

NEW TARAXACA FROM THE NETHERLANDS

BY

J. L. VAN SOEST

(received December 16th, 1955)

1. **Taraxacum agaurum** v. Soest nov. spec.

*T. laetum* non Dahlstedt, 1905, Botaniska Notiser p. 169; v. Soest, 1939, Ned. Kruidk. Arch. 49: p. 228, cum icon. (pro *T. laeto!*).

*T. Soesteanum* Haglund (manuscr. 1943), nomen nudum.

Planta sat robusta 10–25 cm alta basi fragmentis foliorum vetustiorum incrassata.

Folia numerosa vulgo terrae adpressa laete gramineo-viridia parce araneoso-pilosa nervo mediano pallido, petiolis brevis subalatis pallide viridibus. Folia exteriora lanceolata paulo lobata obtusa. Folia interiora ± lingulata utrinque ca 6-loba; lobi laterales triangulares saepe angusti acuti ± integri, interlobiis subalatis saepe longe grosse dentatis; lobus terminalis deltoideus vel hastatus obtusus vel subacutus, lobulis lateralibus saepe elongatis lobis lateralibus vel dentibus interlobii similibus.

Scapi numerosi subcrassi subrubescentes erecti folia superantes sub involucro ± araneosi.

Involucrum mediocre 1,5 cm longum, 1,5 cm latum crassiusculum viride. Squamae exteriore adpressae ovatae 8 mm longae late albo-vel roseolo-marginatae corniculis conspicuis instructae; squamae interiores late lineares subanguste marginatae apicibus corniculatae.

Calathium planum radians ad 3,5 cm diametro saturate luteum; ligulae marginales planae extus stria cano-violacea notatae. Antherae polliniferae; stylus et stigmata lutei. Floret vere, ab ineunte usque ad medium mensem maium.

Achenium obscure badio-violaceum 4 mm longum (pyramidi inclusa) superne argute erecte spinulosum ceterum laeve, in pyramiden cylindricam 1 mm longam laevam abrupte abiens; rostrum 9 mm longum, pappus albus 5 mm longus.

E sectione *Erythrospermorum* Dt.

*Typus*: Waalsdorp, pr. 's Gravenhage, in dunis maritimis, 29. IV. 1948, v. Soest (herb.).

Originally I identified this species as "cfr. *T. laetum* Dt.", and after consulting Christiansen I recorded it as such in Ned. Kruidk. Arch., Haglund, who received dried material from me, wrote me (1. V. 1943) in answer to my request for critical observation; "den är obeskriven

ännu. Jag har tillåtit mig kalla densamma *T. Soesteanum* m.". I visited Stockholm in 1948, and discussed this species with him, and in 1949 we together visited the type locality. After a long and serious illness Dr Haglund died in 1955, unable to describe and publish the new species. In the meantime I distributed it to several botanical collections under the name proposed by Haglund, as "nomen provis". I now prefer to drop this name, which is but a "nomen nudum", and I describe the species as *T. agaurum* m.

*T. agaurum* is allied to *T. laetum*, with which it has in common the yellow styles, the green petioles, the big warts on the phyllaries; it differs from it by its taller appearance, the larger heads, a more saturate colour of the flowers, bigger fruits and a slightly different leaf form. It is flowering nearly two weeks later than the other *Erythrosperma* in the same region.

*Distribution:* *T. agaurum* covers only a very small area of the Dune district of Holland; I never have seen plants from other countries, and I have studied collections from nearly everywhere in Western and Northern Europe. In this small area—a small stretch of seadunes along the North sea coast—it is very common in the *Violeto-Corynephoretum dunense* and in the *Tortuleto-Phleetum arenarii*, and it is often accompanied by *T. obliquum*.

Very common near the Hague from Loosduinen and Kijkduin to Wassenaar, see also Ned. Kruidk. Arch l.c.; furthermore: Noordwijk, de Jongh and v. Soest (herb.).

#### *Variability:*

f. *tubulosa* v. Soest: ligulis breves tubulosis, marginalibus extus purpurascensibus.

Dunes of Waalsdorp, 1935 v. Soest (herb.); also Kijfhoek and Wassenaar.

f. *colorata* v. Soest: petiolis nervo que mediano pro parte purpurascensibus.

's Gravenhage, 1936, v. Soest (herb.); also Waalsdorp and Meyendel.

#### **2. Taraxacum dunense v. Soest nov. spec.**

*T. tenuilobum* auct. non Dahlstedt, 1905, Botaniska Notiser p. 167; v. Soest, 1939, Ned. Kruidk. Arch. 49: p. 233, cum icon. (pro *T. tenuilobu* !)

Planta 5–25 cm alta gracilis basi araneoso-pilosa fragmentis foliorum vetustiorum incrassata.

