

I. A REVISION OF THE SOUTH AFRICAN SPECIES OF THE GENUS *TEPHROSIA* PERS.

II. THE SEGREGATION THEREFROM OF THE GENUS *OPHRESTIA* FORBES.

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I. THE GENUS *TEPHROSIA*.

Since the South African species of the genus *Tephrosia* were enumerated by Harvey in "Flora Capensis", Vol. 2 (1860-61), a number of new species has been described by different authors, and unnamed material has accumulated in herbaria. This revision, therefore, was undertaken with the object of collating all the previously published descriptions, and of naming and describing any new species found among the unnamed material.

The genus *Tephrosia* belongs to the subsection *Papilionaceae* of the family *Leguminosae*. It was founded by Persoon in 1807, but, as will be seen by the synonymy, *Tephrosia* was not the first name to be given to this group of plants. Murrill in 1910 stated that "according to the Vienna Botanical Conference, the retained and rejected names for this genus are as follows:—

<i>Retained Name.</i>	<i>Rejected Names.</i>
<i>Tephrosia</i> Pers. (1807).....	<i>Cracca</i> L. (1753);
	<i>Colinel Adans.</i> (1763);
	<i>Needhamia Scop.</i> (1777).

In Kew Bulletin, 1935, p. 416, there is the following note:—

"*Cracca* L. is a nomen rejiciendum *Tephrosia* Pers. being conserved against it. The two are essentially identical, Persoon having transferred to *Tephrosia* all the original species of *Cracca*. It would appear, therefore, that the latter cannot be used under the Kules, but still prevents the use of a later homonym."

The genus is not restricted to South Africa, but occurs throughout the whole of Africa, sub-tropical Australia, America, India and other tropical and semi-tropical parts of the world. It is an extremely variable group, its members ranging from small procumbent plants with tiny insignificant flowers to quite big shrubs with racemes of large mauve-purple flowers. Although the prevailing colour of the flowers varies from a pale pinkish-mauve to rosy or mauve-purple, a few species occur with pale yellow and orange to orange-red flowers. There is one constant and conspicuous character by which the genus may be readily recognised, namely, the close, distinct penninerved venation of the leaflets.

Although it is a large and widely spread group, it is not, as yet, of any economic importance. Some 22 species have been recorded as fish-poison plants, and investigations have been carried out on some of these as to their possible use as insecticides. The principal chemical properties are rotenone, deguelin, tephrosin and toxicarol. Full reports on some of these investigations may be found in Kew Bulletin (1937 and 1940); Annals of Applied Biology (1925; 1932 and 1934); Nature (1936), and Malay Agricultural Journal (1937).

Numerous botanists and travellers have commented on the fish-poison properties of these plants. The four most widely known of these are *T. piscatoria* of India, *T. toxicaria*

of America, *T. Vogelii* of Africa and *T. macropoda* of South Africa. In the case of the first three species the crushed leaves and stems are mainly employed, but in *T. macropoda*, or "iLozane" as the Zulus call it, it is the crushed roots that are used. The method of employment, however, is the same. The crushed material is thrown into a quiet pool or pond, or a part of a river that has been dammed up, and in a short while the stupified fish rise to the surface of the water, and are thus easily collected. The flesh of the fish is not in any way affected and may be eaten with impunity. The fish, when they rise to the surface of the water, are not actually dead, but in a state of stupefaction or "intoxication", and if, at this stage, they are removed to a pool of fresh water, they will gradually recover. They die, however, if left too long in the treated pool. Writing of *T. Vogelii*, Fairchild stated that men who have waded in streams treated with this plant feel a "kind of deadness" in their legs.

In 1937, R. C. Roarke of the United States Department of Agriculture, published an interesting and comprehensive list of all the literature in which references occur about these plants, either as fish-poisons or insecticides, under the title of "Tephrosia as an Insecticide.—A Review of the Literature." This is not merely a list of publications, but consists of interesting citations from the books as well.

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ABBREVIATIONS.

The following are the abbreviations used when citing specimens deposited in the various herbaria:—

Albany Museum, Grahamstown.....	A.M.
Bolus Herbarium, Cape Town.....	B.H.
Botaniska Museet, Uppsala.....	U.
Botanisches Museum, Berlin-Dahlem.....	B.
Botanisches Museum, Zurich.....	Z.
British Museum (Natural History), London.....	B.M.
Conservatoire Botanique, Geneva.....	G.
Dinter's Private Collection.....	D. Coll.
Fielding Herbarium, Oxford.....	O.
Grey's University College, Bloemfontein.....	G.U.C.
MacGregor Museum, Kimberley.....	Kim.

Museum National d'Histoire Naturelle, Paris.....	Pa.
Natal Herbarium, Durban.....	N.
National Herbarium, Pretoria.....	P.
Naturhistorisches Museum, Vienna.....	V.
Royal Botanic Gardens, Kew.....	K.
South African Museum, Cape Town.....	S.A.M.
South African College, Cape Town.....	S.A.C.
Transvaal Museum, Pretoria.....	T.M.
University of Stellenbosch.....	S.
Witwatersrand University, Johannesburg.....	W.

Tephrosia Pers.

Cracca L. Fl. Zeyl. 139 (1747); Spec. pl. ed. 1 752 (1753); *Erebinthus* Mitch. Acta. Acad. nat. cur. 8 app. 210 (1748); *Colinel* Adans. Fam. 2 (1763); *Needhamia* Scop. Introd. 310 (1777); *Tephrosia* Pers. Synops 11. 328 (1807); *Crafordia* Raf. Specchio. 1. 156 (1814); *Kiesera* Rienw. Sylloge ratisbonn. 2.11 (1828); *Xiphocarpus* C. Presl. Symb. Bot 1, 13. t. 7. (1830); *Apodynomene* E. Mey. Comment. Pl. Afr. Aust. 111 (1835); *Catacline* Edgew. Journ. As. Soc. Bengal 16, 2. 1314. (1847); *Macronyx* Dalz. Hooker Kew Journ. 2, 35 (1805); *Balboa* Liebn. Kjoebenhaven Vid. Meddel. 106 (1856); *Seemannantha* Alef. Bonplandia 10,264 (1862); *Benthamantha* Alef. in Bonplandia 10. 264 (1862).

