

NEUE TARAXACUMARTEN DER NIEDERLANDE V

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SUMMARY

Sixteen new species belonging to *Taraxacum* sect. *Vulgaria* Dahlst. are described and the area of distribution is given: *T. denticulatum*, *T. effusum*, *T. exsertiforme*, *T. hebelobum*, *T. horridum*, *T. incomptum*, *T. limburgense*, *T. notabile*, *T. nubilum*, *T. prionoides*, *T. pseudacrolobum*, *T. replicatum*, *T. rigens*, *T. singulare*, *T. sublacerifolium*, *T. vastisectiforme*. Besides, two varieties belonging to well known species are mentioned.

1. *T. denticulatum* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, *fig. 1*. Planta 1–2 dm alta, parce araneosa. *Folia* prasinoviridia, lobata, petiolis angustis, laete purpureis, nervo mediano ± rufescente-colorato; lobi laterales utrinque 5–6, triangularis, patentes, subacuti, saepe mucronulati, usque ad 2 cm longi, margine inferiore recto integro, dorso subrecto vel paulo concavo, subdense subulato-denticulato (in lobis superioribus subintegro), in interlobiis brevis, c. 5 mm latis abeuntes; lobus terminalis deltoideus vel hastatus, subobtusus, integer, 1,5–2 cm longus, lobulis basalibus acutis vel obtusis. *Scapi* interdum bracteis angustis instructi, florendi tempore saepe glabri, foliis subaequilongi. *Involucrum* 15 mm longum, 15 mm latum, fusciscente viride; squamae exteriores anguste ovatae vel late lanceolatae, usque ad 4 mm latae, immarginatae, recurvae, extremo lineari dentato. *Calathium* planum, radians, 4 cm diametro. Ligulae marginales extus stria atroviolacea notatae. Antherae polliniferae; stylus et stigmata fuscovirescentia. *Achenium* maturum ignotum. E Sectione *Vulgarium* Dahlst.

HOLOTYPUS: Z. Holland: Poortugaal, Oude Maas, 29.4.1967, v. Soest 45858 & Zevenbergen.

Weitere Fundstellen: Eernewoude, Franke, Sahlin, Sältin & v.S. 45946; Nijkerk, v.S. 37473; Millingerwaard, Waiboerhoeve, Zb. 1564; Voorburg, v.S. 16612; Waalsdorp, Hgd., v.S. 50047 & Zb.; Abbenbroek, Zb. 873; Yerseke, Moer, Groot & v.S. 27334.

Belgien: Elzendamme, Lawalrée 5831 & v.S. 32921.

2. *T. effusum* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, *fig. 2*. Planta c. 2 dm alta, sat grossa. *Folia* subprasino-viridia, saepe lutescentia, petiolis viridis sat alatis, praesertim nervo mediano araneossa; lobi laterales in foliis intermediis c.6, patentes triangulares, superiores grosse triangulariter dentati, inferiores subulato-dentati; interlobia brevia; lobus terminalis late deltoideus, saepe valde incisus et grosse triangulariter dentatus, obtusus; lobus terminalis in foliis exterioribus sat parvus, ± acutus, integer. *Involucrum* sat latum et longum (c. 18 mm), crassiusculum, fuscoviride; squamae exteriores valde recurvatae, lanceolatae,

anguste marginatae, in costa canovirides. *Calathium* convexum, radians, usque ad 5 cm diametro; ligulae marginales planae, extus stria canoviolacea notatae. Antherae polliniferae; stylus et stigmata obscura. *Achenium* maturum ignotum. E Sectione *Vulgarium* Dahlst.

HOLOTYPUS: Amsterdam N, park 4.5.1949, Haglund & v.S. 20954.

Weitere Fundstellen: Aduard, v. Brakel & v.S. 33463; Alphen, Molenaarsbrug, Haglund & v.S. 20968; Rijswijk, Huis te Lande, Hgd. 787 & Zb. 890; Ooy, Hgd. & v.S. 53959; Waspik, Oude Maas, v.S. 18038; Ulvenhout, Annabosch, v.S. 18138; Moergestel, Hijzen, Hgd. 305, 325, v.S. & Zb. 446.

3. *T. exsertiforme* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 3. A *T. exserto* Hgd., v.S. & Zb. cui simile est, notis sequentibus divisum: *Folia* sat laete viridia, petiolis fere semper angustis vel interdum pro parte angustissime alatis, saepissime ruforoseis, lobus terminalis saepe parvus subobtusus; involcri squamae exteriores breviores (c. 8 mm), patentes, minus retroversae; antherae vacuae.

HOLOTYPUS: Delft, langs de Delftse Schie, 7.4.1974, Hagendijk & Zevenbergen: eine Pflanze: Hgd. 2042, v.S. 55967, Zb. 2033; *isotypus*: Hgd. 2034, 2038, Zb. 2029, 2038.

Weitere Fundstellen: östlich Neerloon, Hgd. 1146, v.S. 53881 & Zb.; südwestlich Reuver, Hgd. 1738, v.S. & Zb. 1825; Broekhuizen-Schuitwater, Taraxacum-exc., herb. Hgd. 2426, 2436; nördlich Venlo, Venkoelen, v.S. 54426, 54431; Schandelosche beek, Hgd. 1745, v.S. & Zb. 1830, 1831, 1837; Aa-Ufer (Limburg), Hgd. 1146, v.S. & Zb. 1272.

4. *T. hebelobum* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 4. Planta 1–2 dm alta, parce araneosa. *Folia* prasino-viridia, lobata, petiolis (nervique mediano usque ad apicem vinoso-colorato), inferne angustis; lobi laterales utrinque 4–6, valde approximati, breviter triangulares vel \pm lingulati vel subhamati, superiores (2–3) dorso integro, obtusi vel subobtusi, inferiores per breves acuti, dorso minute denticulato, omnes margine inferiore integro, saepe paulo convexo; interlobia lata, paulo plicatula, saepe fusco-marginata vel raro atro-violacea; lobus terminalis subhastatus brevis, obtusus, in foliis interioribus saepe incisus vel dentatus, lobuli basales saepe retroversi, subobtusi, *Scapi* paulo araneosi. *Involucrum* c. 15 mm latum, c. 12 mm longum, basi subturbinatum, fusco-viride, siccum nigrum; squamae exteriores laxe adpressae vel patentes, apice paulo recurvae, lanceolatae, inconspicue angustissime marginatae, in costa saepe obscurae. *Calathium* radians, c. 4 cm diametro. Ligulae marginales extus stria violacea notatae. Antherae polliniferae; stylus et stigmata virescentia. *Achenium* stramineum, pyramide inclusa 4 mm longum, superne breve spinulosum ceterum rugosum, basi laeve, in pyramidem conicam c. 0,5 mm longam subabrupte abiens; rostrum 10 mm longum, pappus albus 5 mm longus.

HOLOTYPUS: Vlijmen, Haarsteeg, Maasuiterswaard, 30.4.1961, de Jongh, v. Leeuwen & v. Soest 40026.

Weitere Fundstellen: Havelte, Hgd. 2176, v.S. & Zb. 2179; 't Soerel, v.S. 27517, 27547; Edesche Bosch, Groot & v.S. 12367; Soesterberg, v. Brakel (Herb. v.S.

38633); Oudewater, De Ruige Weide, Groot (Herb. v.S. 37561); Haastrecht-Stolwijk, Groot (Herb. v.S. 3758; Biert, Hgd., v.S. 33216 & Zb.; Hoekske, v.S. 55045; unweit Breugel, Zb. 1464.

5. **T. horridum** Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 5. Planta (1,5-) 2–2,5 dm alta, robusta. *Folia* sat obscure viridia, longe araneoso-pilosa, lobata, petiolis (nervoque mediano parte inferiore ruforoseo) anguste, pro parte late alatis; lobi laterales utrinque 4–6, praesertim superiores valde approximati, triangulares vel saepe late unguiculati, usque ad 4 cm longi, acuti, margine inferiore recto vel saepe concavo, raro minute denticulato, dorso dense longeque dentato in interlobiis longe dentatis vel sublobulatis, saepe valde plicatis abeunteus; interlobia interdum atroviolaceo-colorata; lobus terminalis hastatus, subobtusus late triangulariter dentatus, interdum incisus, lobuli basales plerumque acuti, raro apice rotundati. *Scapi* parce araneosi. *Involucrum* magnum, 2,5 cm longum, 2 cm latum, crassiusculum obscure viride; squamae exteriores recurvae, late lanceolatae, usque ad 5 mm latae, pro parte anguste marginatae, in costa obscure virides, rufo-purpurascens. *Calathium* planum, 4 cm diametro, saturate luteum. Ligulae marginales planae, extus stria atroviolacea ornatae; ligulae interiores apice aurantiacae. Antherae polliniferae. Stylus et stigmata sordide lutea. *Achenium* stramineum, pyramide inclusa 4,3 mm longum, superne breviter spinulosum, ceterum rugosum basi laeve, in pyramidem brevissimam, 0,2 mm longam inconspicue abiens. Rostrum 10 mm longum; pappus albus, 5 mm longus.

HOLOTYPUS: Bronkhorsterveer unweit Brummen (33.46). v. Soest 54686; *isotypus* in Herb. Hgd. 2765; *paratypus fructifer*: südlich De Noord (19.14), zusammen wachsend mit *Tragopogon pratensis* L und *Senecio jacobaea* L, v.S. 54720-1.

Weitere Fundstellen: Schagen, v.S. 54634; Katham, Hgd., v.S. 53534 & Zb.; Culemborg, v.S. 52168; Lage Zwaluwe, Sahlin & v.S. 53935, 53937.

