

Taraxacum sect. *Palustria* (Compositae) in Bohemia A contribution to the RAMSAR sites

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ABSTRACT: A survey of the representatives of *Taraxacum* sect. *Palustria* (Compositae) in Bohemia is presented. Nineteen species are given full descriptions, chromosome numbers, distribution in Bohemia (with references to published localities and lists of additional sites). Four of them, *T. madidum*, *T. anserinum*, *T. quaesitum*, *T. dentatum*, are described as new, and *T. hemiparabolicum* HUDZIOK is typified. A simple indication value reflecting a relative rarity of a species in Bohemia and elsewhere, and ecological demands of a species, is calculated for each representative. An account of localities with members of the section is given; ten localities of international importance are listed, other localities important for nature conservation reasons are also mentioned.

KEYWORDS: Plant Species Conservation, Taxonomy, *Taraxacum* sect. *Palustria* (Compositae), Bohemia, Meadows

Introduction

Taraxacum Wigg. sect. *Palustria* (H. LINDB. fil.) DAHLST. is a group of species characterized by their morphology (VAN SOEST 1965) and ecology: they are confined to mineral rich fens, wet meadows, subsaline habitats etc. This type of habitat is in a considerable decline in most regions due to intensive farming methods (including changing meadows to arable fields, drainage, fertilisation etc.).

There are some regions in Europe where representatives of *Taraxacum* sect. *Palustria* still are relatively common (the Alps, the Carpathians, the Balkans, the Pannonian basin etc.). However, in lowlands of C. Europe where wet meadows or fens are found in poor remains now, species of this section are rare, vanishing or even extinct. That is why we have focused our interest on the section *Palustria* in the course of our *Taraxacum* studies in the last decade. Herbarium specimens witness the fact that there are several regions in Bohemia where *Palustria* were distributed in the past but have not been recorded since the 1950s. They are, for instance, large areas in the Central Polabí region, the vicinity of Česká Lipa in N. Bohemia, saline and subsaline localities in NW. Bohemia etc.

A minor part of our results have already been published (KIRSCHNER et ŠTĚPÁNEK 1984 a, b, 1986 a, b, 1985, 1989, 1992, KIRSCHNER, SONCK et ŠTĚPÁNEK 1993) and the data (localities, comments) are not repeated in the present paper.

Our study aims at two goals: first, taxonomy of the Czech members of the section should be reviewed [among 19 species recognised, eight were (or have to be) described by us]. Secondly, the localities of the Czech *Palustria* are listed according to their importance, i.e. the diversity and rarity of the members of the section present at a given locality. The list should serve Nature Conservation experts in selecting the localities for protection or special management. It should be emphasized that, among the Czech species of the sect. *Palustria*, there are endemic species, species with two or three recent localities known within their whole geographical range, species whose ranges have shrunked dramatically in the last decades, and many very rare species.

The only reason why the whole territory of the Czech Republic is not covered in the following account is the space problem: the numerous Moravian *Palustria* would make this account too voluminous.

Material and methods

The study is based on the examination of the material in field and in cultivation. Mainly our own collections are included, but contributions by our colleagues have also given invaluable assistance. The help of the group of South Bohemian Branch of the Czech Botanical Society (led by V. CHÁN and V. ŽILA) should primarily be emphasized. Further important contributions were provided us by B. TRÁVNÍČEK, JOSEF KUČERA, J. RYDLO etc. An additional source of the specimens quoted is represented by herbaria; collections of BRNM, BRNU, JE, L, LIT, MP, PL, PR, PRC, ROZ were consulted.

Methods used for the determination of chromosome numbers are described in KIRSCHNER et ŠTĚPÁNEK (1985). English descriptions are compiled by means of a PC program package PANKEY (PANKHURST 1978, 1986 ms.).

