skierniewice, Budy Grabskie, Primeval forest-Puszcza Bolimowska, coll. R. Czapik	[N 52°01', E 20°17']	
36		district Włocław, Milicz, coll. J. Małecka	[N 51°32', E 17°16']	
36		district Gdańsk, near Jastrzębia Góra	[N 54°50', E 18°22']	
36		district Gdańsk, Losniewo*		
36		district Suwałki, Michnowce near Sejny, in the vicinity of Lake Płaskie	[N 53°47', E 19°34']	
36		district Tarnobrzeg, Żarabki, coll. Z. Sawicka	[N 50°16', E 21°47']	
36		district Włocław, Ruda Malicka, coll. R. Izmailow*		Skalińska <i>et al.</i> , 1971
36		Stronie Śląskie, Sudetien Mts	[N 50°18', E 16°53']	
36		Wielogłowy near Pelplin	[N 53°55', E 18°42']	Pogan <i>et al.</i> , 1987
36		district Kielce, Pińczów	[N 50°32', E 20°32']	
36		Beskid Śląski Mts, grassland above chalet ca 3.8 km ESE of the of the station in the town of Ustroń	N 49°43'20", E 18°51'20"	Rotreklová <i>et al.</i> , 2002
36		Beskid Śląski Mts, grassland along the road 0.5 km SW of the chalet ca 3.25 km SE of the of the station in the town of Ustroń	N 49°43'00", E 18°50'40"	
36		Jizerské hory Mts, near the settlement of Orle 3.5 km W of the village of Jakuszyce	N 50°48'45", E 15°23'50"	Rotreklová <i>et al.</i> , 2005
36	Portugal	near Paradela (Tras os Montes)	[N 41°15', W 07°51']	Gadella, 1972
36		Serre do Gerês, Carris (no. 1385)	[N 39°30', W 08°06']	Fernades and Queirós, 1971
36		2km de Barracão vers Braga (no. 1386)	[N 41°33', W 08°26']	
36	Spain	Ordesa, alt. 1300 m	[N 42°38', E 00°02']	Gadella, 1984
36		Galicia, near Verin, alt. 650	[N 41°57', W 07°27']	
36		Galicia, Ria Euviane, N. of Chantada	[N 42°38', W 07°46']	
36		Galicia, Vieilro, alt. 850 m	[N 43°39', W 07°37']	
36		Ordesa Soaso, alt. 1750 m*	[N 42°40', W 00°04']	
36	Sweden	Scania, Ljungbyhed, G. Turesson, 1949	[N 56°04', E 13°13']	Turesson and Turesson, 1960
36		Scania, Dalby, G. Turesson, 1945	[N 59°32', E 17°21']	
36		Scania, Simrishamn, G. Turesson, 1945	[N 55°33', E 14°21']	
36		Scania, Gunnarp, G. Turesson, 1945	[N 57°19', E 12°39']	
36		Scania, Sätaröd, G. Turesson, 1945	[N 55°57', E 13°53']	
36		Scania, Ludvigsborg, B. Turesson, 1945	[N 55°54', E 13°36']	
36		Scania, S. Rörum, G. Turesson, 1945	[N 55°56', E 13°40']	

36		Scania, Stenestad, G. Turesson, 1945	[N 56°03', E 13°05']	
36		Scania, Kaffatorp, G. Turesson, 1945*		
36		Småland, Gränna, G. Turesson, 1945	[N 58°32', E 14°28']	
36		Småland, Forserum, G. Turesson, 1953	[N 57°43', E 14°19']	
36		Scania, Båstad, G. Turesson, 1953	[N 56°46', E 12°54']	
36		Scania, Landskrona, G. Turesson, 1949	[N 55°52', E 12°50']	
36		Scania, Axelvold, H. Nordenskiöld, 1951	[N 55°58', E 13°06']	
36		Scania, Barseback, G. Turesson, 1953	[N 55°46', E 12°54']	
36		Scania, Vankiva, G. Turesson, 1953	[N 56°11', E 13°44']	
36		Scania, Högstad, H. Nordenskiöld, 1951	[N 55°30', E 13°45']	
36		Scania, Falsterbo, G. Turesson, 1951	[N 57°39', E 16°22']	
36		Scania, Skanor, G. Turesson, 1951	[N 55°25', E 12°51']	
36		Scania, Tjornarp, G. Turesson, 1953	[N 56°00', E 13°38']	
36		Scania, Skillinge, G. Turesson, 1951	[N 55°28', E 14°17']	
36		Scania, Sjöbo, G. Turesson, 1951	[N 55°38', E 13°42']	
36		Scania, Hohög, G. Turesson, 1953	[N 55°26', E 13°05']	
36		Scania, Bjerred, G. Turesson, 1952	[N 55°42', E 13°02']	
36		Scania, Viktorshög, G. Turesson, 1952*		
36		Scania, Domsten, G. Turesson, 1952	[N 56°07', E 12°36']	
36		Scania, Forstavallen, G. Turesson, 1953*		
36		Scania, Klagshamn, G. Turesson, 1951	[N 55°32', E 12°55']	
36		Scania, Sanekulla, G. Turesson, 1951*		
36		Scania, Knutstorp, H. Nordenskiöld, 1951*		
36		Scania, Hovs Hallar, G. Turesson, 1954	[N 56°28', E 12°42°]	
36		Scania, Malen, G. Turesson, 1949*		
36		Scania, Tunbyholm, G. Turesson, 1945	[N 55°36', E 14°07']	
36		Scania, Hylla, B. Turesson, 1945	[N 55°33', E 13°38']	
36		Scania, Östarp, G. Turesson, 1945	[N 55°36', E 13°33']	
36		Scania, Haväng, G. Turesson, 1956	[N 55°43', E 06°00']	
36		Halland, Högaskog, G. Turesson, 1949*		
36	Switzerland	Tessin: Val Verzasco near Sonogno, alt. 900 m	[N 46°15', E 08°35']	Gadella, 1984
36	Ukraine	Chornogora, v fitotsenozakh lednikovych kotlov Goverla-Breskul, Breskul-Pozhizhevskaja, Pozhizhevskaja-Dantser, Rebra-Gutin-	[N 48°10', E 24°24']	Pashuk, 1987