Folia ± glabra gramineo-viridia saepe p.p. atro-purpureo-marginata nervo mediano petiolisque intense purpureis. Folia exteriora lanceolata dentata vel paulo lobata; lobe terminalis ± deltoideus obtusus. Folia interiora multilobata ad 20 cm longa (petiolo inclusus); lobi laterales ± irregulariter distributi falcati p.p. lineares vel lingulati acuti, p.p. longe anguste dentati; interlobii perangusti valde et longe dentati, dentibus p.p. lobiformibus; lobe terminalis ± tripartitus, lobulo apicali lanceolato subacuto, lobulis lateralibus erecto-patentibus, omnibus integris.

Scapi purpurei basin versus intense vinosi glabrescentes.

Involucrum obscure viride 11–13 mm longum, ca 10 mm latum. Squamae exteriores laxe adpressae apice  $\pm$  patentes ovato-lanceolatae 6–7 mm longae ca 3 mm latae anguste sed conspicue albido- vel purpureo-marginatae sub apice purpureae corniculatae vel callosae. Squamae interiores late lineares p. max. p. anguste marginatae apice purpureae corniculatae.

Calathium laete luteum planum radians ca 2,5 cm diametro. Ligulæ marginales extus stria fusco-purpurea notatae. Antherae polliniferae; stylus et stigmata fusco-virescentes. Floret vere.

Achenium badio-rubrum 4 mm longum (pyramidi exclusa) superne argute spinulosum ceterum tuberculatum—basi laeve, in pyramiden (spinulis saepe praeditam) cylindricam 0,8 mm longam subsensim abiens; rostrum 8 mm longum; pappus niveus 5,5 mm longus.

E sectione *Erythrospermorum* Dt.

*Typus*: Scheveningsche Boschjes pr. 's Gravenhage, in dunis maritimis, 1922 v. Soest (herb.).

*T. dunense* is closely related to *T. tenuilobum* Dt., differing however by the shorter and broader, adpressed outer phyllaries of the involucre, by the shorter endlobes of the leaves and by longer fruit and rostrum, the first of a darker colour. In general, the red colour of the petioles and nerves is deeper, and the scapes are thinner and less arachnoid.

This species has been wrongly interpreted by CHRISTIANSEN (1938) and by me in Ned. Kruidk. Arch. I.c. Afterwards Haglund and I discussed it, and we came to the conclusion that it was a new species.

*Distribution*: only along the North sea coast in the dunes, often accompanied by *Salix repens* ssp. *arenaria* (L.) And., *Viola coniophila* Wittr. a.s.o.

Very common in the dunes of Wassenaar and the Hague (Ned. Kruidk. Arch. I.c.); furthermore: dunes near Zandvoort, J. Prins (herb. Gorter). It is also common in the Flemish dunes (v. Soest, Bull. Soc. Bot. Roy. Belg., 1956).

### 3. *Taraxacum frisicum* v. Soest nov. spec.; fig. 1.

Planta ca 15–25 cm alta subglabra.

Folia luteo-viridia lanceolata 10–15 cm longa (petiolo angusto rubro inclusu), interiora valde lobata; lobi laterales (utrinque 3) triangulares interdum  $\pm$  retroversi acuminati acutissimi integri vel (inferiores) denticulati, interlobiis  $\pm$  latis integris; lobus terminalis elongatus ad 3,5 cm longus ad 1 cm latus subobtusus vel obtusus saepe sublobatus, lobulis lateralibus acuminatis acutis  $\pm$  retroversis.

Scapi glabri rubri ad anthesin erecti vel plerumque sigmatoidei.

Calathium mediocre paulo radians. Involucrum obscure viride interdum purpurascens; squamae exteriores adpressae ovatae 4–7 mm longae ad 4 mm latae in apicem obtusam acuminatae sublate marginatae  $\pm$  erosae vel ciliolatae; squamae interiores ad 15 mm longae late lineares. Ligulæ  $\pm$  saturate luteae, marginales extus stria obscure rubro-violacea notatae. Antherae polliniferae; stylus et stigmata sordide lutei. Floret vere.



