Seven new Taraxacum species (Asteraceae, Cichorieae) from Norden

Authors: Lundevall, Carl-Fredrik, and Øllgaard, Hans
Source: Willdenowia, 36(2) : 671-688
Published By: Botanic Garden and Botanical Museum Berlin (BGBM)
URL: https://doi.org/10.3372/wi.36.36203
Seven new *Taraxacum* species (*Asteraceae*, *Cichorieae*) from Norden

Abstract


Seven new species of *Taraxacum* from the countries of northern Europe are formally described and discussed, and their known distribution is presented. Three of them (*T. expandens*, *T. finitimum*, *T. obnuptum*) belong to *T. sect. Borea*, the rest (*T. broddesonii*, *T. huddungense*, *T. pilosella*, *T. theodori*) are members of *T. sect. Ruderalia*. Three of the species have been known and named for a very long time, yet not formally described by earlier taraxacologists. *T. obnubilum* Dahlst. ined. (non Dahlst. ex Puol.) is described with a new name.

Key words: *Compositae*, dandelions, taxonomy, N Europe.

During several years, the present authors (and others) have observed some ± widely distributed and conspicuous Nordic *Taraxacum* species, which they were unable to assign to a previously described species. Two of them (*T. broddesonii* and *T. theodori*) were earmarked as new species by the Swedish *Taraxacum* authority G. E. Haglund (1900-55). A third was designated as *T. expandens* by another Swedish expert, B. Saarsoo (1899-1964). However, neither Haglund nor Saarsoo published or drafted descriptions. In this paper we undertake to describe them and validate their names, already familiar to several botanists. A fourth species was distributed by H. Dahlstedt in his *Taraxaca Scandinavica exsiccata* as *T. obnubilum* Dahlst., adding the qualification “mscr.” (manuscript), but without providing a description on the printed exsiccate label (or elsewhere), and even as it appears without leaving a handwritten diagnosis. A Finnish botanist, Puolanne (1933), validated the name *T. obnubilum*, which he ascribed to Dahlstedt, but in the protologue he referred to material different from Dahlstedt’s intended taxon. We here give Dahlstedt’s species a somewhat similar name, *T. obnuptum*, and have based our description on Dahlstedt’s exsiccate specimens, so that *T. obnuptum* can be easily compared in herbaria that hold Dahlstedt’s *Taraxacum exsiccata*. 

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Feb 2020
Terms of Use: https://bioone.org/terms-of-use
The wish and need to quote all known *Taraxacum* taxa, even those still unpublished, in flora reports brought it about that three of the species names validated here already appear, as nomina nuda, in a large Swedish province Flora. Without commending the inclusion of workbench information on taxa still in the process of being studied, we strongly support the inclusion of all taxa, even from complicated genera like *Taraxacum*, in flora reports. In the present case, we have seen and confirmed the specimens in question, and have included them in our specimen lists.

We have seen all the new species here described in the wild and have cultivated them all in order to verify the validity of their respective diagnostic traits. All holotype specimens are deposited in the Naturhistoriska Riksmuseet, Stockholm (S), together with additional specimens. Paratypes, still mainly kept in the authors’ personal herbaria, will be distributed to public herbaria in due time. Herbarium abbreviations follow Holmgren & Holmgren (1998-). A list of specimens seen, in addition to the type material, is given in an electronic supplement to this paper at http://www.bgbm.org/willdenowia/willd36/Lundevall+Ollgaard.htm.


Holotype: “Suecia: Närke, Lillkyrka sn., Brandstorp, backäng vid Östra gärden”, 59°19′N, 15°30′E, 28.5.1934, *Haglund & Broddeson* (S; isotype: S). – Fig. 1.


**Eponymy.** – Named for Otto Edward Broddeson, BSc (Örebro, 1880-57), expert in the flora of the Swedish landscape Närke.

