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 HUDZIÓK 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 Štepánek 1984 a, b, 1986 a, b, 1985, 1989, 1992, Kirschner, Sonček et Štepánek 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 shrunk 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 Kucera, 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 Štepánek (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 alcaline 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
  Caricion davallianae, Festuco-Puccinellietalia etc.) .... 1

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

1. Taraxacum brandenburgicum ... 12
2. Taraxacum subalpinum .......... 3
3. Taraxacum mendax ............. 11
4. Taraxacum bohemicum ......... 11
5. Taraxacum hollandinum ....... 6
6. Taraxacum skalinskanum ..... 10
7. Taraxacum paucilobum ....... 5
8. Taraxacum vindobonense ..... 5
9. Taraxacum bavaricum ........ 9
10. Taraxacum madidum .......... 7

11. Taraxacum anserinum .......... 11
12. Taraxacum turfosum ............ 7
13. Taraxacum quaesitum ........ 11
14. Taraxacum irrigatum .......... 9
15. Taraxacum subdolum .......... 6
16. Taraxacum dentatum .......... 7
17. Taraxacum ancoriferum ....... 13
18. Taraxacum heleonastes ..... 11
19. Taraxacum hemiparaboticum ... 10

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. hollandinum).
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 into 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 (Chlumec 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 Pohoří. 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 (Chlumec 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, Centaurium 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 (Choceně)
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. Novokrský rybník (Strakonice)
A meadow along the NW shore of the Novokrský rybník pond NNE. of the village of Krtý. 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. *Samo"lus valerandi*). Now probably all the interesting species have become extinct. The only species of *Palustria* repeatedly observed. 1.

19. Hrnčíře (Praha)
   A complex of meadows above the large pond at Hrnčíře, 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. Vyskrov (Poděbrady)
A meadow between the railway and N. part of Vyskrov. Palustria reported by J. Rydlo (pers. comm.). An interesting locality with Cnidium dubium, Lathyrus palustris, Daectylichiza incarnata etc. 2, 5 and other species to be expected.

30. Chotěánky (Nymburk)
Meadows called ‘Chotěanecký rybník’ W. of Chotěánky. 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 Chvojenci. 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 (Zdírec 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

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Terminal lobe usually elongate, leaves usually deeply lobate, lateral lobes 2-4, ligule teeth yellow or reddish.......................... 14. T. irrigatum

Terminal lobe medium-sized, sagittate to triangular, leaves usually dissected, lateral lobes 4-5, teeth to the ligules blackish.......................... 13. T. quaesitum

Border to the exterior bracts absent (reduced to a white or membranaceous narrow margin) .............................................................................. 10

Border to the exterior bracts developed (in addition to a membranaceous margin) .............................................................................. 11

Leaves merely dentate, scapes dark purple, exterior bracts tightly adpressed, imbricate, achenes longer than 4.5 mm .................. 6. T. skalinskanum

Leaves ± deeply lobate, scapes pale purplish, exterior bracts loosely adpressed, of the same length, achenes less than 4.5 mm long............. 15. T. subdolutum

Exterior bracts imbricate ........................................................................ 12

Exterior bracts ± of the same length .......................................................... 13

Terminal lobe elongate, the outermost exterior bracts often conspicuously narrower than the others, achenes shortly ±densely spinulose above .............................................. 3. T. mendax

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. hemiparabolidicum would be keyed out in this lead of the key. It is distinct in its leaf shape, cf. HUDZIÓK, Feddes Repert. 80: 325, Fig. 1, 1969.

Cone 1.6-2.0 mm long .............................................................................. 9. T. bavaricum

Cone less than 1.4 mm long ................................................................... 14

Rostrum 6-8 mm long ........................................................................... 17

Rostrum longer ....................................................................................... 15

Cone 0.5-0.7 mm long ........................................................................... 16

Cone more than 0.8 mm long ................................................................. 11. T. anserinum

Achenes densely spinulose above, rostrum 8-9 mm long, lateral lobes 3-7........ 4. T. bohemicum

Achenes sparsely spinulose above, rostrum 10-11 mm long, lateral lobes 2-3.... 12. T. turfosum

Cone 0.5-0.6 mm long ........................................................................... 16. T. dentatum

Cone longer ............................................................................................. 18

The outermost exterior bracts often conspicuously narrower than the others, exterior bracts glabrous ...................................................... 10. T. madidum

The outermost exterior bracts broader or equalling the others, exterior bracts sparsely ciliate or ciliate ......................................................... 19

Scapes glabrous or subglabrous, exterior bracts 4-6 mm long, achenes gradually narrowing to a cone .................................................... 7. T. paucilobum

Scapes araneous, 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-oblanceolate, 14.0 to 20.0 cm long, 0.8 to 1.4 cm wide, glabrous, greyish green, suffused dark purple, unspotted, thick (subcarneous), 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, ± 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. Petoioles narrow, purple. Scapes equaling the leaves, glabrous or subglabrous (sometimes with rare hairs below the capitulum). Involucre 9.0 to 10.0 mm wide, ± rounded. Exterior bracts 8 or 9, adpressed, ± of the same length, broadly ovate, 6-8 mm long, 4-6 mm wide, entire, ± 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 (Polabi from Mělník to Pardubice). Only very few localities, usually with a limited number of specimens, persist in Bohemia.

Specimens examined


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

Plants medium-sized or tall, suberose. Leaves erecto-patent or ± erect, ± 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, ± 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, ± rounded. Exterior bracts 11 to 13, adpressed, loosely adpressed, or erecto-patent, ± imbricate or of the same length, lanceolate to ovate, 6-7 mm long, 3.3-4.7 mm wide, entire, ± glabrous, not ciliate or sparsely ciliate at the apex. The outermost exterior bracts broader than or equaling 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.
Outer ligules flat, striped greyish red. Teeth to the ligules reddish. Pollen slightly developed (usually not visible on the stigmas). Stigmas dirty (greyish) yellow, with dark hairs. Achenes olivaceous brownish, 3.7 to 4.2 mm long (incl. the cone), densely spinulose above, 
\pm abruptly narrowing to a 0.8 to 0.9 mm long cone. Rostrum 9.0 to 10.0 mm long. Pappus 5.0 to 6.0 mm long.

Chromosome number 2n=24 (KIRCHNER et ŠTĚPÁNEK 1985: 412).

Distribution in Bohemia (Fig. 19)

One of the more common species of the section. The eastern limit of the species is reached in SW. Silesia (in Poland and the Vidnava vicinity), western Moravia and eastern Bohemia, and also in S. Bohemia. The species and its relatives have been given a detailed study recently (KIRCHNER, SONCK et ŠTĚPÁNEK 1993), and most localities are listed there, showing that T. subalpinum occurs in S. Bohemia, rarely in W. and NW. Bohemia, in the Polabí region and in E. Bohemia.