Fig. 1



Fig. 2

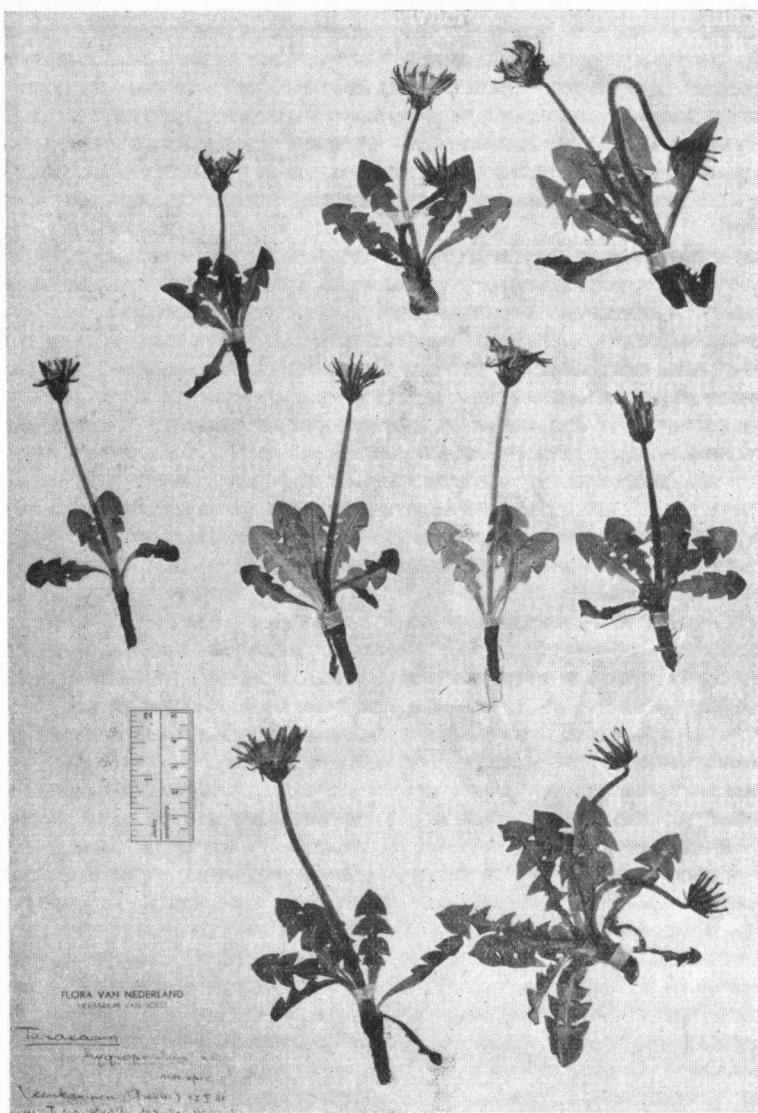


Fig. 3

Achenium pallide stramineum angustum (ad 1 mm latum) ad 4 mm longum (pyramidi inclusa) superne subdense  $\pm$  patente spinulosum (spinulis  $\frac{1}{2}$  mm longis), ceterum tuberculatum—basi laeve, in pyramiden cylindricam 0.8–1,0 mm longam laevam subabrupte abiens. Rostrum ca 8 mm, pappus albus 5–6 mm.

E sectione *Palustrium* Dt.

*Typus*: Akkerwoude, Lytsen (Friesland), in blue-grass pasture, 1953 v. d. Ploeg (herb., herb. v. S.).

*T. frisicum* is allied to *T. limnanthes* Hagl., which is lacking pollen and has broader-margined outer phyllaries in the involucre; the petioles of *T. frisicum* are deeper coloured. In small individuals the leaf form may resemble that of *T. limnanthes*.

*T. frisicum* is also related to *T. balticiforme* Dt.; the latter, however, has bigger, more acute, less acuminate and very broadly margined outer phyllaries; their leaf form is much alike.

Small individuals of *T. copidophyllum* Dt. sometimes imitate *T. frisicum*, but they specifically differ from it by the characteristic *Palustria* involucre of *T. frisicum*, which, moreover, has glabrous scapes.

*Distribution*: in peat-bog country, accompanied by *Hierochloë odorata* (L.) Whlnbg., *Viola palustris* L., *Taraxacum limnanthes* Hagl., *T. adami* Claire a.s.o., mostly in the *Caricion fuscae*. Only in Friesland.

Akkerwoude; Lytsen and Heechfinne; Eernewoude: Alde Feanen, Compagnie, Fokkesloot, Princehof; collected by v. Brakel, Franke (herb.), v.d. Ploeg (herb.), Vlieger and v. Soest (herb.).

#### 4. *Taraxacum johannis-jansenii* v. Soest nov. spec.; fig. 2.

Planta mediocris ad 15 cm alta glabrescens.

Folia numerosa lobata subobscurae viridia nervo mediano pallido, petiolis alatis pallidis. Folia exteriora minus lobata, interiora utrinque 4–5 loba  $\pm$  crispata; lobi laterales saepe ascendentibus hamati margine superiore convexo interdum 1 (-2) dente grosso muniti, saepe (lobi inferiori) minute denticulati, margine inferiore valde concavo raro 1 dente muniti; interlobiis interdum sublongis, saepe grosse dentatis; lobus terminalis hastatus subacutus, lobulis lateralibus elongatis acutis.

