

NEUE TARAXACUMARTEN DER NIEDERLANDE. IV

A. HAGENDIJK¹, J. L. VAN SOEST² und H. A. ZEVENBERGEN³

SUMMARY

Fourteen new species belonging to *Taraxacum* sect. *Vulgaria* Dahlst. are described and their area of distribution is given: *T. angulare*, *T. arenarium*, *T. armatifrons*, *T. ekmaniiforme*, *T. flandricum*, *T. lancidens*, *T. nitidum*, *T. pachymeroides*, *T. planoides*, *T. recessum*, *T. retusum*, *T. texelense*, *T. tortuosum* and *T. unguifrons*.

T. angulare Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 1*
Planta (1,5-) 2-3 dm alta, parce araneosa, Folia gramineo-viridia, lobata, in petiolis longum (folio usque ad dimidio parte) sine limine sensim descendencia; petiolis roseis, inferne angustis, superne late alatis; nervo mediano pallido vel fusco; lobi laterales utrinque 4-6, superiores triangulares, patentes, usque ad 3 cm longi, subobtusii, dorso recto vel convexo, in lobis superioribus ± integro, in lobis intermediis et inferioribus dentato vel denticulato; margine inferiore recto vel saepe subconvexo, integro vel basi 1 dente grosso minuto. Lobi inferiores ± lineari, pro parte dentiformes. Lobus terminalis hastatus vel deltoideus, 1-4 cm longus, saepe polygonius vel grosse triangulariter dentatus obtusus, non raro mucronulatus, interdum apice breviter contracto. Scapi sub involucri araneosi, floriferi foliis ± superantes. Involucrum 18-20 mm longum et latum, obscure viride. Squamae exteriores late lanceolatae, usque ad 3,5 mm latae, anguste viridi-marginatae, in costa canovirides, saepe purpurascens. Calathium planum, radians, usque ad 5 cm diametro. Ligulae marginales extus stria atroviolacea notatae; antherae polliniferae; stylus et stigmata obscure fusciscentia. Achenium maturum ignotum. E Sectione *Vulgariorum* Dahlst.

HOLOTYPUS: Belgien: Tal des Demers, Stokrooi, 4.5.1971, Vannerom & v. Soest 55712.

In den Niederlanden: Oud-Alblas, Nieuwe Boezem, v.B., Gr. & v.S. 38548; westlich Werkendam, Biesboshaven, v.B., Gr. & v.S. 30586; Leerdam-Beesd, Sahlin, Sältin, v.S. 45900 & Zb.; Schagen, mit äusserst viel *Bellis perennis* L., v.S. 54567, 54588.

Abkürzungen:

v.B.: K. B. van Brakel

v.S.: J. L. van Soest

Gr.: P. D. Groot

Zb.: H. A. Zevenbergen

Hgd.: A. Hagendijk

¹ A. Hagendijk, Oudelandse dijk 33, Abbenbroek.

² J. L. van Soest, Van Soutelandelaan 35. 's-Gravenhage.

³ H. A. Zevenbergen, van Vredenburgweg 152b, Rijswijk.

T. arenarium Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 2.*
 Planta 2–3 dm alta, basi paulo vel subaraneosa. Folia subprasino-viridia saepe lutescentia, paulo araneosa, lobata, petiolis anguste vel sublatale alatis, roseolis, nervo mediano pallido. Lobi laterales utrinque 4–6, patentes, triangulares, superiores integri vel raro subdenticulati, dorso \pm recto, interdum grosse inciso vel sublobulato, margine inferiore saepissime convexo, inferiores conspicue denticulati vel dentati, interdum dorso convexo. Interlobia inter lobos superiores brevissima, ceterum sat brevia, ca. 5 mm lata, \pm plicatula, fusco-marginata. Lobus terminalis deltoideus vel late hastatus, 1–3 cm longus, integer vel raro grosse incisus, obtusus vel subobtusus, interdum mucronulatus. Scapi parce araneosi, floriferi foliis conspicue superantes. Involucrum subturbinatum, sat angustum, ca. 14 mm longum, sat obscure viride. Squamae exteriores recurvae, laceolatae, 2–3 mm latae, inconspicue angustissime marginatae, in costa \pm canovirides. Calathium convexum, (3–)4–5 cm diametro, luteum. Ligulae marginales extus stria atro-purpurea vel-violacea notatae; antherae vacuae vel polliniferae; stylus et stigmata sat obscure fusciscentia. Achenium maturum ignotum. E sectione *Vulgariorum* Dahlst.

HOLOTYPUS: Gelderland: 't Soerel, zwischen Nunspeet und Epe, 10.5.1964, v. Soest 42684; *Isotypus*: Herb. Hagendijk 2478, Zevenbergen 2514, v. Soest 42659, 42790, 43394; gleichfalls, mit Pollen: v.S. 27548, 42792.

Weitere Fundstellen: Zwartendijk unweit Kampen, D. Bakker, Gr., de Jongh, Kern & v.S. 38647; Junner Koeland, Oosterveld 1975-83 (Herb. Rijksinstituut v. Natuurbeheer); zwischen 't Soerel und Klein Soerel. v.S. 42738; Doornspijk, Klaterweg, v.S. 16586 und Kerkdijk, v. S. 42771; Nunspeet, v.S. 27150, 27189; Huize Hulshorst, v.S. 28650; Goor-Markelo, v.S. 32220; Darthuizen, v.B. & v.S. 28694, 28858, 29018; Rhynauwen unweit Utrecht, v.S. 44001-2; westlich Werkendam, Biesboshaven, v.B., Gr. & v.S. 38490; Wateringen, de Zwet, Gr. (Herb. v.S. 37597); den Haag, Koninginnegracht, v.S. 50037; Hoogvliet, Aveling, Hgd. 718; Staelduin, v.S. 32047; Breda, Mastbos, Hgd. & Zb. 300; Moergestel, Hijzen, Hgd., v.S. 50747 & Zb.; nördlich Uffelte, Hgd., v.S. 55122 & Zb.

T. armatifrons Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 3.*
 Planta 1–2 dm alta, araneosa. Folia obscure subprasino-viridia, lobata, petiolis interdum alatis, ruforoseis, nervo mediano usque ad apicem rufescente. Lobi laterales utrinque 4–6, patentes vel paulo retroversi, triangulares, usque ad 3 cm longi, acuti, mucronulati, dorso \pm recto, saepissime dense subulato-dentata, margine inferiore \pm recto, interdum \pm denticulato. Interlobia valde dentata, interdum atroviolaceo-colorata, maculae usque in paginam loborum descendentes, angulis loborum plicatis, vulgo \pm fusco-marginatis. Lobus terminalis in folia exteriori anguste, ceterum late deltoideus, usque ad 3 cm longus, valde grosseque dentatus et denticulatus, subacutus, lobulo apicali margine inferiore integro. Scapi sub involucre araneosi, floriferi foliis subaequilongi. Involucrum 13–15 mm longum, sat obscure viride, basi turbinatum. Squamae exteriores recurvae, late lanceolatae, ca. 10 mm longae, anguste sed conspicue

albo- vel roseolo-marginatae, saepe ciliolatae, in costa cano- vel rufescenti- virides. Calathium usque ad 4 cm diametro, \pm radians, luteum. Ligulae marginales extus stria atropurpurea notatae; antherae polliniferae; stylus et stigmata virescentia. Achenium stramineum, pyramide inclusa 4–4,5 mm longum, superne breviter spinulosum, basi laeve, in pyramidem 0,3–0,4 mm longam abrupte abiens; rostrum 9 mm longum; pappus albus, 5,5 mm longus.

HOLOTYPE: Noord-Brabant: Elzendorp, auf Sandboden, 9.5.1956, v. Brakel, Groot & v. Soest 36101.