*Taraxacum broddesonii* is 20-40 cm tall, a medium-sized plant for a member of *T*. sect. *Ruderalia*. The leaves are rather dull green with a greyish to faintly bluish hue, glabrescent above, lacking scattered spots. All leaves are distinctly lobed. The side lobes are recurved (of deltoid shape), often deeply dissected, ± falcate, with robust teeth of irregular size on the distal edge. The proximal lobe edges are straight (or almost so), usually entire. The side lobes in the distal leaf half are uniformly blunt to obtuse apically. The interlobes are acutely angled to broadly rounded, flat to faintly plicate. Interlobe blots (“tar colour”) are usually present and ± conspicuous but sometimes rather faint. The terminal lobe of the outer and middle leaves is small and often only weakly set off, being itself deeply incised, with the apical lobe obusate to acute, not distinctly apiculate; in inner leaves the terminal lobe is larger and less dentate or incised. Petiole wings are present but narrow. Petiole colour in all leaves is faintly red or pink, usually more strongly tainted abaxially. The midribs are green to faintly brownish.

The scapes are conspicuously hairy only under the flower heads when in bud. The involucre is darkish green, not (or only faintly) pruinose, with the outer bracts 14-15 mm long, 4-5 mm broad (sometimes broader), ± horizontal to slightly recurved, regularly arranged, greenish, with a faint hyaline border. The inner bracts are almost equally wide, not coalescent. The flower head is c. 55 mm in diameter at full anthesis, medium yellow, of medium density and with a ± convex
Fig. 1. *Taraxacum broddesonii*, holotype (S).
profile. The ligules are flat or slightly canaliculate, faintly striped reddish grey abaxially. The inner ligules have yellow apical teeth. Pollen is present. The stigmas are greenish to greyish.

The ripe achenes are greyish brown, c. 4.1 mm long (including the cone), in the distal half with medium long, medium strong, straight spinules. The achene cone is almost cylindrical, smooth, 0.5-0.7 mm long. The rostrum is about 10-11 mm long. The pappus is white.

Discussion. – Within its section, *Taraxacum broddesonii* is best compared with, e.g., *T. lacini- sum* Dahlst. (because of leaf lobation and usually tar-coloured interlobes), *T. dilaceratum* M. P. Chr. (non-denticulate modifications, robustness, general habit, outer bracts) and, in some cases, *T. lucidum* Dahlst. (rather few side lobes, robustness, broad, ± horizontal bracts and large end lobes of inner leaves). From all these *T. broddesonii* is separated by dull green leaf colour, often with a bluish hue. *T. laciniyum* has narrower, somewhat irregular outer bracts, always whitish green peitoles and a more elongate leaf shape. *T. dilaceratum* has a larger number of crowded side lobes with usually conspicuously plicate interlobes, relatively smaller end lobes in inner leaves and its midrib is usually freckled on the adaxial surface. *T. lucidum* has shorter outer bracts, inner leaves with almost all lamina in distal leaf half, ± shining leaves and petioles usually wingless, strongly purple coloured.

Distribution. – Denmark, Finland, Great Britain, Sweden.


A rather small species, 10-20 cm tall. The leaves are mid green to dark green, glabrous or only faintly glabrescent above, without scattered spots. The petioles are narrow to rather broadly winged, coloured intensely red-violet. The midrids are green to faintly reddish or brownish, with no striolate pattern. The leaf lobation is distinct in all leaves, not with ± faintly lobed inner leaves as is usually the case in *Taraxacum* sect. *Borea*. The number of lobe pairs is (4-)5-6, the lobes being deltoid to somewhat triangular, undivided or (often) ± dissected, with medium acute to very acute or somewhat tapering tip. The distal edges of the side lobes are straight or somewhat convex, entire (or almost) or with robust teeth of irregular size. The proximal lobe edges are almost straight, entire or subulate-dentate or sometimes with a conspicuous tooth. The terminal lobes of the outer and middle leaves are rather small, triangular, in inner leaves usually larger...
Fig. 2. *Taraxacum expansens*, holotype (S).
and conspicuous, with or without a well-differentiated tip. The interlobes are acute-angled to well differentiated, angular, flat to faintly or irregularly plicate, green.

The scapes are usually arachnoid throughout. Bud colour varies from light to dark green, with its surface usually not (or faintly) pruinose. The outer bracts are 12-13 mm long, about 3 mm broad, greenish, often somewhat suffused with purplish, rather regularly arranged, ± arcuate-recurved. The margin of the outer bracts is flat, without a border or very faintly bordered. The apex of the bracts has no corniculation. The inner bracts are almost equally wide, not coalescent.