Undershrubs or herbs, stems erect, ascending or procumbent, simple or branched. *Leaves* simple, digitate or pinnate. *Inflorescence* racemose or 1-2 flowers in axils of leaves, racemes terminal, axillary or leaf-opposed; flowers small to large, pale yellow, orange to orange-red, rosy to deep mauve. *Calyx* teeth subequal or longer than the tube; the lower sometimes longer than the rest, linear-lanceolate to subulate; the two upper lobes connate. *Petals* unguiculate; vexillum generally suborbicular and more or less velvety pubescent without; alae obliquely obovate or oblong, adhering a little to the carina, incurved, obtuse or sub-acute. *Stamens*, upper stamen free to the base or middle; anthers uniform. *Ovary* sessile, usually multiovulate. *Style* upcurved, often flattened, naked or bearded; stigma terminal, naked or penicillate. *Pod* linear, flattened, straight or slightly falcate, or plicate or contorted, continuous or slightly septate within.

KEY TO SECTIONS.

Leaves simple.....	SECTION 1.
Leaves palmate or digitate.....	SECTION 2.
Leaves pinnate; stipules setaceous, linear to subulate...	SECTION 3.
Leaves pinnate; stipules broadly ovate or cordate.....	SECTION 4.

KEY TO SECTION 1.

Flowers in a terminal raceme.....	A.
Flowers axillary.....	B.
A. Peduncles 1-2-flowered.....	1. <i>marginella</i> .
Peduncles many-flowered.....	C.
C. Leaves sessile, all simple.....	2. <i>acaciaefolia</i> .
Leaves petiolate, usually 1-2-jugate, lower occasionally simple..	D.
D. Plant canescent; leaflets oblanceolate, 2-4 cm. long.....	31. <i>griseola</i> .
Plant not canescent; leaflets linear-lanceolate, 4-7-9 cm. long...	39. <i>elongata</i> .
B. Legumes 1-seeded.....	E.
Legumes more than 1-seeded.....	F.
E. Leaves obcordate, up to 2 cm. long.....	3. <i>sphaerosperma</i> .
Leaves ovate-lanceolate, up to 5 cm. long.....	4. <i>pseudosphaerosperma</i> .

F. Calyx lobes longer than tube.....	5. <i>Forbesii</i> .
Calyx lobes not longer than tube.....	G.
G. Leaves sessile.....	6. <i>virgata</i> .
Leaves petiolate.....	H.
H. Flowers 1-3 together.....	8. <i>Pietersii</i> .
Flowers solitary.....	I.
I. Flowers yellow.....	9. <i>gracilentia</i> .
Flowers mauve.....	7. <i>monophylla</i> .

1. **T. marginella** H. M. Forbes sp. nov. affinis *T. elongatae* E. Mey. habitu minore gracilioreque foliis simplicibus differt.

Caules ascendentes, simplices vel pauca ramosi, sparse appresse pubescentes, fere 33 cm. alti. *Folia* simplicia, lineari-oblonga, 1.5-10 cm. longa, 0.3-1.2 cm. lata, marginibus crassis; petioli striati, 1.6-3 cm. longi; stipulae lineari-subulatae, 4-5 mm. longae. *Pedunculi* terminales, 1-2-flori, 4.5-20 cm. longi. *Flores* usque ad 1 cm. longae; dentes calycis lineari-subulati tubo subaequilongi vel longiores; stylus glaber. *Fructus* linearis, 4.5 cm. longus, 3 mm. latus.

Type specimen, *Flanagan* 2271, in National Herbarium, Pretoria.

Stems ascending, flexuous, simple or branching a little, slender, thinly appressedly pubescent, up to 33 cm. high. *Leaves* simple, linear to linear-lanceolate, 1.5-10 cm. long, 1.2 cm. broad; glabrous above, thinly appressedly pubescent below, mucronate, margins thickened and straw-coloured, petiole striate, channelled above, sparsely pubescent, 0.6-3 cm. long. *Stipules* linear, 4-5 mm. long; pedicels 3 mm. long. *Calyx*—teeth equalling or longer than the tube; linear-subulate. *Style* glabrous. *Legume* linear, thinly pubescent, 4.5 cm. long, 0.3 cm. broad.

CAPE.—Cathcart district: Mountain above Toise R. Station, *Flanagan* 2271 (P.) Fort Cunynghame, *Sim* 2681 (P.).

This species is similar to *T. elongata* E. Mey, but is a smaller and more slender plant, and the leaves are always simple.

2. **T. acaciaefolia** Welw. ex Baker in Oliv. Fl. Trop. Afr. 2,106 (1871); Baker Leg. Trop. Afr. 180 (1926); Burt Davy Fl. Tvaal. 1,379 (1932).

Syn. *Cracca acaciaefolia* O. Kt., Rev. Gen. Pl. 1,174 (1891); Hiern in Cat. Afr. Pl. Welw. 1,218 (1896); *Tephrosia salicifolia* Schinz in Viertelsjahrschr. Nat. Ges. Zurich 52,425 (1907).

Type: *Welwitsch* 2071, in Herbarium, Kew.

Stems erect, ascending, several usually arising from the rootstock, simple or laxly branched, densely grey or ferruginous downy. *Leaves* unifoliolate, linear to linear-lanceolate, subsessile, mucronate, apex obtuse, glabrous, grey-downy below and midrib usually ferruginous, 2.5-17.5 cm. long, 0.6-1.9 cm. broad. *Stipules* linear setaceous, 2.5 mm. long. *Peduncles* terminal, 7-36 cm. long, laxly flowered; flowers usually in pairs; pedicels short, downy; bracts setaceous, minute. *Flowers* 1-1.1 cm. long. *Calyx* densely silky without, tube 5-7 mm. in diam., 3 mm. long, lobes subulate, acuminate, shortly and thickly ciliate, unequal, 1.5-3 mm. long. *Vexillum* suborbicular, densely silky without, 0.9-1 cm. long, 8-9 mm. broad; claw 2-3 mm. long. *Ovary* 7-7.5 mm. long, densely silky. *Style* 3 mm. long, somewhat flattened, especially near the base, penicillate at apex. *Legumes* 4.5-5 cm. long, 3 mm. broad, densely grey-silky along middle and dark brown along sutures.

ANGOLA.—At sandy margins of forests between Bumba and Condo, *Wehuitsch* 2071 (K., Pa., G., B.).