Indication value

In order to compare species of the section *Palustria* in Bohemia with respect to their conservation status and rarity, and to classify their localities, a simple indication value is calculated for each species. The indication value is assessed according to the relative rarity of a species in Bohemia (and adjacent territories), and according to the rarity of its habitat.

Highest indication values include species requiring alkaline soils rich in mineral nutrients, which suffer from higher and denser vegetation, require regular mowing (but not other types of disturbance such as trampling in spring), and which disappear under the influence of fertilizers. At the other end of the indication value range are the species with less specific requirements, which are able to survive a moderate fertilization regime and irregular mowing which allows the vegetation to be higher than about 25 cm in late spring.

There is a similar composite criterion for the evaluation of rare and threatened species introduced by ČEROVSKÝ (1981), a 'socioecological' index. However, as most of these values would be equal for species of *T. sect. Palustria* (almost all of them are relatively rare, with limited geographical ranges, confined to natural wetlands and wet

meadows and fens, and critically threatened in the whole range), we have had to develop a simple new indication value composed of the following criteria:

A. Current distribution in Bohemia

extinct.....	5
very rare (1-2 localities, rare at the sites).....	4
rare (3-10 localities).....	3
scattered-rare(less than 20 loc.).....	2
scattered throughout Bohemia.....	1

B. Overall distribution

endemic to the Czech Republic.....	5
very rare in the whole range (1-2 loc. outside CR).....	4
rare.....	3
locally more common.....	2
scattered in several countries.....	1

C. Ecological criteria (all five criteria eligible for a species)

[applicable for the Czech localities only]	
not at trampled localities.....	1
not at fertilised localities.....	1
requires regular mowing or grazing.....	1
not outside calcareous fens.....	1
not outside critically threatened communities (such as <i>Caricion davalliana</i> e, <i>Festuco-Puccinellietalia</i> etc.).....	1

According to the above system, the Czech species of the section *Palustria* are given the indication values:

1. <i>Taraxacum brandenburgicum</i> ...	12	11. <i>Taraxacum anserinum</i>	11
2. <i>Taraxacum subalpinum</i>	3	12. <i>Taraxacum turfosum</i>	7
3. <i>Taraxacum mendax</i>	11	13. <i>Taraxacum quaesitum</i>	11
4. <i>Taraxacum bohemicum</i>	11	14. <i>Taraxacum irrigatum</i>	9
5. <i>Taraxacum hollandicum</i>	6	15. <i>Taraxacum subdolum</i>	6
6. <i>Taraxacum skalinskanum</i>	10	16. <i>Taraxacum dentatum</i>	7
7. <i>Taraxacum paucilobum</i>	5	17. <i>Taraxacum ancoriferum</i>	13
8. <i>Taraxacum vindobonense</i>	5	18. <i>Taraxacum heleonastes</i>	11
9. <i>Taraxacum bavaricum</i>	9	19. <i>Taraxacum hemiparabolicum</i> ...	10
10. <i>Taraxacum madidum</i>	7		

Thus, we can recognise three groups of species. A group with values 10-13 whose presence is highly indicative of a large conservation value for a locality (*T. ancoriferum*, *T. brandenburgicum*, *T. mendax*, *T. skalinskanum*, *T. bohemicum*, *T. anserinum*, *T. quaesitum*, *T. heleonastes*). The second group (values from 7 to 9) comprises species that indicate a good natural value for a locality (*T. bavaricum*, *T. madidum*, *T. turfosum*, *T. irrigatum*, *T. dentatum*), while the presence of the species of the third group (values from 3 to 6) does not indicate more than the fact that the meadow locality is not heavily disturbed (*T. subalpinum*, *T. paucilobum*, *T. vindobonense*, *T. subdolum*, *T. hollandicum*).

A survey of the localities of the sect. *Palustria* existing at present in Bohemia

The distribution of the section *Palustria* has undergone serious changes in Bohemia. The representatives of the section, according to older herbarium specimens (sometimes not identifiable in more detail), occurred in some regions of N. Bohemia (Šluknov, Česká Lípa), in large salt localities in N. Bohemia (Podkrušnohorská pánev basin, Soos near Františkovy Lázně etc.) and in many other smaller localities in the regions where it is unlikely that any *Palustria* would be refound nowadays.