Specimens examined
[Additions to the list in KIRCHNER et al. 1993]

3. Taraxacum mendax Kirschner et Štěpánek, Folia Geobot. Phytotax. 20: 413, 1985. (Fig. 3)

Plants delicate to medium-sized, slender. Leaves ± erect, linear or linear-oblanceolate, 8.0 to 15.0 cm long, 0.6 to 1.0 cm wide, glabrous or sparsely araneous, greyish green, unspotted, of neutral texture, sinuate-dentate to lobulate. Terminal lobe elongate, 2.5 to 5.0 cm long, 0.5 to 1.0 cm wide, hastate or spatulate. Lateral lobes 1 to 4, patent, triangular or deltoidal. Distal margin of lateral lobes straight, ± entire or with single tooth. Interlobes long, 0.8 to 2.5 cm long, 0.2 to 0.4 cm wide, entire, without red coloration. Pettioles narrow, slightly reddish to purplish. Scapes overtopping the leaves, sparsely araneous. Involucre 8.0 to 10.0 mm wide, slightly rounded or subconical. Exterior bracts 14 to 19, adpressed, ± imbricate, lanceolate-ovate, 5-7 mm long, 3-4 mm wide, entire, ciliate. The outermost exterior bracts sometimes conspicuously narrower than the others. Membranaceous margin not distinct, 0.2 to 0.4 mm wide. Border to the exterior bracts conspicuous, with distinct limits, 1.0 to 1.5 mm wide, greenish. Median part of the bracts dark green, 0.3 to 0.5 mm wide. Interior bracts 13.0 to 15.0 mm long. Capitulum 2.0 to 3.0 cm wide, convex. Outer ligules flat, striped greenish grey-purple. Teeth to the ligules blackish. Pollen present. Stigmas greenish,

Fig. 3. - Taraxacum mendax K. et Š. A: exterior involucral bracts; B: general habit; C: capitulum; D: achene; E: inner leaf.
with greyish or dark hairs. Achenes pale greyish or greyish straw-brown, 4.0 to 4.2 mm long (incl. the cone), shortly spinulose above, subabruptly narrowing to a 0.9 to 1.1 mm long cone. Rostrum 6.0 to 7.0 mm long. Pappus 6.0 to 6.5 mm long.

Chromosome number 2n=40 (KIRSCHNER et ŠTĚPÁNEK 1985: 413).

Distribution in Bohemia (Fig. 20)

Known only from a few localities, at four of them collected after 1980. Mostly confined to eastern Bohemia (vicinity of Pardubice, Opočno and Vysoké Mýto, Hlinsko), a distribution connected with the Carpathian range of the species. Recently found at one site in southern Bohemia (Slavošovice), which also documents the Alpine-Carpathian character of the overall distribution.

Specimens examined


4. Taraxacum bohemicum KIRSCHNER et ŠTĚPÁNEK, Preslia 58: 99, 1986. (Fig. 4)

Plants medium-sized or tall, subrobust or robust. Leaves erecto-patent or ± erect, ± oblong, 12.0 to 25.0 cm long, 1.2 to 3.5 cm wide, sparsely araneous, light or mid green, unspotted, of neutral texture, deeply lobate. Terminal lobe medium-sized, 1.0 to 3.0 cm long, 0.7 to 2.0 cm wide, triangular or tripartite. Lateral lobes 3 to 7, patent, triangular or deltoidal. Distal margin of lateral lobes straight or concave, ± entire. Interlobes short or medium-sized, 0.2 to 2.0 cm long, 0.2 to 0.3 cm wide, entire or sparsely dentate, without red coloration. Petoiles narrow, slightly reddish to purple. Scapes equalling or overtopping the leaves, araneous. Involucre 10.0 to 11.0 mm wide, ± rounded to subconical. Exterior bracts 12 to 15, loosely adpressed or sometimes recurved at the apex, ± of the same length, narrowly lanceolate or lanceolate, 7-9 mm long, 1.1-3.0 mm wide, entire, ± glabrous, not ciliate or sparsely ciliate at the apex. The outermost exterior bracts sometimes conspicuously narrower than the others. Membranaceous margin not distinct, 0.2 mm wide. Border to the exterior bracts indistinct or conspicuous, with distinct limits, 0.5 to 1.1 mm wide, greenish. Median part of the bracts dark green, 0.4 to 0.5 mm wide. Interior bracts 14.0 to 16.0 mm long. Capitulum 3.0 to 4.0 cm wide, convex or flat. Outer ligules flat, striped greyish. Teeth to the ligules blackish. Pollen present. Stigmas green, with dark hairs. Achenes olivaceous brownish, 3.5 to 3.7 mm long (incl. the cone), densely spinulose above, ± abruptly or subabruptly narrowing to a 0.6 to 0.7 mm long cone. Rostrum 8.0 to 8.5 mm long. Pappus 6.0 to 6.5 mm long.

Chromosome number 2n=32 (KIRSCHNER et ŠTĚPÁNEK 1986: 100).
Fig. 4. - Taraxacum bohemicum K. et Š.

Distribution in Bohemia (Fig. 22)

Known from a few localities in eastern Bohemia (mainly vicinity of Pardubice, one older locality in central Labe lowlands (Polabi, Hradišt’ko). Specimens examined are summarized in Kirschner et Štěpánek (1986: 100) with one exception: Újezd u Pardubic (Kaplan 1992 herb., no. det. 11005).

5. Taraxacum hollandicum Van Soest, Nederl. Kruidk. Arch. 52: 226, 1942. (Fig. 5)

Plants medium-sized or tall, robust. Leaves ± erect, broadly oblong or oblancoate, 12.0 to 25.0 cm long, 1.3 to 4.0 cm wide, sparsely araneous, light or mid green, unspotted, thin, lobate. Terminal lobe medium-sized, 1.5 to 3.0 cm long, 1.3 to 2.0 cm wide, sagittate or triangular. Lateral lobes 2 to 4, recurved, triangular. Distal margin of lateral lobes straight, ± entire. Interlobes short or medium-sized, 0.5 to 1.0 cm long, 0.4 to 0.7 cm wide, entire or sparsely dentate, with tar coloured margins or without coloration. Petioles narrow or slightly winged, purplish. Scapes overtopping the leaves, sparsely araneous. Involucre 14.0 to 18.0 mm wide, ± rounded. Exterior bracts 12 to 16, adpressed, ± of the same length, ovate, 10-11 mm long, 5-6 mm wide, entire, sparsely ciliate at the apex. The outermost exterior bracts broader than or equalling the others. Membranaceous margin distinct, 0.3 to 0.4 mm wide. Border to the exterior bracts indistinct or conspicuous, with distinct limits, 1.0 to 2.0 mm wide, greenish, suffused red in the upper part. Median part of the bracts dark green, 1.5 to 2.0 mm wide. Interior bracts 16.0 to 18.0 mm long. Capitulum 3.0 to 4.5 cm wide, flat. Outer ligules flat,
striped red. Teeth to the ligules reddish. Pollen present. Stigmas greenish or green, with dark hairs. Achenes olivaceous brownish, 4.3 to 4.6 mm long (incl. the cone), spinulose or shortly spinulose above, subabruptly narrowing to a 0.5 to 0.7 mm long cone. Rostrum 8.5 to 10.0 mm long. Pappus 6.5 to 7.0 mm long.

Chromosome number 2n=24 (Kirschner et Štepánek 1985: 409).