TRANSVAAL.—Barberton district: Kaapsche Hoop, *Rogers* 20882 (B.M., P., W.); *Rogers* 20778 (T.M.); Lydenburg district: in grassland at Havelock, *Liebenberg* 2391 (P.). Pretoria district: in grass, Hamanskraal, *Schlechter* 4193 (K., B.M., G., V., Z., B., T.M., B.H., A.M.); Pienaars River, Bushveld, *Rehmann* 4797 (K., B.M., Z.); Elands River and Drift, Bushveld, *Rehmann* 4927 (Z); Kopjes, Daspoort, *Leendertz* 596 (A.M., T.M.); Rustenburg district: Rustenburg, *Nation* 359 (K., B.H.); *Rogers* 18725 (T.M.); Waterberg district: in collibus lapidosis graminosisque prope Potgietersrust, *Leendertz* (T.M., S.A.M., A.M.); Rooiplaat, *Leendertz* 759 (T.M., B.H.); Vygenboompoort, near Naboomspruit, *van Dam* (T.M.); sandveld, Mosdene, Naboomspruit, *Galpin* M. 86 (P.); Pietersburg district: Between Koedoes and Middel Letaba River, *Junod* 1554 (Z., G.).

3. **T. sphaerosperma** (D.C.) Baker in Oliv. Fl. Trop. Afr. 2. 125 (1871); Engl. Bot. Jahrb. 9.29. (1888); O. Kuntze Rev. Gen. Pl. 1 (1891); Burt Davy and Pott in Ann. Tvl. Mus. 3. 3. 146 (1912); Ann. Bolus Herb. 1. 1. 15 (1914); Ann. S. A. Mus. 9. 4. 256 (1915); Engl. and Drude Die. Veg. der Erde 9. 590. Fig. 292 (1915); Bak. f. Leg. Trop. Afr. 1. 215 (1926).

Syn:—*Requienia sphaerosperma* DC. Ann. Soc. Nat. Ser. 1. IV 91. (1825); Leg. Mem. 6.226 t. 38 (1825); Harvey in Harv. and Sond. Fl. Cap. 2.231 (1861–62); Burt Davy Fl. Tvaal. 1. 2. 379 (1932).

Co-type specimens, *Burke* and *Zeyher* 368, in Herbarium, Kew.

A copiously branched diffuse undershrub. *Stems* numerous, rigid, branching, procumbent or suberect, flexuous, more or less densely grey-pubescent, about 30 cm. long. *Leaves* unifoliolate, obovate or orbicular, subobcordate, often complicate, mucro recurved, both surfaces finely grey downy, veins prominent on lower surface, 0.5–12 cm. long, 0.4–1.6 cm. broad; petioles 2–4 mm. long. *Flowers* pale yellow, axillary, very shortly pedicellate, 1–3 together, 3.5–4 mm. long. *Calyx* pubescent, tube 3–3.5 mm. in diam., about 1.5 mm. long, lobes lanceolate, about 0.5–1 mm. long, lowest longest. *Vexillum* obovate, 2–3 mm. long, about 1.5 mm. broad. *Ovary* 2.5 mm. long, pubescent. *Style* about 1 mm. long, incurved, glabrous. *Legume* thinly pubescent, 1-seeded, tapering to the base, 5–8 mm. long, 2.5–3 mm. broad.

SOUTH WEST AFRICA.—Omahekeinsel bei Karibib, *Dinter* 6875 and *Dinter* 6975 (D. Coll.); Palmerswald, *Dinter* 2355 (B.); Giftkoppie, *Dinter* 1432 (Z., B.); Inachab, *Dinter* 1149 (Z.); and *Dinter* 1155 (Z., B.); Oshihoho, *Schinz* 545 (Z., B.H.); Okahandja, sandige Ufer 1300 m. *Dinter* 305 (K., B.M., Z., G., B., S.A.M., A.M.); am sandwege Grotfontein-Grosshuis, *Dinter* 7274 (K., D.Coll.); Namabezirk, Narib sandfelder zuusehen den Dunen der Kalahari-hugel, *Engler* 6553 (B.); Sandboden in Sandverhaar, *Schafer* 279 (B.); sand dunes at Sandverhaar, *Pearson* 4683 (K., B.M., B.H.); and *Pearson* 4915 (K.); Quickborn, Waterberg, *Bradfield* 191 (P.); Mariental, Einup, *Steyn* 22534 (P.); sand dunes between Noachabeb and Grundoorn, *Pearson* 7892 (K., B.M., N., A.M., B.H., P., Kim.); Damaraland, *Een* (B.M.); No definite locality, *Dinter* 5153 (D. Coll.); *Dinter* (D. Coll.); *Seiner* 96 (B.).

CAPE.—In arenosis, Kuruman, *Marloth* 1048 (B., P., A.M.); near source of Kuruman River, *Burchell* 2514 (K.); Armoeds Vlakte, Vryburg, *Mogg* 8265 (P.); Griqualand West; between Asbestos Mountains and Wittewater, *Burchell* 1693 (K., B.).

ORANGE FREE STATE.—Kroonstad district: common in grassveld, Bothaville, *Goossens* 1202 (P.).

TRANSVAAL.—In collibus arenosis prope Crocodile and Aapies River, *Zeyher* 368 (K., B.M., Pa., S.A.M.); Vereeniging, *Gilfillan* (B.M.); near Pietersburg, *Schlechter* s.n. (B.) probably Pretoria district, *Rutherford* (K.).

RHODESIA.—Victoria Falls, *Schwarz* (B.H.).

SOUTH AFRICA.—No definite locality, *Burke* (K.); *Chapman and Baines* (K.); *Lemue* (G.).

4. **T. pseudosphaerosperma** Schinz in *Vierteljahrschr. Nat. Ges. Zurich* 57, 557 (1912);
Bak. f. *Leg. Trop. Afr.* 1.215 (1926); *Die Veg. der Erde* 9.3.591 (1915).

Type specimen, *Fleck* 334a, in Botanisches Museum, Zurich.

Stems erect or ascending, several arising from the rootstock. *Leaves* simple, 2–6.5 cm. long, 1–1.5 cm. broad, elliptic to elliptic-lanceolate or elliptic-spathulate, wedge-shaped at base, mucro recurved, densely appressedly sericeous on both sides, petioles about 2–3 mm. long. *Stipules* subulate, 1–2 mm. long. *Flowers* axillary, 2–4 together, small; pedicels 1–2 mm. long. *Calyx* densely sericeous, tube 2–3 mm. long, lobes unequal, 1–2 mm. broad. *Ovary* 4 mm. long, densely sericeous. *Style* glabrous, 1.5 mm. long. *Legume* one-seeded, 0.5–1 cm. long, 2–4 mm. broad, sericeous.

SOUTH WEST AFRICA.—Omalhelhe bei Epasa, *Seiner* 352 (Z., B.); Karribib, Omalhekersmsel, *Dinter* 6975 (P.).