6. **T. incomptum** Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 6. Planta 1–2,5 dm alta. *Folia* parce araneosa, subprasino-viridia, saepe lutescentia, lobata, petiolis alatis, roseis; lobi laterales utrinque 4–5, triangulares, usque ad 20 mm longi, acuti, dorso subconvexo, superiores dorso integro vel parce denticulato, margine inferiore subrecto, integro; interlobia brevia, sat lata, integra vel parcissime denticulata, subplicatula; lobus terminalis hastatus vel deltoideus, 1–3 cm longus, integer vel parcissime dentatus, non raro incisus, subobtusus. *Scapi* sub involucre araneosi. *Involucrum* subturbinatum, sordide viride, 12–13 mm longum; squamae exteriores retroversae, lanceolatae, extremo interdum longe lineares, in costa cano-virides, interdum purpurascens. *Calathium* luteum, radians, usque ad 4,5 cm diametro; ligulae marginales extus stria cano-violacea notatae; stylus et stigmata sordide lutea. *Achenium* maturum ignotum. E Sectione *Vulgarium* Dahlst.

HOLOTYPUS: Erp (N.Brabant), 9.5.1956, v. Brakel, Groot & v. Soest 36118.

Weitere Fundstellen: Hummelo-Kruisberg, v. Brakel, Groot & v.S. 36011; Wassenaar, v.S. 42135; Sliedrecht-Giessendam, v. Brakel & v.S. 39433; Looijerheide, v. Brakel, Groot & v.S. 36494.

7. *T. limburgense* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 7. Planta mediocriter, c. 0,5–2,5 dm alta, ubique araneosa. *Folia* lobata, luteoviridia, petiolis (nervoque mediano rufescente colorato) brevis, alatis; lobi laterales utrinque usque ad 7, valde approximati, subretroversi vel recurvi, triangulares, acuti vel superiores subobtusius, usque ad 3 cm longi, dorso subconvexo vel recto, in superioribus denticulato vel parce dentato, in inferioribus dentato, interdum inciso; margine inferiore recto vel \pm concave vel \pm convexo, integro; interlobia perbrevia, angulis loborum plicatulis, interdum parce rufo-violaceis; lobus terminalis saepe deltoideus vel interdum indeterminatus, 6–10 mm longus, 10 mm latus, saepe mucronulatus, lobulis basalibus subobtusius; lobus terminalis in folia inferioro latior (usque ad 35 mm), longior (usque ad 25 mm). *Scapi* foliis subaequilongi vel paulo longiores. *Involucrum* obscure rufoviolascenticoloratum, 18–20 mm latum, c. 15–18 mm longum, subturbatum; squamae exteriores lanceolatae, usque ad 11 mm longae, usque ad 3 mm latae, valde recurvae, raro \pm patentes, immarginatae, saepe ciliolatae, omnes laeves. *Calathium* planum radians, 3–4 cm diametro, luteum. Ligulae marginales extus stria canoviolacea notatae, apicibus nigris. Antherae polliniferae; stylus et stigmata fuscescentia. *Achenium* maturum ignotum. E Sectione *Vulgarium* Dahlst.

HOLOTYPUS: linkes Geultal über Mechelen; vergesellschaftet mit *Thlaspi alpestre* L var *calaminare* Lej., Groot & v. Soest 24975; *isotypus* in Herb. Hgd. 2246, Herb. v.S. 24835, 39818, Herb. Zb. 2325; weiter: v.S. 25148 – 54.

Weitere Fundstellen: Geulhem, Groot & v.S. 24790; Swalmen, Groot & v.S. 24862; und häufiger in Süd-Limburg.

8. *T. notabile* Hagendijk, v. Soest & Zevenbergen *spec. nov.*, fig. 8. Planta robusta, 3–4 dm alta, parce araneosa. *Folia* subprasino-viridia, lobata, petiolis in parte superiore alatis, pallidis; lobi laterales 4–6, patentes, triangulares, usque ad 4 cm longi, acuti, dorso subdense fortiter dentato, margine inferiore interdum subdenticulato; interlobia brevia, lata, magis dentata; lobus terminalis magnus, usque ad 6 cm longus, \pm deltoideus subacutus vel subobtusius, saepissime triangulariter dentatus. *Scapi* sat crassi, saepe bracteis instructa. *Involucrum* subobscure viride, latum (2–2,5 cm); squamae exteriores recurvae vel reflexae, late (4–5 mm) lanceolatae, longae, immarginatae, in costa pallide virides. *Calathium* planum, 4–5 cm diametro, saturate luteum; ligulae marginales extus stria canoviolacea notatae. Antherae polliniferae; stylus et stigmata laete viridia. *Achenium* stramineum, pyramide inclusa 4,3 mm longum, superne breviter spinulosum, in pyramidem conicam 0,5 mm longam subabrupte abiens. Rostrum 10 mm longum; pappus albus, 8 mm longus. Floret vere.

HOLOTYPUS: Hulhuizen, 8.5.1972, Hagendijk, v. Soest & Zevenbergen (Herb. v.S. 53997, Herb. Zb. 1318).

Weitere Fundstellen: Brummen v.S. 54706; Cortenoever, v.S. 54660, 54673; polder De Purmer, Hgd. 1205, v.S. & Zb.; Hulten, westlich Tilburg, Hgd., v.S. 50723 & Zb.; Hilvarenbeek, Sahlin 62071 & v.S.

9. *T. nubilum* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 9. Planta 1–2 dm

alta, parce araneosa. *Folia* obscure subprasino-viridia, lobata, petiolis angustis vel paulo alatis, obscure rufopurpureis; lobi laterales 4–5, retroversi vel patentés, triangulares, acuti dorso dentato et denticulato, margine inferiore integro, in interlobiis latis sat brevis saepe 1 dente munitus abeunte; lobi laterales inferiores parvi, plerumque magis dentati; lobus terminalis deltoideus, usque ad 6 cm latus, 4 cm longus, saepe grosse breviterque dentatus, lobulo apicali apice saepe breviter lingulato. *Scapi* sub involucro parce araneosi. *Involucrum* sat latum, basi rotundatum, 15 mm longum, usque ad 18 mm latum, atroviride; squamae exteriores laxe adpressae, apice recurvae, late lanceolatae, parcissime marginatae, in costa obscure virides. *Calathium* luteum, paulo radians, 3–4 cm diametro; ligulae marginales planae, extus stria atroviolacea notatae; antherae polliniferae, stylus sicut stigmata sordide luteus. *Achenium* maturum ignotum stramineum, spinulosum. E Sectione *Vulgarium* Dahlst.

HOLOTYPUS: Sliedrecht – Giessendam, Merwede- Auen (Salix), 22.4.1960, v. Brakel & v. Soest 39462; *isotypus*: 39422.

Weitere Fundstellen: Oldenaller, unweit Nijkerk, v.S. 28920; Woerden, Kattenbroek, v.S. 30791, 30793; Haagsche Bosch, v.S. 16693; Poortugaal, v.S. 45851 & Zb.; Drongelen, Hgd., v.S. 53720 & Zb.; Swalmen, Groot & v.S. 24818, 24890; Rothem unweit Meerssen, Groot & v.S. 24867.

10. *T. prionoides* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, *fig. 10*. Planta sat robusta, 1–1,5 dm alta, basi sat densiuscule araneosa. *Folia* obscure canoviridia, petiolis saepe rufescentibus, alatis, brevis; lobi laterales 4–6, triangulares, subobtusius vel subacuti, margine inferiore interdum minute denticulato, dorso in lobis superioribus integro, in lobis inferioribus parce minute triangulariter dentato; interlobia brevia, sat lata, saepe dentata; lobus terminalis breviter deltoideus, saepe 1 dente grosso minutus, lobulo apicali lineari ad 7 mm longo. *Involucrum* sat crassum, squamae exteriores lanceolatae recurvae, immarginatae, in costa saepe obscure purpurascens vel coerulescens coloratae. *Calathium* mediocre; antherae polliniferae; stylus et stigmata sordide lutea. *Achenium* maturum ignotum, stramineum, rostratum. E Sectione *Vulgarium* Dahlst.

HOLOTYPUS: Veghel, 8.5.1956, v. Brakel, Groot & v. Soest 36409.

Weitere Fundstellen: Haastrecht, Mooren (AMD); Doornspijk, v.S. 20901; Voorburg, v.S. 12478; Rips-Merselo, v. Brakel, Groot & v.S. 36168; Beringen-Nederweert, v. Brakel, Groot & v.S. 36197.

11. *T. pseudacrolobum* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, *fig. 11*. Planta gracilis, ca. 1,5 dm alta, parce araneosa. *Folia* lobata, sat obscure canoviridia, petiolis (nervoque mediano praesertim parte inferiore roseo) paulo vel non alatis. Lobi laterales in foliis exterioribus utrinque ca. 5, triangulares, usque ad 2 cm longi, superiores integri vel denticulati, inferiores dorso recto vel convexo subulato-dentato, margine inferiore \pm recto integro; interlobia sat brevia, angusta, angulis loborum fuscomarginatis; lobus terminalis late sagittatus, 1,5–2 cm longus, subobtusus, integer, lobulis basalibus interdum obtusis. Lobi laterales in foliis interioribus utrinque 4–5 \pm retroversae triangulares, usque ad 2 cm longi,

dorso dense subulato-dentato, margine inferiore raro denticulato, basin versus angulum obtusum formantes et in interlobiis sine limite transeuntes; interlobia brevia, viridia, integra fusco-marginata; lobus terminalis (interdum \pm indeterminatus) hastatus, 2–3 cm latus, usque ad 4 cm longus subobtusus vel acutus, saepissime dense retroverso-dentatus, interdum incisus, lobuli saepe dentati, lobulis basalibus triangularibus \pm retroversis. *Scapi* floriferi foliis subaequilongi, sub involucrio dense araneosi. *Involucrum* 16 mm longum, 14 mm latum, turbinatum, olivaceo-viride; squamae exteriores reflexae lanceolatae vel sublineares usque ad 2,5 mm latae, ca. 10 mm longae, inconspicuae angustissime viridimarginatae, in costa laetiores subpurpurascenti-coloratae, interiores apicibus atrovioleaceis, omnes laeves. *Calathium* planum radians, ca. 4 cm diametro, luteum; ligulae marginales extus stria atrovioleacea notatae; flores interiores apicibus \pm aurantiacae. Antherae polliniferae. Stylus et stigmata sordide virescentia. *Achenium* stramineum, pyramidem inclusa 4 mm longum, superne dense breviter spinulosum, ceterum rugosum, basi laeve, in pyramidem 0,5 mm longam abrupte abiens; rostrum 10 mm longum, pappus albus, 6 mm longus.