Distribution in Bohemia (Fig. 21)

The geographical distribution of *T. hollandicum* has been investigated in a number of studies. In Kirschner et Štepánek (1986: 100), a grid map of its distribution in Czech and Slovak Republics is given; a dot map was published in Kirschner et Štepánek (1989: 100) with a list of localities. Some localities are also listed in Kirschner et Štepánek (1985: 409, 1992: 18, 1984: 19). All these works report *T. hollandicum* as confined to eastern Bohemia in the Czech Republic. Since then, a number of additional localities have been detected. Surprisingly, there are several sites in southern Bohemia, one locality near Praha, C. Bohemia; localities in the easternmost Bohemia near the Moravian border (vicinity of Hlinsko) are also new. Thus, the picture of the distribution of *T. hollandicum* in Bohemia has been substantially changed.

Specimens examined

[Only localities not listed in the above accounts of *T. hollandicum* are quoted]

6. *Taraxacum skalinskianum* MALECKA et VAN SOEST, *Acta Biol. Cracov., Bot.*, 15/2: 120, 1972. (Fig. 6)

Plants medium-sized or tall, slender to robust. Leaves ± erect, linear or linear-oblancoolate, 15.0 to 25.0 cm long, 0.8 to 1.5 cm wide, glabrous or subglabrous, dark green, unspotted, of neutral texture, dentate. Without distinct terminal and lateral lobes. Petioles narrow, dark purple or violet. Scapes equalling or overtopping the leaves, glabrous or subglabrous (sometimes with rare hairs below the capitulum). Involute 10.0 to 11.0 mm wide, ± rounded. Exterior bracts 15 to 18, adpressed, ± imbricate, lanceolate-ovate, 5.5-6.5 mm long, 2.5-4.0 mm wide, entire, ± 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 absent.

Fig. 6. *Taraxacum skalinskianum* MALECKA et VAN SOEST. a: general habit; b: achene.
Median part of the bracts dark green or (blackish), 2.5 to 4.0 mm wide. Interior bracts 15.0 to 20.0 mm long. Capitulum 2.0 to 3.0 cm wide, convex or flat. Outer ligules flat, striped greyish red. Teeth to the ligules reddish. Pollen present. Stigmas dirty (greyish) or greenish yellow, with greyish or hyaline hairs. Achenes pale straw-brown, 4.9 to 5.2 mm long (incl. the cone), sparsely spinulose, gradually narrowing to a 1.2 to 1.7 mm long cone. Rostrum 6.0 to 8.0 mm long. Pappus 5.0 to 6.0 mm long.

Chromosome number 2n=40 (KIRSCHNER et ŠTĚPÁNEK 1985: 412).

Distribution in Bohemia (Fig. 22)

As a mainly Carpathian species, T. skalinskanum reaches only the northern part of the easternmost Bohemia. The species is given a detailed analysis in KIRSCHNER et ŠTĚPÁNEK (1989: 115-121).

Specimens examined


7. Taraxacum paucilobum HUDBIČK, Feddes Repert. 72: 29, 1965. (Fig. 7)

Plants delicate, slender. Leaves prostrate, erecto-patent, or ± erect, linear-oblanceolate, 7.0 to 13.0 cm long, 0.7 to 1.1 cm wide, glabrous or subglabrous, mid green, unspotted, thin or of neutral texture, sinuate-dentate to lobate. Terminal lobe medium-sized, 0.8 to 1.7 cm long, 0.6 to 1.0 cm wide, triangular. Lateral lobes 2 or 3, patent or slightly recurved, triangular. Distal margin of lateral lobes convex, ± entire or with single tooth. Interlobes short to long, 0.3 to 1.0 cm long, 0.2 to 0.3 cm wide, entire, without red coloration. Petioles narrow, purple. Scapes overtopping the leaves, glabrous or subglabrous (sometimes with rare hairs below the capitulum). Involucre 8.0 to 9.0 mm wide, ± rounded to slightly conical. Exterior bracts 10 to 12, adpressed, ± of the same length, lanceolate or broadly lanceolate, 4-6 mm long, 2.5-3.0 mm wide, entire, ciliate. The outermost exterior bracts broader than or equaling the others. Membranaceous margin absent. Border to the exterior bracts conspicuous, gradually changing into the median strip or with distinct limits, 0.5 to 1.0 mm wide, suffused red. Median part of the bracts dark green, suffused red, 1.0 to 1.5 mm wide. Interior bracts 12.0 to 15.0 mm long. Capitulum 2.0 to 2.5 cm wide, convex or flat. Outer ligules flat, striped greenish grey-purple. Teeth to the ligules blackish. Pollen present. Stigmas greenish, with dark hairs. Achenes greyish straw-brown, 4.1 to 4.5 mm long (incl. the cone), shortly spinulose above, gradually narrowing to a 0.7 to 0.9 mm long cone. Rostrum 6.0 to 7.0 mm long. Pappus 5.5 mm long.

Chromosome number 2n=24 (KIRSCHNER et ŠTĚPÁNEK 1985: 410).
Distribution in Bohemia (Fig. 23)

The most common species of the section not only in Bohemia (and the Czech Republic) but also in the whole C. Europe (known from Germany, Poland, Slovakia, Hungary, Austria, Slovenia, Bosnia). In Bohemia, it is found through the whole region at suitable biotopes. Most of the localities have been listed in our previous papers (Kirschner et Štěpánek 1984: 130, 1985: 410, 1989: 109-111, 1992: 18, 19). The distribution is analysed in Kirschner et Štěpánek (1989: 108-109). In what follows, only additional specimens are given.

Specimens examined
- Malčice, Nový Dvůr (Chán 1988 herb., no. det. 8858).
- Blatná, Řečice (Otruba 1991 herb., no. det. 9398).
- C. Bohemia, Mladá Boleslav, Dolány (Štepaňák 1988 PR, no. det. 8224).
- Kopidlno, rybník Kojetín (pond) (Ducháčková 1987 Museum Jičín, no. det. 5915).
- Újezd u Pardubic (Kaplan 1992 herb., no. det. 11006).
- Rychnov nad Kněžnou, Černíkovice, Černíkovický rybník (pond) (J. Kučera 1990 herb., no. det. 7680).
- Holice, Veliny (Toč 1902 PR, no. det. 10972).
- E. Bohemia, Hlinsko, Staré Ransko, Pobočenský rybník (pond) (Bureš 1989 BRNU, no. det. 7281).
- Hlinsko, Hluboká, Štůrův důl (Bureš 1988 BRNU, no. det. 7267).
- Hlinsko, Radostín (Bureš 1989 BRNU, no. det. 7268, 7269).
- Hlinsko, Dlouhý, rybník

Fig. 7. - Taraxacum paucilobum Hudziok. A: general habit; B: capitulum; C: exterior involucral bracts; D: achene.
   (incl. *T. vitabile* K. et Š., ined.) (Fig. 8)

Plants medium-sized or tall, slender or subrobust. Leaves erecto-patent, linear-oblancoelate, 13.0 to 22.0 cm long, 1.5 to 2.3 cm wide, sparsely araneous, mid green, unspotted, thin, lobate or deeply lobate. Terminal lobe medium-sized or elongate, 1.5 to 3.5 cm long, 1.4 to 1.9 cm wide, triangular or hastate. Lateral lobes 2 to 5, patent, triangular. Distal margin of lateral lobes straight or concave, ± entire. Interlobes long, 1.2 to 2.5 cm long, 0.2 to 0.5 cm wide, entire or sparsely dentate, with tar coloured margins or without red coloration. Petioles narrow, purple. Scapes overtopping the leaves, araneous or densely hairy below the capitulum. Involucr 11.0 to 14.0 mm wide, ± rounded. Exterior bracts 11 to 16, adpressed, loosely adpressed, or sometimes recurved at the apex, ± of the same length, lanceolate to lanceolate-ovate, 7-9 mm long, 2.8-4.5 mm wide, entire, sparsely ciliate at the apex or ciliate. The outermost exterior bracts broader than or equalling the others. Membranaceous margin not distinct. Border to the exterior bracts indistinct, gradually changing into the median strip, 0.5 to 1.0 mm wide, greenish. Median part of the bracts dark green or (blackish), 1.0 to 3.0 mm