		Tomnatek, <i>Festucetum-rubrae</i> , 1430-1600 m		
36	United Kingdom	England, Sussex, H.G. Baker, 1950	[N 50°55', W 00°10']	Turesson and Turesson, 1960
36		England, Bristol	[N 51°28', W 02°36']	Finch, 2005 (CD-BSBI)
36		England, E. Sussex, Fairligh sand quarry	[N 50°54', E 00°13']	
36		England, E. Kent, Dungeness	[N 51°12', E 01°10']	
36		England, N. Wilts., Vale of Pewsey, Walker Hill	[N 51°21', W 01°47']	
36		England, W. Gloucs., Avon Gorge, N side, 0.5 mi below Clifton Bridge	[N 51°56', W 02°15']	
36		England, Cambs., Babraham Hall Estate	[N 52°08', E 00°10']	
36		England, S. Hants., Christchurch	[N 50°44', W 01°45']	
36		England, Glam., Caerphilly	[N 51°40', W 03°11']	
36		England, S. Devon, Berry Head	[N 50°27', E 03°51']	
36		England, Berks., Wytham Wood, near Oxford	[N 51°45', W 01°14']	
36		England, Wight., Carisbrooke Castle	[N 50°42', W 01°18']	
36		England, S. Hants., Portsmouth	[N 50°50', W 01°05']	
36		England, E. Gloucs., Birdlip	[N 51°55', W 02°07']	Watson, 2005 (CD-BSBI)
36		England, W. Suffolk, Lakenheath Warren	[N 52°25', E 00°31']	Edmond, <i>et al.</i> , 2005 (CD-BSBI)
45	Austria	Fischbach, Styria, B. Nordensiöld, 1950	[N 47°27', E 15°39']	Turesson and Turesson, 1960
45		Maria Trost, Graz, B. Nordensiöld, 1950	[N 47°05', E 15°26']	
45		Katschberg, B. Nordensiöld, 1953	[N 47°03', E 13°37']	
45		Bernstein (Burgenland)	[N 47°24', E 16°16']	Gadella, 1972
45		Oberwart (Burgenland)	[N 47°17', E 16°12']	
45		Niederösterreich, Retz, Windmühlenberg nördlich Retz	[N 48°45', E 15°57']	Schuhwerk and Lippert, 1997
45	Belarus	Mogilevskaja obl., Slavgorodskij, okr.Rabinovichi	[N 53°35', E 30°20']	Dmitrieva, 1987
45	France	Alpes-Maritimes, localités entre Berthemon et St-Martin V0subie, talus eu bordure de la route, alt. 1300 m	[N 44°04', E 07°15']	Delcourt, 1972
45		Alpes-Maritimes, entre St-Martin v0subie et Bor0on, talus en bordure de la route, pelouse pâtures avec <i>Gentiana lutea</i> , alt. 1500 m	[N 44°04', E 07°15']	
45		Alpes-Maritimes, St-Etienne-de-Tinée, sur cailloutis en bordure de la Tin0e, alt. 1170-1200 m	[N 44°15', E 06°55']	
45		B.-Alpes, Vallée de l'Ubaye, route de Maurin, alt. 1400 m	[N 44°33', E 06°53']	
45		B.-Alpes, Vallée de l'Ubaye, Tornoux, 1200 m	[N 44°28', E 06°18']	
45		Alpes-Maritimes, en descendant de la Madonede Fenestre, alt. 1800 m*	[N 44°07', E 07°21']	
45		Alpes-Maritimes, Thorene, alt. 1200 m*		