HOLOTYPE: Oisterwijk, 9.5.1958, v. Brakel, Groot & v. Soest 38501.

Weitere Fundstellen: Texel, Staatsboschen, Haglund & v.S. 20870; Nunspeet, v.S. 27513, 27066; Den Haag, Duindal, v.S. 29127; Yerseke, Groot & v.S. 38683 (paratypus fructifer); Nijmegen, Hgd., v.S. & Zb. 1547.

Frankreich, Yvelines, La Celle-Saint-Cloud, Debray, 14620 (Herb. v.S. 47081).

12. *T. replicatum* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 12. Planta 1–2,5 dm alta, parce araneosa. *Folia* subprasino-viridia sat obscura, lobata, facile plicantia, petiolo brevi rubro, nervo mediano saepe usque ad apicem rufocolorato; lobi laterales numerosae, utrinque 5–6, hamati vel triangulares valde retroversi, superiores integri subobtusi, inferiores parvi, subtriangulares minute denticulati acuti valde recurvi, valde approximati; interlobia inter lobos superiores brevia ut plurimo integra, interdum plicatula et inconspicue fusco-marginata; lobus terminalis sagittatus, usque ad 3 cm longus, integer obtusus, lobulis basalibus subobtusis. *Scapi* sub involucrio araneosi. *Involucrum* breve, 15–16 mm longum, c. 15 mm latum, subobscurum viride; squamae exteriores patentes, denique apice recurvae, anguste lanceolatae, vix conspicue anguste marginatae, laeves. *Calathium* planum radians usque ad 4 cm diametro, luteum; ligulae marginales planae extus stria fuscovioleacea notatae; stylus sicut stigmata fuscus. Antherae polliniferae. *Achenium* maturum ignotum rostratum; pappus albus. E Sectione *Vulgarium* Dahlst.

HOLOTYPE: Well-Heijen, 11.5.1956, v. Brakel, Groot & v. Soest 36234.

Weitere Fundstellen: Rode Klif, v. Brakel & v.S. 33126; De Bilt, v. Brakel (Herb. v.S. 36323); nördlich Bilthoven, v.S. 28968; Scheveningse Bosjes, Hgd., v.S. 53830 & Zb.; Zeeland-Uden (N.Brab.), v. Brakel, Groot & v.S. 35942; Ginneken, v.S. 50502; westlich Dommelen, Hgd., v.S. 53863 & Zb.

Frankreich: Manche, Par Ger, v.S. 53707.

13. *T. rigens* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 13. Planta 0,8–1,6

dm alta, basi araneosa. *Folia* subprasino-viridia lutescentia, lobata; petiolis late alatis, valde purpureis; nervo mediano araneoso, praesertim parte inferiore rufopurpureo; lobi laterales utrinque 3–4, breves (5–15 mm longi), triangulares, obtusi vel subobtusi, patentes vel paulo retroversi, superiores (valde approximati) et medii integri, inferiores denticulati, dorso et margine inferiore saepissime convexo; interlobia 0-brevia, integra; lobus terminalis 1–3,5 cm longus obtusus, semi-ellipticus, interdum incisus vel breviter triangulariter dentatus. *Scapi* araneosi. *Involucrum* obscure viride, saepe rufescente, crassiusculum, c. 20 mm latum, 15–18 mm longum; squamae exteriores recurvae vel patentes apice recurvae, lanceolatae, angustissime marginatae, in costa canovirides; squamae interiores saepe bicallosae. *Calathium* sat magnum, convexum, usque ad 5 cm diametro; ligulae marginales extus stria atro-purpurea vel -violacea notatae, interiores apice sordide purpureo. Antherae polliniferae; stylus et stigmata virescentia. *Achenium* maturum ignotum. E Sectione *Vulgarium* Dahlst.

HOLOTYPUS: Langelille, Tal des Kuinders, 4.5.1954, K. B. v. Brakel & v. Soest 33064; *isotypus* desgl. 33065.

Weitere Fundstellen: Muggebeet, v. Brakel & v.S. 33038; zwischen Meppel und Zwartsluis, v. Brakel & v.S. 32996; Polder Mastenbroek, zwischen Zwolle und Hasselt, v. Brakel & v.S. 32961; Nunspeet, Oosteinderweg, v.S. 14064 und Breede weg, v.S. 21065-6.

14. **T. singulare** Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 14. Planta 1–2 dm alta. *Folia* subprasino-viridia, lutescentia, subaraneosa, lobata, petiolis rubroroseis, anguste alatis, nervo mediano rufescente; lobi laterales utrinque 4–5, breves, triangulares, obtusi vel subobtusi, inferiores acuti; superiores et medii dorso \pm recto integro vel parce triangulariter dentato, inferiores dorso argute denticulato, margine inferiore recto; interlobia brevina, saepe atroviolaceo-colorata vel piceo-marginata, non plicata, maculae saepe usque in pagina lorum descendentes; lobus terminalis breve, obtusus 0,5–1 (–2) cm longus, pro parte deltoideus, ceterum \pm hastatus, saepe incisus. *Scapi* floriferi foliis subaequilongi. *Involucrum* obscure viride, subtruncatum; squamae exteriores longe lanceolatae, \pm immarginatae, valde recurvae, in costa \pm canovirides, purpurascens, extremo filiformes. *Calathium* convexulum, usque ad 4 cm diametro; ligulae marginales planae, extus stria atroviolacea notatae; antherae polliniferae; stylus et stigmata obscure sordide viridia vel fuscescentia. *Achenium* stramineum, pyramide inclusa ca. 3,5 mm longum, superne spinulosum, in pyramidem conicam brevem subsensim abiens; rostrum 10 mm longum; pappus albus, 5,5 mm longus.

HOLOTYPUS: Scheveningse Bosjes, 18.4.1972, Hagendijk 1351, v. Soest & Zevenbergen; *isotypus*: Hgd. 1341, 1352; v.S. 53829, 53841; Zb. 1421, 1436, 1437, 1440.

Weitere Fundstellen: Zwartendijk unweit Kampen, Bakker, Groot, de Jongh, Kern & v.S. 38648; De Bilt, v. Brakel (Herb. v.S. 36325); Schagen, v.S. 54568; Warmond, v.S. 32230; Voorschoten, v. Brakel (Herb. v.S. 42110); Wassenaar, Leidse Straatweg, v.S. 42138; Staalduin, v.S. 32039; Epen, Geuldal, Hgd., v.S. 53321 & Zb.

15. *T. sublacerifolium* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 15.

Planta 1–2,5 dm alta, parce araneosa. *Folia* subprasinosviridia, lobata, petiolis pallide roseis vel subviridis, angustis vel angustissime alatis, nervo mediano saepe rufescente; lobi laterales ca. 6, approximati, triangulares vel falcati, a basi saepe lata in apicem sat longum patentem vel subporrigentem protracti, lobi supra medium interdum paulo latiores; lobi patentes vel paulo retroversi, superiores interdum apice erecto, dorso grosse longeque dentati, in interlobiis minute vel non plicatulis abeuntes; lobus terminalis indeterminatus nam profunde incisus, lobulo apicali subacuto vel anguste lingulato. *Scapi* sub involucri araneosi. *Involucrum* 15–16 mm latum, ca. 18 mm longum, sat crassiusculum, fuscoviride; squamae exteriores late lanceolatae vel subovatae, usque ad 4 mm latae, basi subadpressae, recurvatae, \pm marginatae, in costa saepe \pm purpurascens, superiores apicibus obscuris, sub apice interdum bicallosae. *Calathium* usque ad 4 cm diametro, saturate luteum; ligulae marginales extus stria atroviolacea notatae; stylus sicut stigmata laete, raro sordide luteus. *Achenium* maturum ignotum dilute brunneum, spinulosum, in pyramidem sat longam conico-cylindricam abiens; rostrum sat longum; pappus albus 6 mm longus.

HOLOTYPUS: Graftermeer, v. Leeuwen & v. Soest, 9.5.1969, 50711; *isotypus* 50708–10.

Weitere Fundstellen: Terschelling, Hgd. 2643; Ruinerwold, Hgd. 2148, v.S. 55134, Zb. 2152; Uffelte, Hgd. 2187, v.S. 55115, Zb. 2190–2193; Doornspijk, v.S. 42750; Pannerden, Hgd. 1506; Ooij, Hgd., v.S. 53961, Zb. 1560; Zijpepolder, Hgd., v.S. 54724; Schagen, v.S. 54597; Wassenaar, v.S. 14097; Den Haag, v.S. 12484, 16713; Segbroekpolder, v.S. 27310; Wateringen Hgd., v.S. 53293, Zb.; Poortugaal, v.S. 45852 & Zb.; Nieuwenhoorn, v. Brakel, Groot & v.S. 36439; Houtakker, Sahlin & v.S. 53929; Veghel, v. Brakel, Groot & v.S. 36257; Weert, v. Brakel, Groot & v.S. 36377.