Scapi subglabri, folia breviter superantes.

Involucrum crassiusculum basi rotundatum obscure viride. Squamae exteriora laxe adpressae ovatae ca 6 mm longae 3 mm latae inaequilaterae obtusae conspicue (interdum late) albo-vel purpureo-marginae, apicibus interdum purpureae saepe inconspicue callosae; squamae interiora late lineares (ad 2,5 mm latae) membranaceo-marginatae, apicibus interdum inconspicue callosae.

Calathium paulo radians ad 2,5 cm diametro obscure luteum. Ligulae marginales angustae  $\pm$  planae extus stria cano-violacea ornatae. Antherae  $\pm$  parce polliniferae; stylus et stigmata obscure fusco-virescentes, subnigri. Floret vere.

Achenium stramineum 4 mm longum (pyramidi inclusa) ad 1,2 mm latum superne  $\pm$  breve spinulosum ceterum  $\pm$  rugosum—basi laeve,

in pyramiden conicam 0,4 mm longam subsensim abiens; rostrum 8 mm, pappus albus 5 mm.

E sectione *Vulgarium* Dt.?

*Typus:* Middelaar, Johan Jansen, 20. V. 1941 (herb. v. S.).

This is an interesting species, more or less intermediate between *Spectabilia* and *Vulgaria*; in this respect it resembles *T. hyrophilum*, described below, and some other species of northern Europe. Whereas the *Spectabilia* have large fruits, *T. johannis-jansenii* has small ones. I think, it must be placed in the *Vulgaria* group, though it shows no direct affinity to any species of this section.

*Distribution:* common only in a small area near the type locality in the surroundings of Nijmegen, growing in acid and humid pastures.

Middelaar, Mook and Mooksche Broek, Plasmolen, Wychen, Orthen; collected by Joh. Jansen, J. Kern and Th. Reichgelt (herb. L., Roy. Netherl. Bot. Soc., a.s.o.).

### 5. *Taraxacum hyrophilum* van Soest nov. spec.; fig. 3.

Planta humilis ca 7–10 cm alta.

Folia 4–5 cm longa (petiolo brevi alato pallido inclusu) ovato-lanceolata utrinque 2-vel 3-loba glabra nervo mediano pallido; lobi laterales ovato-triangulari dorso convexo integri vel paulo denticulati, margine inferiore integri; interlobii subnullis ± crispis; lobus terminalis brevis semi-orbicularis vel hastatus.

Scapi 1–2 sub involucro araneosi.

Involucrum mediocre 10–12 mm longum 7–9 mm latum basi truncatum obscure viride. Squamae exteriores adpressae ovato-lanceolatae ad 5 mm longae ad 2,5 mm latae albo- vel roseolomarginatae ciliolatae, apicibus interdum purpureae laeves; squamae interiores late lineares.

Calathium paulo radians ad 2,5 cm diametro obscure luteum. Ligulae marginales planae extus stria cano-violacea notatae. Antherae polliniferae; stylus et stigmata obscuri. Floret vere.

Achenium parvum 2,8 mm longum (pyramidi inclusa) ca 1 mm latum brunnescens superne squamulis tricuspidatis parvis praeditum, ceterum laeve, in pyramiden conicam 0,45 mm longam subabrupte abiens; rostrum sub breve 3 mm; pappus albus 4–4,5 mm.

Inter sectiones *Spectabilium* Dt. et *Vulgarium* Dt.?

*Typus:* Veenkampen, Grebbevallei, in acid peat bog pasture, v. Soest, 27. V. 1941 (herb.), accompanied by *T. nordstedtii* Dt. and *T. adami* Claire.

This species is closely related to *T. johannis-jansenii*; the heads are similar, a little bit smaller and more truncate at the base; the outer phyllaries are less broad; the fruits are smaller. The leaves are different, but in younger individuals the difference is small.

In general aspect it shows a great affinity to the *Spectabilia*; the fruits, however, are extra-ordinary small.

The real *Spectabilia* with big fruits are tetraploid ( $2n = 32$ ), *T.*

*nordstedtii* even is hexaploid. The *Vulgaria* all seem to be triploid. *T. praestans* Lb. f., considered an intermediate species, is triploid; it should be of interest to examine the chromosome number of *T. hygrophilum* and *T. johannis-jansenii*.

*T. hygrophilum* seems to be related to *T. hibernicum* Hagl., described from Ireland; this, however, has much larger fruits.

*Distribution:* in humid grassfields, especially in blue-grass pastures on acid soil, here and there in the Netherlands.

Grebbe valley (see above); Nieuw-Lekkerland, Haglund, Kloos (herb.) and v. Soest (herb.); Ulvenhout, v. Soest (herb.).