BECHUANALAND.—Uschi, Kalahari, *Fleck* 334a (Z.); Mochudi, *Rogers* 6591 (K., Z.); Harbor [*Rogers* 6336] (P.); Harbor [*Rogers* 6499] (B.H.).

5. **T. Forbesii** Baker in *Oliv. Fl. Trop. Afr.* 2.116 (1871) in nota; *Die Veg. der Erde* 9 3.589 (1915); *Burt Davy Fl. Tvaal.* 1.2.379 (1932); (*T. salicifolia* Schinz, in part.).

Type specimen, *Forbes* s.n. in Herbarium, Kew.

Perennial. *Stems* ascending, slender, branching, with short grey or fulvous pubescence. *Leaves* simple, subsessile, linear, mucronate, apex recurved, glabrous above, pilose below, 2.5–7 cm. long, 0.4–1.1 cm. broad. *Stipules* setaceous, 3–6 mm. long. *Flowers* 0.9–1.3 cm. long, pale mauve-pink, solitary or in pairs in the axils of the leaves; pedicels 0.4–1 cm. long. *Calyx* silky, tube 4–5 mm. in diam., 2 mm. long, lobes linear-subulate, all more or less the same length, 4–7 mm. long. *Vexillum* suborbicular, silky without, 0.8–1 cm. long, 5–9 mm. broad, claw short, 1–2 mm. long; carina 0.7–1 cm. long, 2–3 mm. broad; alae 0.9–1.1 cm. long, 2–3 mm. broad, with a short tail at the base of each lobe. *Ovary* 6–7 mm. long, silky. *Style* 2 mm. long, penicillate. *Legume* linear, thinly appressedly silky, 2.5–3.5 cm. long, 3–4 mm. broad.

TRANSVAAL.—Waterberg district: in sandveld, Mosdene, Naboomspruit, *Galpin* 11667. (K., B.H., N., P.); and *Galpin* M 84 (P.).

PORTUGUESE EAST AFRICA.—Ad sinum Delagoa Bay, *Forbes* 77 (P.); Delagoa Bay, *Forbes* s.n. (K.); *Junod* 168 (G., Z., B.); Rikatla, Lourenço Marques, *Junod* 546 (T.M.); Lourenço Marques, *Schlechter* 11519 (K., B.M., G., Pa., V., Z., B.); *Howard* 25 (B.H.); *Borle* 585 (P.); sandflats east of docks, Lourenço Marques, *van Nouhuys* (T.M.).

6. **T. virgata** H. M. Forbes sp. nov., affinis *T. Forbesii* Bak., sed foliis angustioribus, caulibus senicibus multo ligneis differt.

Suffruticosus. *Caules* novelli tenuiter appresse albo-pubescente, caules senices lignei, subnigri. *Folia* simplicia, lineari-lanceolata, 1.5–2.5 cm. longa, usque ad 2 mm. lata, mucronata, retusa, parva, supra glabrescentia, subtus appresse pubescentia; stipulae angusto-lineari-subulatae, usque ad 1 mm. longae. *Flores* axillares, geminati, 4 mm. longi; pedicelli graciles, usque ad 4 mm. longi; lobi calycis pilosi, tubo aequilongi; stylus pilosus. *Froctus* linearis, complanatus appresse pubescens, 1.5 cm. longus, 3 mm. latus.

Type specimen, *Pole Evans* s.n., in National Herbarium, Pretoria, and Natal Herbarium, Durban.

Small, somewhat shrubby plant. *Stems* when young, slender, appressedly albopubescent, when old, woody and almost black in colour. *Leaves* simple, sessile or subsessile, linear-lanceolate, mucro retuse, small, glabrous above, appressedly pubescent below, 1.5–2.5 cm. long, up to 2 mm. broad. *Stipules* narrow, linear-subulate, up to 1 mm. long. *Flowers* axillary, in pairs, 4 mm. long. *Pedicels* slender, 4 mm. long. *Calyx* softly pilose, lobes equalling the tube, ciliate. *Vexillum* 4 mm. long, 3 mm. broad; carina eared at base. *Style* bearded. *Legume* linear, flattened, thinly appressedly pubescent, 1.5 cm. long, 3 mm. broad, 2–4 seeded.

TRANSVAAL.—Greefswald 615, nr. Mapungubwe, *Pole-Evans* (P., N.).

One gathering only of this plant has been seen. The dark woody stems, apparently arising from a woody rootstock, bearing the young leaf- and flowering-stems, make this species quite distinct from any other. The greyish-green leaves and very small pink-mauve flowers tend to make the plant inconspicuous. From its appearance this plant probably grows in very arid regions.

7. **T. monophylla** Schinz in Viertelsjahrsch. Nat. Ges. Zurich, 52. 424 (1907).

Type specimen, *Fleck* 836, in Botanisches Museum, Zurich.

Stems erect, slender, densely appressedly argenteo-sericeous. *Leaves* shortly petiolate, unifoliolate, oblong-elliptic, mucronulate, glabrous above, sericeous below, 1.5–5.5 cm. long, 3–8 mm. broad; petioles 4–6 mm. long. *Stipules* up to 2 mm. long. *Flowers* solitary, axillary, on pedicels up to 2 cm. long. *Calyx*-tube 3 mm. long, 5 mm. in diam., two upper lobes short, connate, lateral and lowest lobes approximately 2 mm. long. *Vexillum* 1–1.2 cm. long, 4–5 mm. broad. *Ovary* 5 mm. long, pilose. *Style* 1–1.5 mm. long, glabrous. *Legumes* up to 4 cm. long, 4 mm. broad, slightly falcate, appressedly argenteo-sericeous.

SOUTH WEST AFRICA.—Rehoboth, *Fleck* 836 (Z.); Hereroland, *Fleck* 436 (Z.); Sandibenen bei Inachab, *Dinter* 1158 (Z.); Usakos, *Dinter* 5927 and *Dinter* s.n. (D. Coll.); Karibib, *Dinter* 778 (D. Coll.); Grosser Kalkber, *Dinter* 7703 (B., D. Coll.).

8. **T. Pietersii** H. M. Forbes sp. nov., affinis *T. Forbesii* Bak., sed foliis pedicellisque longioribus differt.

Caulis gracilis, ascendens, simplex vel parce ramosus. *Folia* simplicia, lineari-lanceolata, 2.8–7 cm. longa, 3–7 mm. lata; mucronata, mucrone retuso, supra glabrescentia, subtus appresse pilosa; petioli graciles, 0.3–1.2 cm. longi; stipulae angusto-subulatae, 2–5 mm. longae, pubescentes. *Flores* axillares, solitarii vel terni, purpurei, 0.9–1.2 cm. longi; pedicelli 4–5.5 mm. longi; lobi calycis lineari-subulati, pilosi, ciliati, tubo aequilongi vel breviores; stylus glaber. *Fructus* 2–3 cm. longus, 3 mm. latus, leviter falcatus, pubescens.