Thus, we should like to summarize the current distribution of the section, and give a list of *Palustria* localities. More attention is paid to the sites where a sum of indication values of species present exceeds 20-25. For other localities, only the more important or otherwise interesting sites are listed.

The name of the locality is followed by the name of the nearest town in brackets, and by brief description of the locality. Species of the section *Palustria* occurring at the locality are listed by their numbers (order numbers given below).

The list is divided in two parts: 'top ten' localities, and other localities of national importance. Sites where only one (rarely two) species of *Palustria* with the lowest indication values (3-5) is found can be traced in the lists of examined specimens under individual species names.

Top ten localities of international importance

1. Žehuňský rybník (Chlumeč nad Cidlinou)

A complex of fens, meadows and wetlands along the shore of the pond of Žehuňský rybník in the vicinity of the villages Žehuň, Zbraň and Choťovice. It is the richest locality of *Palustria* in Bohemia - it harbours ten species. 1, 2, 5, 7, 9, 11, 13, 14, 15, 17.

2. Zbytka (Opočno)

A calcareous fen and adjacent meadows near Zlatý potok brook between the villages of České Meziříčí and Pohoží. As an area of water protection, it harbours a rich vegetation with such species as *Viola elatior*, *Allium angulosum*, *Sesleria uliginosa* etc. Seven species of the sect. *Palustria* are found at the locality, viz. 1, 2, 3, 5, 6, 7, 9.

3. Proudnický rybník (Chlumeč nad Cidlinou)

A narrow belt of fens and unfertilised meadows along S. shore of the pond. A rich vegetation with *Orchis palustris*, *Dactylorhiza incarnata*, *D. majalis*, *Sagina nodosa*, *Sesleria uliginosa*, *Centaureum uliginosum* etc. *Palustria* present. 1, 5, 6, 7, 9, 14, 15.

4. Mělnická Vrutice (Mělník)

Meadows adjacent to the fen reserve of Polabská černava near Mělnická Vrutice. Vegetation of the area is extremely rich but the diversity is in decline in the last years. *Palustria*. 7, 9, 11, 12, 14.

5. Králova Lhota (Jaroměř)

A small meadow and adjacent grassy moist paths in the vicinity of a small pond by the road between the villages of Libřice and Králova Lhota. Only a small number of individuals of *Palustria* species are found at the locality. 4, 6, 7, 9, 15, 16.

6. Velenka (Nymburk)

A small but exceedingly interesting locality near a brook W. of Dolní Kersko. Strongly endangered by intensive farming and water level fall. Species such as *Sesleria uliginosa*, *Thesium ebracteatum*, *Crepis praemorsa*, *Gladiolus palustris* accompanied the three species of the section *Palustria*. 1, 7, 9.

7. Lodrant (Choceň)

Wet meadows near the S. shore of the Lodrant pond near village of Trusnov. A locality rich in *Carex* species, *Ophioglossum vulgatum* common etc. The richest (type) locality of *Taraxacum bohemicum*. 4, 5, 7, 8.

8. rybník Řeka (Hlinsko)

An interesting locality inside the area of a camping place at the shore of the pond of Řeka near Staré Ransko. Later in the season the vegetation suffers from some trampling. *Palustria* present. 5, 6, 7, 15.

9. Rovná (Strakonice)

A wet meadow near the shore of Dolejší rybník pond in close vicinity of the village of Rovná. A locality for *Gentiana verna*. Formerly an extremely rich locality for *Palustria* (even *T. hemiparabolicum* was present there). Now a few species occur abundantly there. 7, 9, 10, 11.