45	Finland	Nätö, Åland, E. Hesselman, 1948*		Turesson and Turesson, 1960
45		Ostersundom, B. Nordensiöld, 1947	[N 60°15', E 25°11']	
45		Vädö, B. Nordensiöld, 1947*		
45	Ireland	Knochnareah, Granche House (Co. Sligo)*	[N 54°16', E 08°28']	Gadella, 1984
45		Port Runny Bay, (Ct. Roscommon)*	[N 53°38', E 08°13']	Gadella, 1972
45		Ben Bulbin (Co. Sligo), H. McAllister 68/40		Watson (2005, CD BSBI)
45		Near Enniskillen (Co. Fermanagh)		Finch (2005, CD BSBI)
45	The Netherlands	Noord Holland, Camperduin	[N 52°44', E 04°34']	
45		Zuid Holland, Wassenaar	[N 52°09', E 04°24']	
45		Gelderland, near Winterswijk	[N 51°56', E 08°43']	
45		Noord Holland, Island Texel, de Muy	[N 53°05', E 04°50']	Gadella, 1984
45		Noord Holland, Island Texel, de Krim	[N 53°05', E 04°50']	
45	Norway	Oslofjord, Island of Boroya	[N 59°21', E 10°35']	Gadella, 1972
45	Poland	near Kuźnice	[N 52°02', E 19°04']	
45	Sweden	Gotland, Lojsta Hed, G. Turesson, 1957	[N 57°21', E 18°22']	Turesson and Turesson, 1960
45		Gotland, Vike, G. Turesson, 1957	[N 63°20', E 18°45']	
45		Gotland, Fårösund, O. Hedberg, 1949	[N 57°53', E 16°06']	
45		Scania, Kaffatorp, G. Turesson, 1951	[N 56°12', E 14°17']	
45		Scania, Skälderviken, G. Turesson, 1949	[N 56°25', E 12°42']	
45		Scania, V. Ströo, B. Lövkvist, 1949*		
45		Småland, Pataholm, B. Turesson, 1952	[N 56°55', E 16°25']	
45		Scania, Hallands Väderö, B. Lövkvist, 1949	[N 56°51', E 12°54']	
45		Scania, Bollerup, G. Turesson, 1951	[N 55°30', E 14°02']	
45		Scania, Sibbarp, G. Turesson, 1952	[N 57°21', E 12°42']	
45		Scania, Vittsjö, G. Turesson, 1953	[N 56°20', E 13°39']	
45		Scania, Osby, G. Turesson, 1953	[N 56°22', E 13°59']	
45		Blekinge, Bräkne-Hoby, G. Turesson, 1951	[N 56°13', E 15°07']	
45		Blekinge, Karlskrona, G. Turesson, 1956	[N 56°10', E 15°35']	
45		Halland, Tolarp, O. Gelin, 1952	[N 55°56', E 13°58']	
45		Halland, Skrea strand, G. Turesson, 1952	[N 56°53', E 12°30']	
45		Halland, Steninge, G. Turesson, 1952	[N 56°47', E 12°40']	
45		Halland, Åsa, G. Turesson, 1952	[N 57°21', E 12°08']	
45		Halland, Tönnersjö, G. Turesson, 1952	[N 56°38', E 13°04']	

45	Öland, Resmo, B. Turesson, 1952	[N 56°33', E 16°26']
45	Småland, Vassmolösa, B. Turesson, 1950	[N 56°35', E 16°10']
45	Småland, Jönköping, B. Nordensiöld, 1950	[N 57°47', E 14°10']
45	Småland, Tännö, B. Nordensiöld, 1950	[N 57°07', E 14°00']
45	Småland, Almhult, G. Turesson, 1953	[N 57°14', E 14°17']
45	Småland, Markaryd, B. Nordensiöld, 1950	[N 56°27', E 13°36']
45	Småland, Bellö, G. Turesson, 1954	[N 57°35', E 15°20']
45	Småland, Svinshult, G. Turesson, 1954	[N 57°39', E 15°05']
45	Småland, Råshult, G. Turesson, 1953	[N 57°27', E 15°28']
45	Småland, Urshult, G. Turesson, 1953	[N 56°32', E 14°49']
45	Småland, Ravamåla, G. Turesson, 1953	[N 56°33', E 15°16']
45	Småland, Ryningsnäs, G. Turesson, 1953	[N 59°36', E 13°07']
45	Småland, Lenhovda, G. Turesson, 1953	[N 57°00', E 15°17']
45	Småland, Oskarshamn, G. Turesson, 1953	[N 57°16', E 16°28']
45	Småland, Vimmerby, G. Turesson, 1953	[N 57°40', E 15°51']
45	Småland, Eksjö, G. Turesson, 1953	[N 57°40', E 14°58']
45	Småland, Bankeryd, G. Turesson, 1953	[N 57°53', E 14°06']
45	Småland, Vrå, G. Turesson, 1954	[N 57°22', E 12°20']
45	Bohuslän, Munkedal, G. Turesson, 1948	[N 58°28', E 11°41']
45	Bohuslän, Stenungsund, G. Turesson, 1952	[N 58°04', E 11°49']
45	Bohuslän, Svanesund, G. Turesson, 1952	[N 58°08', E 11°50']
45	Bohuslän, Lysekil, G. Turesson, 1948	[N 58°16', E 11°27']
45	Östergötland, Ringstad, G. Turesson, 1949	[N 59°36', E 13°07']
45	Östergötland, Omberg, O. S. Björkman, 1949	[N 58°19', E 14°41']
45	Östergötland, Grensholmen, A. Gustafsson, 1949	[N 58°31', E 15°48']
45	Östergötland, Borghamn, A. Gustafsson, 1949	[N 58°23', E 14°41']
45	Västergötland, Läckö, O. S. Björkman, 1949	[N 58°41', E 13°13']
45	Östergötland, Åtvidaberg, G. Turesson, 1954	[N 58°12', E 16°01']
45	Västergötland, Udenäs, G. Turesson, 1953	[N 58°39', E 14°25']
45	Västergötland, Hindås, B. Nordensiöld, 1950	[N 57°43', E 12°30']
45	Västergötland, Alingsås, B. Nordensiöld, 1950	[N 57°56', E 12°32']
45	Västergötland, Falköping, G. Turesson, 1951	[N 58°10', E 13°34']
45	Västergötland, Trollhättan, G. Turesson, 1952	[N 58°17', E 12°18']