Belgien: Emblen, De Langhe 91/1956.

16. *T. vastisectiforme* Hagendijk, v. Soest & Zevenbergen, *spec. nov.*, fig. 16.

Planta 1–2,5 dm alta, modice araneosa. *Folia* lutescenti-subprasino-viridia, lobata, petiolis purpureis, subalatis vel alatis, nervo mediano parte inferiore rufo-purpureo. Lobi laterales (4–)5–6, triangulares, patentes, sat breves, subobtusius, margine inferiore saepe parce dentato; lobi superiores valde approximati, dorso integro, raro parcissime dentato, inferiores dorso denticulato vel parce dentato; interlobia brevia, saepe lata, non raro grosse dentato; lobus terminalis integer, raro subincisus vel breviter dentatus, saepe elongatus, usque ad 4 cm longus, valde obtusus, lobulis basalibus paulo retroversis. *Scapi* sub involucri araneosi. *Involucrum* subobscurum viride, 12–14 mm latum, 13 mm longum; squamae exteriores anguste ovatae vel lanceolatae, recurvae, \pm immarginatae, interdum callosae. *Calathium* saepe paulo radians, usque ad 35 mm diametro, luteum; ligulae marginales planae, extus stria atroviolacea notatae. Antherae polliniferae; stylus et stigmata sat obscura. *Achenium* dilute brunneum, pyramide inclusa 4 mm longum, superne spinulosum, in pyramidem subcylindricam sat longam (0.6 mm) abrupte abiens; rostrum 10 mm longum; pappus albus, 6 mm longus.

HOLOTYPUS: Den Haag, Koninginnegracht gegenüber Raamweg, 26.4.1943, v. Soest 14520.

Weitere Fundstellen: Rode Klif, v. Brakel & v.S. 33134; Oudemirdum-Rijs, v. Brakel & v.S. 33084; 't Soerel, v.S. 27515–6; Nunspeet, v.S. 27146, 27199; Beverwijk, v.S. 32365; Castricum, v.S. 32252; Purmer, bei Ilpendam, Haglund & v.S. 21086; Hoofddorp, Kruisweg, Haglund & v.S. 20867; Wassenaar, Landscheidingsweg, Hgd., v.S. 53227 & Zb.; Delfgauw, v.S. 18192; Kesseleijk, v. Brakel, Groot & v.S. 36351.

Schliesslich ist es von Nutzen zwei Abarten zu beschreiben.

T. adamii Claire f. *acutilobum* Hagendijk, v. Soest & Zevenbergen: lobus terminalis acutus: TYPUS: Veghel, v. Brakel, Groot & v. Soest 36079. Diese seltene Form ist durch intermediaire Formen mit der typischen Form verbunden.

T. excellens Dahlst. f. *dentatum* Hagendijk, v. Soest & Zevenbergen: lobi laterales grosse dentati, interdum grosse incisi: TYPUS: Haart, Hagendijk 2956–7, v. Soest 54979, Zevenbergen 2057–9. Diese ziemlich seltene Form ist durch intermediaire Formen mit der typischen Form verbunden.

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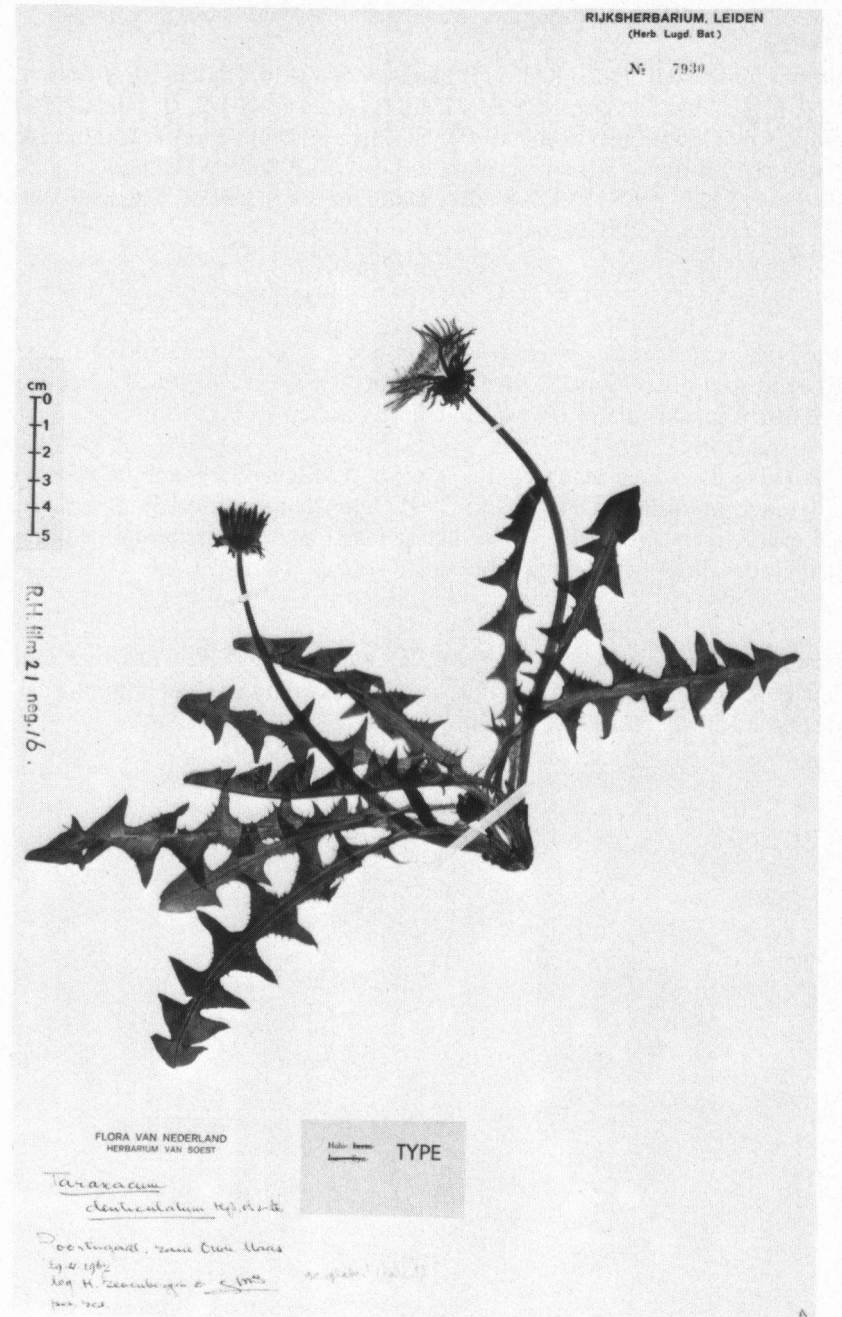


Fig. 1. *T. denticulatum*, Holotypus.

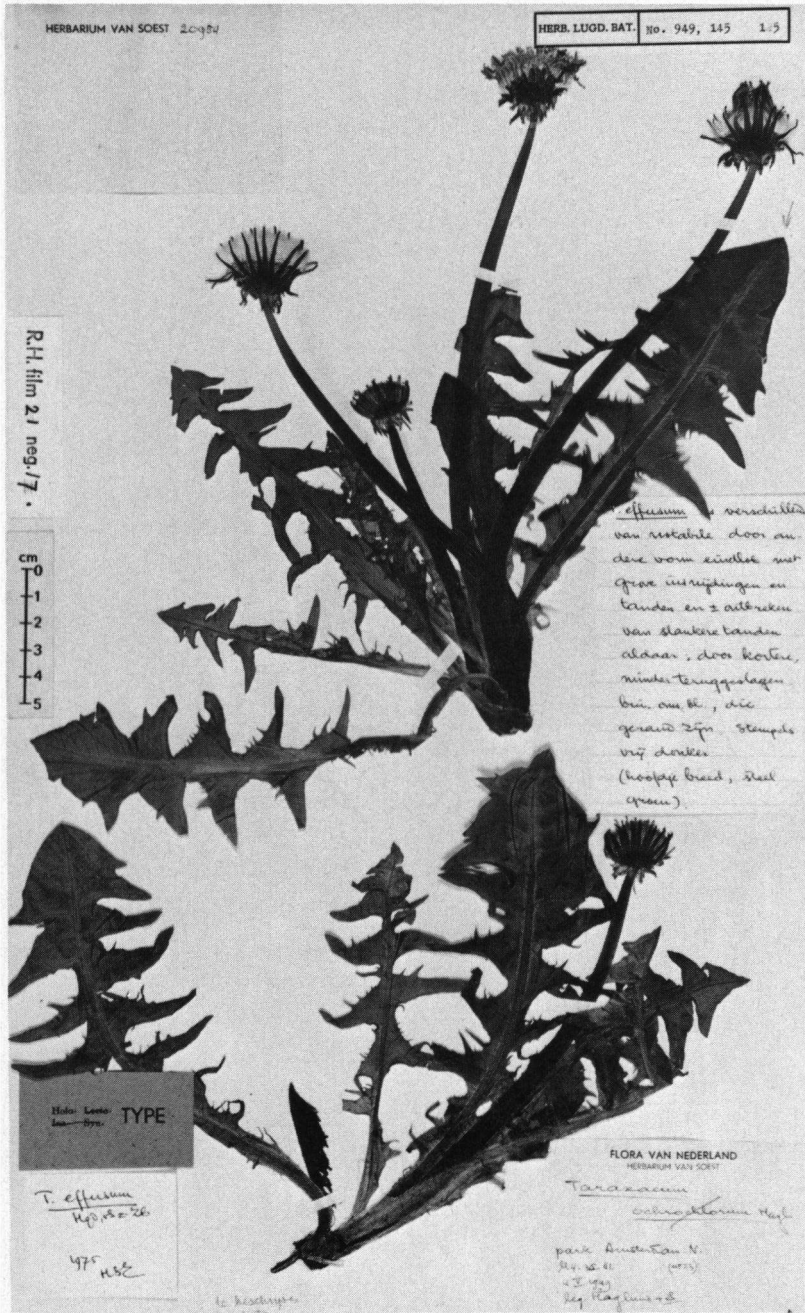


Fig. 2. *T. effusum*, Holotypus.