10. rybník Nechvíl (České Budějovice)

A meadow by the SW. shore of the Nechvíl pond, near Čakov. *Palustria* species are more common at slightly disturbed places along a track through the meadow: 7, 10, 15, 18. In addition, an unknown species of *Palustria* has been found at the locality recently.

Other more important localities of *Palustria* in Bohemia

The sum of the indication values of *Palustria* at the following localities usually does not exceed 20. The localities usually harbour (1) 2-3 (4) species of the section nowadays (some additional species are often documented in herbaria), and should be of interest for local nature conservation authorities.

South Bohemia

11. Novokrtský rybník (Strakonice)

A meadow along the NW shore of the Novokrtský rybník pond NNE. of the village of Krty. *Palustria*. 2, 7, 10.

12. Ponědraž (Třeboň)

Meadows near the N. shore of Ponědražský rybník (pond) in the E. vicinity of Ponědraž. 5, 8.

13. Velká Turná (Blatná)

A meadow track and meadows by the NW. shore of the Milava ('Mylavý' in some maps) pond N. of Velká Turná. 12, 15.

14. Mačkov (Blatná)

A meadow near the WSW. shore of Velký mačkovský rybník (pond) NW. of Mačkov. 7, 10, 15.

15. Řečice (Blatná)

A meadow W. of the pond in the S. vicinity of Řečice. 2, 5 (7 at a close site).

16. Na Pařezu (Cerhonice)

An eastern part of a pasture near a pond E. of Na Pařezu SE. of Cerhonice. 7, 10, 15.

17. Vlkovický rybník (České Budějovice)

Meadows near the SE. shore of the Vlkovický rybník (pond) between Vlkovice and Slavošovice. A very interesting locality with an unknown species of *Palustria*, accompanied by 3 and 15.

C. Bohemia

18. Netřeba (Mělník)

A subsaline locality in an old ditch along a railway between Netřeba and Chlumín. Formerly many halophytes present (e.g. *Samolus valerandi*). Now probably all the interesting species have become extinct. The only species of *Palustria* repeatedly observed. 1.

19. Hrnčiče (Praha)

A complex of meadows above the large pond at Hrnčiče, SE. margin of Prague. Only one species present, formerly in a great number of individuals, now in serious decline. 5.

20. Lom Na Kobyle (Beroun)

A bottom of an old limestone quarry 'Na Kobyle' near Koněprusy. A rich population of one species (9), rare specimens of 13.

Central Polabí region

21. Dolánky (Mladá Boleslav)

A wet grassy track in woods south above Dolánky. Few individuals of three species. 7, 13, 14.

22. Mlýnec (Rožďalovice)

A small meadow by the NE. shore of Mlýnec pond near Mlýnec. A rich locality that might be placed among the top ten. 7, 9, 12, 16.

23. Opatov (Nový Bydžov)

Wet meadows near the NW. shore of Nový rybník (pond) near Opatov close to Kobylice. 5, 7.

24. Vysoké Veselí (Nový Bydžov)

A seminatural meadow near the E. shore of Vysokoveselský rybník (pond). 2, 5, 7.

25. Nový Bydžov

A wet meadow near a pond (now dried) in an angle between railway and a road, S. margin of the town. 2, 5, 7.

26. rybník Beran (Nový Bydžov)

A wet, disturbed meadow below the Beran pond near Zachrašťany. Very few specimens of 2, 5 (formerly also 7).

27. Luková (Nový Bydžov)

Fragments of wet meadows along the railway at E. margin of Luková. A relatively rich locality for 5.

28. Štítar (Městec Králové)

A meadow close to the SW. shore of Štítar pond near Městec Králové. 5, 14.

29. Vystrkov (Poděbrady)

A meadow between the railway and N. part of Vystrkov. *Palustria* reported by J. Rydlo (pers. comm.). An interesting locality with *Cnidium dubium*, *Lathyrus palustris*, *Dactylorhiza incarnata* etc. 2, 5 and other species to be expected.