45	Öland, Djupvik, Föra, N. Erlandsson, 1954	[N 57°18', E 18°09']
45	Bohuslän, Uddevalla, G. Turesson, 1952	[N 58°36', E 11°25']
45	Dalsland, Ed, Stora Le, S. Odén, 1951	[N 59°05', E 11°53']
45	Dalsland, Mellerud, G. Turesson, 1952	[N 58°42', E 12°27']
45	Dalsland, Bengtsfors, G. Turesson, 1952	[N 59°02', E 12°13']
45	Närke, Degerfors, S. Odén, 1951	[N 65°09', E 21°29']
45	Närke, Olshammar, G. Turesson, 1953	[N 58°45', E 14°48']
45	Närke, Askersund, G. Turesson, 1953	[N 58°53', E 14°55']
45	Södermanland, Kila, B. Nordensiöld, 1948	[N 57°53', E 15°58']
45	Södermanland, Tystberga, G. Turesson, 1949	[N 58°51', E 17°15']
45	Södermanland, Sjösa, B. Nordensiöld, 1949	[N 58°46', E 17°05']
45	Södermanland, Römora, Trosa, B. Nordensiöld, 1952	[N 58°54', E 17°34']
45	Södermanland, Sparreholm, B. Turesson, 1952	[N 59°04', E 16°48']
45	Södermanland, Simonstorp, G. Turesson, 1954	[N 58°47', E 16°10']
45	Västmanland, Harbo, B. Lökvist, 1949	[N 60°07', E 17°13']
45	Södermanland, Klastorp, G. Turesson, 1954	[N 58°44', E 17°12']
45	Värmland, Valnäs, G. Turesson, 1952	[N 60°29', E 17°46']
45	Värmland, Karlstad, G. Turesson, 1954	[N 59°23', E 13°31']
45	Värmland, Brattfors, G. Turesson, 1954	[N 59°40', E 14°01']
45	Västmanland, Hjulsjö, G. Turesson, 1952	[N 59°47', E 14°46']
45	Västmanland, Arboga, G. Turesson, 1953	[N 59°24', E 15°21']
45	Uppland, Bäcklösa, G. Turesson, 1945	[N 60°22', E 17°23']
45	Uppland, Ärna, B. Nordensiöld, 1948*	
45	Uppland, Toroslunda, G. Turesson, 1950	[N 59°32', E 17°56']
45	Uppland, Uppsala, B. Turesson, 1950	[N 59°51', E 17°38']
45	Uppland, Gårdskär, B. Lökvist, 1950	[N 60°38', E 17°37']
45	Uppland, Biludden, B. Lökvist, 1950*	
45	Uppland, Vittinge, G. Turesson, 1951	[N 59°54', E 17°03']
45	Uppland, Månkarbo, G. Turesson, 1951	[N 60°14', E 17°28']
45	Uppland, Österbybruk, G. Turesson, 1951	[N 60°12', E 17°54']
45	Uppland, Älvkarleby, G. Turesson, 1951	[N 60°34', E 17°26']
45	Uppland, Norrtälje, G. Turesson, 1952	[N 59°46', E 18°42']
45	Uppland, Grisslehamn, B. Turesson, 1952	[N 60°06', E 18°48']

45	Uppland, Gottsunda, B. Turesson, 1952	[N 50°29', E 18°13']
45	Gästrikland, Storvik, G. Turesson, 1952	[N 60°35', E 16°31']
45	Gästrikland, Gävle, G. Turesson, 1952	[N 60°40', E 17°07']
45	Jämtland, Äre, G. Turesson, 1949	[N 63°24', E 13°06']
45	Dalarna, Säter, G. Turesson, 1948	[N 62°31', E 17°05']
45	Medelpad, Ange, A. Gustafsson, 1948	[N 62°31', E 15°37']
45	Medelpad, Norrhassel, A. Gustafsson, 1948	[N 62°16', E 16°43']
45	Småland, Ljungby, G. Turesson, 1954*	
45	Småland, Lindas, G. Turesson, 1952*	
45	Småland, Hornsborg, O. Gelin, 1952	[N 56°38', E 13°48']
45	Småland, Oskarshamn, Gränsö, G. Turesson, 1956	[N 57°16', E 16°27']
45	Småland, Oskarshamn, Gunarsö, G. Turesson, 1956	[N 57°16', E 16°27']
45	Småland, Oskarshamn, Rotvik, G. Turesson, 1956	[N 57°16', E 16°27']
45	Småland, Visingsö, G. Turesson, 1945	[N 58°09', E 14°20']
45	Öland, Vickleby, N. Erelandsson, 1949	[N 56°35', E 16°28']
45	Öland, Böda, B. Turesson, 1952	[N 60°15', E 18°23']
45	Scania, Nybroan, G. Turesson, 1949	[N 55°26', E 13°55']
45	Gotland, Lummelunda, B. Nordensiöld, 1950	[N 57°46', E 18°27']
45	Västergötland, Kleva, G. Turesson, 1951	[N 58°33', E 13°15']
45	Västergötland, Bjurum, G. Turesson, 1953	[N 57°14', E 12°15']
45	Västergötland, Mariestad, G. Turesson, 1953	[N 58°42', E 13°49']
45	Östergötland, Näkna, G. Turesson, 1954	[N 58°43', E 16°09']
45	Småland, Växjö, D. Bertman, 1948*	
45	Västergötland, Granvik, G. Turesson, 1953*	
45	Bohuslän, Svälte, G. Turesson, 1952	[N 58°25', E 11°17']
45	Scania, Gyllebo, G. Turesson, 1957	[N 55°35', E 14°13']
45	Gotland, Hoburg, G. Turesson, 1957	[N 56°58', E 18°08']
45	Bohuslän, Harleby, G. Turesson, 1952	[N 58°10', E 11°38']
45	Dalsland, Laxarby, S. Odén, 1951	[N 59°02', E 12°19']
45	Närke, Säbylund, B. Lövkvist, 1951	[N 59°10', E 15°10']
45	Södermanland, Vaxaker, B. Nordensiöld, 1949*	
45	Södermanland, Södertälje G. Turesson, 1951	[N 59°12', E 17°37']
45	Södermanland, Slemna, G. Turesson, 1954*	