The capitulum is c. 40 mm in diameter, dense, with a ± convex profile, flower colour medium yellow. The ligules are flat or slightly canaliculate, with dark apical teeth, beneath with a reddish stripe. Pollen is usually not produced, but sometimes (e.g. in cultivation or under similarly favourable circumstances) pollen is found plentiful in some flower heads. In such cases the pollen has a triploid appearance, with irregular pollen grain diameter. The stigmas are faintly greenish.

The achenes are straw-coloured or greyish brown, 3.6-3.8 mm long (including the cone), with c. 0.4-0.5 mm long, cylindrical, smooth or ± spinulose achene cone. The achene spinules are medium long, medium strong and straight or ± incurved. The rostrum length is 8-9 mm.

**Discussion.** – *Taraxacum expandens* is best placed in *T.* sect. *Borea* because of its small size and its rather small flower heads lacking pollen. However, the sectional position of *T. expandens* and several similar species needs assessment through further genetic studies and we prefer to regard its placement in *T.* sect. *Borea* as tentative. It belongs to the so-called “lojoénse group” (or “melano-stigma group”), a group of species that take an intermediate position between *T.* sect. *Ruderalia* and sect. *Borea*, all being ± smallish species with an elegant look and flower heads that are usually smaller (40 mm in diam.) and denser than in *T.* sect. *Ruderalia* and very often lack pollen. Within this group the closest morphological relative of *T. expandens* seems to be *T. atricappillum* Sonck, which also has rather short, broad and acute, often almost triangular leaf lobes. From that species it differs by its lighter (not black-green) bud colour, its discoloured (not blackish) stigmas and its somewhat broader petiolar wings. Besides, *T. expandens* shows a greater tendency to have ± cleft leaf lobes in the distal leaf half and its achene spinules are shorter.

**Distribution.** – Sweden. During many years this species has been collected in the Bergian Botanic Garden and around the Botanical Museum (Frescati, Stockholm, Sweden) as a supposed introduction. The specific epithet, that means expanding, indicates that Saarsoo regarded the species to be in the process of expanding to the neighbouring regions. However, only a few finds outside the “classical” localities have been made. It cannot be excluded that *Taraxacum expandens* is/was mainly spread together with living plants from the Bergian Botanic Garden.

*Taraxacum* (sect. *Borea*) *finitimum* Lundev. & H. Øllg., sp. nov.

Holotype: Sweden, “Härjedalen, Tännäs s:n Funäsdalen, ängsmark vid värdshuset Grönländaren” [at the inn ‘Grönländaren’, meadow], 62°32’35”N, 12°28’07”E, 12.7.1962, Lundevall CFL-2455 p.p. (S); isotypes: CFL-2455 p.p. (S), CFL-2448 (S). – Fig. 3.

Fig. 3. Taraxacum finitimum, holotype (S).
Taraxacum finitimum is a plant of normal size for _T_. sect. _Borea_, i.e. 15-25 cm tall. It is a rather robust species with dark green unspotted leaves, usually with a grey-bluish hue. Especially the inner leaves are densely hairy. The petioles are narrowly winged, all medium red. The midribs are green to faintly reddish, lacking a striolate pattern. _T_. finitimum shows the typical _Borea_ location, namely distinct leaf lobes in outer and middle leaves, whereas the inner leaves often are unlobed or but faintly lobed. The number of lobe pairs in middle leaves is about 2–3. Well developed lateral lobes are deltoid, with distinctly convex to ± straight, entire to faintly denticulate distal edge, almost straight, entire, proximal edge and a medium acute to faintly tapering tip. The terminal lobes are small to medium sized in middle leaves, larger in inner leaves, obtuse to acute, lacking a distinct tip, with denticulate edges and/or ± deep incisions. The interlobes are rather long, acutely angled or broadly rounded, flat to faintly or irregularly plicate, without tar-coloured blots.

The achenes are straw-coloured or greyish brown, 3.6-3.8 mm long (including the cone). The achene spinules are medium long, acutely angled or broadly rounded, flat to faintly or irregularly plicate, without tar-coloured blots.

The flower ligules are flat, with reddish apical teeth. The ligule stripe is narrower than the ligule, subbrunnescente, striolis coloratis praedito. The flower is fully flowering flower head is c. 45 mm. It is rather dense, with a flat to slightly convex profile. The terminal lobes are medium sized in middle leaves, larger in inner leaves, obtuse to acute, lacking a distinct tip, with denticulate edges and/or ± deep incisions. The interlobes are rather long, acutely angled or broadly rounded, flat to faintly or irregularly plicate, without tar-coloured blots.

