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Notulae ad floram euro-mediterraneam pertinentes No. 19

CARL-FREDRIK LUNDEVALL & HANS ØLLGAARD

Seven new *Taraxacum* species *(Asteraceae, Cichorieae)* from Norden

Abstract

Lundevall, C.-F. & Øllgaard, H.: Seven new *Taraxacum* species *(Asteraceae, Cichorieae) from* Norden. – Willdenowia 36: 671-688. – ISSN 0511-9618; © 2006 BGBM Berlin-Dahlem.
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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.

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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.

Taraxacum (sect. *Ruderalia*) ***broddesonii*** [G. E. Haglund in Rydberg 2001: 577, nom. nud., ex] Lundev. & H. Øllg., **sp. nov.**
Holotype: "Suecia: Närke, Lillkyrka sn., Brandstorp, backäng vid Östra gården", 59°19'N, 15°30'E, 28.5.1934, *Haglund & Broddeson* (S; isotype: S). – Fig. 1.

Planta mediae magnitudinis, 20-40 cm alta, sat robusta. *Folia* laete glaucescenti-viridia glabrescentia, petiolo anguste alato pallide roseo-rubro. *Lobi laterales* utrinque 3-4, deltoidei subfalcati et saepe semel parum vel profunde dissecti vel irregulariter et grosse dentati, apice subacuto vel obtusiusculo. *Lobus terminalis* cordato-hastatus subacutus vel obtusus, in foliis exterioribus et intermediis parvus et propter incisiones inconspicuus, in interioribus major et minus incisus. *Interlobia* angulata vel late rotundata plerumque parum plicata saepe ± piceata. *Scapi* glabrescentes sub involucro tamen ± araneosi. *Involucrum* laete vel obscure viride haud pruinosum. *Squamae exteriores* c. 14-15 mm longae et 4-5 mm latae, patentes vel subrecurvae, pallide vel obscure virides plerumque angustissime vel anguste hyalino-marginatae. *Calathium* c. 55 mm diametro luteum convexum subradians. *Ligulae* marginales planae, subtus stria pallide griseo-violacea ipsius ligulae angustiore ornatae, denticulis terminalibus luteis. *Antherae* polliniferae. *Stigmata* virescentia extus obscura. *Achaenium* badio-stramineum, pyramide inclusa c. 4.1 mm longum et 0.9-1 mm latum, superne spinulis mediocribus rectis instructum, pyramide 0.5-0.7 mm longa, fere cylindrica, glabra. *Rostrum* 10-11 mm longum. *Pappus* albus.

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 lobule obtuse 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

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Fig. 1. *Taraxacum broddesonii*, holotype (S).

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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. laciniosum* 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. laciniosum* has narrower, somewhat irregular outer bracts, always whitish green petioles 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.

Taraxacum (sect. *Borea*) ***expandens*** [Saarsoo in Rydberg 2001: 574, nom. nud., ex] Lundev. & H. Øllg., **sp. nov.**
Holotype: Sweden, "*Taraxacum expandens* S-OO, n.sp., Stockholm, Bergianska trädgården (sub nom. *T. florstroemii*)", 59°22'07"N, 18°02'46"E, 22.5.1956, *Jungstedt* (S; isotypes: S, 2 sheets, det. Saarsoo 1958 sub no. 9314). – Paratype (with fruits): Stockholm, "Frescati, Bergianska trädgården, ruderat vid 'Försäljningen'", 30.4.1961, *Jungstedt* (herb. Saarsoo no. 12548, herb. Lundevall no. 13179; det. Jungstedt, confirm. Saarsoo 1961). – Fig. 2.

Planta subgracilis, 10-20 cm alta. *Folia* 1-5 cm lata, omnia distincte lobata saturate vel obscure viridia glabrescentia, maculis dispersis nullis, petiolo anguste vel sat late alato, in omnibus valde rubri-purpureo, nervo medio viridi vel brunnescente, striolis nullis. *Lobi laterales* utrinque (4-)5-6, margine distali plerumque subulato-dentato, dente uno ceteris majore. *Lobus terminalis* triangularis, apice saepe protracto. *Scapi* vulgo conspicue araneosi. *Involucrum* laete vel obscurius viride, non vel leviter pruinosum. *Squamae exteriores* 12-13 mm longae, circa 3 mm latae, virides vel saepe leviter purpurascentes, regulares, planae, non vel angustissime marginatae, apice laevi. *Calathium* sat parvum, 35-40 mm diametro, densum, ± convexum, mediocriter luteum, ligulis marginalibus subtus stria ipsius ligulae angustiore obscure rubro-purpurea ornatis, ligulis ceteris denticulis apicalibus rubris. *Antherae* polline carentes. *Stylus* et *stigmata* leviter virescentia. *Achaenium* (paratypi fructiferi) fusco-stramineum, pyramide inclusa 3.6-3.8 mm longum, superne spinulis mediae longitudinis subrobustis incurvis instructum, pyramide 0.4-0.5 mm longa, cylindrica, laevis vel leviter spinulosa. *Rostrum* 8-9 mm longum. – Planta exigua inconspicua attamen foliis obscure viridibus, involucris parvis obscure viridibus squamisque exterioribus sat brevibus patentibus vel recurvis et leviter purpurascentibus facilius dignoscenda.