30. Choťánky (Nymburk)

Meadows called 'Choťánecký rybník' W. of Choťánky. *Palustria* common on two hectares closer to the railway (J. Rydlo, pers. comm.). A locality almost surely belonging among top ten sites, in a great need of conservation (*Lathyrus palustris*, *Eleocharis uniglumis*, *Stellaria palustris*, *Cnidium dubium* etc.). It will be studied in 1994. 2, 5 and other species to be expected. (7,9 found in 1994).

31. Německá (Libice nad Cidlinou)

A meadow called 'Německá' at the margin of the Libický luh reserve, south of Polesí Libice headquarters near Libice nad Cidlinou. A very rich vegetation of harbours such species as *Allium angulosum*, *Lathyrus palustris*, *Pseudolysimachion longifolium*, *Thalictrum flavum*, *Cnidium dubium*, *Eleocharis uniglumis*. The meadow is a part of a National nature reserve; it is strongly threatened by local building activities. 2, 7.

East Bohemia

32. Libišany (Hradec Králové)

Wet disturbed meadows along the road N. of Libišany. Scattered *Palustria*. 2, 5.

33. Šmatlán (Holice)

A meadow near the E. shore of Šmatlán pond S. of Chvojenec. 4, 7, 16.

34. Horní Ředice (Holice)

A complex of meadows adjacent to a series of ponds (Mordýř, Horní Ředický, Řeďák) near Horní Ředice. A relatively rich locality for a Czech endemic, *T. bohemicum*. 4, 7, 16.

35. Rokytno (Holice)

A meadow with *Alopecurus pratensis* below a road NE. of Rokytno. Formerly a rich locality for 5.

36. Bohumileč (Pardubice)

A meadow near the WNW shore of the Bohumilečský rybník (pond) in the vicinity of Bohumileč. A locality reported by Z. Kaplan (in litt.). 1, 5.

37. Újezd u Pardubic

Wet meadows along the ENE. shore of the Újezdský rybník (pond) near Újezd u Pardubic. A locality reported by Z. Kaplan (in litt.). 4, 5, 7.

38. Podmoklany (Ždírec nad Doubravou)

Wet meadows about 1.3 km ESE. of the Homole hill near Podmoklany. Some accompanying species: *Carex hostiana*, *C. davalliana*, *Epipactis palustris* etc. *Palustria* are in decline (Bob Trávníček, pers. comm.). 5, 7, 8.

39. Doubravník (Hlinsko)

A meadow at the E. shore of the Doubravník pond ca 1.3 km south of Hluboká. 5, 7, 8.

40. Jedlová (Polička)

A wet meadow at a pond about 1 km E. of the Modřecký vrch (hill, 657 m) near Jedlová. 7, 8.

A brief identification key to *Taraxacum* sect. *Palustria* in the Czech Republic

An identification key to a group of relatively closely related agamospermous taxa is of a limited use due to the reticulate distribution of character states and tiny differences that are not easily expressed in qualitative morphological terms. In spite of this fact, we have attempted to compile a brief key that, together with the drawings and photographs, should facilitate sorting the taxa.

- 1a Pollen absent 2
- 1b Pollen present 6
- 2a Outer bracts loosely adpressed to erecto-patent in full flower and later; leaves deeply lobate, more than 3.0 cm wide 2. *T. subalpinum*
- 2b Outer bracts tightly adpressed; leaves shallowly lobate, less than 2 cm wide 3
- 3a Cone 1.6-2.0 mm long 9. *T. bavaricum*
- 3b Cone less than 1.5 mm long 4
- 4a Exterior bracts 8-9, broadly ovate 1. *T. brandenburgicum*
- 4b Exterior bracts more than 10, lanceolate to ovate-lanceolate 5
- 5a Rostrum 7.0-7.5 mm long, achenes gradually narrowing to a cone, scapes subglabrous, exterior bracts 3-4 mm wide 18. *T. heleonastes*
- 5b Rostrum 8.5-9.5 mm long, achenes subabruptly narrowing to a cone, scapes densely araneous, exterior bracts 2-3 mm wide 11. *T. anserinum*
- 6a Involucre 14-18 mm wide at the base 5. *T. hollandicum*
- 6b Involucre less than 13 mm wide at the base 7
- 7a Exterior bracts erecto-patent, usually 9-12 mm long 8
- 7b Exterior bracts adpressed to loosely adpressed, usually less than 9 mm long (if longer or erecto-patent, then exterior bract pale border absent, cf. *T. subdolum*) 9