Weitere Fundstellen: Rode Klif, v.B. & v.S. 33124; Oranjewoud, v.B. & v.S. 33144; Stokkum, v.S. 55300; Doornspijk, v.S. 39418; 't Soerel, v.S. 27507, 36499, 42785; Otterlo-Hoenderlo, v.S. 12383; Kampen, Zwartendijk, Hgd. 850, 851, v.S. & Zb.; Millingen, Waiboerhoeve, Hgd., v.S. 53971 & Zb.; Waalsdorp, v.S. 27561; Waalsdorperweg, v.S. 12261; Nieuwe Scheveningse Bosjes, v.S. 25124; südlich Vlist, Hgd., v.S. & Zb. 825; Veghel, v.B., Gr. & v.S. 36084, 36256; Broekhuizen, v.B., Gr. & v.S. 37134; Roggel, v.B., Gr. & v.S. 36356; Swalmen, an verschiedenen Stellen, Gr. & v.S. 24842, 24890, 25185.

Auch in Belgien: Profondeville-Rivière, Lawalrée 5762, v.S. 32833; Chiny Lawalrée 5932; Aiseau, Ridelle (Herb. Malonne).

Die Art zeigt Verwandtschaft mit *T. trigonum* Christ., welche nie Färbung der Interlobien hat und, ins Besondere, viel längere, zurückgerichtete Aussenhüllblätter zeigt. Die Endlappen bei *T. armatifrons* sind meistens reichlicher gezähnt und gezähnt.

T. ekmaniiforme Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 4.* Planta robusta, 1–3 dm alta, ubique araneosa. Folia obscure viridia, lobata, petiolis viridis raro subroseolis, (pro parte late) alatis. Lobi laterales utrinque 4–6, patentes, saepe valde approximati, triangulares, usque ad 4 cm longi, peracuti, dorso saepe valde convexo, fere semper subulato-dentato, raro grosse dentato, margine inferiore saepe 1 dente subulato producto. Interlobia brevia, lata, subulato-dentata, plicata. Lobus terminalis saepissime late hastatus vel subdeltoideus, usque ad 6 cm longus, usque ad 7 cm latus, obtusus, saepe mucronulatus, saepissime pro parte multidenticulatus, interdum etiam repetitoincisus vel triangulariter dentatus. Involucrum crassiusculum, usque ad 16 mm longum, 20–25 mm latum, sat obscure viride. Squamae exteriores valde recurvae, late lanceolatae, anguste marginatae, in costa canovirides; squamae intermediae saepe ovatae. Calathium convexum, radians, usque ad 5 cm diametro, obscure luteum. Ligulae marginales planae, extus stria atroviolacea notatae; antherae polliniferae; stylus et stigmata obscure fuscescentia. Achenium rufo-stramineum, pyramide inclusa ca. 4 mm longum, superne dense breviterque spinulosum, ceterum rugosum, in pyramidem conicam brevem (0,2 mm) abrupte abiens; rostrum 8–9 mm longum; pappus albus, 6,5–7 mm longus.

HOLOTYPE: Limburg: westlich Geulhem, 30.4.1950, Groot & v. Soest 24766; *Paratypus fructifer*: Gelderland: Culemborg, 18.5.1939, v. Soest 12283.

Weitere Fundstellen: Akkerwoude, Broekpollen, v. d. Ploeg (L); Mussel-

kanaal v.B. & v.S. 33234; Doetinchem, Kruisberg, v.B., Gr. & v.S. 36015; nördlich Hoofddorp, Haglund & v.S. 20831; Jutphaas, Laagraven, v.B. (Herb. v.S. 27212); Lent, Gr. & v.S. 12428; Slijk Ewijk-Herveld, Gr. & v.S. 12427; den Haag, Wittebrug, v.S. 42083; Benoordenhoutse Weg, v.S. 43899; Voorne, Nieuwenhoorn, v.B., Gr. & v.S. 36436; Ulvenhout, Cauwelaarse beek, v.S. 18057; Oosterhoutse Bos, Gr. & v.S. 12426; Veghel, v.B., Gr. & v.S. 36267; östlich Neerloon, Hgd. 1405, v.S. & Zb.; Best, v.B. & v.S. 39437; Mechelen (L), Gr. & v.S. 25132.

Die Mehrzahl der Fundstellen bezieht sich also auf den südlichen Teil des Landes.

Die Art ist auch in Nord-Frankreich nachgewiesen: Seine-et-Marne: Fort de Chelles, Didier 1957/47 (Herb. v.S. 441414); Seine-et-Oise: Sartrouville, Debray 9359 (Herb. Didier 1958/207; Herb. v.S. 39744).

T. flandricum Hagendijk, v. Soest & Zevenbergen, *spec. nov.*

Fig. 5.

Planta 1–3 dm alta. Folia luteoviridia, lobata, parce araneosa, petiolis subalatis, roseis, nervo mediano pallido. Lobi laterales utrinque 4–6, anguste triangulares vel lingulati, saepe in parte superiore paulo dilatati, usque ad 25 mm longi, saepe valde incisi, patentes vel interdum paulo erecti, plerumque subobtusius; dorso (in interlobiis abeuntibus) dentato vel non dentato, saepe 1–3 plo inciso; margine inferiore \pm recto, interdum 1 dente munito. Interlobia sublobulata, dentata, raro fusco- vel violaceo-marginata, plicatula. Lobus terminalis sagittatus, usque ad 3 cm longus, lobulis basalibus patentibus acutis vel obtusis, interdum apice rotundatis, supra lobulos basalis saepe breve inciso supra incisuram margine rotundato, lobulo apicali anguste vel late lingulato, obtuso vel raro subacuto, interdum mucronulato, Scapi paulo araneosi, sub involucre conspicue araneosi. Involucre subturbinatum, ca. 17 mm longum, sat obscure viride, saepe purpurascens; squamae exteriores patentes, apice recurvae, ovatae vel late lanceolatae, angustissime marginatae, in costa interdum purpurascens, non raro bicallosae. Calathium radians, planum, luteum, ca. 4,5 cm diametro. Ligulae marginales extus stria canoviolacea notatae; antherae polliniferae; stylus et stigmata virescentia. Achenium stramineum, pyramide inclusa 4,1–4,3 mm longum, superne spinulosum, in pyramidem subcylindricam 0,6 mm longam abrupte abiens; rostrum 13–14 mm longum; pappus albus, 6 mm longus.

HOLOTYPUS: Belgien: Walem, Tal der Grote Nethe, 13.5.1956, de Langhe 86-1956, v. Brakel & v. Soest 36296; **Isotypus:** de Langhe 39-1956; **Locotypus:** de Langhe 68-1956, 109-1957, 111-1957; v. Soest 36302-3; Pelgrims (Herb. P., Herb. v.S. 55389).

Weitere Fundstellen:

Belgien: Emblen, Tal der Kleine Nethe, de Langhe 86-1956, v.B. & v.S. 35921; Viersel, de Langhe 85-1956 & v.S.; Sennegat, de Langhe 71-1958; Dijle, de Langhe 73-1958; Stokrooi, Tal des Demers, Vannerom & v.S. 53367; 1 km östlich Gentbrugge, Sahlin 62090.