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 narrowly to rather broadly winged, coloured intensely red-violet. The midribs 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

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Fig. 2. *Taraxacum expandens*, holotype (S).

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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 "*lojoënse* group" (or "*melanostigma* 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. atricapillum* 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 petiole 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.

Planta sat humilis, 15-25 cm alta, tamen subrobusta. *Folia* obscure canescenti- vel glaucescenti-viridia, parce vel praesertim in foliis interioribus dense araneosa, maculis dispersis nullis, petiolo anguste alato, in omnibus ± purpurei, nervo medio squalide viridi vel leviter rubescente, striolis coloratis carente. *Lobi laterales* foliorum interiorum saepius inconspicui vel deficientes, exteriorum et mediorum distincti utrinque 2-3, deltoidei, integri, margine distali convexo vel fere recto, integro vel minute subulato-dentato, proximali fere recto, integro, apice ± acuto vel paene acuminato. *Lobus terminalis* mediae magnitudinis vel (in foliis mediis et interioribus) maximus, apice obtuso vel acuto, marginibus saepe ± profunde incisis. *Interlobia* distalia sat longa, acutangula vel late rotundata, viridia. *Scapi* cuncti ± arachnoidei. *Involucrum* obscure viride, non pruinosum. *Squamae exteriores* 12-13 mm longae, 2.5-3.5 mm latae, arcuato-patentes, sub apice ± corniculatae, in parte distali cano-virides vel (apice extremo) pallide purpureae, marginibus planis viridibus vel levissime hyalinis. *Squamae interiores* latitudine inter se fere aequales. *Calathium*

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Fig. 3. *Taraxacum finitimum*, holotype (S).

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c. 45(-50) mm diametro, densum, planum vel leviter convexum. *Ligulae* marginales planae, denticulis apicalibus rubris, subtus stria canescente ipsius ligulae angustiore ornatae. *Antherae* vacuae. *Stigmata* virescentia. *Achaenium* badio-stramineum, pyramide inclusa 3.6-3.8 mm longum, superne spinulis mediae longitudinis, modice robustis rectis vel subrecurvis instructum, pyramide 0.4-0.6 mm longa conico-cylindrica laevi. *Rostrum* 8-9 mm longum. *Pappus* albus.

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* lobation, 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 scapes are ± arachnoid throughout. The buds are dark blackish green, not pruinose. The outer bracts are regularly lanceolate, acute, ± corniculate, 12-13 mm × 2.5-3.5 mm, greyish green above, sometimes with slightly purplish tips, ± horizontal or arcuate-recurved. The border is absent or very faint. The inner bracts are almost equally wide, not coalescent. The diameter of the fully flowering flower head is c. 45 mm. It is rather dense, with a flat to slightly convex profile. The flower ligules are flat, with reddish apical teeth. The ligule stripe is narrower than the ligule, greyish violet. Pollen is not produced. The stigmas are discoloured.

The achenes are straw-coloured or greyish brown, 3.6-3.8 mm long (including the cone). The achene cone is 0.4-0.6 mm long, conical-cylindrical, smooth. Achene spinules are medium long, medium strong, straight or slightly recurved. Rostrum length is 8-9 mm.

Discussion. – *Taraxacum finitimum* is closest morphologically to *T. septentrionale* Dahlst. However, the latter species has many-lobed middle leaves and light green involucres with reflexed outer bracts (a photograph of the isolectotype 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, "Uppland, Huddunge sn, Huddungeby, gräsmatta" [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 subbrunnescente, 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 pruinosum. *Squamae exteriores* 15-16 mm longae, 4-4.9 mm latae, pallide virides, subregulares, patentes vel ± reflexae, margine fere plano non hyalino, apicem versus laeves. *Squamae interiores* latudine inter se fere

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Fig. 4. *Taraxacum huddungense*, holotype (S).