![Fig. 8. *Taraxacum vindobonense* van Soest](image_url)
wide. Interior bracts 14.0 to 16.0 mm long. Capitulum 3.0 to 4.0 cm wide, convex. Outer ligules flat, striped greyish. Teeth to the ligules blackish. Pollen present. Stigmas dirty (greyish) yellow, with dark hairs. Achenes greyish straw-brown, 3.8 to 4.2 mm long (incl. the cone), spinulose, subabruptly narrowing to a 0.7 to 0.8 mm long cone. Rostrum 6.0 to 7.0 mm long. Pappus 6.0 to 7.0 mm long.

Chromosome number 2n=32 (Kirschner et Štěpánek 1992: 20. as T. vitabile).

Distribution in Bohemia (Fig. 24)

As shown in Battjes et al. (1992), Taraxacum vindobonense is a genetically variable species comprising a number of allozyme genotypes. The question of its taxonomic homogeneity will be studied elsewhere. Here the species is understood in broader sense.

Taraxacum vindobonense is fairly common in the Pannonian lowlands and adjacent territories of the Carpathians (Slovakia, Hungary, Austria, Moravia). On the other hand, outside this territory it is very rare; in Bohemia, there are only very few localities scattered from the south through C. Bohemia to the easternmost Bohemia near Moravian border near Hlinsko.

Specimens examined


(syn.: T. calcem-amans Hudziok) (Fig. 9)

Plants medium-sized, subrobust. Leaves erecto-patent or erect, curved, linear, 15.0 to 21.0 cm long, 0.5 to 1.0 cm wide, sparsely araneous, greyish green, unspotted, of neutral texture, remotely lobulate. Terminal lebe indistinct or elongate, 0.0 to 5.0 cm long, 0.5 to 1.5 cm wide, hastate or spatulate. Lateral lobes 0 to 3, patent or slightly recurved, linear. Distal margin of lateral lobes straight, ± entire. Interlobes long, 1.0 to 2.0 cm long, 0.2 to 0.3 cm wide, entire, without red coloration. Petioles narrow, slightly reddish. Scapes equaling the leaves, araneous. Involucre 9.0 to 11.0 mm wide, ± rounded. Exterior bracts 12 to 16, adpressed, ± of the same length, ovate, 6.5-8.0 mm long, 3.5-5.0 mm wide, entire, sparsely ciliate at the apex. The outermost exterior bracts broader than or equaling the others. Membranaceous margin distinct, 0.4 to 0.5 mm wide. Border to the exterior bracts indistinct or conspicuous, gradually changing into the median strip, 0.8 to 1.2 mm wide, dark green. Median part of the bracts dark (blackish), 2.0 to 2.5 mm wide. Interior bracts 14.0 to 18.0 mm long. Capitulum 2.5 to 3.0 cm wide, convex. Outer ligules flat, striped greenish grey-purple. Teeth to the
ligules blackish. Pollen present. Stigmas dirty (greyish) or greenish yellow, with dark hairs. Achenes pale straw-brown, 4.8 to 5.3 mm long, sparsely spinulose or with rare spinules or tuberculate, gradually narrowing to a 1.6 to 2.0 mm long cone. Rostrum 8.5 to 10.0 mm long. Pappus 6.5 to 7.0 mm long.

Chromosome number
2n=24 (Kirschner et Štěpánek 1985: 408).

Distribution in Bohemia (Fig. 23)

Scattered at the richest localities in three regions: southern Bohemia (Strakonice), central Bohemia (Beroun) and the central Elbe basin (Polabi from Mělník to Hradec Králové). Some older sites are documented in herbaria from W. Bohemia.

It should be noted that in Kirschner et Štěpánek (1986) the picture of the achene does not belong to T. bavaricum.

Specimens examined


10. *Taraxacum madidum* KIRSCHNER et ŠTĚPÁNEK, sp. nov. (Fig. 10)

**Holotypus:** Bohemia australis, opp. Strakonice: in prato uliginoso (cum *Gentiana verna*) ad piscinam prope pagum Rovná (J. Kirschner 1984 PR, no. det. 10966).

**Diagnosis**  
Plantae graciles usque mediocres. Folia linearia vel lineari-oblongae, 6-14 cm longa, 0.7-1.2 cm lata, sparse araneosa, sinuato-dentata vel breviter lobata lobo terminali plerumque elongato, lobis lateralis numero 1-2, marginibus distalibus rectis, vulgo integerrimis vel dente unico praeditis. Petiolus violaceus, angustissimus. Involucrum basi 8-9 mm in diametro, squamis interioribus 13-15 mm longis, squamis exterioribus numero 10-16, adpressis, non imbricatis, anguste lanceolatis usque lanceolatis, 6-8 mm longis, 2.3-3.0 mm latis. (cis 1-2 extremis angustis, ad 1.5 mm latis), integris, glaberrimis, margine

**Fig. 10.** - *Taraxacum madidum* sp. nov.
membranaceo inconspicuo, ad 0.2 mm lato, margine pallide viridi 0.3-0.9 mm lato, superfine rubescenti, stria mediana obscura (atro-viridi) 1.0-1.6 mm lata. Antherae polliniferae, stigmata viridia, obscure pubescencia. Achenium pallide stramineo-brunneum, superfine breviter spinulosum, 4.0-4.3 mm longum (pyramidem inclusa), in pyramiden subcylindricam 0.9-1.2 mm longam subabrupte vel sensim transiens, rostrum 7.0-7.5 mm, pappus 5.5-6.5 mm longi.

Description
Plants delicate to medium-sized, slender or subrobust. Leaves erecto-patent, linear or linear-oblancoolate, 6.0 to 14.0 cm long, 0.7 to 1.2 cm wide, sparsely araneous, mid or dark green, unspotted, of neutral texture, sinuate-dentate or lobate. Terminal lobe medium-sized or elongate, 1.2 to 3.2 cm long, 0.8 to 1.1 cm wide, narrowly hasteate or lingulate. Lateral lobes 0 to 2, patent or slightly recurved, triangular. Distal margin of lateral lobes straight, ± entire or with single tooth. Interlobes medium-sized or long, 0.5 to 1.4 cm long, 0.2 to 0.4 cm wide, entire, with tar coloured margins or without red coloration. Petioles narrow, purple. Scapes equalling the leaves, sparsely araneous. Involucro 8.0 to 9.0 mm wide, slightly rounded or subconical. Exterior bracts 10 to 16, adpressed, ± of the same length, narrowly lanceolate or lanceolate, 6-8 mm long, 2.3-3 mm wide, entire, ± glabrous, not ciliate. The outermost exterior bracts sometimes conspicuously narrower than the others. Membranaceous margin absent or not distinct and 0.0 to 0.2 mm wide. Border to the exterior bracts indistinct, gradually changing into the median strip, 0.3 to 0.9 mm wide, greenish, suffused red in the upper part or suffused red. Median part of the bracts dark (blackish), 1.0 to 1.6 mm wide. Interior bracts 13.0 to 15.0 mm long. Capitulum 2.0 to 2.5 cm wide, convex or flat. Outer ligules flat, striped greenish grey-purple. Teeth to the ligules reddish. Pollen presents. Stigmas greenish, with dark hairs. Achenes greyish straw-brown, 4.0 to 4.3 mm long (incl. the cone), shortly spinulose above, subabruptly or gradually narrowing to a 0.9 to 1.2 mm long cone. Rostrum 7.0 to 7.5 mm long. Pappus 5.5 to 6.5 mm long.