Niederlande: Houtakker, unweit Tilburg, Hgd., v.S. & Zb. 632; Moergestel,

Hgd., v.S. & Zb. 445; Veghel, v.B., Gr. & v.S. 36411; Groote Peel, Hgd., v.S. 53351-2 & Zb.; westlich Werkendam, Biesboshaven, v.B., Gr. & v.S. 38584; westlich Wissekerke, Beeftink, Sahlin & v.S. 50636; 1 km westlich Tinte (Voorne), Lodderlandse dijk, Beeftink (Herb. Yerseke); Almkerk, Cornse Boezem, Oosterveld 151 (Herb. Rijksinstituut v. Natuurbeheer); Wageningen, Veenkampen, Muller (Herb. M.); Elburg, Goor, Haglund & v.S. 20921 (*Paratypus fructifer*); nordöstlich Vorden, Gr. & v.S. 50818-9. Frankreich: Ardenne: vallée de l'Aisne, Voncq, Duvigneaud 63F.233; id. Vrivy, Duvigneaud 63F.241.

Offenbar hat diese Art eine südliche Verbreitung. Sie zeigt in Gestalt gewisse Ähnlichkeit mit *T. lacerifolium* Hagl.; diese aber hat dunkelgrüne Blätter, dunklere Narben, meistens schmalere Aussenhüllblätter, die unberandet und stärker zurückgerichtet sind.

T. lancidens Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 6.*
 Planta robusta, 1,2–2,5 dm alta. Folia subprasinoviridia, subglabra, lobata, petiolis (nervique mediano parte inferiore roseo-purpureo) angustis. Lobi laterales utrinque 4–5, patentes, anguste triangulares vel sublineares, usque ad 4 cm longi, subacuti, dorso grosse dentato, dentes usque ad 10 mm longi, lanceolati et saepe repetito-sublobulato, in interlobiis abeuntibus; margine inferiore saepissime recto, integro vel parce dentato. Interlobia saepe usque ad 3 cm longa, 1 cm lata, saepe sat dense grosseque dentata. Lobus terminalis deltoideus vel late sagittatus, ca. 1,5–2 cm longus, saepe triangulariter dentatus, in apicem sublingulatem contractus, subacutus vel subobtusus. Scapi sub involucre modice araneosi, floriferi foliis subaequilongi vel paulo superantes. Involucrum latum (ca. 20 mm), ca. 15 mm longum, obscure viride. Squamae exteriores ± recurvae, anguste ovatae vel lanceolatae, usque ad 12 mm longae, ca. 3 mm latae, anguste albo-marginatae, in costa canovirides. Calathium radians, ca. 4 cm diametro, luteum. Ligulae marginales extus stria atroviolacea notatae; antherae polliniferae; stylus et stigmata obscure fusciscentia, Achenium stramineum, pyramide inclusa 4 mm longum, superne dense breviterque spinulosum, ceterum rugosum, basi laeve, in pyramidem conico-cylindricam 0,7 mm longam abrupte abiens; rostrum 10–11 mm longum; pappus albus, 6 mm longus.

HOLOTYPUS: Zuid-Holland: den Haag, Klein Zwitserland, v. Soest 53819; *Isotypus*: Herb. Hagendijk 1319, Herb. Zevenbergen 1702, Herb. v.S. 53818, und in der Nähe v.S. 35641; *Paratypus fructifer*: Stokkum, v. Soest 32189.

Weitere Fundstellen: Diepenheim, v.S. 32126; Goor, Groote Whee, v.S. 32079, 32093; Durgerdam, v. Leeuwen & v.S. 50670; Hoofddorp, Haglund & v.S. 21023; Woerden, polder Kattenbroek, v.S. 32010; Reeuwijk, v.S. 28633; Wassenaar, Maaldrift, v.S. 14134; den Haag, Ruychrocklaan, v.S. 20703 und Raamweg, v.S. 28992; Leidschendam, Zijdepolder, v.S. 52196; Hoek van Holland, v.S. 28957; Brakel, v.S. 55525.

Im Auslande:

England: Hampton Court Green, v.S. 24730; Surrey, Pyrford, Alston 11317

(Herb. v.S. 34704); W. Kent, N. Dartford, Alston 11317 (Herb. v.S. 34723).
Deutschland: Nieder-Sachsen: Harburg, Bendesdorf, Sahlin (Herb. S).

T. nitidum Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 7.*
Planta 1–2(–3) dm alta, robusta, basi araneosa. Folia sat obscure prasinoviridia, petiolis (nervique mediano saepe usque ad apicem intense nitide purpureo-colorato) alatis. Lobi laterales in folia exteriori utrinque ca. 3, in folia interiori et medii usque ad 7, conspicue patentes, anguste triangulares vel vulgo lingu-lati vel lineares, in apicem saepe dilatatum protracti, obtusi vel subacuti, dorso saepe longe dentato, non raro sublobulato, margine inferiore interdum denticulato. Interlobia brevia vel sat longa (usque ad 1,5 cm), sat angusta (3–5 mm), grosse dentata vel sublobulata, saepe intense atrovioleaceo-colorata. Lobus terminalis in folia exteriora et media breviter sagittatus vel deltoideus, 8–20 mm longus, saepe incisus, obtusus vel subobtusus. Scapi araneosi, floriferi foliis aequilongi. Involucrum ca. 18 mm longum, crassiusculum; squamae exteriores 10–12 mm longae, lanceolatae, recurvae, anguste vel non marginatae, in costa saepe rufo-purpurascens, extremo lineares saepe filiformes. Calathium convexum, radians, usque ad 5 cm diametro, saturate luteum. Ligulae marginales planae, extus stria canopurpurea notatae, summis aurantiae; antherae polliniferae; stylus et stigmata fuscescentia. Achenium dilute brunneum, pyramide inclusa 3,5 mm longum, superne dense spinulosum, ceterum rugosum, in pyramidem perbreve (0,2 mm) abrupte abiens; rostrum 12 mm longum; pappus albus, 6 mm longus.

HOLOTYPE: Zuid-Holland: Voorburg, Westvlietweg, 10.4.1974, v. Soest 54950; *Isotypus*: Herb. Hagendijk 2233, Herb. Zevenbergen 2020, 2333; auch Herb. Richards, Sahlin, Øllgaard.

Weitere Fundstellen: zwischen Brakel und Zuilichem, v.S. 55518; Scheveningse Bosjes, Hgd. 1334, 1336, 1338, v.S. 53849, Zb. 1419; Scheveningen, v.S. 53286; den Haag, Wittebrug, v.S. 42099; Waalsdorp, v.S. 28620; Wassenaar, Landscheidingsweg, Hgd. 982, v.S. & Zb.; Hazerswoude, Sahlin & v.S. 54554; Goes, Gr. & v.S. 27191; Lage Zwaluwe, v.S. 55058; Hoekske, v.S. 55073, 55077; Mariapeel, Hgd., v.d. Hammen, v. Leeuwen, Oosterveld, Sahlin, v.S. & Zb. 2410; Broekhuizen, Schuitwater, Hgd. 2446 und dieselben.

Von *T. obliquilobum* Dahlst. unterscheidet diese Art sich einfach durch dunklere Farbe der Blätter und, ins Besondere, durch die äusserst kurze Fruchtpyramide, welche bei *T. obliquilobum* etwa 0,75 mm lang ist.

T. pachymeroides Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 8.*
Planta 1–2,5 dm alta. Folia subprasinoviridia, saepe lutescentia, lobata, petiolis pallidis vel roseis, angustis, nervo dorsali subaraneoso. Lobi laterales utrinque 3–4, superiores valde approximati, late triangulares, superiores obtusi, inferiores acuti, usque ad 3 cm longi, dorso in lobis superioribus convexo integro, in lobis inferioribus recto argute dentato; margine inferiore convexo integro. Interlobia brevissima, lata, plicata. Lobus terminalis late lingulatus, obtusus, usque ad 6 cm longus, integer vel interdum 1 dente triangularibus munito.