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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 coalescent. 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, Klusån, 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, Väsmanland 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* deltoidei patentes integri, margine distali fere recto integro vel rarius parce denticulato, proximali fere recto saepius integro rarius dente conspicuo instructo. *Lobus terminalis* foliorum exteriorum et mediorum modice magnus, interiorum major vel maximus, apice acuto vel subobtuso vel bene apiculato. *Interlobia* late rotundata vel angulata plana rarius parce crispata et dentata, viridia. *Scapus*

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Fig. 5. *Taraxacum obnuptum*, holotype (S).

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glabrescens, sub involucro magis araneosus. *Involucrum* obscure canescenti-viride non vel parce pruinosum. *Squamae exteriores* lanceolatae 15-16 mm longae et 3-3.9 mm latae obscure virides arcuato-recurvae perregulares acutae, apice non corniculato, margine plano non vel angustissime 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, subtus stria canescente ipsius ligulae angustiore ornatae. *Antherae* polliniferae. *Stigmata* 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. acutulum* 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. melanthoides* 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

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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. obnuptum:* leaves have very little resemblance to *T. semiglobosum*).

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

Taraxacum (sect. *Ruderalia*) ***pilosella*** [Lundev. & H. Øllg. in Rydberg 2001: 581, nom. nud., ex] Lundev. & H. Øllg., **sp. nov.**
Holotype: Sweden, "Uppland, Huddunge sn, Huddungeby, gräsmatta" [lawn], 60°02'59"N, 16°59'10"E, 9.6.1974, *Lundevall CFL-11013* p.p. (S); isotypes: *CFL-11013* p.p. (S, 2 sheets), *CFL-11000* (S, 2 sheets), *CFL-10994* (S), *CFL-11011* (S, 2 sheets), *CFL-11019* (S), *CFL-11021* (S, 2 sheets). – Paratype (with fruits): ibid., 8.6.1981, *Lundevall CFL-11543A* (S). – Fig. 6.

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 subsinuato integro vel partim minute et regulariter denticulato, proximali subrecto integro, apice modice acuti. *Lobus terminalis* saepius mediae magnitudinis, apice nunc acuto vel ± obtuso nunc in apiculum distinctum protracto. *Interlobia* bene definita angulata plana vel parce crispata viridia vel saepe ad margines piceato-colorata. *Scapi* sub involucro valde araneosi, ceterum araneosi vel glabrescentes. *Involucrum* subglobosum laete vel obscurius viride parce pruinosum. *Squamae exteriores* 12-15 mm longae et 3.5-5 mm latae albovirides vel cano-virescentes, interdum apicem versus parce rubescentes, regulares, patentes, marginibus planis non vel angustissime hyalinis. *Squamae interiores* latitudine inter se fere aequales. *Calathium* 50-55 mm diametro modice densum vel subdensum convexum mediocriter luteum. *Ligulae* fere planae, denticulis apicalibus ± rubris, subtus stria ipsius ligulae angustiore cano-rubescente ornatae. *Antherae* polliniferae. *Stigmata* valde virescentia. *Achaenium* fusco-stramineum, pyramide inclusa circa 4 mm longum, superne spinulis mediae longitudinis vel longissimis modice robustis saepe parum squamiformibus rectis vel incurvis instructa, pyramide 0.7-0.8 mm longa cylindrica laevi. *Rostrum* 10-11 mm longum. *Pappus* albus.

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

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Fig. 6. *Taraxacum pilosella,* holotype (S).

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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, gräsmatta" [the cemetery, lawn], 23.5.1946, *Haglund* (S; det. Haglund). – Fig. 7.

Planta mediae magnitudinis, 20-40 cm alta, rosula patule multifoliata. *Folia* lanceolata obscure canescenti-viridia ± araneosa omnia lobata. *Lobi laterales* utrinque 4-5, inter se subconformes, reflexi densi deltoidei mediocriter acuti, interdum profunde fissi et in lobulum apicalem late linearem saepe ± porrectum et subcorynodiformem desinentes. *Lobus terminalis* mediae magnitudinis vel sat parvus, in apicem elongatum vel linguatum subobtusum protractus. *Interlobia* acutangula vel angulata subcrispata plerumque valde piceato-maculata. *Scapi* omnino ± arachnoidei. *Involucrum* subglobosum laete vel obscure viride parce pruinosum. *Squamae exteriores* 13-14 × 4-4.9 mm metientes, canescenti-virides vel irregulariter purpurascentes regulares retroflexae vel arcuato-reflexae, non vel angustissime marginatae, apice laeves. *Squamae interiores* latitudine inter se subconformes. *Calathium* mediocriter luteum circa 55 mm diametro modice densum convexum. *Ligulae* planae vel canaliculatae, periphericae subtus stria cano-rubescente ornatae. *Antherae* polliniferae. *Stigmata* lutea vel levissime virescentia. *Achaenia* fusco-straminea pyramide inclusa c. 4 mm longa, superne spinulis mediae longitudinis vel perlongis modice robustis rectis instructa, pyramide 0.6-0.7 mm longa cylindrica laevi. *Rostrum* 10-11 mm longum. *Pappus* albus.