- 8a Terminal lobe usually elongate, leaves usually deeply lobate, lateral lobes 2-4, ligule teeth yellow or reddish..... 14. *T. irrigatum*
- 8b Terminal lobe medium-sized, sagittate to triangular, leaves usually dissected, lateral lobes 4-5, teeth to the ligules blackish..... 13. *T. quaesitum*
- 9a Border to the exterior bracts absent (reduced to a white or membranaceous narrow margin)..... 10
- 9b Border to the exterior bracts developed (in addition to a membranaceous margin)..... 11
- 10a Leaves merely dentate, scapes dark purple, exterior bracts tightly adpressed, imbricate, achenes longer than 4.5 mm 6. *T. skalinskanum*
- 10b Leaves \pm deeply lobate, scapes pale purplish, exterior bracts loosely adpressed, of the same length, achenes less than 4.5 mm long..... 15. *T. subdolum*
- 11a Exterior bracts imbricate 12
- 11b Exterior bracts \pm of the same length 13
- 12a Terminal lobe elongate, the outermost exterior bracts often conspicuously narrower than the others, achenes shortly \pm densely spinulose above 3. *T. mendax*
- 12b Terminal lobe medium-sized, the outermost exterior bracts broader or equalling the others, achenes with rare spinules or only tuberculate..... 17. *T. ancoriferum*
 Note: The extinct *T. hemiparabolicum* would be keyed out in this lead of the key. It is distinct in its leaf shape, cf. HUDZIOK, Feddes Repert. 80: 325, Fig. 1, 1969.
- 13a Cone 1.6-2.0 mm long 9. *T. bavaricum*
- 13b Cone less than 1.4 mm long 14
- 14a Rostrum 6-8 mm long 17
- 14b Rostrum longer 15
- 15a Cone 0.5-0.7 mm long 16
- 15b Cone more than 0.8 mm long..... 11. *T. anserinum*
- 16a Achenes densely spinulose above, rostrum 8-9 mm long, lateral lobes 3-7 4. *T. bohemicum*
- 16b Achenes sparsely spinulose above, rostrum 10-11 mm long, lateral lobes 2-3 12. *T. turfosum*
- 17a Cone 0.5-0.6 mm long 16. *T. dentatum*
- 17b Cone longer 18
- 18a The outermost exterior bracts often conspicuously narrower than the others, exterior bracts glabrous 10. *T. madidum*
- 18b The outermost exterior bracts broader or equalling the others, exterior bracts sparsely ciliate or ciliate 19
- 19a Scapes glabrous or subglabrous, exterior bracts 4-6 mm long, achenes gradually narrowing to a cone..... 7. *T. paucilobum*
- 19b Scapes araucous, exterior bracts 7-9 mm long, achenes subabruptly narrowing to a cone 8. *T. vindobonense*

Survey of the members of the section *Palustria* occurring in Bohemia

1. *Taraxacum brandenburgicum* HUDZIOK, Feddes Repert. 75: 131, 1967. (Fig. 1)