Scapi sub involuacro araneosi, floriferi foliis superantes. Involucrum basi rotundatum, ca. 15–2 cm longum et latum, obscure olivaceo-viride; squamae exteriores late lanceolatae vel anguste ovatae, subadpressae, immarginatae, in costa obscure virides. Calathium planum vel convexulum, radians, ca. 5 cm diametro. Ligulae marginales extus stria canoviolacea notatae. Antherae polliniferae; stylus et stigmata obscure fuscescentia. Achenium maturum ignotum. E sectione *Vulgariorum* Dahlst.

HOLOTYPUS: Zuid-Holland: Hoek van Holland, 27.4.1952, v. Soest 29019; *Isotypus*: v. Soest 28800.

Weitere Fundstellen: Aerdenhout, Leiduin, A. Gorter 1953 & v.S.; Noordwijkerhout, Nora, Gr. (Herb. v.S. 37461); den Haag, Wittebrug, v.S. 42596; Rockanje, begleitet von viel *Cladonia* sp. und *Eryngium campestre* L.

Auch in Belgien: Modave, camp romain, Lawalrée & v.S. 32883.

T. planoides Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 9.*
 Planta 1–2 dm alta, subaraneosa. Folia prasinoviridia, lobata, petiolis pallidis vel roseolis, pro parte alatis, nervo mediano araneoso, ± rufescente. Lobi laterales utrinque 5–7, triangulares, superiores ± patentes, integri vel paulo dentati, subacuti, dorso paulo convexo, inferiores ± retroversi, saepe valde denticulati, sparse dentati, acuti vel peracuti, dorso recto. Interlobia brevia, 3–5 mm lata, plicatula, interdum piceo-marginata. Lobus terminalis hastato-sagittatus, usque ad 3,5 cm longus, saepe uno latere incisus, subobtusus vel pro parte deltoideus, brevis (1–2 cm), subacutus. Scapi floriferi foliis aequilongi. Involucrum sat obscure olivaceo-viride, 12–15 mm latum et longum, subturbinatum; squamae exteriores lanceolatae, ca. 7–8 mm longae, ca. 3 mm latae, extremo saepe lineares, angustissime pallidi-marginatae, in costa canovirides. Calathium luteum, paulo convexum, radians, usque ad 5 cm diametro. Ligulae marginales extus stria atroviolacea notatae; antherae polliniferae; stylus et stigmata virescentia. Achenium stramineum, pyramide inclusa ca. 4 mm longum, superne sat dense breviterque spinulosum, in pyramidem conicam, 0,6–0,7 mm longam abiens; rostrum 9–10 mm longum; pappus albus, 5–6 mm longus.

HOLOTYPUS: Zuid-Holland: Scheveningen, ehemaliges Bahnhofsgelände, 27.4.1971, v. Soest 53291; *Isotypus*: 53289 in den Herbarien Sahlin und Øllgaard, Hagendijk 2484, Zevenbergen 2513.

Weitere Fundstellen: Texel, Dijkmanshuizen, P. A. Bakker, C. Boot, v. Leeuwen, v.S. 44975, Zb. 942, 946; Gaasterland, Lyklemabos, v.B. & v.S. 33069; Mirnser Klif, v.B. & v.S. 33105; Ruitenborg, v. Leeuwen & v.S. 42825; Nijkerk, Oldenaller, v.S. 28612; Wissel, v.S. 21041; Linschoten, Hgd. 2213, v.S. & Zb.; Katwijk-Noordwijk, de Jongh & v.S. 27143; Waalsdorp, v.S. 14524, 30893; den Haag, Duindal, v.S. 27229; ehemaliger Golfplatz, v.S. 32427; Wittebrug, v.S. 11299; Raamweg, v.S. 42795; Koninginnegracht, v.S. 55710; Scheveningse Bosjes, Hgd. 1339, v.S. 53828, 53848-9 & Zb. 1438, 1703; Wateringen, Zb. 1914; 's Gravenpolder, Gr. & v.S. 27308.

Die Art ist auch aus Belgien nachgewiesen: Ranst, Kasteel Zevenbergen, de Langhe, v.B. & v.S. 35930.

T. recessum Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 10.*
 Planta 1–2,5(–3) dm alta, parce araneosa. Folia subglabra, prasinoviridia, saepe lutescentia, petiolis viridis, interdum alatis, nervo mediano saepe curvato, viridi vel rufescente. Lobi laterales in folia exteriori et intermedii utrinque (5–)6–8, retroversi, approximati, anguste triangulares vel lingulati, inferiores acuti, denticulati, superiores obtusi vel subobtusius, dorso \pm convexo, integro vel saepe 1 dente triangulariformibus grosse munito. Lobus terminalis sat breve, sagittatus, deltoideus vel anguste hastatus, integer vel saepe incisus, obtusus vel subobtusius, interdum mucronulatus. Folia interiora minus lobata, lobus terminalis latiore, \pm hastatus, saepe grosse triangulariter dentatus. Scapi florendi tempore foliis paulo vel conspicue superantes. Involucrum ca. 17 mm longum, usque ad 20 mm latum, olivaceo-viride. Squamae exteriores late lanceolatae, usque ad 4 mm latae, usque ad 12 mm longae, recurvae vel reflexae, immarginatae, in costa subpallide virides, saepe parce purpurascensicoloratae. Calathium radians, convexulum, usque ad 5 cm diametro, luteum. Ligulae marginales extus stria atroviolacea notatae; antherae polliniferae; stylus et stigmata subobscure virescentia. Achenium stramineum, pyramide inclusa ca. 4 mm longum, superne breviter spinulosum, ceterum rugosum, basi laeve, in pyramidem 0,3 mm longam abrupte abiens; rostrum 8 mm longum; pappus albus, 5 mm longus.

HOLOTYPE: Zuid-Holland: den Haag, Koninginnegracht, 29.4.1968, v. Soest 50036; *Isotypus*: Herb. Hagendijk 2488, v. Soest 42606, Zevenbergen 2512; *Paratypus fructifer*: Waalsdorp, in den Meeresdünen, zusammen wachsend mit *Anthriscus caucalis* Bieb., *Draba muralis* L., *Milium scabrum* Rich. und *Taraxacum dunense* v.S., im Halbschatten von *Populus alba* L., v.S. 25094; weiter v.S. 25118, 27458.

Weitere Fundstellen: zwischen Katwijk und Wassenaarse Slag, de Jongh & v.S. 43921-2; den Haag, ehemaliger Golfplatz, v.S. 41361, 41765; Duindal, v.S. 16675; Waalsdorp, Militär Lager, v.S. 27416; Waalsdorper Weg, v.S. 55488; Scheveningse Bosjes, Hgd., v.S. 53823, 53839 & Zb.; den Deijl, v.S. 43854; Voorburg, T. Groot-Risseeuw (Herb. v.S. 46792); Loosduinen, Segbroekpolder, v.S. 27298, 27367; Cadzand, in den Meeresdünen, v.S. 38561.

Taraxacum insigne Ekman, gleichfalls mit grünen Blattstielen und mit dicht gedrängten Seitenlappen, hat deutlich abstehenden und nicht zurückgerichteten Seitenlappen wie *T. recessum*.