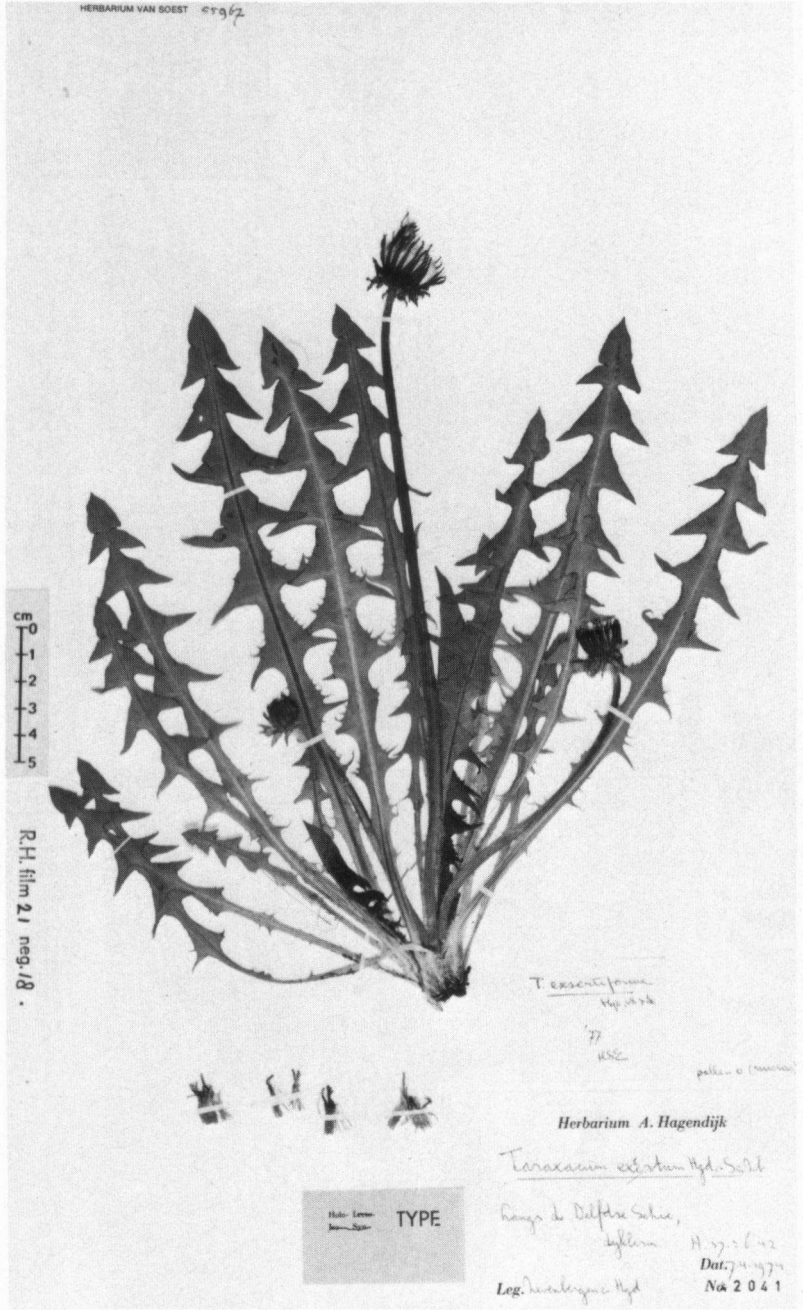


Fig. 3. *T. exsertiforme*, Holotypus.

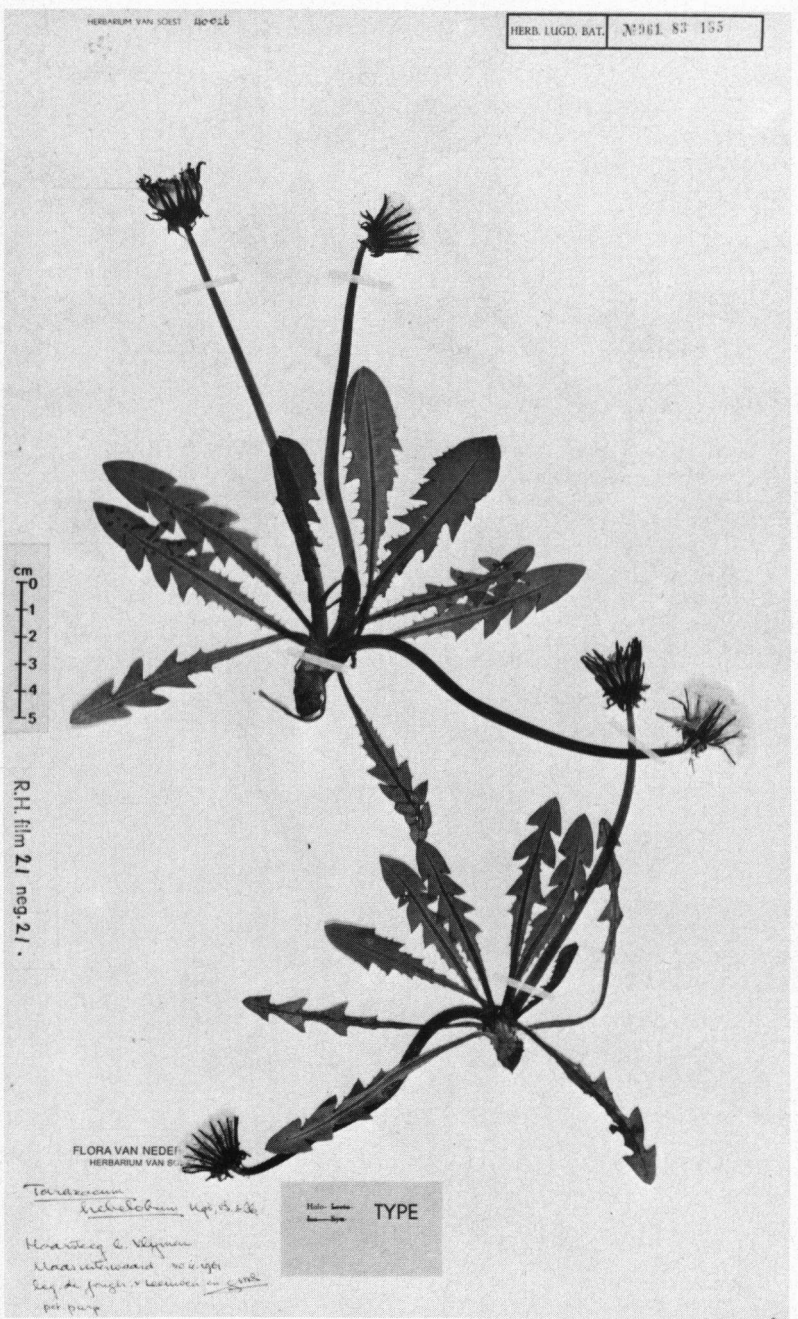


Fig. 4. *T. hebelobum*, Holotypus.

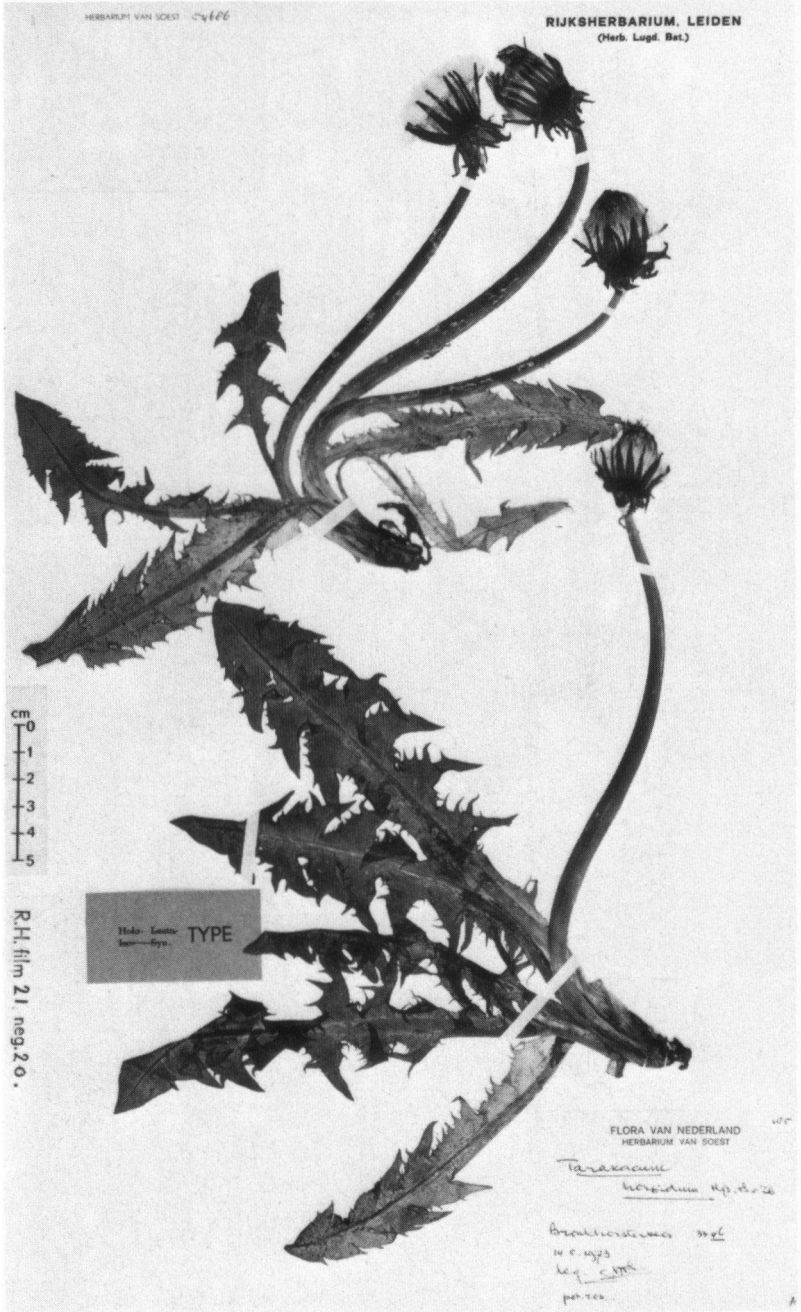


Fig. 5. *T. horridum*, Holotypus.