45		Värmland, Blankheden, A. Gustafsson *		
45		Värmland, Noppen, A. Gustafsson	[N 47°57', E 10°00']	
45		Värmland, Bro, S. Odén, 1951*		
45		Värmland, Saxa, G. Turesson, 1954*		
45		Uppland, Lidingö, B. Nordensiöld, 1948	[N 59°22', E 19°11']	
45		Uppland, Udderböo, B. Lövkvist, 1949*		
45		Uppland, Hummeldal, G. Turesson, 1950	[N 60°15', E 18°26']	
45		Uppland, Hjällstaviken, B. Nordensiöld, 1950*		
45		Uppland, Funbo, G. Turesson, 1950	[N 59°51', E 17°49']	
45		Uppland, Hammarby G. Turesson, 1954*		
45		Uppland, Osby, B. Lövkvist, 1950*	[N 59°57', E 18°06']	
45		Uppland, Ultuna, G. Turesson, 1951	[N 59°49', E 17°40']	
45		Medelpad, Nordanede, A. Gustafsson, 1948	[N 62°33', E 17°21']	
45		Uppland, Frötuna, G. Turesson, 1952	[N 60°37', E 17°21']	
45		Uppland, Gottröra, G. Turesson, 1952	[N 59°44', E 18°09']	
45		Dalarna, Rämshytan, G. Turesson, 1952*		
45		Dalarna, Hösjo, G. Turesson, 1952*		
45		Brantevik	[N 55°31', E 14°21']	Lövkvist and Hutlgård, 1999
45	Switzerland	Val Verzasca, near Sonogno (Tessin)	[N 46°21', E 08°47']	Gadella, 1972
45		Breil (Graubünden)	[N 46°46', E 09°03']	
45		Jaunpass	[N 46°35', E 07°20']	
45	United Kingdom	England, W. Lancs., Bardsea Wood	[N 54°04', W 02°51']	Watson, 2005 (CD-BSBI)
45		England, Anglesey, Newborough Warren	[N 53°18', W 04°24']	
45		England, Angus, 1 mi NW of Forfar	[N 56°39', W 02°53']	
45		England, Angus, Auchmithie	[N 56°45', W 02°48']	
45		England, Carms., Llanoverly, on A40	[N 51°59', W 03°47']	
45		England, Co. Durham, Quarrington	[N 54°43', W 01°48']	
45		England, Co. Durham, Sunderland	[N 54°53', E 01°26']	
45		England, Co. Durham, Teesdale, Slapstone Sike	[N 54°38', W 02°07']	
45		England, Derbys., Cressbrook	[N 53°16', E 01°43']	
45		England, Derbys., Derwent	[N 52°53', W 01°17']	
45		England, Derbys., Padley Woods	[N 53°12', W 01°12']	
45		England, E. Norfolk, Howeshill	[N 52°43', E 01°33']	

45	England, E.Gloucs., Opposite Crickley Hill	[N 51°51', W 01°39']	
45	England, Glam., Oxwich Burrows	[N 51°33', W 04°10']	
45	England, Glam., Whiteford Burrows*		
45	England, Cheshire, Northwich, Witton	[N 53°16', W 02°32']	
45	England, Merioneth, Dolgellau	[N 52°45', W 03°53']	
45	England, Monts., Llangurig	[N 52°24', W 03°36']	
45	England, N.W. Yorks, 1 mi SE of Middleton-in-Teesdale	[N 54°38', W 02°05']	
45	England, Pembs., near Trevine	[N 51°57', W 05°08']	
45	England, S. Lancs., Ainsdale	[N 53°36', W 03°02']	
45	England, S. Lancs., Formby	[N 53°33', W 03°04']	
45	England, Staffs., Cheddleton Hospital	[N 53°04', W 02°02']	
45	England, Staffs., Cheddleton, Canal Pool Bridge	[N 53°04', W 02°02']	
45	England, Staffs., Cheddleton, Pumphouse Field	[N 53°04', W 02°02']	
45	England, Staffs., Cheddleton, River Churnet	[N 52°56', W 01°52']	
45	England, Staffs., Leek, Leekbrook, Wallgrange railway embankment	[N 53°07', W 02°02']	
45	England, W. Cornwall, Newlyn East railway	[N 50°06', W 05°33']	
45	England, W. Cornwall, Perranporth	[N 50°21', W 05°09']	
45	England, W. Cornwall, Treskillard*		
45	England, W. Norfolk, Scott Head	[N 52°33', W 00°11']	
45	Scotland, E. Perth, Cairnwell	[N 56°53', W 03°25']	
45	Scotland, E.Perth, Ben Vrackie	[N 56°27', W 03°39']	
45	Scotland, Mid Ebudes, Mull, near Dervaig	[N 56°23', W 06°00']	
45	Scotland, Mid Perth, Glen Lochay, near power station	[N 56°24', W 03°39']	
45	Scotland, Mid Perth, Loch Tummel	[N 56°43', W 04°02']	
45	Scotland, Mid Perth, River Coninish, near Tyndrum	[N 56°26', W 04°43']	
45	England, Westmorland, Scout Scar and Kendal	[N 54°20', W 02°46']	Finch, 2005 (CD-BSBI)
45	England, Fermanagh, near Enniskillen	[N 54°21', W 07°38']	
45	England, Cambs., Gamlingay, Hayley Wood	[N 52°10', W 00°11']	
45	England, Anglesey, Bywrrdd Arthur	[N 53°18', W 04°21']	
45	England, Main Argyll, Oban	[N 56°25', W 05°30']	
45	England, Main Argyll, Ledaig	[N 56°07', W 04°52']	
45	England, Burbage, Hathersage (Wiltshire)	[N 51°21', W 01°41']	Gadella, 1984
45	England, W. Cornwall, Gwinear road station	[N 50°11', W 05°22']	Gadella, 1972