T. retusum Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 11.*
 Planta 1–2 dm alta, subaraneosa. Folia lobata, lutescenti-viridia, petiolis pallidis, anguste alatis, nervo mediano araneoso, lucide marginato. Lobi laterales utrinque 3–5, triangulares vel sublingulati, usque ad 2 cm longi, obtusi vel subobtusius, pro parte manifeste rotundati, superiores valde approximati, \pm integri, inferiores denticulati raro dentati; dorso recto vel subconvexo, margine inferiore integro vel raro 1 dente munito. Interlobia brevissima, 0,5–1,0 cm lata, saepe 1 dente munita, interdum denticulata, interdum inconspicue angustissime piceo-marginata. Lobus terminalis deltoideus vel hastatus, saepe

incisus, 1–2,5 cm longus, obtusus, lobulis basilibus late triangularibus, saepissime apicibus valde rotundatis. Scapi floriferi foliis subaequilongi vel paulo superantes. Involucrum basi subturbinatum, sat angustum, ca. 13–15 mm longum, olivaceo-viride; squamae exteriores patentes, apice recurvae, lanceolatae, ca. 8 mm longae, angustissime marginatae, in costa pallidiores, saepe \pm purpurascenti-coloratae, interiores apice violaceae. Calathium planum, radians, ca. 3–4 cm diametro, sat laete luteum; ligulae marginales extus stria canoviolacea notatae, antherae polliniferae; stylus et stigmata fusco-virescentia. Achenium stramineum, superne spinulosum, maturum ignotum; rostrum ca. 10 mm longum; pappus, albus, 5 mm longus.

HOLOTYPUS: Utrecht: Grebbeberg, am Fuss des Abhangs, v. Brakel & v. Soest, 6.5.1952, 28581.

Weitere Fundstellen: Wageningen, v.B. & v.S. 28575, 28768, 28863; Texel, Oudeschild, Haglund & v.S. 20868; Leimuiden, Haglund & v.S. 20860; den Haag, Klein Zwitserland, v.S. 20651; Pompstationsweg, v.S. 27418; Nieuwe Scheveningse Bosjes, Haglund & v.S. 20817; den Briel-Nieuwenhoorn, v.B., Gr. & v.S. 36458.

T. texelense Hagendijk, v. Soest & Zevenbergen, *spec. nov.*

Fig. 12.

Planta glabra vel subglabra, sat humilis, 0,5–1,2 dm alta. Folia raro pro parte subintegra, sinuoso-dentata, saepissime lobata, prasinoviridia, petiolis (nervique mediano praesertim parte inferiore \pm purpureo) angustis. Lobi laterales utrinque 2–4, breves (usque ad 15 mm longi), triangulares vel falcati, retroversi vel subpatentes, dorso convexo, triangulariter et saepe curvato-dentato, margine inferiore recto vel concavo, integro. Interlobia brevia, 2–3,5 cm lata, lobus terminalis nunc sagittatus elongatus non dentatus, nunc latiore (ultimo 2 cm), saepe obtusus, dentatus. Scapi glabri vel subglabri, floriferi foliis saepe superantes. Involucrum obscure rufo-viride, 10–15 mm longum, basi crassiusculum; squamae exteriores laxe adpressae vel paulo recurvae, basi latae, acuminatae, \pm purpureo-marginatae. Calathium paulo radians, 2–3 cm diametro, saturate luteum. Ligulae marginales extus stria atroviolacea notatae; antherae polliniferae; stylus et stigmata fusco-virescentia. Achenium ignotum.

HOLOTYPUS: Texel: Waal en Burg, Lammerenweid, 19.5.1970, P. A. Bakker, Hagendijk, v. Soest 52247 & Zevenbergen; *locotypus*: P. A. Bakker, C. Boot, v. Leeuwen & v. Soest 44984.

Weitere Fundstellen: Texel, de Slufter, Hgd., v.S. & Zb. 957; Dijkmanshuizen, P. A. Bakker, Hgd., v.S. 52250 & Zb.; De Bol, P. A. Bakker, C. Boot, v. Leeuwen & v.S. 44950; Het Blok, dieselben, v.S. 44947; Terschelling, Dode-manskisten, V. J. v. Soest (Herb. v.S. 34788); Liesplak, Oosterveld 157, 183, 196; Groede, id. 204; daselbst, im Polder, id. 193 pro parte (alle Herb. Rijks-instituut v. Natuurbeheer).

Vielleicht gehören hierzu kräftigere, höher wachsende Pflanzen mit grösseren Köpfen aus dem Inlande, in der Gegend der ehemalige Zuiderzee: Elburg, auf saurem Boden, v.S. 27116; Meppelerdiep, auf moorigen Boden, de Jongh, v. Leeuwen, v.d. Voo & v.S. 45011.

Auffällig sind die meistens anliegenden, dunklen Aussenhüllblätter. Die Pflanzen sind kahl, nur bisweilen sind die jüngeren Blätter und die Stiele unterhalb der Köpfechen etwas haarig. Die Art nimmt eine Mittelstellung ein zwischen Sect. *Vulgaria* Dahlst. und den niedrig wachsenden, südwest-europäischen Taxa der Sect. *Spectabilia* Dahlst. *T. litorale* Raunk., die bisweilen etwas ähnlich aussehen kann, fehlt Pollen, ist meistens deutlich behaart und weist lanzettliche Aussenhüllblätter auf.

T. tortuosum Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 13.*
 Planta 1–2,5 dm alta, subaraneosa. Folia subprasino-iridia, paulo canescentia, lobata, petiolis viridis, in parte superiore alatis. Lobi laterales utrinque 3–5(–6), superiores integri, obtusi, inferiores dentati, acuti, omnes ± patentes, 10–15(–20) mm longi, dorso et margine inferiore convexo, modice undulato-tortuoso, perumque abrupte contracto. Interlobia inter lobos superiores brevissima, integra vel subintegra, inter lobos inferiores sat conspicua, vulgo 7–10 mm lata, saepe subulato-dentata vel denticulata, angulis loborum saepe plicatulis. Lobus terminalis hastatus vel deltoideus, 1–3 cm longus, raro dentatus, interdum subincisus, obtusus, lobulis basalibus brevibus obtusis integris. Scapi araneosi, floriferi foliis aequilongi vel paulo superantes. Involucrum olivaceo-iride, basi turbinatum, sat angustum, 12–15 mm longum, 10–12(–15) mm latum; squamae exteriores valde recurvae, lanceolatae, sat longae, 2–3,5 mm latae, anguste vel non marginatae, in costa pallidiores. Calathium convexulum, radians, usque ad 4 cm diametro, saturate luteum. Ligulae marginales extus stria canoviolacea notatae; antherae polliniferae; stylus et stigmata fusciscentia. Achenium stramineum, pyramide inclusa ca. 4 mm longum, superne spinulosum, ceterum rugosum, basi laeve, in pyramidem conicam, 10 mm longam abrupte abiens; rostrum 10 mm longum; pappus albus, 5,5–6 mm longus.

HOLOTYPE: Zuid-Holland: Scheveningse Bosjes, 6.5.1948, v. Soest 18188; *Isotypus*: Herb. Hagendijk 2234, Zevenbergen 2326; *Paratypus fructifer*: Wassenaar, Hoogeboomse Weg, v. Soest 14130.

Weitere Fundstellen: Munnikenzijl, v.B. & v.S. 33499; Haren, v.S. 50279; Jutphaas, Laagraven, v.B. (Herb. v.S. 27354); Heeswijk unweit Montfoort, v. d. Voo & v.S. 43955; Zevenhuizen, v.S. 25224, 25309; Wassenaar, Bierlap, v.S. 11274; den Haag, Duindal, v.S. 16786; Clingendaal, v.S. 16716; Scheveningen, v.S. 16667; Hoek van Holland, v.S. 28804; Vlaardingen, v.S. 11335; Waalhaven, v.B. (Herb. v.S. 28844-5, Herb. Zb. 2530); Zeeland-Uden, v.B., Gr. & v.S. 35940; Elst (U), v.B. & v.S. 28884.

Die Hüllen sind denen von *T. trilobatum* Palmgren ziemlich ähnlich, aber die Blätter sind ganz verschieden und ähneln diejenige von *T. undulatum* Lb. f. & Markl., welche letzte Art breite, deutlich berandete Aussenhüllblätter und breitere Köpfe aufweist.