Chromosome number 2n=24 (from the locality Rovná det. JK).

Distribution in Bohemia (Fig. 22)
Taraxacum madidum is confined to southern and western parts of Bohemia, from the south it also marginally reaches C. Bohemia. The Czech localities form an eastern limit of its distribution range that extends from France and Switzerland to Germany (Bavaria and Thuringia in the east).

Specimens examined

11. *Taraxacum anserinum* KIRCHNER et ŠTĚPÁNEK, sp. nov. (Fig. 11)


Diagnosis

Plantae graciles vel mediocres. Folia lineari-oblongeolata, 7-14 cm longa, 0.5-1.1 cm lata, araneosa, dentata vel breviter lobulata lobo terminali inconspicuo. Petiolum angustus, paulo roseus vel violascens. Scapus araneus vel superne dense araneosus. Involucrum basi 9-11 mm in diametro, paulo truncatum vel rotundatum, squamis interioribus 13-15 mm longis, squamis exterioribus numero 11-16, adpressis, non imbricatis, lanceolatis, 6.0-7.8 mm longis, 3.1-3.8 mm lati, integris, sparse vel subdense ciliatis, margine membranaceo indistincto 0.2-0.3 mm lato, margine pallide viridi, rubescenti, conspicuo, 0.5-0.9 mm lato, stria mediana obscura (atro-viridi) 1.8-2.6 mm lata. Antherae polliniferae vel polline carentes, stigma sordide lutea, grisee pubescencia. Ache-
nium pallide vel griseo-stramineum, superne spinulosum, 3.8-4.1 mm longum (pyramide inclusa), in pyramidem subcylindracam 0.9-1.0 mm longam subabrupte abiens, rostrum 8.5-9.5 mm longum, pappus 5.5-6.0 mm longi.

Description

Plants delicate to medium-sized, slender or subrobust. Leaves erecto-patent or ± erect, linear-oblanceolate, 7.0 to 14.0 cm long, 0.5 to 1.1 cm wide, araneous, mid or greyish green, unspotted, of neutral texture, dentate or lobulate. Terminal lobe ± absent. Interlobes absent. Petoiles narrow, slightly reddish to purple. Scapes equalling or overtopping the leaves, araneous or densely hairy below the capitulum. Involucre 9.0 to 11.0 mm wide, slightly truncate or ± rounded. Exterior bracts 11 to 16, adpressed, ± of the same length, lanceolate, 6.0-7.8 mm long, 3.1-3.8 mm wide, entire, sparsely ciliate at the apex or ciliate. The outermost exterior bracts broader than or equalling the others. Membranaceous margin not distinct, 0.2 to 0.3 mm wide. Border to the exterior bracts conspicuous, gradually changing into the median strip or with distinct limits, 0.5 to 0.9 mm wide, greenish, suffused red in the upper part or suffused red. Median part of the bracts dark (blackish), 1.8 to 2.6 mm wide. Interior bracts 13.0 to 15.0 mm long. Capitulum 2.0 to 2.5 cm wide, convex or flat. Outer ligules flat, striped dark grey-greenish. Teeth to the ligules reddish. Pollen present or absent (often variable in one plant). Stigmas dirty (greyish) yellow, with greyish hairs. Achenes pale or greyish straw-brown, 3.8 to 4.1 mm long (incl. the cone), spinulose, subabruptly narrowing to a 0.9 to 1.0 mm long cone. Rostrum 8.5 to 9.5 mm long. Pappus 5.5 to 6.0 mm long.

Chromosome number 2n=24 (from Žehuň det. JS under no. 18/87).

Distribution in Bohemia (Fig. 26)

*T. anserinum* is known to occur in Germany and the Netherlands. In Bohemia, it seems to be confined to a few localities, two in the south (Strakonice, Vimperk), the others in the Labe lowlands (Polabí, near Mělník and Poděbrady) and Prague vicinity.

Specimens examined


Plants delicate, slender. Leaves erecto-patent or ± erect, linear-oblanceolate, 5.0 to 10.0 cm long, 0.4 to 1.0 cm wide, sparsely araneous, mid green, unspotted, thin, dentate or lobate. Terminal lobe medium-sized, 0.6 to 1.5 cm long, 0.4 to 0.8 cm wide, triangular or slightly rounded. Lateral lobes 2 or 3, slightly recurved, triangular. Distal margin of lateral lobes convex, ± entire. Interlobes medium-sized or long, 0.4 to 1.5 cm long, 0.15 to 0.4 cm wide, entire, without red coloration. Petoiles narrow, red or purple
Scapes equalling the leaves, sparsely araneous. Involucre 8.0 to 10.0 mm wide, slightly rounded or subconical. Exterior bracts 10 to 13, adpressed or sometimes recurved at the apex, ± of the same length, linear-lanceolate to lanceolate, 6.5-8 mm long, 2.2-2.9 mm wide, entire, ± glabrous, not ciliate. The outermost exterior bracts sometimes conspicuously narrower than the others. Membranaceous margin not distinct, 0.2 to 0.3 mm wide. Border to the exterior bracts indistinct, gradually changing into the median strip, 0.5 to 0.8 mm wide, greenish, suffused red in the upper part. Median part of the bracts dark green, 1.0 to 1.7 mm wide. Interior bracts 12.0 to 14.0 mm long. Capitulum 2.5 to 3.0 cm wide, convex. Outer ligules flat, striped greenish grey-purple. Teeth to the ligules reddish. Pollen present. Stigmas greenish, with dark hairs. Achenes greyish straw-brown, 3.6 to 3.9 mm long (incl. the cone), sparsely spinulose, gradually narrowing to a 0.5 to 0.7 mm long cone. Rostrum 10.0 to 11.0 mm long. Pappus 5.5 to 6.0 mm long.

Chromosome number 2n=24 (cf. MERXMÜLLER et LIPPERT 1978).

Distribution in Bohemia (Fig. 25)

Up to now, T. turfosum has been found at few localities in Bohemia, in the south and in C. Bohemia. It is a taxon that may be overlooked in the field but it is much less frequent than, for instance, T. paucilobum. It is relatively common in Bavaria, and it seems likely that it reached Bohemia from the south.