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-

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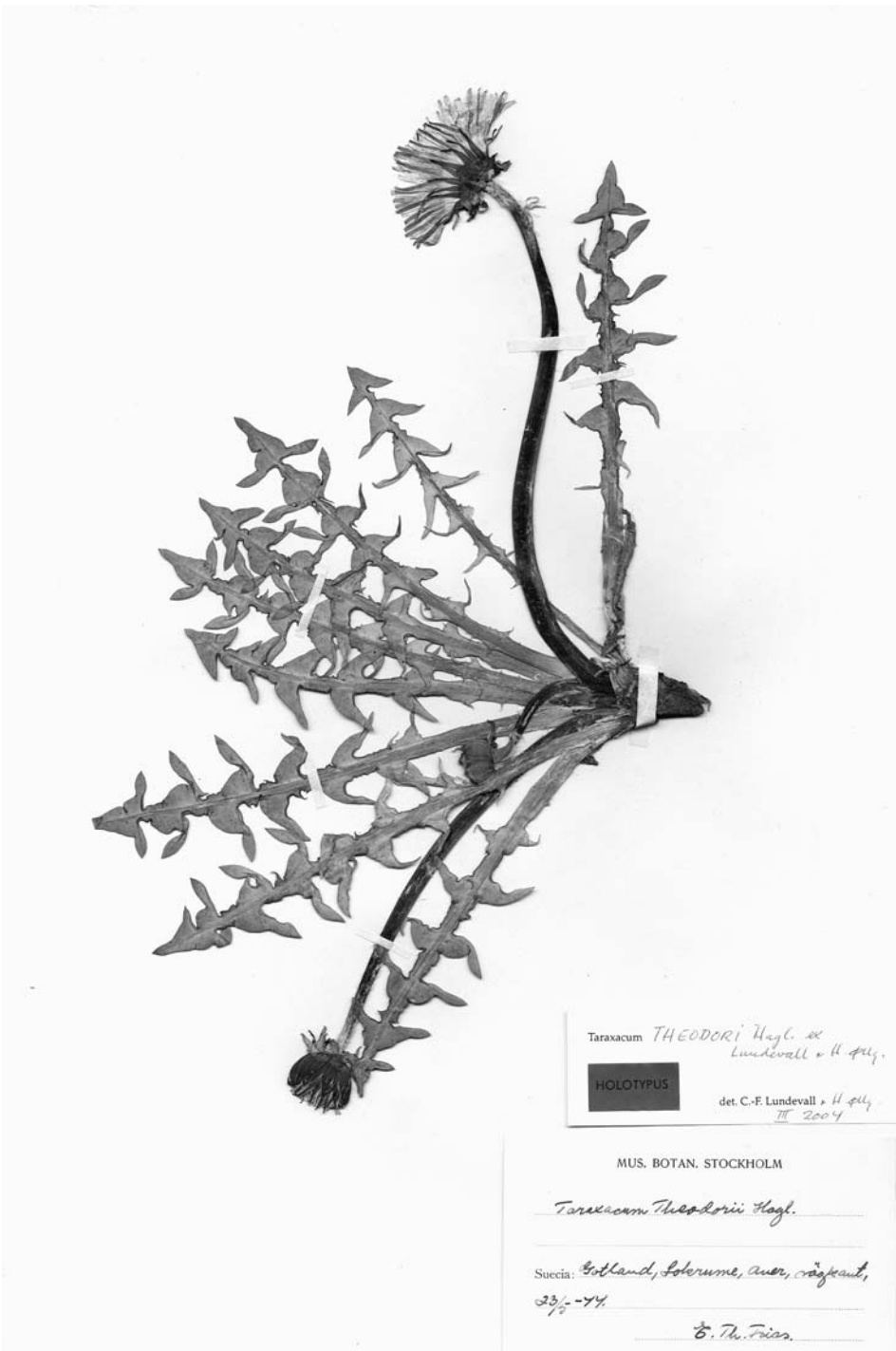


Fig. 7. *Taraxacum theodori*, holotype (S).

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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. atripictum),* 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

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