45		Scotland, Glen Affric Valley (Inverness)	[N 57°29', W 04°42']	
45		Scotland, Loch Ness (Inverness)	[N 57°11', W 04°34']	
45		Scotland, St. Cyrus (Kincardines)	[N 56°04', W 03°43']	
45		Scotland, Ben Lawers Mt. (Perth)	[N 56°33', W 04°14']	
45		Scotland, Ben Eighe, Loch Maree (West Ross)	[N 57°42', W 05°28']	
54	Austria	Lanser Alm, Insbr., B. Nordensiöld, 1950	[N 47°17', E 16°25']	Turesson and Turesson, 1960
54		Glasshuten, Koralpe, B. Nordensiöld, 1950	[N 48°04', E 16°02']	
54		Stockacher, Insbr., B. Nordensiöld, 1949*	[N 47°16', E 11°24']	
54		Polster, Hochschwab., B. Nordensiöld, 1950	[N 47°32', E 15°03']	
54		Hebalm, NW from Deutschlandsberg (Burgenland)	[N 46°51', E 15°10']	Gadella, 1972
54		Ruster Hiigelland bei Oslip (Burgenland)	[N 47°50', E 16°37']	
54		Ötztal, Obergurgl, Tirol, alt. 1925 m	[N 46°52', E 11°01']	Gadella, 1984
54		Klein Walsertal, Vorarlberg, alt. 1350 m	[N 47°12', E 10°00']	
54		Ötztal, Untergurgl, Tirol, alt. 1800 m*	[N 46°53', E 11°02']	
54		between Zundorf and Nickelsdorf	[N 47°58', E 17°03']	Schuhwerk and Lippert, 1997
54	Croatia	between Senj and Kratnik, alt. 300 m	[N 45°00', E 14°55']	Gadella, 1984
54		Plensvika near Senj, alt. 220 m	[N 45°04', E 14°57']	
54		Vela Ucka, Istra, alt. 1000 m	[N 45°17', E 14°12']	
54	France	near Lac du Mont Cenis (Savoie), 1850 m	[N 45°15', E 06°55']	
54		near Bessans (Savoie), 1700 m	[N 45°19', E 07°00']	
54		Mont Cenis (Savoie), 2500 m	[N 45°15', E 05°64']	
54	Ireland	Strandhill near Sligo (Ct. Sligo)	[N 54°17', W 08°27']	
54	Italy	between S. Michele and Doberda (Venezia Giulia)*	[N 45°49', E 13°15']	
54	Macedonia	near Mavrovo	[N 41°39', E 20°43']	Gadella, 1972
54	Romania	near Bacau	[N 46°34', E 26°55']	Gadella, 1972
54	Russia	Komi Republic, Syktyvkar	[N 61°43', E 50°46']	Lavrenko and Sereditov, 1991
54	Sweden	Scania, Vankiva, G. Turesson, 1953	[N 56°11', E 13°43']	Turesson and Turesson, 1960
54		Småland, Vimmerby, G. Turesson, 1953	[N 57°40', E 15°52']	
54		Gotland, Vastergarn, G. Turesson, 1957	[N 57°27', E 18°09']	
54		Gotland, Eksta, G. Turesson, 1957	[N 57°17', E 18°12']	
54		Uppland, Bergshamra, G. Turesson, 1945	[N 59°38', E 18°38']	
54		Uppland, Hallstavik, G. Turesson, 1952	[N 60°03', E 18°35']	
54		G]strikland, Forsbacka, G. Turesson, 1952	[N 60°37', E 16°49']	