Specimens examined
České Budějovice, Dobrá Voda (Menc1 1888 PR, no. det. 10973). - Sušice, Podmokly

Fig. 12. - Taraxacum turfosum (SCH.-BIP.) VAN SOEST
13. *Taraxacum quaesitum* KIRSCHNER et ŠTĚPÁNEK, sp. nov. (Fig. 13)


**Diagnosis**

Plantae mediocre usque subrobustae. Folia ob lanceolata, 15-20 cm longa, 2.8-4.3 cm lata, sparse aranacea, profunde lobata vel dissecta, lobo terminali mediocris, 2.4-3.0 cm longo, 1.6-2.7 cm latu, sagittato vel triangulari, lobis lateralis numero 4-5 utroque, plerumque anguste triangularibus vel linearibus, marginibus distaliibus rectis vel convexis, ± integerrimis. Petiolus angustus, obscure violaceus. Involucrum basi 13-14 mm in diametro, squamis interioribus 14-16 mm longis, squamis exterioribus numero 13-18, erecto-patentibus vel patentibus, non imbricatis, anguste lanceolatis vel lanceolatis, 9.5-11.5 mm longis, 2.5-3.5 mm latis, integris vel interdum sparsissime dentatis, ± glabris, margine membranaceo indistincto, 0.1-0.3 mm lato, margine pallide viridi inconspicuo vel distincto, 0.7-1.0 mm

Fig. 13. - *Taraxacum quaesitum* sp. nov.

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lato, stria mediana obscure viridi, 1.2-2.0 mm lata. Antherae polliniferae, stigmata
huteo-viridia. Achenium pallide grisco-stramineum, superne dense spinulosum, 3.7-4.0
mm longum (pyramide inclusa), in pyramidem subcylindricam 0.9-1.0 mm longam
subbrupte abiens, rostrum 8-9 mm longum, pappus 7.0-7.5 mm longus.

Description
Plants medium-sized, subrobust. Leaves erecto-patent or ± erect, oblanceolate, 15.0
to 20.0 cm long, 2.8 to 4.3 cm wide, sparsely araneous, mid green, unspotted, thin,
lobate to dissected. Terminal lobe medium-sized, 2.4 to 3.0 cm long, 1.6 to 2.7 cm
wide, sagittate or triangular. Lateral lobes 4 or 5, slightly recurved, linear or triangular.
Distal margin of lateral lobes straight or convex, ± entire. Interlobes medium-sized or
conspicuously developed, 0.5 to 0.7 cm long, 0.2 to 0.4 cm wide, entire or sparsely
dentate, without red coloration. Petioles narrow, dark purple. Scapes overtopping the
leaves, araneous. Involute 13.0 to 14.0 mm wide, ± rounded. Exterior bracts 13 to 18,
erecto-patent or patent, ± of the same length, narrowly lanceolate or lanceolate, 9.5-
11.5 mm long, 2.5-3.5 mm wide, entire or sometimes sparsely dentate, ± glabrous, not
clioite or sparsely ciliate at the apex. The outermost exterior bracts broader than or
equalling the others. Membranaceous margin not distinct, 0.1 to 0.3 mm wide. Border
to the exterior bracts indistinct or conspicuous, gradually changing into the median
strip, 0.7 to 1.0 mm wide, greenish. Median part of the bracts dark green, 1.2 to 2.0
mm wide. Interior bracts 14.0 to 16.0 mm long. Capitulum 2.5 to 3.5 cm wide, flat.
Outer ligules flat, striped dark grey-greenish. Teeth to the ligules blackish. pollen
present. Stigmas greenish yellow, with greenish hairs. Achenes greyish straw-brown,
3.7 to 4.0 mm long (incl. the cone), densely spinulose above, subabruptly narrowing to
a 0.9 to 1.0 mm long cone. Rostrum 8.0 to 9.0 mm long. Pappus 7.0 to 7.5 mm long.

Chromosome number 2n=24 (from the type locality det. JŠ under no. 208/86 and
JK under no. 58/86; from the locality Vydrník det. JŠ under. no. 4/87).

Distribution in Bohemia (Fig. 21)
Taraxacum quaesitum was first found by us in the herbarium PR (collections of M.
DEYL). Later on, too rich localities of this species were detected in East-Central
Slovakia (both quoted because chromosome counts were made on the Slovak plants).
Recently, we have succeeded in finding this rare species in central and east-central
Bohemia not far from the original DEYL sites. As T. quaesitum is unlikely to be
overlooked, we suppose it represents a very rare species.

Specimens examined
Boleslav, Dolány in via silvatica humida supra vicum’ (Štěpánk 1988 PR, no. det. 10936).
- Nový Bydžov, ‘ad piscinam Opatov prope vicum Kobylce’ (M. Deyl 1943 PR, no. det. 10941,
10950). - Městec Králové, ‘ad ripam merid. piscinæ Žehuňský rybník, in peripheria pagi Žehuň’
10974). - Slovakia centr., Spišská kotlina, Vydrník (Štěpánk 1984 PR, no. det. 10960). -
Spišské Podhradie, Baldovce (Štěpánk 1984 PR, no. det. 10935).
Plants medium-sized, slender or subrobust. Leaves erecto-patent or ± erect, ob lanceolate, 8.0 to 20.0 cm long, 1.5 to 2.0 cm wide, sparsely araneous, mid green, unspotted, thin, lobate or deeply lobate. Terminal lobe medium-sized or elongate, 1.0 to 5.0 cm long, 0.8 to 1.8 cm wide, triangular or subhastate. Lateral lobes 2 to 4, patent or slightly recurved, narrowly triangular or triangular. Distal margin of lateral lobes straight, ± entire or sparsely dentate. Interlobes medium-sized or conspicuously developed, 0.5 to 0.8 cm long, 0.3 to 0.5 cm wide, entire or sparsely dentate, with tar coloured margins or without red coloration. Petoioles narrow, purple. Scapes overtopping the leaves, araneous. Involucre 9.0 to 12.0 mm wide, slightly rounded or subconical. Exterior bracts 18 to 23, erecto-patent, ± of the same length, narrowly lanceolate or lanceolate, 9-11 mm long, 2.5-4 mm wide, sometimes sparsely dentate, ± glabrous, not ciliate or sparsely ciliate at the apex. The outermost exterior bracts sometimes conspicuously narrower than the others. Mem branaceous margin not distinct, 0.1 to 0.2 mm wide. Border to the exterior bracts indistinct, gradually changing into the median strip, 0.4 to 0.7 mm wide, greenish. Median part of the bracts dark green, 2.0 to 2.5 mm wide. Interior bracts 14.0 to 18.0 mm long. Capitulum 3.5 to 4.0 cm wide, flat. Outer ligules flat, striped dark grey-greenish. Teeth to the ligules yellow or reddish. Pollen present. Stigmas greenish, with greenish hairs. Achenes pale straw brown, 3.8 to 4.1 mm long (incl. the cone), densely spinulose above, subabruptly narrowing to a 0.9 to 1.0 mm long cone. Rostrum 8.0 to 9.0 mm long. Pappus 5.5 to 6.5 mm long.

Fig. 14. - Taraxacum irrigatum K. et Š. General habit (bar = 5 cm); achene (bar = 5 mm) and exterior involucral bract (bar = 1 mm)

2n=24 (Kirschner et Štepánek 1992: 22).
Distribution in Bohemia (Fig. 24)

In Bohemia, *T. irrigatum* is confined to the central part of the lowland area along the Labe river (Polabi, the region among Mladá Boleslav, Poděbrady, Chlumec nad Cidlinou and Městec Králové), and the localities probably form the western limit of the species’ geographical range.