**Discussion.** – _Taraxacum finitimum_ is closest morphologically to _T_. _septentrionale_ Dahist. However, the latter species has many-lobed middle leaves and light green involucres with reflexed outer bracts (a photograph of the islectotype of _T_. _septentrionale_ is seen in Preslia 71: 62, lower photo, unfortunately with a wrong legend and laterally reversed). Besides, the stigmas of _T_. _finitimum_ are discoloured, not yellow as those of _T_. _septentrionale_, and the achenes of _T_. _finitimum_ are somewhat longer (_T_. _septentrionale_: 3 mm including the cone).

**Distribution.** – Norway and Sweden.

**Taraxacum** (sect. _Ruderalia_) _huddungense_ Lundev. & H. Øllg., _sp. nov._

Holotype: Sweden, “Upland, Huddunge sn, Huddungeby, gräsamma” [lawn], 60°02’59”N, 16°59’10”E, 7.6.1976, **Lundevall CFL-11127** p.p. (S); isotypes: **CFL-11127** p.p. (S), **CFL-11123** (S). – Fig. 4.

_planta mediae magnitudinis, 25-40 cm alta. Folia_ late lanceolata, omnia bene lobata, laete canescenti-viridia, supra glabrescentia, maculis dispersis nullis, petiolo late alato foliorum exteriorum et intermediorum pallido interiorum ± rubescente, nervo medio subrubescente vel subbrunrescente, striolis coloratis praedito. _Lobi laterales_ utrinque 3(-4) magni deltoidei integri, margine distali recto vel convexulo integro vel minute denticulato (raro grossius dentato), proximali fere recto integro, apice peracuto. _Lobus terminalis_ sat magnus integer vel ± incisus, apice obtuso vel acuto. _Interlobia_ late rotundata vel angulata, plana, parce dentata, viridia. _Scapi_ glabrescentes, sub involucro araneosi. _Involucrum_ obscure viride, non vel parce pruinsum. _Squamae exteriores_ 15-16 mm longae, 4-4.9 mm latae, pallide virides, subregulares, patentes vel ± reflexae, margine fere plano non hyalinum, apicem versus laeves. _Squamae interiores_ latudine inter se fere

678 Lundevall & Øllgaard: Seven new _Taraxacum_ species from Norden

---

**Terms of Use:** https://bioone.org/terms-of-use

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Feb 2020
Fig. 4. *Taraxacum huddungense*, holotype (S).
aequales. Calathium c. 40-45 mm diametro, modice densum, convexum. Ligulae mediocriter luteae planae vel leviter canaliculatae, denticulis apicalibus luteis, subtus stria canescente ipsius ligulae angustiore ornatae. Antherae polliniferae. Stigmata virescentia. Achaenium fusco-stramineum, pyramide inclusa 3.5-4(-4.2) mm longum, superne spinulis mediae longitudinis modice robustis rectis instructum, pyramide c. 0.4 mm longa cylindrica laevi. Rostrum c. 12 mm longum. Pappus albus.

Taraxacum huddungense is a plant of medium size, 25-40 cm tall. The leaves are broadly lanceolate, very light green, glabrescent above, unspotted, all distinctly lobed, with broad petiole wings. The petiole is pale greenish in outer leaves, ± reddish in the inner. The midribs are green to faintly reddish or brownish, with a striolate pattern. There are 3-4 side lobe pairs, which are large, deltoid and undivided, with straight to convex or irregular, usually entire distal edges, straight to irregular proximal edges and a very acute tip. The terminal lobe is large, at least in inner leaves, obtuse to acute, sometimes incised, without (or rarely with) a distinct tip. The interlobes (in the distal leaf half) are broadly rounded or somewhat angular, flat to faintly or irregularly plicate, with small teeth (rarely with large and acute teeth) and without tar-blots.