54		Medelpad, Ostavall, A. Gustafsson, 1947	[N 62°25', E 15°29']	
54		Öland, Karlevi, G. Turesson, 1952	[N 56°36', E 16°28']	
54		Gotland, Högklint, G. Turesson, 1957	[N 57°36', E 18°12']	
54	Switzerland	near Waltensburg	[N 46°47', E 09°07']	Gadella, 1972
54		Lej da Staz near St. Moritz, Graubünden, , alt. 1800 m	[N 46°30', E 09°50']	Gadella, 1984
54		Pontresina, Graubünden, alt. 1800 m	[N 46°29', E 09°52']	
54		Samedan, Graubünden, alt. 1725 m	[N 46°32', E 09°45']	
54		Bernina Lagalp, Graubünden, alt. 2000 m *		
54		Between Sils Maria and Crasta, Graubünden, alt. 1850 m	[N 46°27', E 09°45']	
54		Sils Maria, Graubünden, alt. 1800 m*		
54		Bernina Lagalp, Graubünden, alt. 2200 m	[N 46°23', E 09°54']	
54		Brigels, Graubünden, alt. 1250 m	[N 46°46', E 09°04']	
54		Morteratsch near Pontresina, Graubünden	[N 46°29', E 09°54']	
54		Alp Languard, Graubünden, alt. 2300 m*		
54		Val Roseg, Graubünden, alt. 2000 m*		
54		St. Moritz, Graubünden, alt. 1800 m	[N 46°30', E 09°50']	
54		Muottes Muragl, Graubünden, alt. 2450 m*		
54		Muottas da Pontraschigna, Graubünden, alt. 2200 m*		
54		Val Fex, Graubünden, alt. 1900 m*	[N 46°26', E 09°46']	
54		Crasta, Val Fex, Graubünden, alt. 1850 m	[N 46°25', E 09°46']	
54		Hohschuggen near Grächen, Wallis, alt. 2000 m*		
54		Gäsenried near Grächen, Wallis, alt. 1800 m	[N 46°11', E 07°50']	
54		Niedergrachen, Wallis, alt. 1600 m*		
54		Flue, Wallis*	[N 46°01', E 07°46']	
54		Riedgleschel near Grächen, Wallis, alt. 1800 m *	[N 46°11', E 07°49']	
54	United Kingdom	Scotland, Loch Rescobie, (Perthshire)	[N 56°39', W 02°48']	
54		England, Mid Ebudes, Mull, Glengorm Castle	[N 56°26', W 05°58']	Watson, 2005 (CD-BSBI)
54		England, E. Ross, River Carron	[N 57°53', W 04°21']	
54		England, Co. Durham, Westgate-in-Weardale	[N 54°44', W 02°08']	Morton, 1974
54		Scotland, Westerness, Glengarry, between Loch Garry and Invergarry	[N 56°48', W 05°01']	Finch, 2005 (CD-BSBI)
54		Scotland, Main Argyll, Glencoe, W end	[N 56°02', W 05°52']	
54		Scotland, Westerness, Ben Nevis, Meall an Suidhe	[N 56°48', W 04°14']	
54		Scotland, Moray, between Nairn and Elgin, Findhorn	[N 57°35', W 03°53']	

63	The Netherlands	Friesland, Vuurboetsduin, Island of Vlieland	[N 53°16', E 04°58']	Gadella, 1984
63	Sweden	Scania, Stenshuvud, B. Turesson, 1956	[N 55°40', E 14°17']	Turesson, 1972
18,36	Italy	Valley of Aosta, near Ville sur Nus, alt. 1400 m	[N 45°45', E 07°20']	Gadella, 1972
36,45	Belarus	Brestskaija obl., der. Vygonoshchi	[N 52°39', E 25°43']	Dmitrieva, 1987
36,45	Finland	Vihti, Ojakkala-Otalampi, gravel pit	[N 60°25', E 24°20']	Jalas and Pellinen, 1985
36,45		Nurmijärvi, Kiljavannumi	[N 60°28', E 24°48']	
36,45		Porvoo, Linnanmäki	[N 63°00', E 23°55']	
36,45	Ireland	Killarney (Ct. Kerry)	[N 52°03', W 09°31']	Gadella, 1972
36,45		Elphin (Ct. Roscommon)	[N 53°03', W 05°01']	
36,45		Benbulbin (Ct. Roscommon)	[N 54°22', W 08°28']	
36,45	The Netherlands	Friesland, Island of Terschelling	[N 53°25', E 05°20']	
36,45		Friesland, Island of Schiermonnikoog	[N 53°30', E 06°12']	
36,45		Gelderland, Winterswijk	[N 51°58', E 06°43']	
36,45		Zuid Holland, Wassenaar	[N 52°09', E 04°23']	
36,45	Norway	near Skjolden	[N 61°30', E 07°36']	Gadella, 1972
36,45	Sweden	Östergötland, Åby, G. Turesson, 1954	[N 58°40', E 16°11']	Turesson and Turesson, 1960
36,45		Broby, B. Lökvist, 1949*		
36,45		Kungsmarken*		
36,45		Uppland, Mösseberg	[N 58°12', E 13°30']	
36,45	United Kingdom	England, Derbys., Dovedale	[N 52°55', W 01°30']	Watson, 2005 (CD-BSBI)
36,45		England, Staffs., Wetton Mill	[N 56°26', W 06°17']	Finch, 2005 (CD-BSBI)
36,45		England, Leics., Charnwood forest, Bradgate Park	[N 52°42', W 01°03']	Watson, 2005 (CD-BSBI)
45,54	France	Near Bonneval sur Arc (Savoie), 1850 m	[N 45°22', E 07°08']	Gadella, 1972
45,54		between Bonneval sur Arc and l'Ecot (Savoie), 1950 m	[N 45°22', E 07°08']	
45,54	Italy	National Park Gran Paradiso: near Rifugio Vittorio Sella	[N 45°30', E 07°19']	
45,54		between Valnontey and Rifugio Vittorio Sella, ca 2200 m	[N 45°30', E 07°19']	
45,54	Sweden	Västergötland, Göteborg, G. Turesson, 1948	[N 57°43', E 12°00']	Turesson et Turesson 1960
45,54		Uppland, Vaddö Huvud, B. Turesson, 1952	[N 60°00', E 18°49']	
45,54		Dalarna, Hedemora, B. Turesson, 1949	[N 60°17', E 15°59']	
45,54		Uppland, Bogesund, G. Turesson, 1948	[N 59°24', E 18°17']	
45,54		Västergötland, Kleva, G. Turesson, 1951	[N 58°12', E 12°26']	
45,54		Ångermanland, Gansvik, G. Turesson, 1949	[N 57°08', E 18°25']	
45,54	United Kingdom	England, Main Argyll, Glencoe village	[N 56°02', W 05°52']	Finch, 2005 (CD-BSBI)