Specimens examined


15. *Taraxacum subdolum* Kirschner et Štěpánek, Preslia 64: 28, 1992. (Fig. 15)

Plants medium-sized, subrobust. Leaves ascending or erecto-patent, ± oblong, 10.0 to 18.0 cm long, 1.5 to 4.0 cm wide, subglabrous, dark or olivaceous green, unspotted, thick (subcarnose), deeply lobate. Terminal lobe medium-sized or elongate, 1.5 to 3.5 cm long, 0.8 to 2.7 cm wide, narrowly triangular or hastate. Lateral lobes 2 to 5, forward pointing, patent, or recurved, narrowly triangular, triangular, or broadly triangular. Distal margin of lateral lobes convex, ± entire or with single tooth. Interlobes long, 0.5 to 2.0 cm long, 0.2 to 0.4 cm wide, entire, without red coloration. Petioles narrow, purplish. Scapes overtopping the leaves, sparsely araneous. Involute 8.0 to 11.0 mm wide, slightly truncate or ± rounded. Exterior bracts 15 to 21, loosely ad-

Fig. 15. - *Taraxacum subdolum* K. et Š. General habit (bar = 5 cm), achene and exterior involucral bract (bars = 1 mm)
pressed or erecto-patent, ± of the same length, lanceolate to ovate, 8.5-10 mm long, 4-5.5 mm wide, entire, ± glabrous, not ciliate. The outermost exterior bracts broader than or equalling the others. Membranaceous margin distinct, 0.1 to 0.5 mm wide. Border to the exterior bracts absent. Median part of the bracts dark (blackish), 3.0 to 5.5 mm wide. Interior bracts 14.0 to 17.0 mm long. Capitulum 3.0 to 4.0 cm wide, flat. Outer ligules flat, striped dark grey-greenish. Teeth to the ligules blackish. Pollen present. Stigmas greenish, with dark hairs. Achenes greyish straw-brown, 4.2 to 4.4 mm long (incl. the cone), sparsely spinulose, gradually narrowing to a 1.0 to 1.4 mm long cone. Rostrum 8.0 to 9.0 mm long. Pappus 6.5 to 7.0 mm long.


Distribution in Bohemia (Fig. 25)

*Taraxacum subdolum* is relatively widely distributed in C. Europe (Germany, Poland, Austria, Slovakia), and is more common in Moravia than in Bohemia. However, it is not rare in Bohemia, being scattered in S. Bohemia, the Labe lowlands (Polabi) and the easternmost Bohemia. The localities listed below represent an addition to those given in KIRSCHNER et ŠTĚPÁNEK (1992: 20, 30).

Specimens examined


16. *Taraxacum dentatum* KIRSCHNER et ŠTĚPÁNEK, sp. nov. (Fig. 16)


**Diagnosis**

Plantae graciles usque mediocres. Folia lineari-oblongeolata, 7-14 cm longa, 0.9 1.5 cm lata, sparse aranecosa, sinuato dentata vel breviter lobata, lobo terminali mediocres vel elongato, 1.2-2.7 cm longo, 0.6-1.2 cm lato, anguste triangulari, lobis lateraliibus numero 2-3 utroboque, late triangularibus, marginibus distalibus rectis, dentatis. Interlobia brevia (plerumque inconspicua), 0.3-0.5 cm longa, 0.3-0.6 cm lata, integris. Petiolus angustus, violaceus. Involucrum basi 8-10 mm in diametro, rotundatum vel subconicum, squamis interioribus 12-15 mm longis, squamis exterioribus numero 15. 156
14, laxe adpressis, interdum apice recurvatis, non imbricatis, anguste lanceolatis, 6.5-8.5 mm longis, 1.5-2.8 mm latis (eis 1-2 extremis interdum angustissimis), integris, glabris, margine membranaceo indistincto, 0.1-0.2 mm lato, margine pallide viridi inconspicuo, 0.4-0.9 mm lato, paulatim in stria mediana obscura 0.4-1.1 mm lata abeunte. Antherae polliniferae, stigmata pallide viridia, obscure pubescentia. Achenium grisco-stramineum vel pallide olivaceo-brunneum, superne breviter spinulosum, 2.9-3.5 mm longum (pyramide inclusa), in pyramide subcylindricam 0.5-0.6 mm longam subabrupte usque sensim abiens, rostrum 6.0-6.5 mm longum, pappus 5.5-6.0 mm longus.

Description

Plants small or medium-sized, slender. Leaves erecto-patent, linear-ob lanceolate, 7.0 to 14.0 cm long, 0.9 to 1.5 cm wide, sparsely araneous, mid green, unspotted, thin or of neutral texture, sinuate-dentate or lobate. Terminal lobe medium-sized or elongate, 1.2 to 2.7 cm long, 0.6 to 1.2 cm wide, narrowly triangular. Lateral lobes 2 or 3, patent or slightly recurved, broadly triangular. Distal margin of lateral lobes straight, dentate. Interlobes short or medium-sized, 0.3 to 0.5 cm long, 0.3 to 0.6 cm wide, entire, without red coloration. Petoioes narrow, purple. Scapes equalling or overtopping the leaves, sparsely araneous. Involucre 8.0 to 10.0 mm wide, slightly rounded or subconical. Exterior bracts 11 to 14, loosely adpressed or sometimes recurved at the apex, ± of the same length, narrowly lanceolate, 6.5-8.5 mm long, 1.5-2.8 mm wide, entire, ± glabrous, not ciliate. The outermost exterior bracts sometimes conspicuously narrower than the others. Mem-

Fig. 16. - *Taraxacum dentatum* sp. nov.

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branaceous margin not distinct, 0.1 to 0.2 mm wide. Border to the exterior bracts indistinct, gradually changing into the median strip, 0.4 to 0.9 mm wide, greenish. Median part of the bracts dark green, 0.4 to 1.1 mm wide. Interior bracts 12.0 to 15.0 mm long. Capitulum 2.0 to 3.0 cm wide, flat. Outer ligules flat, striped dark grey-greenish or greenish grey-purple. Teeth to the ligules yellow. Pollen present. Stigmas greenish, with dark hairs. Achenes greyish straw-brown or olivaceous brownish, 2.9 to 3.5 mm long (incl. the cone), shortly spinulose above, subapruptly or gradually narrowing to a 0.5 to 0.6 mm long cone. Rostrum 6.0 to 6.5 mm long. Pappus 5.5 to 6.0 mm long.

Chromosome number 2n=24 (from Králova Lhota det. JK under no. 56/86).

Distribution in Bohemia (Fig. 20)

Although in adjacent regions T. dentatum is not rare (Moravia, Slovakia, Poland), in Bohemia it has been found only in a limited area in eastern Bohemia. However, there, in the districts of Městec Králové, Pardubice and Hradec Králové, it is amongst the more common species.