NATAL.—Ladysmith district: near Pieters, 3–4000 ft., 1900, *Wood* in Natal Herb. 8888, Type.

Stems slender, ascending, simple or laxly branched, 1–4 arising from the rootstock, up to 10 cm. long. *Leaves* unifoliolate, linear-lanceolate, slightly falcate, mucro short, recurved, glabrescent above, thinly appressedly pilose beneath, 2.8–7 cm. long; petioles slender, 0.3–1.2 cm. long, with two small bracts 1–1.5 mm. long at apex. *Stipules* narrow subulate, pubescent, 2–5 mm. long. *Flowers* axillary, solitary or three together, purple, 0.9–1.2 cm. long; pedicels 4–5.5 mm. long. *Calyx* pilose, tube 5 mm. in diam., lobes unequal, lateral and lowest longest. *Vexillum* silky without, 0.9–1.2 cm. long, 4–7 mm. broad; alae 1–1.2 cm. long, 2.5 mm. broad, sparsely pilose without and ciliate, especially

towards base of lobe; carina 6.5–7.5 mm. long, 2 mm. broad. *Staminal-tube* 5.5 mm. long, vexillary stamen attached. *Ovary* silky, 5 mm. long. *Style* 2 mm. long, glabrous. *Legume* slightly falcate, pubescent, 2–3 cm. long, 3 mm. broad.

9. **T. gracilentia** H. M. Forbes sp. nov., affinis *T. Pietersii* H. M. Forbes, sed caulibus gracilioribus, foliis brevioribus angustioribusque, floribus flavidis differt.

Caules graciles, ascendentes. *Folia* simplicia, lineari-lanceolata, 2.3–3.9 cm. longa, 2.5–5 mm. lata, subtus appresse pilosa, supra glabrescentia, apice retusa, mucrone parvo; petioli 2.5–6 mm. longi; stipulae setosae, 2.3–5 mm. longae. *Flores* axillares, solitarii, flavi; pedicelli 5.5 mm. longi; dentes calycis tubo breviores; stylus glaber. *Fructus* non visus.

NATAL.—Entabeni district: Gingindhlovu, 1933, *Gerstner* in Natal Herb. 23083, Type.

Stems slender, ascending, thinly appressedly pilose becoming glabrous when older. *Leaves* unifoliolate, linear-lanceolate, appressedly pilose below, glabrous above, mucro small, recurved, 2.3–3.9 cm. long, 2.5–5 mm. broad; petioles 2.5–6 mm. long, with two small bracts at apex. *Stipules* setaceous, 2.3–5 mm. long. *Flowers* yellow, solitary in axils of leaves, 1–1.5 cm. long; pedicels 5.5 mm. long. *Calyx*-tube 5 mm. in diam., 2.5 mm. long, lobes ciliate, shorter than the tube. *Vexillum* silky without and long ciliate round margin at base of lobe. *Ovary* densely silky, 5 mm. long. *Style* glabrous, about 1 mm. long. *Legume* not seen.

KEY TO SECTION 2.

Leaves palmate, 4–7-lobed.....	10. <i>lupinifolia</i> .
Leaves digitate, 3-lobed.....	A.
A. Pods flat; leaves generally 2–3-jugate.....	65. <i>mucoropoda</i> .
Pods not flat; leaves always 3-lobed.....	B.
B. Pods twisted into loose spiral.....	12. <i>contorta</i> .
Pods plicately folded.....	11. <i>plicata</i> .

10. **T. lupinifolia** (Burch.) DC. Prodr. 2.255 (1825); Linnaea 23. 31 (1850); Harvey in Harv. and Sond. Fl. Cap. 2.204 (1861–62); Baker in Oliv. Fl. Trop. Afr. 2.107 (1871); O. Kuntze Rev. Gen. Pl. 1.175 (1891); Durand and Schinz Etudes sur la Fl. du Congo. 105 (1896); Durand Syll. Fl. Congo. 132 (1909); Burt Davy and Pott in Ann. Tvl. Mus. 3,3.146 (1912); Fries in von Rosen. Schwed. Rhod.-Congo Exped. 1911–12, 1.81 (1914); Die Veg. der Erde, 9, 3.586 (1915); Trans. Roy. Soc. S.A. 5, 4.375 (1916); De Wild in Bull. Soc. Bot. Belg. 577,2.122 (1925); Bak. f. Leg. Trop. Afr. 1.183 (1926); Bot. Survey Springbok Flats, Mem. 12,68 (1928); Hutch. and Dalziel Fl. West Trop. Afr. 1, 2.385 (1928); Young in Ann. Tvl. Mus. 14,4.398 (1932); Burt Davy Fl. Tvaal. 1.9,378 (1932); Watt and Breyer-Brandwijk Med. and Pois. Pl. S.A. 74 (1932).

Syn. *Galega lupinifolia* Burch. in DC. Prodr. 2.255 (1825); *Rhynchosia* (*Polytropia*) *Cienkowski* Schweinf. Reliq. Kotschy. p. 31, t. 24–5 (1868); *Cracca lupinifolia* O. Ktz. Rev. Gen. Pl. 1.175 (1891); Hiern in Cat., Afr. Pl. Welw. 1.219 (1896).

Type specimen, *Burchell* 2488, in Herbarium, Kew.

Suffruticose. *Stems* diffuse, with stems, petioles, peduncles and young leaves roughly fulvo-hirsute. *Leaves* 4–5 foliolate, palmate; leaflets 1.5–8.5 cm. long, 0.4–1.8 cm. broad, oblanceolate, mucronate, apex recurved, margin thickened, glabrous or sparsely hirsute above, fulvo-hirsute beneath; petioles 1–8.5 cm. long. *Stipules* short, broadly subulate, ribbed, 2–5 mm. long. *Peduncles* terminal and axillary, 9–26 cm. long, laxly flowered. *Flowers* small, 5–7 mm. long, in fascicles of 2–3; pedicels 3–7 mm. long. *Calyx*

2.5-5 mm. long, pilose, lobes subequal, lanceolate, acuminate, 1.5-3 mm. long. *Vexillum* sericeous without, subrotund, about twice as long as the calyx. *Ovary* appressedly villous. *Style* short, glabrous. *Legume* linear, flat, pubescent, 2.5-3.5 cm. long, 3-5 mm. broad.