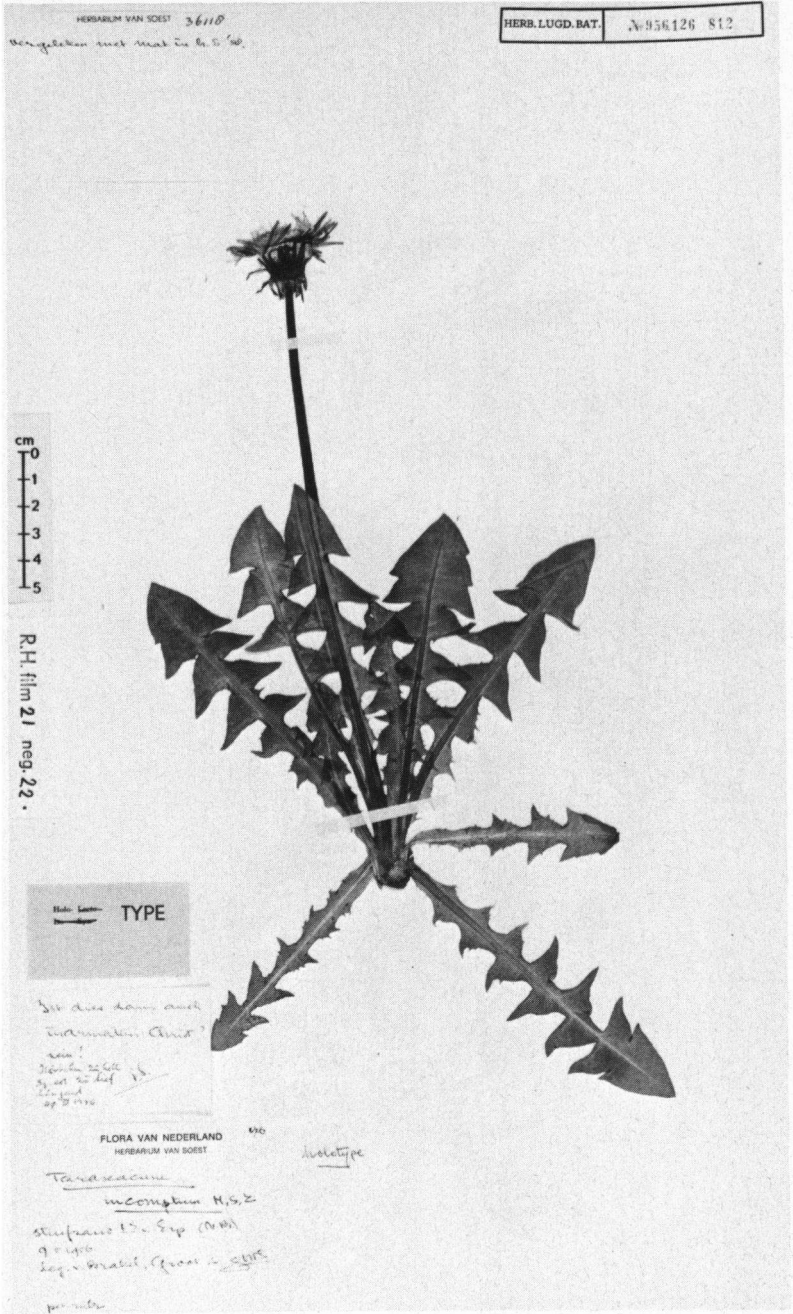


Fig. 6. *T. incomptum*, Holotypus.

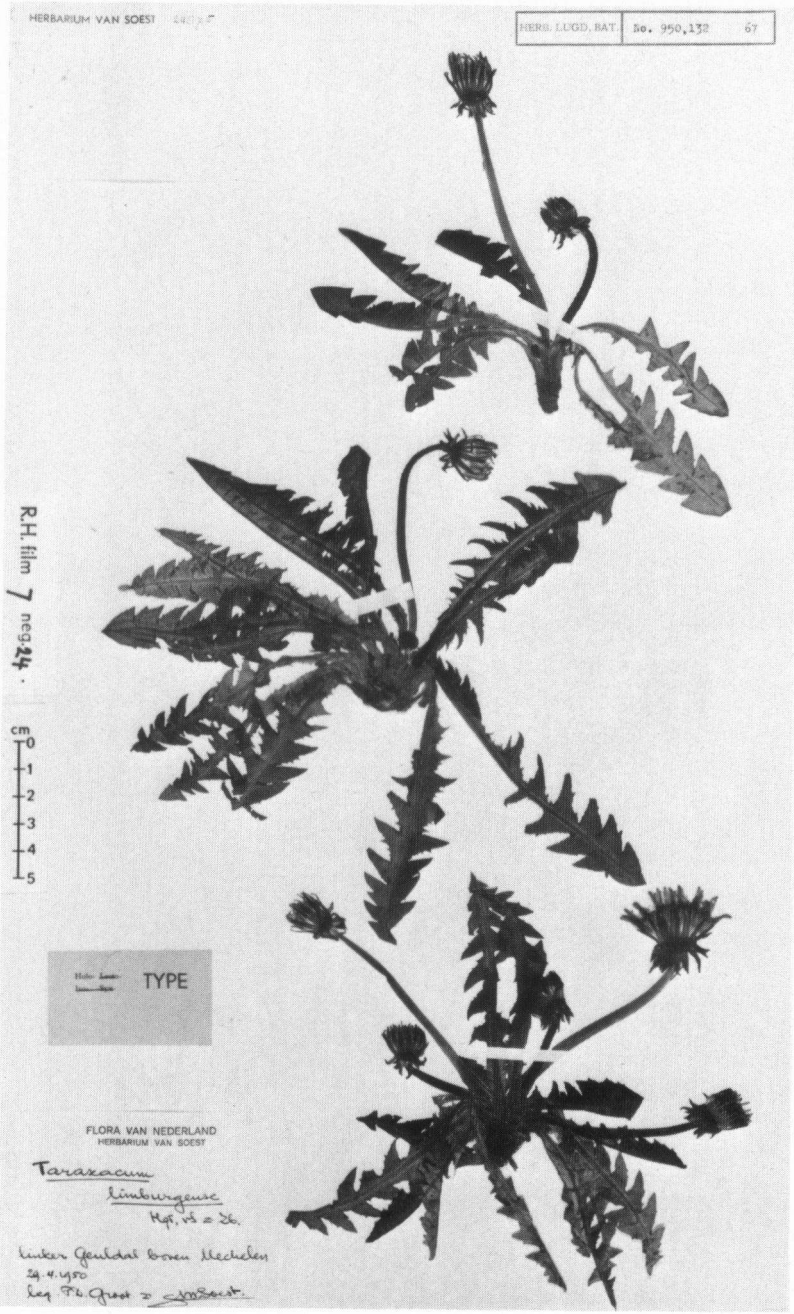


Fig. 7. *T. limburgense*, Holotypus.