T. unguifrons Hagendijk, v. Soest & Zevenbergen, *spec. nov.* *Fig. 14.*
 Planta mediocriter alta, 1–1,5 dm, basi subaraneosa. Folia subprasino-iridia,

lobata, petiolis (nervi que mediano araneoso roseo-colorato) pro parte anguste alatis. Lobi laterales utrinque 3–4, \pm retroversi, late unguiculati, usque ad 15 mm longi, acuti, dorso valde convexo, subulato vel anguste triangulariter dentato et denticulato, margine inferiore recto vel concavo, integro. Interlobia brevia, parce dentata, conspicue plicata, fuscomarginata, interdum violaceo-maculata. Lobus terminalis hastatus, usque ad 4 cm longus, usque ad 3 cm latus, obtusus, saepe incisus, vulgo denticulatus, lobuli basales triangulares, acuti vel obtusi, \pm retroversi. Scapi araneosi, floriferi foliis \pm superantes. Involucrum 15–18 mm latum, 15 mm longum, subtruncatum, sat obscure viride. Squamae exteriores patentiores, apice recurvae, lanceolatae, parce vel immarginatae, in costa purpureo-rufescentes. Calathium convexulum, radians, usque ad 4,5 cm diametro, luteum. Ligulae marginales extus stria atrovioleacea notatae. Antherae polliniferae. Stylus et stigmata obscure fuscescentia. Achenium stramineum, pyramide inclusa 4 mm longum, superne dense breviterque spinulosum, ceterum rugosum, basi laeve, in pyramidem conicam, 0,3 mm longam abrupte abiens; rostrum 8–9 mm longum; pappus albus, 6 mm longus.

HOLOTYPUS: Noord-Holland: Schagen, v. Soest 54616.

Weitere Fundstellen: den Haag, Wittebrug, v.S. 42087; 't Soerel unweit Epe,

Die Photographien wurden von Herrn B. W. Kieft hergestellt, wofür wir ihm dankbar sind; die Publikation der Photographien erfolgt mit Genehmigung des Direktors des Reichsherbariums, Leiden.