SOUTH WEST AFRICA.—Between Kunene River and Eunda, *Barnard* 780 (S.A.M.); Bushveld, Grasslippe uber Lehm, *Dinter* 2327 (B.); Okandjose, *Dinter* 528 (Z.); Amboland, Onamakunde, *Rautanen* 20 (B.); Omulonga, *Schinz* 2086 (Z.); Oshiheke, *Schinz* 2087 (Z.); Otyvaronga district, Quickborn, Okohandja, *Bradfield* 359 (P., T.M.); Damara-land: Olukonda, *Rautanen* 512 (Z.); Ondonga, Olukonda, *Rautanen* 514 (Z., G.); *Rautanen* 517 (Z.); No definite locality, *Rautanen* 513 (K., Z., V., G.).

CAPE.—Little Klobbokhonni near Harnapery, *Burchell* 2488 (K., G.); Mochudi, *Harbor* 6498 in Herb. Rogers (B.H.). Kuruman district: in arenosis, Marmosis, Kuruman, *Marloth* 1047 (P.); Vryburg district: Grasfort, Vryburg, *Mogg* 8333 (P.); Biesjesvlakte, Vryburg, *Henrici* 67 (P.); Vryburg, *Burt Davy* 11111 (P.); East Griqualand in arenosis pr. Botsabelo, *Schlechter* 4101 (Z., B., G.H.).

ORANGE FREE STATE.—Bothaville, Kroonstad, *Goossens* 1165 (P.).

TRANSVAAL.—Potchefstroom district: Vaal and Mooi Rivers, *Burke* and *Zeyher* 343 (K., B.M., S.A.M.); Vereeniging district: Vereeniging, *Gilfillan* (P.); Witwatersrand district: grass veld, Canada, near Johannesburg, *Moss* 13603 (W.); Lichtenburg district: Lichtenburg, *Jenkins* (T.M.); townlands, Klipveld, Lichtenburg, *Liebenberg* 69 (P.); Barberton district: Research Station, Nelspruit, *Liebenberg* 2447 (P.); *Carolina* district: Waterval Boven, *Rogers* [T.M. 14875] (T.M.); *Rogers* 18408 (Z.); Middelburg district: Witbank, *Rand* 142 (B.M.); Pretoria district: T.U.C. Farm, Pretoria, *Moss* 8489 (B.M., W.); road to Daspoort, *Leendertz* 579 (B.H., T.M.); Wonderboom, *Smith* 2268 (P.); between station and level crossing, Wonderboom, *Smith* 6243 (P.); Wonderboompoort, *Rehmann* 4607; (Z.); Magaliesberg near Wonderboom, *Burt Davy* 2659 (P., B.H.); between Bronkhorstpruit and Middelburg, *Wilms* 361 (B.M., G., B.); Middelkop near Pienaars River, *Smith* 2155 (P.); near Koedoespoort, *Smith* 1534 (P.); Bushveld near Eland River and Klippan, *Rehmann* 5032 (K., B.M., Z.); Aapies and Vaal Rivers, *Burchell* 2270 (K.P.); *Burke* 343 (Z.); Vaal River, *Burke* (Pa.); Waterberg district: Strydpoort, Makapaansberge, *Rehmann* 5550 (Z., B.); Mosdene, Naboomspruit, *Galpin* M. 81 (P., Z.M.); Rustenburg district: Rustenburg, *McClelland* (G.U.C.); Marico district: Zeerust, *Burt Davy* 7191 (P.); district unknown: in arenosis pr. Mordiniobole, *Schlechter* 4262 (K., B.M., G., V., Z., B., T.M., A.M.); Zandriviervoort, *Rogers* 24961 (Z., T.M.); Kalahari Region, *Maclea* 6074 (B.H.).

SOUTHERN RHODESIA.—Bulawayo district: Matopos, *Rogers* 5682 (T.M., S.A.M., B.H.); *Eyles* 1154 (Pa., Z., S.A.M.); Victoria Falls, *Rogers* 5605 (Z.); *Fries* 20 (Z.); *Flanagan* 3127 (B.H.); south bank of Zambesi, Victoria Falls, *Rogers* 5716 (K., B.H.).

NORTHERN RHODESIA.—Barotseland, *Watt* and *Brandwyk* 286 (P.).

ANGOLA.—*Welwitsch* 2076 (P., G.); *Welwitsch* 2077 (G., B.); *Gossweiler* 365 (B.).

SOUTH AFRICA.—No definite localities, *Zeyher* 457 (B.M.); Cape (?) 1850, *Zeyher* 458a (K., B.M., Pa., G., Z., B., S.A.M.); *Drege* 458 (V.); *Burchell* 2527 (K.); 1846 Lemue (G.).

This plant is known as "namiyati" to certain native tribes, and a preparation of the root is used by them for procuring abortion and for committing suicide.

11. *T. plicata* Oliv. in Hook. Ic. Pl. t. 1445 (1883); Wood Fl. of Natal 342 (1907); Wood in Trans. S.A. Phil. Soc. 18.2. 147 (1908); Burt Davy and Pott in Ann. Tvl. Mus. 3.146 (1912); Bews Fl. Natal and Zululand 111 (1921); Bot. Survey S.A. Mem. 12.68 (1928); Burt Davy Fl. Tvaal. 1.7.378 (1932).

Syn. *Ptychobium plicatum* (Oliv.) Harms in Engl. Pflanzenw. Afr. 3.1. (1915); Engl. and Drude, Veg. der Erde 9.591 (1915) in obs.

Type specimen, *Rehmann* 4922, in Herbarium, Kew.

Suffruticose, 15–30 cm. high. *Stems* rigid, diffusely hirtotomentellous, procumbent or ascending. *Leaves* trifoliolate, shortly petiolate; leaflets rigid, narrow oblanceolate, apex mucronate, recurved, glabrous above, pubescent below, 0.9–4 cm. long, 0.2–1 cm. broad; petioles 2–7 mm. long. *Stipules* subulate, 1–3 mm. long. *Flowers* minute, 6 mm. long, axillary, subsessile, often geminate. *Calyx*-tube 2 mm. long, 3–5 mm. in diam., lobes about 2 mm. long, lanceolate, acute. *Vexillum* obovate, subpanduriform, retuse, unguiculate, appressedly pubescent without, 6 mm. long, 3 mm. broad; alae ciliate round lower part of lobe. *Ovary* pilose, 3–4 mm. long. *Style* about 1 mm. long, glabrous. *Legume* 0.9–1.3 cm. long, 5 mm. broad, abruptly transversely 3–5 plicate.