45,54		England, Sheffield area	[N 53°24', W 01°29']	Grime <i>et al.</i> , 2005 (CD-BSBI)
36,45,54		Island of Vlieland	[N 53°16', E 04°59']	Gadella, 1972
36,45,54		Island of Texel	[N 53°05', E 04°49']	
54,63	Sweden	Blekinge, Tjurkö, B. Turesson, 1956	[N 56°07', E 15°37']	Turesson and Turesson, 1960

SUPPLEMENTARY INFORMATION 4

New published data on DNA-ploidy level of *Pilosella officinarum* based on flow cytometric analysis from different countries of Europe. Abbreviations used: TU = Tomáš Urfus; AK, FK, VV = Anna Krahulcová, František Krahulec, Vladimír Vladimirov; ZS, HS = Zdeněk Skála, Hana Skálová; JK FR = Jan Kirschner, Frederick Rooks; JZ Jaroslav Zahradníček.

Number of plants	PL	Country	Locality	Latitude, longitude
1	6x	Bulgaria	Vrachanska Planina Mts., meadows along the road from Vratsa to Parshevitsa hut near the hotel "Kiparis", ca. 6 km SW of the town of Vratsa, 1054 m a.s.l., 11 May 2006, AK, FK, VV (No. 1093)	N 43°10'34", E 23°28'55"
2	5x	Bulgaria	Vratschanska Planina Mts., meadow above the road from Vratscha to Parshevitsa hut ca. 7.5 km SW of the town of Vratsa, 1059 m a.s.l., 11 May 2006, AK, FK, VV (Nos. 1086, 1091)	N 43°10'14" E 23°28'50"
4	4x	Bulgaria	wet meadow below the road in the saddle "Petrochan" (between Berkovska Planina Mts. and Koznica Mts.), ca. 12 km S of the town of Berkovitsa, 1394 m a.s.l., 12 May 2006, AK, FK, VV (Nos. 977, 978/2, 1102, 1104)	N 43°07'06" E 23°07'36"
2	5x	Bulgaria	in the valley between the Vitosha Mts. and the Verila Mts., old pasture above the road N of the village of Kovachevichi, 1074 m a.s.l., 30 June 2006, AK, FK, VV (Nos. 1142, 1143)	N 42°27'40" E 23°19'48"
3	4x	Georgia	Bakuriani, 1959 m a.s.l., 1 August 2005, JK, FR	N 47°56'11" E 24°19'31"
3	4x	Georgia	near Tabatskuri lake, 2014 m a.s.l., 3 August 2005, JK, FR	N 41°46'14" E 43°31'07"
3	5x	Georgia	Krestov pass, 2300 m a.s.l., 4 August 2005, JK, FR	N 41°39'15" E 43°41'44"
3	5x	Ireland	western Ireland, Galway, Greatman Bay, 12 m a.s.l., 23 May 2005, TU	N 53°14'40" W 9°37'24"
3	6x	Ireland	Burren, Carnsefin, western Ireland, 53 m a.s.l., 28 May 2005, TU	N 53°08'41" W 09°15'16"
5	6x	Italy	Colli Eugeniei-Monselice, Monte Gargano, 800 m a.s.l., 14 May 2006, TU	N 45°15'48" E 11°41'46"
8	6x	Italy	Monte St. Angelo, Monte Gargano, 722 m a.s.l., 16 May 2006, TU	N 41°42'32" E 15°56'48"
7	6x	Italy	San Marco in Lamis 2 km SZ, Monte Gargano, 523 m a.s.l., 18 May 2006, TU	N 41°43'60" E 15°36'04"
5	6x	Romania	Banat, village of Gârnic, valley on the NW part of the village, near "Filipova díra" cave, April 2005, ZS, HS (Nos. 1058, 1061, 1062, 1067, 1075)	N 44°45'16" E 21°46'48"
3	5x	Romania	Banat, village of Gârnic, pastures on the karst plateau SW of the village, near the road to the village of Sfânta Helena, April 2005, ZS, HS (5x: 1066, 1071, 1072; 6x: 1076)	N 44°44'44" E 21°46'50"

1	5x	Romania	Banat, village of Gârnic, valley NE of the village, near "Petrûv mlýn" mill, pastures	
4	6x		along the brook, April 2005, ZS, HS (Nos. 5x: 1075; 6x: 1063, 1064, 1068, 1069)	N 44°45'35" E 21°47'56"
4	5x	Romania	Roumania, Banat, Sfânta Helena, valley S of the vilage to Dunarea in the vallye of the	
			Ali Beg brook, April 2005, ZS, HS (Nos. 1043, 1045, 1046, 1050)	N 44° 40'23" E 21°42'12"
6	6x	Ukraine	Marmarosh Mts, 0,5 km S of the Mt. Pop Ivan, JZ	N 47°56'11" E 24°19'31"