Plants delicate, subrobust or robust. Leaves erect, curved, linear-oblongate, 14.0 to 20.0 cm long, 0.8 to 1.4 cm wide, glabrous, greyish green, suffused dark purple, unspotted, thick (subcarnose), sinuate-dentate or remotely lobulate. Terminal lobe indistinct or medium-sized, 0.0 to 3.5 cm long, 1.0 to 1.2 cm wide. Lateral lobes 2 to 4, patent, triangular or deltoidal. Distal margin of lateral lobes straight, \pm entire. Interlobes medium-sized or conspicuously developed, 0.5 to 1.5 cm long, 0.2 to 0.5 cm wide, entire, without red coloration. Petioles narrow, purple. Scapes equalling the leaves, glabrous or subglabrous (sometimes with rare hairs below the capitulum). Involucre 9.0 to 10.0 mm wide, \pm rounded. Exterior bracts 8 or 9, adpressed, \pm of the same length, broadly ovate, 6-8 mm long, 4-6 mm wide, entire, \pm glabrous, not ciliate. The outermost exterior bracts broader than or equalling the others. Membranaceous margin distinct, 0.2 to 0.3 mm wide. Border to the exterior bracts conspicuous, gradually changing into the median strip or with distinct limits, 1.0 to 2.0 mm wide, greenish, suffused red in the upper part. Median part of the bracts dark (blackish), 1.0 to 3.0 mm wide. Interior bracts 13.0 to 16.0 mm long. Capitulum 2.5 to 3.0 cm wide, flat or concave. Outer ligules flat, striped greyish red. Teeth to the ligules reddish. Pollen absent. Stigmas pure or dirty (greyish) yellow, with greyish hairs. Achenes pale straw-brown, 3.8 to 4.0 mm long (incl. the cone), sparsely spinulose or with rare

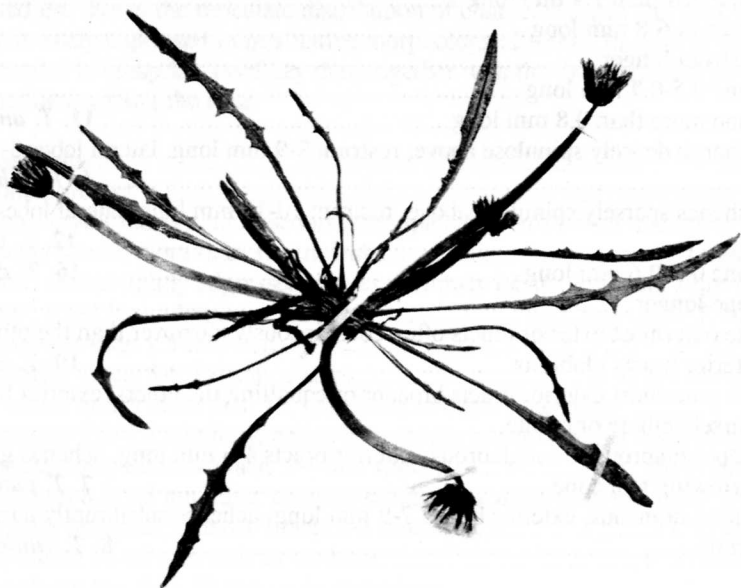


Fig. 1. - *Taraxacum brandenburgicum* HUDZIOK.

spinules or tuberculate, gradually narrowing to a 0.8 to 1.0 mm long cone. Rostrum 7.5 to 8.5 mm long. Pappus 6.0 to 6.5 mm long.

Chromosome number $2n=32$ (KIRSCHNER et ŠTĚPÁNEK 1985: 410 as *T. lissocarpum* agg.).

Distribution in Bohemia (Fig. 19)

Formerly scattered, not rare in the Labe lowlands, rarely outside this area, now very rare in the lowlands along the Labe river (Polabí from Mělník to Pardubice). Only very few localities, usually with a limited number of specimens, persist in Bohemia.