ZULULAND.—No definite locality, *Gerrard* 1087 (K.).

TRANSVAAL.—Barberton district: Berea, Barberton, *Thorncroft* 111 (K., P.); *Thorncroft* 884 (N., V.); *Rogers* 18544 (P.); *Pott* 5349 (T.M.); Kaapmuiden, *Rogers* 25075 (G., Z., T.M.); Pretoria district: Elands River and Drift, Bushveld, *Rehmann* 4922 (K., Z.); *Rehmann* 5181 (Z., B.); in graminosis pr. Pienaars River Bridge, *Schlechter* 4212 (K., Z., V., G., B., B.H., A.M., T.M.); Onderstepoort, *Theiler* (T.M.); near Cheop Pyramid, *Mogg* 1241 (P.); Rooikop, Bushveld, *Smuts* and *Gillett* 2125 (P.); Rust der Winter, *Pole-Evans* 3879 (P.); Waterberg district: Sandveld, Mosdene, Naboomspruit, *Galpin* M.90 (P.); Sandrivierspoort, *Rogers* 24976 (B.M., P.); Pietersburg district: Sand River, *Murray* 610 (P.); Zoutpansberg district: Mara, *Rogers* 22271 (P., T.M.).

PORTUGUESE EAST AFRICA.—Ressano Garcia, *Schlechter* 11830 (K., G., A., B.).

12. ***T. contorta*** N.E. Br. in Kew Bull. 103 (1909); Engl. in Engl. and Drude Veg. der Erde 9.3.1. 568 (1915).

Syn. *Sylitra contorta* (N.E. Br.) Bak. f. Leg. Trop. Afr. 1. 268 (1926); *Bothalia* 3.2.239 (1937).

Type specimen, *Lugard* 132, in Herbarium, Kew.

A shrub with straight twig-like branches, whole plant densely albo-tomentose. *Leaves* trifoliolate, petiolate; leaflets 1.5–4 cm. long, 0.6–1.2 cm. broad, cuneate-oblong, obtuse, mucro recurved, glabrous above, pubescent beneath with adpressed silky white hairs, medial leaflet longest. *Stipules* 2–4 mm. long. *Flowers* axillary, small, fasciculate, 3–4 together, 7–8 mm. long. *Calyx* villous, tube 4 mm. in diam., 2 mm. long, teeth subulate, three equal in length to the tube, two upper shorter and slightly connate. *Vexillum* 6–7 mm. long, 2–3 mm. broad, pubescent on the back. *Ovary* densely villous-tomentose, 2.5–4 mm. long. *Style* slender, glabrous. *Mature legumes* twisted into a loose spiral, densely villous-tomentose with white hairs.

BECHUANALAND.—Ngamiland, Kwebe, *Lugard* 132 (K.).

TRANSVAAL.—Zoutpansberg district: Messina, *Rogers* 20042 (K., G., P., Z.); *Rogers* 20812 (N., P., W.); *Pole-Evans* 1718 (P.); between Saltpan and Waterpoort, Zoutpansberg, *Obermeyer*, *Schweickerdt* and *Verdoorn* 267 (P.); near Catophractes belt, Zoutpan, *Schweickerdt* and *Verdoorn* 508 (P.); Zoekmakaar, Pietersburg, *Rogers* 22598 (Z., P.); Lydenburg district: Ohrigstad-Branddraai Road, *Young* A583 (T. M.); Sandrivier, *Schlechter* 4592 (B., B.H.).

This plant is very closely allied to *T. plicata* Oliv., but the legumes are spirally twisted instead of plicately folded.

Baker f. Leg. Trop. Afr. p. 168 suggests that Fig. 290 in Engl. Veg. der Erde is *T. contorta* N.E. Br., but in my opinion this figure is typical *Sylitra contorta* E. Mey. Engler's sug-

gestion that *T. contorta* N.E. Br. perhaps belongs to the genus *Sylitra* is also incorrect. One of the main differences between the two genera (*Tephrosia* and *Sylitra*) is the pod, which in the latter genus is of a thin papery texture. In *T. contorta* the pods are of a much firmer texture and are also much more contorted than those of *Sylitra*.

KEY TO SECTION 3.

- Stems erect..... A.
 Stems procumbent, spreading or ascending..... B.
- A. Stipules subulate..... C.
 Stipules linear, setaceous or lanceolate..... D.
- C. Whole plant densely silvery canescent..... 13. *canescens*.
 Whole plant not densely silvery canescent..... E.
- E. Flowers in axils of upper leaves, or few on short terminal peduncles up to 2.5 cm. long..... 14. *stricta*.
 Flowers on terminal, axillary or leaf-opposed peduncles..... F.
- F. Pubescence on stems, etc., yellow or brown..... G.
 Pubescence on stems, etc., greyish..... H.
- G. Stems, etc., with close or spreading yellowish pubescence..... 15. *polystachya*.
 Stems, etc., with short ascending brown hairs..... 16. *noctiflora*.
- H. Peduncles terminal and leaf-opposed..... I.
 Peduncles terminal and axillary..... J.
- I. Leaves 2-4-jugate, leaflets linear-lanceolate; pods pale yellow-green..... 17. *Dregeana*.
 Leaves 3-8-jugate; pods not pale yellow-green..... K.
- K. Leaflets cuneate-oblong, dark green above, pale green below; pods linear, velvety..... 18. *pallens*.
 Leaflets oblanceolate; pods slightly falcate, thinly pubescent.... 19. *delagoensis*.
- J. Leaves 1-6-jugate; leaflets more or less densely canescent below Leaves not-canescant below..... L.
- L. Leaves 7-9 jugate; peduncles laxly racemose..... 20. *amoena*.
 Leaves 4-8-jugate; peduncles few flowered at apex..... 21. *Medleyi*.
- D. Style glabrous..... M.
 Style bearded or penicilliate at apex..... N.
- M. Stems, etc., densely cano-pubescent..... O.
 Stems, etc., yellow, brown or grey pubescent..... P.
- O. Leaves 2-6-jugate; leaflets up to 3 cm. long, cano-pubescent on both sides..... 23. *euchroa*.
 Leaves 5-9-jugate; leaflets up to 1.8 cm. long, glabrous and pale green above, densely canescent below..... 24. *pallida*.
- P. Pubescence grey..... Q.
 Pubescence yellow or brown..... R.
- Q. Leaves 6-12-jugate; leaflets complicate; peduncles laxly many flowered..... 25. *Kraussiana*.
 Leaves 3-5-jugate; leaflets not complicate; peduncles sparsely flowered..... 26. *sparsiflora*.
- R. Leaves 5-17-jugate; stipules 4-6 mm. long..... 27. *polystachyoides*.
 Leaves 5-9-jugate; stipules up to 1 cm. long..... 28. *Ehrenbergiana*.
- N. Style penicilliate at apex..... S.
 Style bearded..... T.
- S. Veining on lower surface of leaflets dark brown..... 29. *oxygona*.
 Veining on lower surface of leaflets not dark..... U.
- U. Peduncles densely many flowered..... 30. *zoutpansbergensis*.
 Peduncles laxly flowered..... V.
- V. Leaves 1-2-jugate, sometimes simple..... 31. *griseola*.
 Leaves 3-17-jugate, never simple..... W.
- W. Leaves 7-17-jugate; leaflets up to 2 cm. broad..... 32. *purpurea*.
 Leaves 3-9-jugate; leaflets rarely 1 cm. broad..... X.
- X. Leaves 6-9-jugate; leaflets up to 9 mm. broad, oblanceolate.... 33. *Evansii*.
 Leaves 3-8-jugate; leaflets up to 6 mm. broad, narrow oblanceolate..... 34. *transvaalensis*.