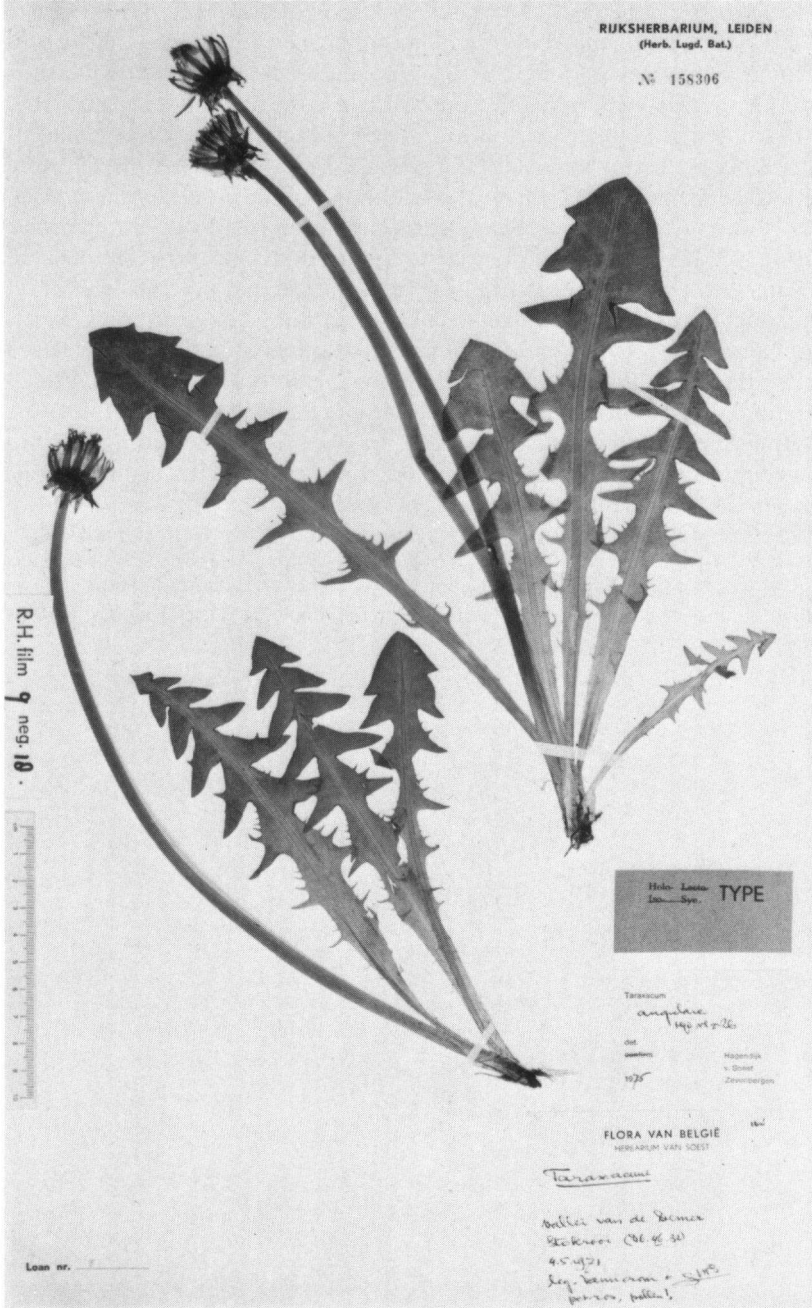


Fig. 1. *T. angulare*. Holotypus



Fig. 2. *T. arenarium*, Holotypus

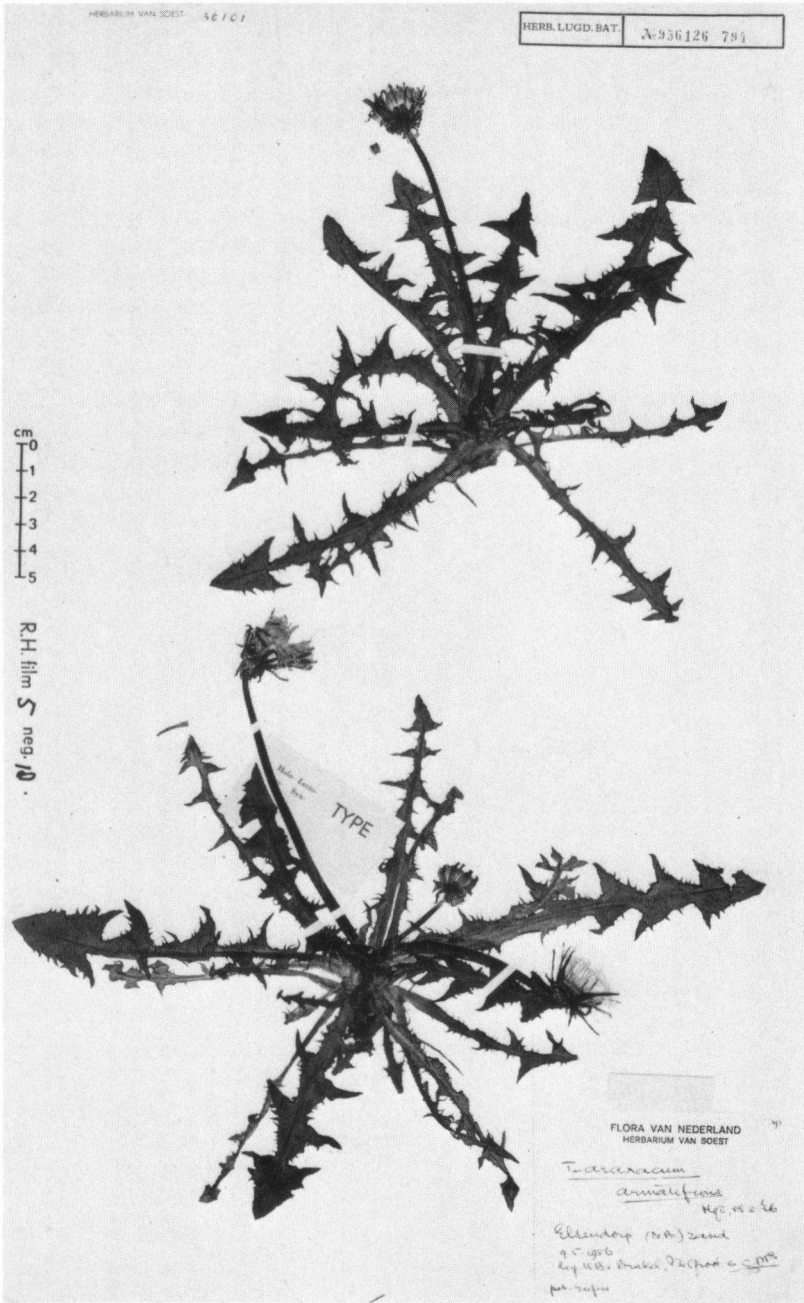


Fig. 3. *T. armatifrons*, Holotypus



Fig. 4. *T. ekmaniforme*, Holotypus

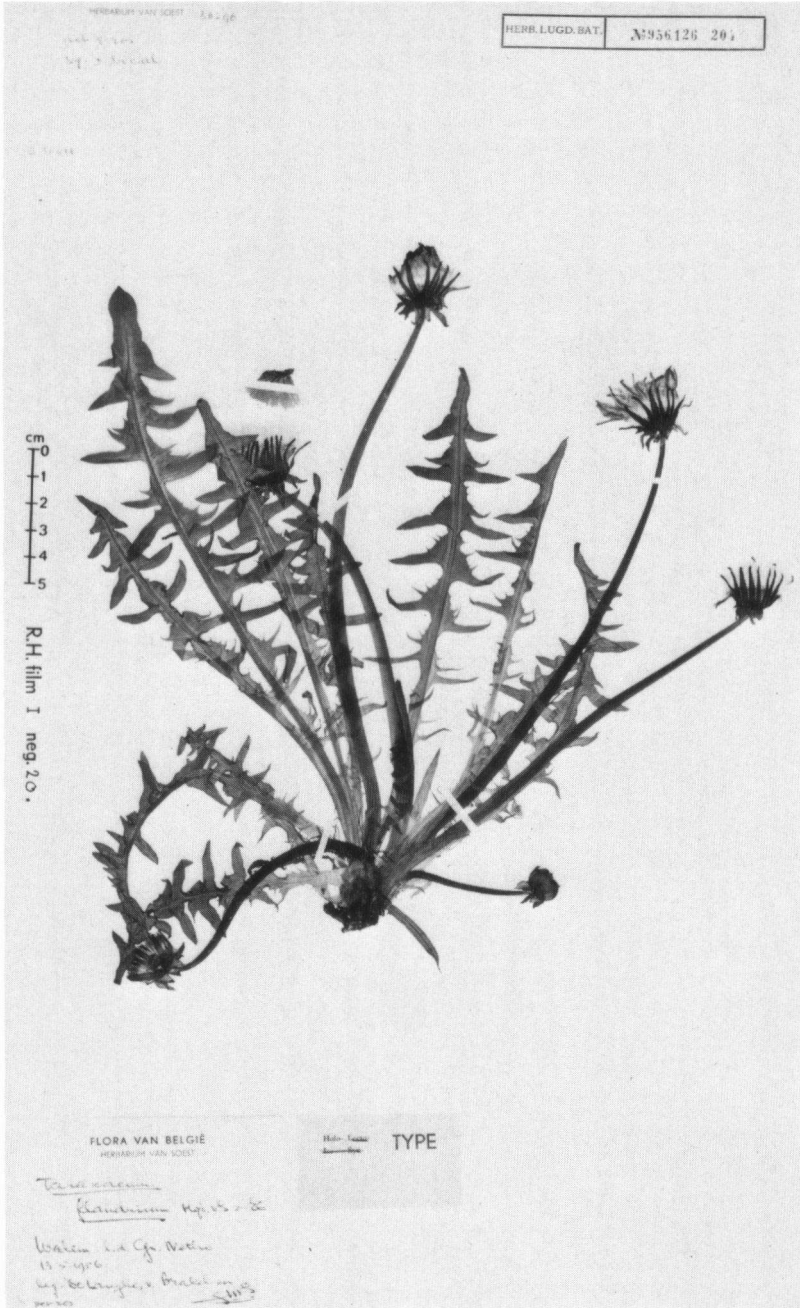


Fig. 5. *T. flandricum*, Holotypus

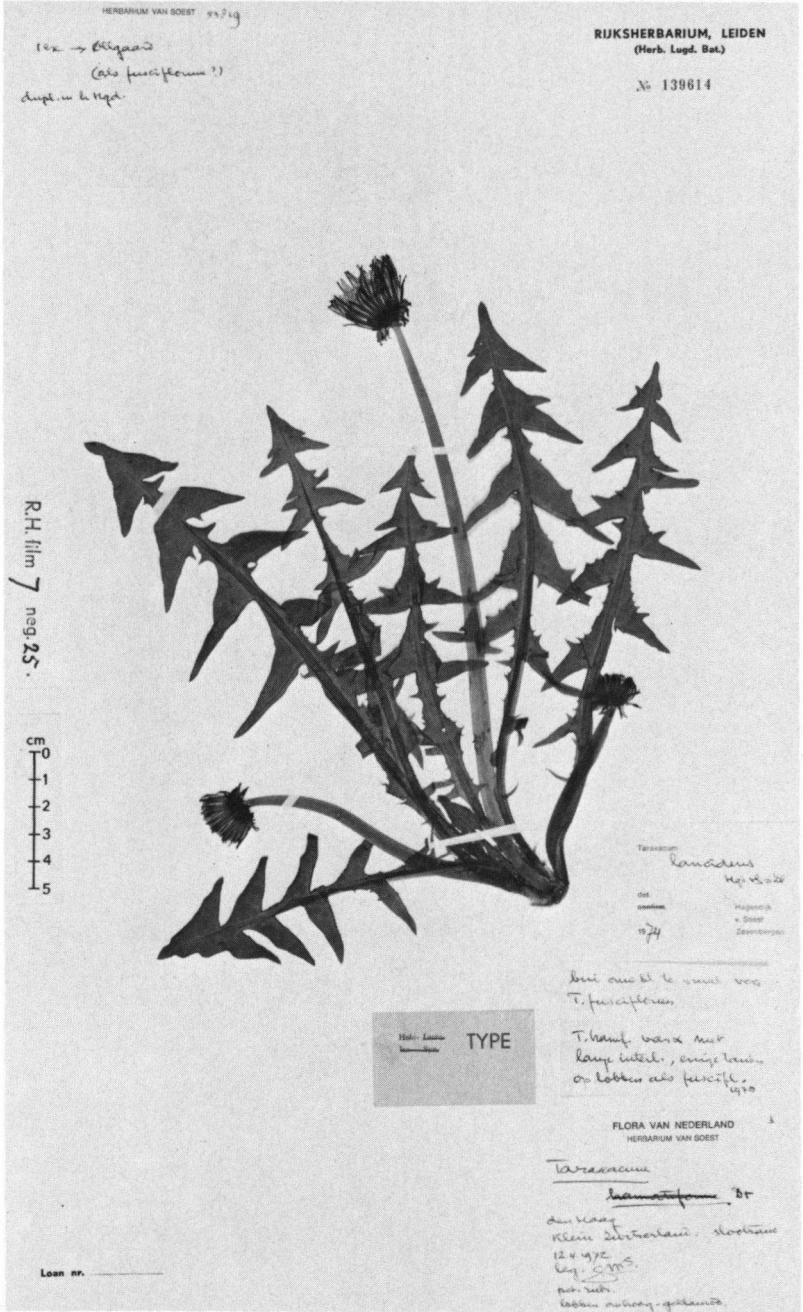


Fig. 6. *T. lancideus*, Holotypus