The scapes are glabrescent, conspicuously hairy only under the involucres. The involucre is light to dark green, not pruinose. The outer bracts are about 15-16 × 4-4.9 mm, whitish to greenish, rather regularly arranged, horizontal to reflexed. The margin of the outer bracts is flat, without hyaline border. Bract corniculations are absent. The inner bracts are almost equally wide, not coalesce. The fully flowering capitulum is c. 40-50 mm in diameter, medium dense, profile ± convex, of a medium yellow flower colour. The flower ligules are flat or slightly canaliculate, with yellow ligule teeth, beneath with a greyish stripe. Pollen is present. The stigmas are discoloured.

The achenes are greyish brown, 3.5-4(-4.2) mm long (including the cone). The achene cone is rather short, c. 0.4 mm long, cylindrical, usually without spinules. The achene body is spinulose above, the spinules medium long, medium strong, straight. Rostrum length is c. 12 mm.

Discussion. – Taraxacum huddungense is a conspicuous species because of its broad, light green, glabrescent leaves with large and broad lobes and pale or very faintly rosy pink petioles. The outer involucral bracts are large and conspicuous. In our opinion it belongs to a series of species centred on T. retroflexum H. Lindb., where it might be confused with T. subhuelphersianum M. P. Chr. However, the latter species usually lacks pollen and has yellowish green leaves with more crispate interlobes, and the outer bracts are more reflexed and have a narrow border. A probably undescribed, somewhat similar species from Sweden, Norrbotten (e.g. Edefors, Klusán, 11.6.2003, and several other localities in northern parts of that province), is separated from T. huddungense in having obviously hairy leaves and shorter outer bracts with an obvious border.

Distribution. – Sweden (mainly known from Uppland, but also from Dalarne, Västmanland and Skåne) and Denmark.

Taraxacum (sect. Borea) obnuptum Lundev. & H. Øllg., sp. nov.
Holotype: Sweden, Gotland, "in prato plano graminoso extra murum septentrionalem oppidi Visby", 57°38'50"N, 18°17'55"E, 26.5.1912, Dahlstedt, Taraxaca Scand. Exs. Fasc. II No. 42, as T. obnubilum Dahlst. ms. [non Puol. 1933], (S; isotypes: AAU, C, CFL, GB, H, L, LD, O, S, TURA). – Fig. 5.

Planta mediae magnitudinis, 20-35 cm alta. Folia lata omnia lobata obscure canescenti-viridia glaucescentia araneosa, maculis dispersis nullis, petiolo conspicue rubro-violaceo, non alato, nervo medio sordide viridi vel subrubescente, striolis carente. Lobi laterales deltoidi patentes integri, margine distali fere recto integro vel rarius parce denticulato, proximali fere recto saepius integro rarius dente conspicuo instructo. Locus terminalis foliorum exteriorum et mediore modice magnus, interiorum major vel maximus, apice acuto vel subobtuso vel bene apiculado. Interlobia latu rotundata vel angulata plana rarius parce crispata et dentata, viridia. Scapus
Fig. 5. Taraxacum obnuptum, holotype (S).
glabrescens, sub involucro magis araneosus. *Involucrum* obscure canescenti-viride non vel parce pruinose. *Squamae exteriories* lanceolatae 15-16 mm longae et 3-3.9 mm latae obscure virides arcuato-recurrevae perregulares acutaee, apice non corniculato, margine plano non vel anguissime tantum hyalino. *Squamae interiores* latitudine inter se fere aequales rarius valde dissimiles. *Calathium* 55-60 mm diametro obscure luteum modice densum convexum. *Ligulae* subangustae planae vel canaliculatae, denticulis apicalibus obscuris, subitus stria canescente ipsius ligulae angustiore ornatae. *Antherae* polliniferae. *Stigmaea* virescentia. *Achaenium* fusco-stramineum pyramide inclusa 4.1-4.2 mm longum, superne spinulis mediae longitudinis tenuissimis vel aliquanto robustis rectis instructum, pyramide c. 0.9 mm longa cylindrica laevi.