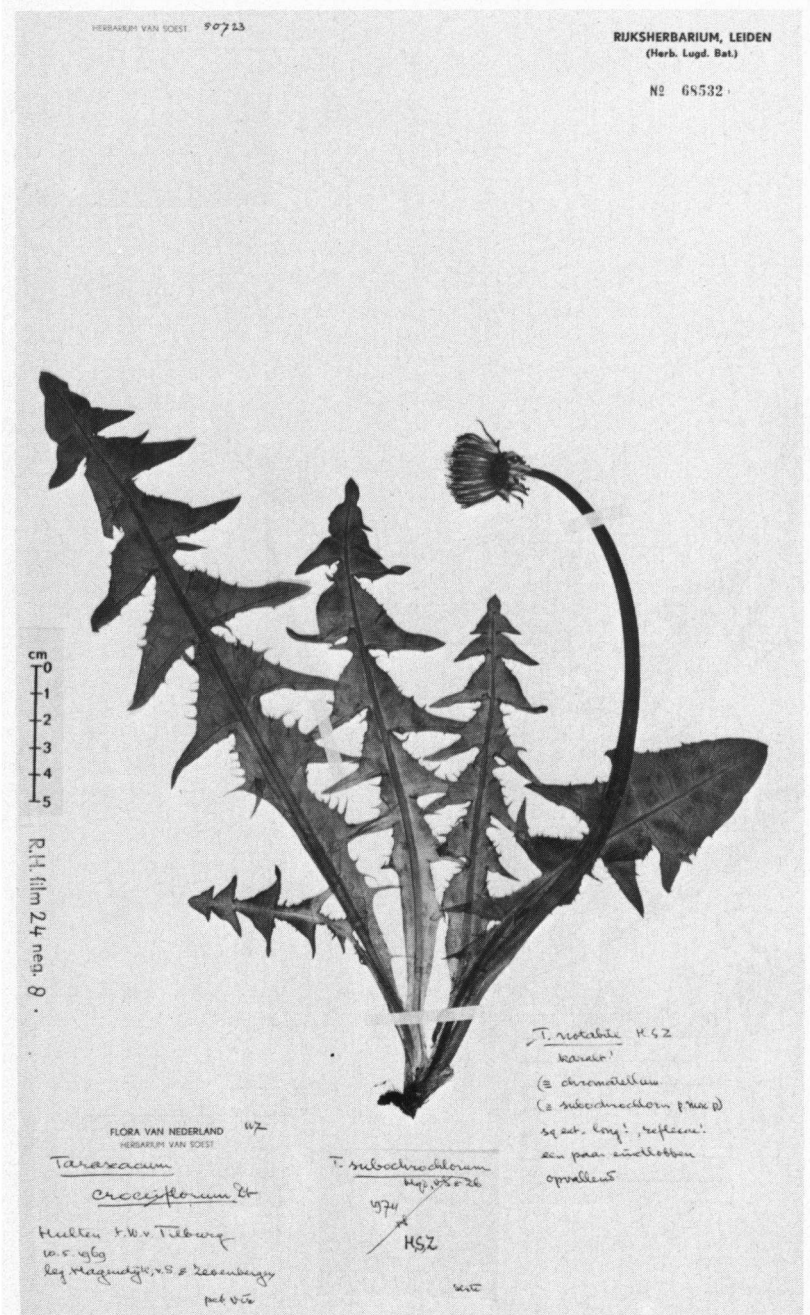


Fig. 8. *T. notabile*.

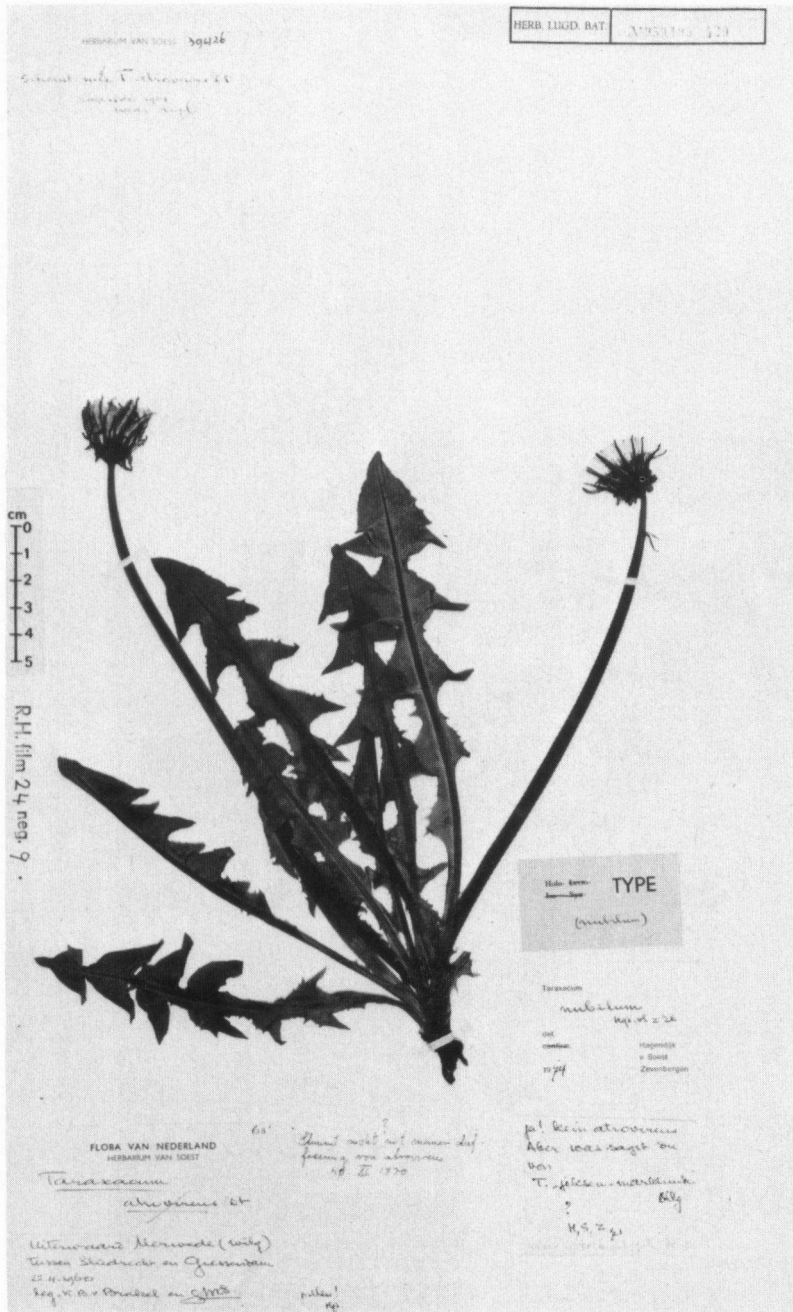


Fig. 9. *T. nubilum*, Holotypus.

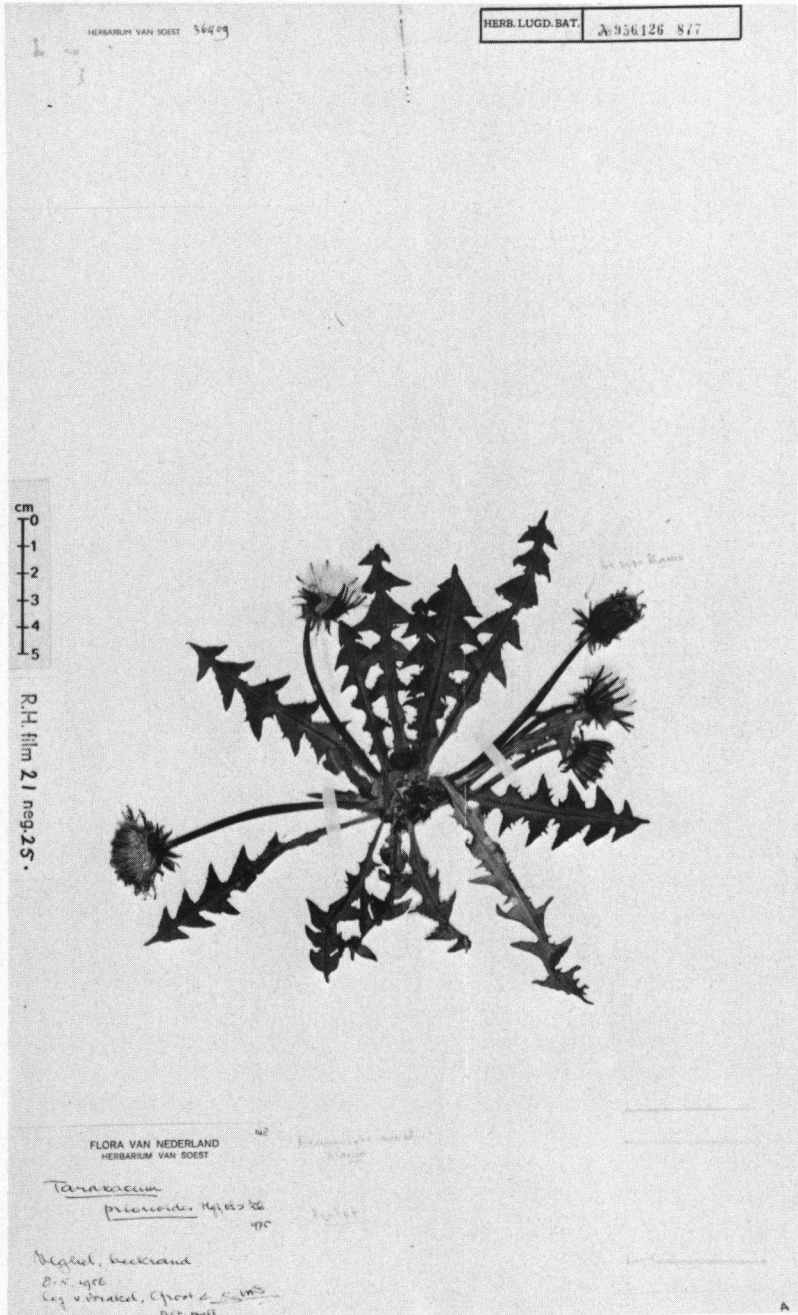


Fig. 10. *T. prionoides*, Holotypus.