Fig. 7. *T. nitidum*, Holotypus



Fig. 8. *T. pachymeroides*, Holotypus

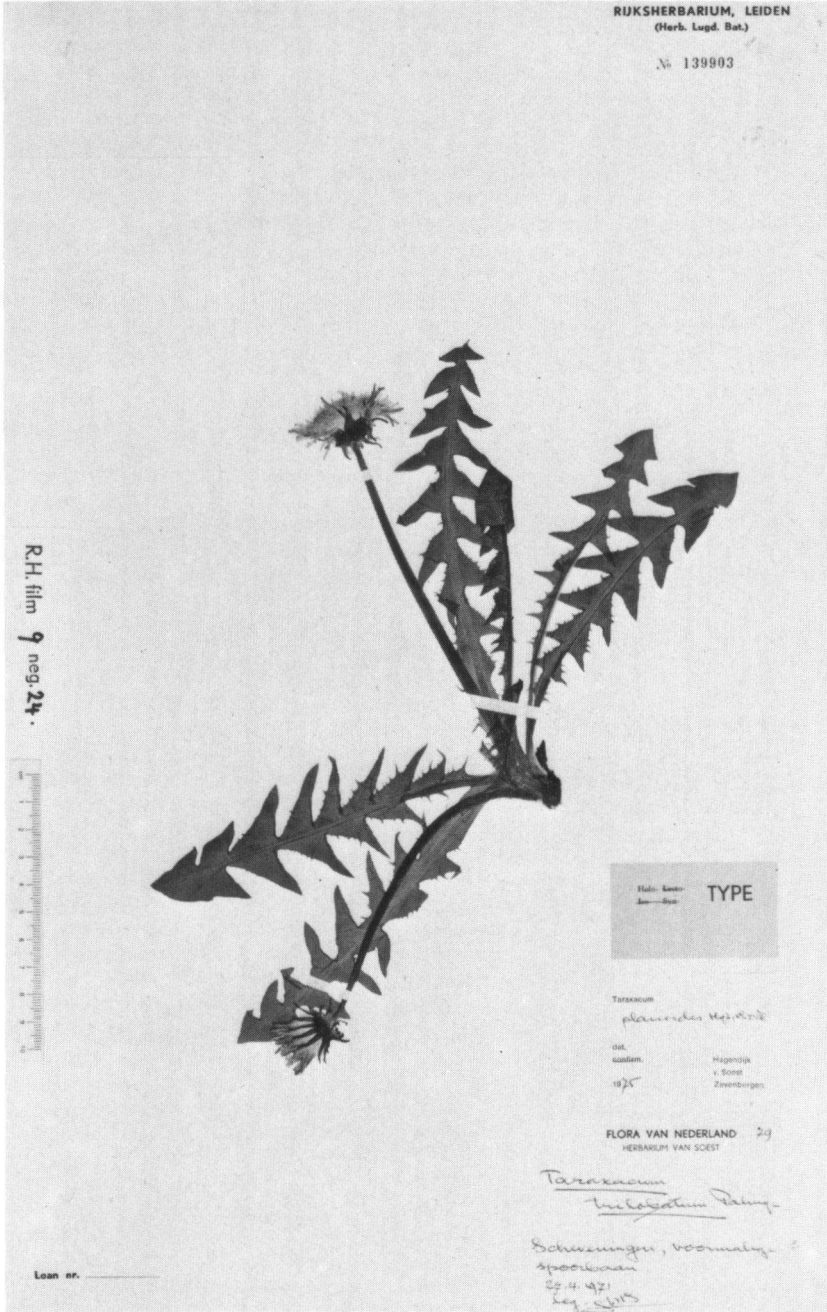


Fig. 9. *T. planoides*, Holotypus



Fig. 10. *T. recessum*, Holotypus



Fig. 11. *T. retusum*, Holotypus



Fig. 12. *T. texelense*. Holotypus

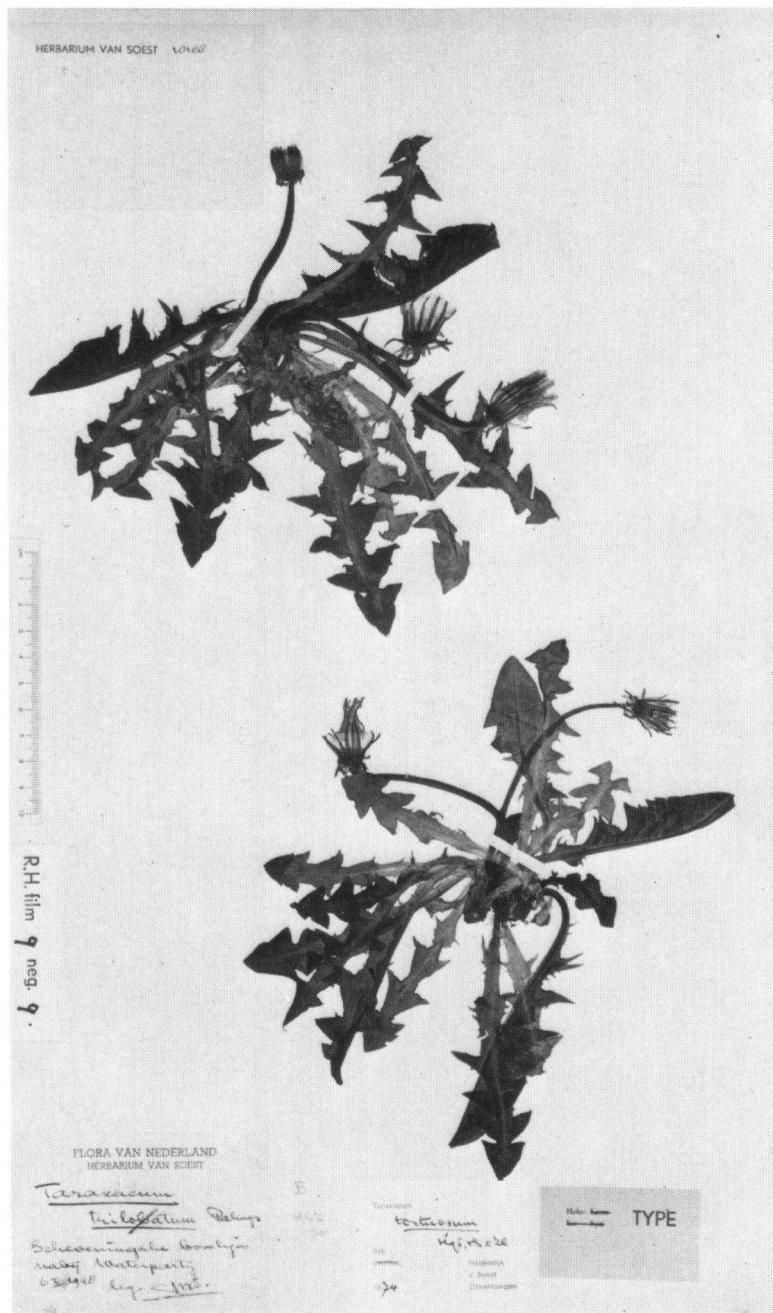


Fig. 13. *T. tortuosum*, Holotypus



Fig. 14. *T. unguifrons*, Holotypus