**Taraxacum obnuptum** is a medium-sized, 20-35 cm tall plant, easily recognised by its dark, hairy leaves with an elegant look because of their narrow petiole and broad lamina with very acute side lobes, and its dark yellow flower heads. It has dark bluish green, obviously hairy, unspotted leaves with unwinged, purplish red petioles and green or faintly reddish, not striolate midribs. All leaves are distinctly lobed, the lobes are deltoid, undivided, with a straight to concave or irregular, entire or faintly denticulate distal edge and an almost straight proximal edge that is usually entire but rather often bears a ± conspicuous tooth. The terminal lobe is medium-sized in outer leaves but becomes larger in intermediate and inner leaves, where it often has denticulate margins and usually a faintly to well differentiated tip. The interlobes are broadly rounded or well differentiated and angular, flat to faintly or irregularly plicate, usually without teeth, sometimes denticulate, without tar-blots.

The scapes are glabrescent but strongly hairy under the involucres. The involucre is dark greyish green, not (or faintly) pruinose. The outer bracts are lanceolate, 15-16 × 3-3.9 mm, dark greenish, very regularly arranged, ± horizontally arcuate-recurved, acute. The margin of the outer bracts is flat and without hyaline border (or very faintly bordered), without corniculation near the tip. The inner bracts are almost equally wide, rarely coalescent and of varying width. The flower head is large (55–60 mm in diameter), dark yellow, medium dense, with a ± convex profile. The flower ligules are rather narrow, flat or often canaliculate, with dark apical teeth, on the underside narrowly striped greyish. Pollen is present. The stigmas are discoloured.

The achenes are straw-coloured to greyish brown, 4.1–4.2 mm long (including the c. 0.9 mm long, cylindrical, smooth cone). The achene spinules are medium long, very thin to medium strong, straight. Rostrum length is 10–11 mm.

**Discussion.** – *Taraxacum obnuptum* is a new name for Dahlstedt’s original but unpublished *T. obnubilum* (see the introductory text). *T. obnubilum* Dahlst. ex Puol. was described based on a Marklund gathering of a different species, erroneously identified as *T. obnubilum* by Dahlstedt. Disagreeing with Dahlstedt’s determination, Marklund (1940) described the latter gathering as *T. acutatum* Markl., thereby creating a later synonym of *T. obnubilum* Dahlst. ex Puol. (these two names, both legitimate, have been made monotypic by lectotype designation (Lundevall & Øllgaard 1999). This duplicity of events has led us consider a general point.

Pre-1935 *Taraxacum* authors in Europe worked under the assumption that, under the international nomenclatural rules then prevailing, new names accompanied only by a description in modern language were not validly published. The Vienna Congress in 1905 had declared Latin diagnoses obligatory, starting 1908, and it was the Cambridge Congress of 1932, and the Rules of 1935, which postponed that date to 1935. By consequence, several species first described in a modern language, often briefly and incidentally, were later republished formally with a Latin description. Examples are *T. angustisquameum* Dahlst. ex H. Lindb. (1908), formally published by Dahlstedt (1910); *T. melanthesoides* Dahlst. ex M. P. Chr. & Wiinst. and *T. acutifidum* M. P. Chr., both in Christiansen & Wiinstedt (1934, in a Danish key), formally described by Dahlstedt (1935) and Christiansen (1936), respectively; and *T. brachylepis* Markl. ex Poul. (Puolanne 1933), again proposed by Marklund (1940). All these names have since then been ascribed consistently (but under the current Code, erroneously) to their “pre-ex” author. Worse, when Lindberg (1910) published *T. biformatum* with a brief description in Swedish and the same species was later
redescribed, in both Latin and Swedish, as *T. albicollum* Dahlst. by Dahlstedt (1911), it was the junior name that was regarded as correct by everybody, even though the synonymy of both was not in dispute. For this very reason, Puolanne’s Finnish descriptions were not regarded as acceptable validating descriptions – probably not even by Puolanne himself, who briefly characterized all *Taraxacum* species from the Helsinki region, published or yet unpublished, without intending to interfere with Dahlstedt’s, Lindberg’s, and Marklund’s ongoing work. Nevertheless, Puolanne’s new names now stand as validly published.

We have studied the specimen on which Puolanne has based his description, i.e. the sheet determined by Dahlstedt as *Taraxacum obnubilum*. That specimen belongs to the type gathering of *T. acutulum* Markl. The type specimen of *T. obnubilum* Dahlst. ex Puol. (in H) has paler leaves than *T. obnuptum* and a different type of lobation, very crowded in the distal leaf half and less hairy. The very conspicuous, sometimes non-lobate inner leaves of *T. obnuptum* are not present in *T. obnubilum* Dahlst. ex Puol. which also has smaller flower heads. We have no doubt that *T. obnubilum* Dahlst. ex Puol. is different from *T. obnuptum*.