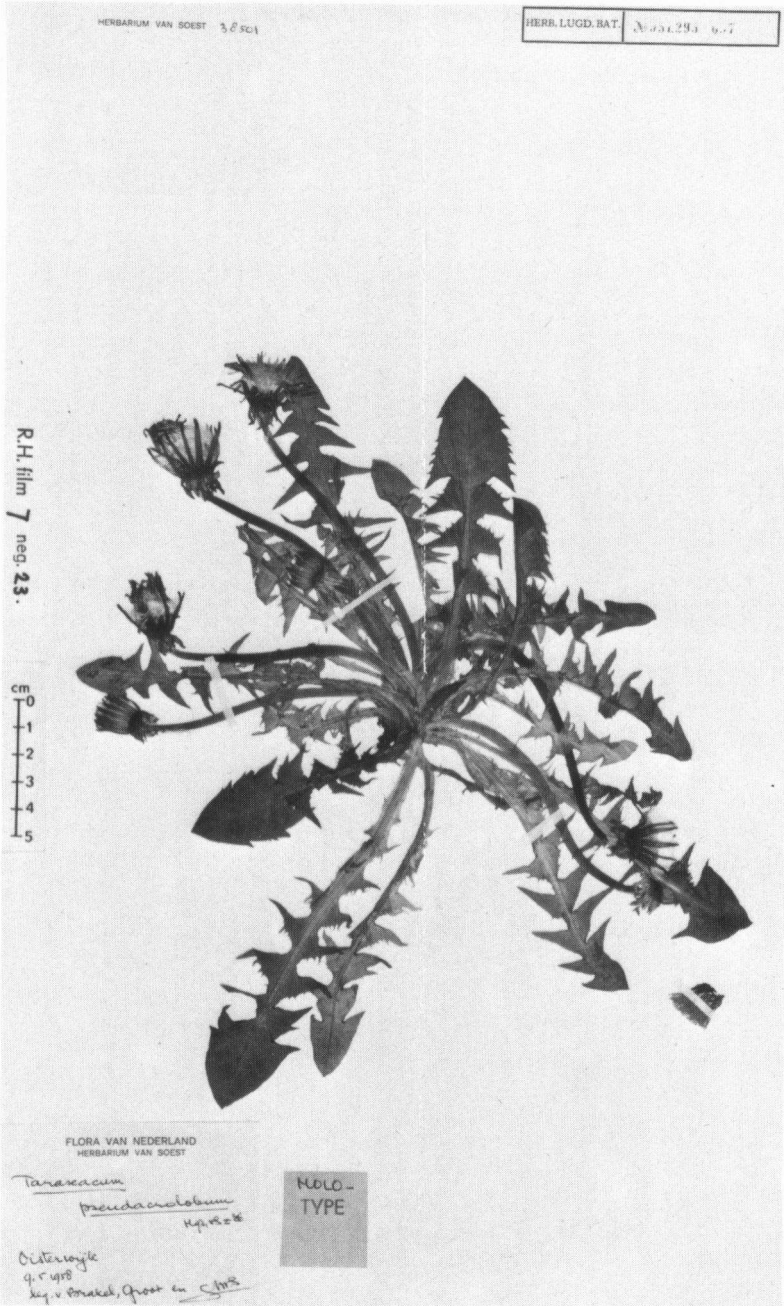


Fig. 11. *T. pseudacrotobum*, Holotypus.

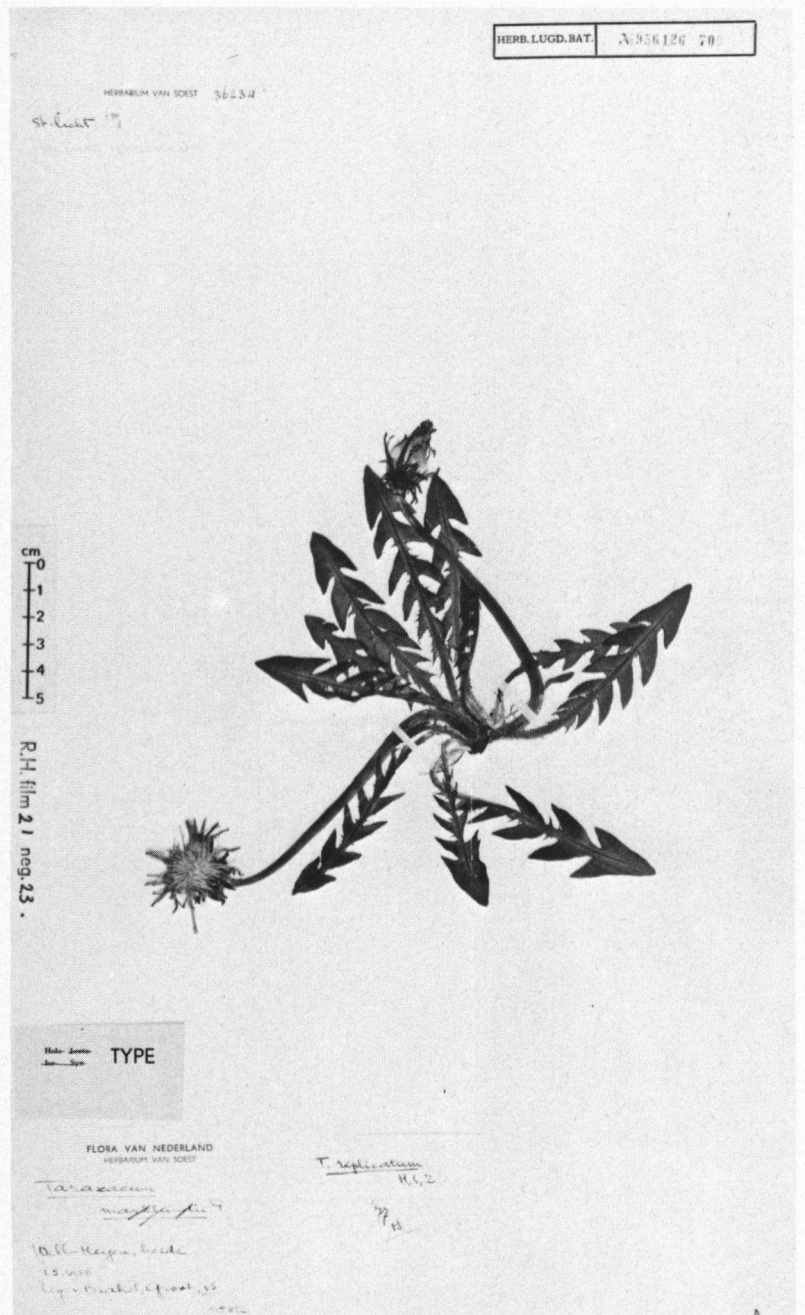


Fig. 12. *T. replicatum*, Holotypus.



Fig. 13. *T. rigens*, Holotypus.

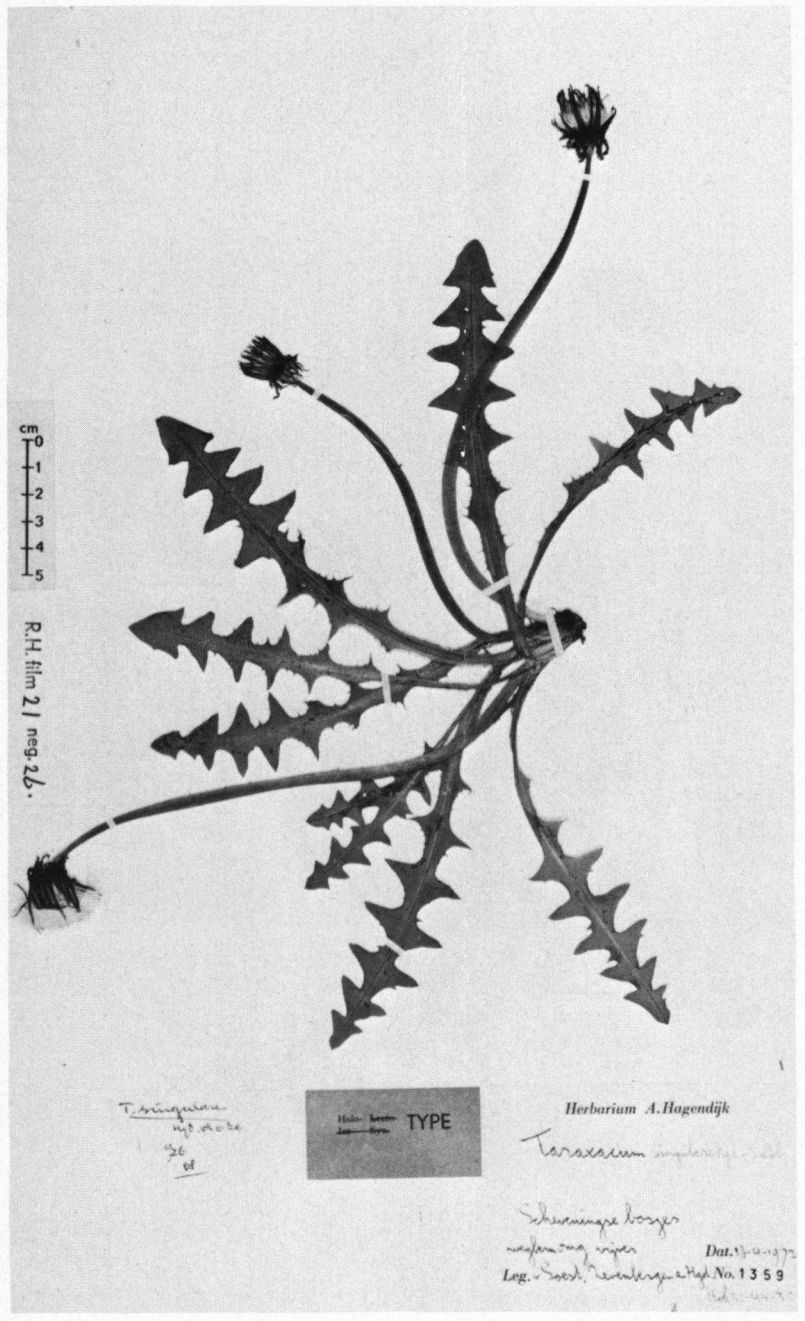


Fig. 14. *T. singulare*, Holotypus.



Fig. 15. *T. sublacrifolium*, Holotypus.



Fig. 16. *T. vastisectiforme*, Holotypus.