Specimens examined

N. Bohemia, 'Wiesen bei Georgswalde [= Jiříkov (Tausch sine dato PR, no. det. 165). - NC. Bohemia, Domoušice (Čelakovský fil. 1887 PR, no. det. 10977). - Kralupy nad Vltavou, in fossa salsa secundum ferroviam situ orient. a pago Netřeby (Kirschner 1982 PR, no. det. 6745). - Úžice (Domin 1901 PR, no. det. 1757; Kašpar 1901 PR, no. det. 1751). - Všetaty (Čelakovský 1876 PR, no. det. 10976; Velenovský 1884 PR, no. det. 1753; Osvačilová 1947 PRC, no. det. 10999). - 'In paludibus prope Pragam' (Poech sine dato PR, no. det. 10975). - Nymburk, Velenka, in reservatione "Černava" (Kirschner 1982 PR, no. det. 6744, 6749). - 'Urwiese Hrabanov bei Lysa' (Pohl 1935 PR, no. det. 4154, 1933 PRC, no. det. 1683). - Lysá nad Labem, Hrabanov (Čelakovský fil. 1887 PR, no. det. 10978; Smolař 1885 PR, no. det. 1738). - Kostomlaty (Rous 1886 PR, no. det. 1731). - Dříš (Velenovský 1884 PR, no. det. 10981). - 'Čelákovice - Velenka' (Krajina 1926 PRC, no. det. 10993). - Poděbrady, Žehuň, Žehuňský rybník (Štěpánek 1984 PR, no. det. 6747, 1985 PR, no. det. 6746). - Kolín, Hradištko, Proudnický rybník (Battjes et Kirschner 1988 PR, no. det. 8210, Rydlo et Štěpánek 1986 PR etc., no. det. 4346, cf. Kirschner et Štěpánek 1992: 20). - Kolín, Hradištko, Proudnický rybník, football ground (Kirschner et Štěpánek 1983 PR, no. det. 6748). - Opočno, České Meziříčí, loc. Zbytky (Kirschner et Štěpánek 1982 PR, no. det. 6768, 6769, 6771, Faltys, Procházka et Tomšovic 1983 PR, no. det. 6754, Kirschner 1984 PR, no. det. 6770). - 'Pardubice: louky při dráze u Steblové' (Košťál 1887 MP, no. det. 3825). - Pardubice: 'při dráze pod Srchem na mokr. loukách' (herb. Kalenský sine dato MP, no. det. 3822). - Bohumileč (Kaplan 1992 herb., no. det. 11002).

2. *Taraxacum subalpinum* HUDZIOK, Feddes Repert. 72: 26, 1965. (Fig. 2)

Plants medium-sized or tall, subrobust. Leaves erecto-patent or \pm erect, \pm oblong or broadly oblong, 20.0 to 25.0 cm long, 3.0 to 3.5 cm wide, subglabrous or sparsely araneous, mid green, unspotted, thin or of neutral texture, deeply lobate. Terminal lobe medium-sized or elongate, 2.0 to 5.0 cm long, 2.0 to 3.0 cm wide, sagittate, triangular, or tripartite. Lateral lobes 2 to 4, recurved, distally convex at the base or triangular. Distal margin of lateral lobes straight or concave, \pm entire. Interlobes conspicuously developed, 1.0 to 2.0 cm long, 0.2 to 0.3 cm wide, entire or sparsely dentate, with tar coloured margins. Petioles narrow, purplish or purple. Scapes overtopping the leaves, densely hairy below the capitulum. Involucre 9.0 to 10.0 mm wide, \pm rounded. Exterior bracts 11 to 13, adpressed, loosely adpressed, or erecto-patent, \pm imbricate or of the same length, lanceolate to ovate, 6-7 mm long, 3.3-4.7 mm wide, entire, \pm glabrous, not ciliate or sparsely ciliate at the apex. The outermost exterior bracts broader than or equalling the others. Membranaceous margin distinct, 0.1 to 0.2 mm wide. Border to the exterior bracts absent. Median part of the bracts dark (blackish), 3.3 to 4.7 mm wide. Interior bracts 14.0 to 17.0 mm long. Capitulum 2.5 cm wide, flat or concave.