As was to be expected, Puolanne’s Finnish description of *Taraxacum obnubilum* Dahlst. is in good agreement with *T. acutulum* Markl. (we are grateful for the kind assistance of J. Räsänen, Joensuu, Finland, who translated Puolanne’s text), but not with the Gotland specimens representing Dahlstedt’s original *T. obnubilum*, i.e. *T. obnuptum*. Puolanne describes *T. obnubilum* as having only slightly red petioles (*T. obnuptum*: markedly red petioles), outer bracts 2-3 mm broad, reflexed (*T. obnuptum*: 3-3.9 mm, arcuate-recurved), leaves looking like *T. semiglobosum* (*T. obnubilum*: leaves have very little resemblance to *T. semiglobosum*).

**Distribution.** – Sweden, where it is endemic to and common on Gotland.


*Planta* mediae magnitudinis, 20-40 cm alta. *Folia* obscure lutescenti-viridia canescentia ± araneosa, maculis dispersis nullis, omnia lobata, petiolo non vel anguste alato sordide purpureo, nervo medio viridi vel parce rubescente, striolis coloratis carente. *Lobi laterales* utrinque c. 4-5 integri nunc falcati nunc circumscriptione varia, margine distali subrecto integro, apice modice acuti. *Lobi terminalis* regulariter denticulato, proximali subrecto integro, apice modice acuti. *Rostrum* fusco-stramineum, pyramide inclusa circa 4 mm longum, superne spinulis mediae longitudinis vel longissimis modice robustis saepe parum squamiforribus rectis vel incurvis instructa, pyramide 0.7-0.8 mm longa cylindrica laevi. *Pappus* sp. nov.

*Taraxacum pilosella* is a medium robust plant, 20-40 cm tall, with dark yellowish green leaves which often have a greyish hue because of their ± conspicuous hairiness. The petioles are narrowly winged or unwinged, brownish purplish red. The midrib is green to faintly reddish, usually hairy and lacks a striolate pattern. All leaves are distinctly lobed. The average number of lobe pairs is 5-6. The lobes are undivided, ± falcate or with a somewhat curved distal edge, which is
Fig. 6. Taraxacum pilosella, holotype (S).
entire or finely denticulate, and a medium acute tip. The terminal lobe is usually rather small, with or without a well-differentiated tip. The interlobes are well differentiated, angular, usually flat, without conspicuous tar-blots, but often with tar-coloured margins.

The scapes are hairy under the involucres or distinctly arachnoid throughout. The involucres are almost globose, light to dark green, not pruinose, with a ± conspicuous collar of regularly arranged whitish green outer bracts that measure about 12-15 × 3.5-5 mm. Their margins are flat, without or with a very faint hyaline border and with a flat or only occasionally slightly corniculate tip. The inner bracts are not coalescent. The capitulum in full flower is 50-55 mm in diameter, medium dense to dense, with a convex profile, medium yellow. The ligules are flat or canaliculate with dark ligule teeth, beneath with a reddish grey stripe. Pollen is present. The stigmas are ± discoloured.

The achenes are brownish grey, c. 4 mm long (including the cone). The achene cone is c. 0.7 mm long, sometimes a little longer, cylindrical, smooth. The achene spinules are medium to very long, medium strong, often squamulose, incurved to straight. Rostrum length is 10-11 mm.

Discussion. – *Taraxacum pilosella* is recognised by its horizontal collar of broad, somewhat spreading outer bracts, its many-lobed, rather pale, yellowish to bluish green leaf colour, often tinged with a greyish hue because of ± dense hairiness. The petioles are medium to rather intensely purplish coloured, with a dusty appearance caused by the occurrence of hairs on the adaxial midrib surface. The side lobes are well defined and ± falcate in shape. *T. pilosella* somewhat resembles *T. scotinum* Dahlst., but differs from it by its usually obvious hairiness and the more densely lobed leaves with less pronounced tar-blots at the interlobes.

Distribution. – Locally fairly common, especially in central and northern Sweden and Norway. Furthermore known from Finland, Denmark, Iceland and the Czech Republic.