Specimens examined


17. Taraxacum ancoriferum HUDZIÓK, Feddes Repert. 80: 333, 1969 s. I. (Fig. 17)

Plants medium-sized, subrobust. Leaves ± crect, linear-oblancoate or oblanceolate, 12.0 to 16.0 cm long, 0.8 to 2.0 cm wide, subglabrous, greyish green, unspotted, of neutral texture or thick (subcarnose), lobulate to deeply lobate. Terminal lobe medium-sized, 1.3 to 2.3 cm long, 0.8 to 1.5 cm wide, narrowly triangular, triangular, or tripartite. Lateral lobes 2 to 5, patent, linear, narrowly triangular, or triangular. Distal margin of lateral lobes straight or concave, ± entire. Interlobes long, 1.0 to 1.5 cm long, 0.3 to 0.4 cm wide, entire, without red coloration. Petioles narrow, slightly reddish. Scapes overtopping the leaves, subglabrous (sometimes with rare hairs below the capitulum). Involute 11.0 to 13.0 mm wide, ± rounded. Exterior bracts 14 to 17, adpressed, ± imbricate, lanceolate-ovate or ovate, 6.5-7.5 mm long, 4-5.5 mm wide, entire, sparsely ciliate at the apex. The outermost exterior bracts broader than or equalling the others. Membranaceous margin distinct, 0.2 to 0.6 mm wide. Border to the exterior bracts indistinct or conspicuous, gradually changing into the median strip or with distinct limits, 0.5 to 1.8 mm wide, greenish, suffused red in the upper part. Median part of the bracts dark (blackish), 1.0 to 2.5 mm wide. Interior bracts 16.0 to 18.0 mm long. Capitulum 3.0 to 4.0 cm wide, flat. Outer ligules flat, striped greenish grey-purple. Teeth to the ligules reddish. Pollen present. Stigmas greenish yellow, with greenish hairs. Achenes pale straw-brown, 4.1 to 4.4 mm long (incl. the cone), with rare spinules or tuberculate, gradually narrowing to a 0.9 to 1.1 mm long cone. Rostrum 9.5 to 10.5 mm long. Pappus 6.5 to 7.5 mm long.

Chromosome number 2n=48 (from the Žechůň locality det. JŠ under no. 225/86).
Fig. 17. - *Taraxacum anciriferum* HUĐZIÖK

Distribution in Bohemia (Fig. 26)

*Taraxacum anciriferum* belongs to a complicated group within the section. Moreover, the authentic material is not extant so that an absolutely safe identification of the Czech plants is not possible. Plants that correspond to the protologue seem to be rare: they have been found in Germany, Denmark and at a single macrolocality in Bohemia: ‘Bohemia orientalis, Chlumec nad Cidlinou, Zbraň, S. shore of Žehuňský rybník (pond) about 2 km W. of Zbraň (Štěpánek 1985 PR, no. det. 10928; Battjes et Kirschner 1988 PR, no. det. 10929, cf. Battjes et al. 1992). Similar specimens were found close to the above locality (Hradišťko, Proudnický rybník) requiring further examination.

18. *Taraxacum helonastes* HAGL., Ber. Schweiz. Bot. Ges. 60: 236, 1950. (Fig. 18)

Plants medium-sized, subrobust. Leaves erecto-patent, linear-oblongate or ± oblong, 12.0 to 17.0 cm long, 1.0 to 1.8 cm wide, subglabrous, mid or dark green, unspotted, of neutral texture, lobate. Terminal lobe medium-sized, 1.2 to 1.8 cm long, 0.9 to 1.8 cm wide, triangular or suboblongate. Lateral lobes 3 to 5, patent, triangular. Distal margin of lateral lobes straight, ± entire. Interlobes medium-sized or conspicuously developed, 0.5 to 1.1 cm long, 0.2 to 0.4 cm wide, entire, without red coloration. Petioles narrow, purple. Scapes equaling the leaves, subglabrous (sometimes with rare hairs below the capitulum) or sparsely araneous. Involucre 9.0 to
Fig. 18. - *Taraxacum heleonastes* HAGL.

11.0 mm wide, slightly rounded. Exterior bracts 12 to 16, adpressed, ± of the same length, lanceolate-ovate, 6.5-7.5 mm long, 4.0-5.5 mm wide, entire, sparsely ciliate at the apex. The outermost exterior bracts broader than or equalling the others. Membranaceous margin distinct, 0.3 to 0.4 mm wide. Border to the exterior bracts conspicuous, with distinct limits, 0.8 to 1.1 mm wide, greenish, suffused red in the upper part. Median part of the bracts dark (blackish), 1.1 to 2.0 mm wide. Interior bracts 15.0 to 17.0 mm long. Capitulum 2.5 to 3.5 cm wide, convex. Outer ligules flat, striped greenish grey-purple. Teeth to the ligules yellow. Pollen absent. Stigmas dirty (greyish) yellow, with greyish or greenish hairs. Achenes pale straw-brown, 4.4 to 4.7 mm long (incl. the cone), shortly spinulose above or with rare spines or tuberculate, gradually narrowing to a 1.0 to 1.1 mm long cone. Rostrum 7.5 to 9.0 mm long. Pappus 6.0 mm long.

**Distribution in Bohemia (Fig. 22)**

As a species with typically Alpine and perialpine distribution, *T. heleonastes* is confined to southern Bohemia in the Czech Republic. Up to now, one single locality of this rare species has been found.

**Specimens examined**


Problems of the typification of the Taraxacum names published by HUDZIOK are summarized in KIRSCHNER, SONCK et ŠTĚPÁNEK (1993: 54). As the originally selected holotype is not extant, the original isotype is selected as the lectotype.

A detailed description of typical specimens is given in HUDZIOK (1969: 323-324). The species has a very characteristic leaf shape; shape and coloration of outer bracts are also diagnostic. Stigmas are greenish, anthers polliniferous, cone to the achene relatively short.

Up to now, we have studied specimens of this species from Germany and Poland. There is only one herbarium sheet from Bohemia that may be safely assigned to T. hemiparabolicum: NW. Bohemia, ‘Milešovka, na bažinné louce pod Milešovkou’ (Wilhelm 1898 PRC, no. det. 2904). The locality no longer exists in the original condition, and the species is extinct from Bohemia. Another herbarium sheet with plants probably belonging to T. hemiparabolicum comes from S. Bohemia, Rovná (Moravec 1959 PR, no. det. 10970). Here also the species is extinct. (Fig. 26)

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References


(Text cont. on p. 170)


Problems of the typification of the *Taraxacum* names published by HUDZIOK are summarized in KIRSCHNER, SONCK et ŠTEPÁNEK (1993: 54). As the originally selected holotype is not extant, the original isotype is selected as the lectotype.

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References


(Text cont. on p. 170)
Fig. 19. - Distribution of *Taraxacum subalpinum* (above) and *T. brandenburgicum* (below) in Bohemia.
Fig. 20. - Distribution of *Taraxacum mendax* (above) and *T. dentatum* (below) in Bohemia.
Fig. 21. - Distribution of *Taraxacum quaesitum* (above) and *T. hollanicum* (below) in Bohemia.
Fig. 22. - Distribution of *Taraxacum bohemicum* (above, ▲), *T. helonastes* (above, ○), *T. madidum* (below, ▲) and *T. skalinskanum* (below, ○) in Bohemia.
Fig. 23. - Distribution of *Taraxacum paucilobum* (above) and *T. bavaricum* (below) in Bohemia.
Fig. 24. - Distribution of *Taraxacum irrigatum* (above) and *T. vindobonense* (below) in Bohemia.
Fig. 25. - Distribution of *Taraxacum turfosum* (above) and *T. subdolum* (below) in Bohemia.
Fig. 26. - Distribution of *Taraxacum anserinum* (above), *T. ancoriferum* (below, ●) and *T. hemiparabolicum* (below, ▲) in Bohemia.


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