**Taraxacum (sect. Ruderalia) theodori** G. E. Haglund ex Lundev. & H. Øllg., sp. nov.

Holotype: Sweden, “Gotland, Lokrume, Auer, vägkant” [roadside], 57°41’N, 18°32’E, 23.5.1944, E. T. Fries (S; det. Haglund). – Paratype (with fruits): Sweden, “Gotland, Lokrume, kyrkogården, gräsMattan” [the cemetery, lawn], 23.5.1946, Haglund (S; det. Haglund). – Fig. 7.


Eponymy. – Named for Elias Theodor Fries (1875-1951), Swedish regimental surgeon, who greatly contributed to the knowledge of the flora of Gotland.

*Taraxacum theodori* is a medium-sized 20-40 cm tall species with a patent, many-leaved rosette of lanceolate, dark greyish green, manifestly hairy leaves with a rather homogenous lobation. The petioles are narrowly to broadly winged, moderately purplish red. The normal number of lobe pairs is 4-5, the lobes are reflexed, ± crowded, deltoid, medium acute, sometimes deeply in-
Lundevall & Øllgaard: Seven new *Taraxacum* species from Norden

Fig. 7. *Taraxacum theodori*, holotype (S).
cised and often with a ± erect broadly linear and somewhat club-shaped apical lobule. The proximal lobe edge is straight, entire. The terminal lobes are relatively small, gradually narrowed or linguate. The interlobes are acutely angled or angular, somewhat plicate ± tar-blotched.

The scapes are ± distinctly arachnoid throughout. The involucre is subglobose, light to dark green, not conspicuously pruinose. The outer bracts measure 13-14 mm × 4-4.9 mm, are whitish green or a little irregularly coloured, rather regularly arranged, ± arcuate-reflexed or deflexed, unbordered, without apical corniculation. The inner bracts are almost equally wide, not coalescent. The flower head in full bloom is c. 55 mm in diameter, medium dense, ± convex in profile, with medium yellow flowers. The ligules are flat, with yellow apical teeth, beneath with a dark reddish grey stripe. Pollen is present. The stigmas are yellowish to very faintly discoloured.

The achenes are greyish brown, about 4 mm long (including the 0.6-0.7 mm long, cylindrical, smooth cone), with medium long or very long, medium strong, straight spinules. Rostrum length is 10-11 mm.

Discussion. – Taraxacum theodori is recognised especially by its long, lanceolate, hairy leaves with regular lobes and ± tar-blotched interlobes. The outer bracts are ± reflexed whitish green. The stigmas are almost yellow. It is usually an easily recognised species, but faintly tar-blotched modifications of it might be confused with T. melanthoides Dahlst. ex M. P. Chr. & Wiinst. The latter species has lighter grey-green leaves with less crispate interlobes devoid of tar-blots. Probably because of its tar-coloured interlobes T. theodori has been confused with T. maculatum Jord. (T. atripicatum), which, however, has lighter green, glabrescent leaves with usually strongly contrasting tar-blots at the interlobes, less reflexed outer bracts and achenes with much shorter spinules. T. megalophyllum Hagl. has more acute lobe tips and a larger, often ± incised end lobe lacking a protracted terminal lobule.

Distribution. – Denmark, Finland, Germany, Great Britain, Poland, Sweden

Acknowledgements

Mia Ehn, Naturhistoriska Riksmuseet, Stockholm, photographed the type specimens. The staffs of the botanical institutes in Helsinki (H), Lund (LD), Stockholm (S) and Århus (AAU) have been of invaluable help during herbarium studies. A. Hagendijk and P. Oosterveld, the Netherlands, and H. Wittzell, Lund, Sweden, provided new information about the distribution area of the species. W. Greuter, Berlin, contributed information about the ICBN history 1905-35, and reviewed the Latin and English language. All are heartily thanked.

References

— 1911: Västsvenska Taraxaca. – Ark. Bot. 10(11).
Lundeall, C.-F. & Øllgaard, H. 1999: The genus Taraxacum in the Nordic and Baltic countries: types of all specific, subspecific and varietal taxa, including type locations and sectional belonging. – Preslia 71: 43-171.

Addresses of the authors:
H. Øllgaard, Lupinstien 7, Birgittelyst, DK-8800 Viborg, Denmark; e-mail: botarax@dlgtele.dk