- T. Peduncles up to 7 cm. long, flowers few in a short dense raceme... 35. *inandensis*.
 Peduncles 8-31 cm. long, laxly many flowered..... Y.
- Y. Leaves 3-8-jugate; peduncles 10-15 cm. long..... 36. *otariensis*.
 Leaves 7-14-jugate; peduncles 8-31 cm. long..... 37. *lactea*.
- B. Stipules setaceous, linear or linear-lanceolate..... (a)
 Stipules subulate..... (b).
- (a) Stems ascending..... (c).
 Stems procumbent or trailing..... (d).
- (c) Leaves sessile or subsessile..... 38. *tzaneenensis*.
 Leaves distinctly petioled..... (e).
- (e) Style glabrous; leaves 1-2 jugate..... 39. *clongata*.
 Style bearded; leaves 1-8 jugate..... (f).
- (f) Leaflets narrow linear-lanceolate, 2-4-mm. broad..... 40. *angustissima*.
 Leaflets linear-lanceolate, up to 9-mm. broad..... (g).
- (g) Leaves 1-4-jugate; midrib lutescent, prominent on lower surface
 of leaflets..... 41. *lurida*.
 Leaves 2-8-jugate; leaflets argenteous below (lfts uncinata in var.
 uncinata)..... 42. *longipes*.
- (d) Style penicillate; veining dark reddish-brown on lower surface
 of leaflets..... 43. *multijuga*.
 Style glabrous; veining not dark..... (k).
- (h) Whole plant more or less densely rufo-tomentose; leaflets glabrous
 above..... 44. *semiglabra*.
 Plant hirsute with long whitish hairs; leaflets glaucous above.... 45. *Burchellii*.
- (b) Stipules up to 6 mm. long..... (i).
 Stipules 1-2 cm. long..... (j).
- (i) Leaves 3-7-jugate, subsessile; apex of leaflets very retuse..... 46. *retusa*.
 Leaves 2-4-jugate, long-petioled; apex of leaflets obtuse or acute 47. *capensis*.
- (j) Flowers almost capitate in a short dense raceme at apex of ped-
 uncle; calyx lobes short, triangular-subulate..... 48. *pseudocapitata*.
 Flowers in an interrupted raceme or few at apex; calyx teeth
 lanceolate..... (k).
- (k) Apices of leaflets truncate or emarginate; calyx lobes longer
 than tube..... 49. *natalensis*.
 Apices of leaflets apiculate; calyx lobes equal to tube..... 50. *apiculata*.

13. **T. canescens** E. Mey. Comm. Pl. Afr. Aust. 1.1.109 (1836); Hook. Lond. Journ. Bot. 2.88 (1834); Cape Plants, Krauss and Engler 54 (1846); Harvey in Harv. and Sond. Fl. Cap. 2.204 (1861-62); O. Kuntze Rev. Gen. Pl. 1.174 (1891); Wood. Fl. of Natal 41 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Bews Fl. Natal and Zululand 110 (1921); Bak. f. Leg. Trop. Afr. 1.188 (1926); Henkel, Ballenden and Bayer Ann. Nat. Mus. 8.1.106 (1936).

Type specimen, *Drège* s.p. in Botanisches Museum, Berlin-Dahlem.

Suffruticose, erect, whole plant densely silky and silvery canescent, 60-95 cm. high. *Stems* slender, flexuous, terete, branching a little. *Leaves* 4-8 jugate, 3.5-10.5 cm. long petiolate; leaflets petiolulate, 0.9-3 cm. long, 0.35-1.3 cm. broad, obovate-oblong, obtuse or emarginate, densely canescent on both sides. *Stipules* 1-2 mm. long, subulate. *Peduncles* 2-15 cm. long, racemes many-flowered, leaf-opposed. *Flowers* 0.9-1 cm. long, pink-mauve; pedicels 3-6 mm. long. *Calyx* canescent, tube 6-7 mm. in diam., 2 mm. long. *Ovary* 5-6 mm. long, silky canescent. *Style* glabrous, 2.5-3 mm. long. *Legume* 4-5 cm. long, 5-6 mm. broad, 4-6 seeded, canescent.

NATAL.—Durban, *Cooper* 2200 (K.); *Wilms* 1952 (K., B.M.); *Wood* 11836 (Z., P., N., W.); *Moss* 5307 (B.M., W.); open dune scrub, *Moss* 5306 (W.); *Wood* 8753 (N.); *Rehmann* 8692 (Z.); in frutice ad oram pr. Durban, *Wood* 6270 (B.M., B., Pa., B.H., P., T.M.); *Wood* 8046 (B.); Snell Parade, Beach, Durban, *van Nouhuys* (N., T.M.); sandy places near Omsamculo, *Drège* (B.); no definite locality, *Drège* (K., B.M., V.); *Gerrard*

and *McKen* 5 (N.); sand dunes, Beach Terminus, 1913, *Thode* (S.); and 1914 *Thode* (B., S.); Zululand Umlalaa, *Gerstner* (N.); no definite locality, *Gerrard* and *McKen* 222 (K., B.M., Pa., V.).

PORTUGUESE EAST AFRICA.—Delagoa Bay, *Forbes* (K., Pa.); in dunes, *Schlechter* 11987 (K., B.M., B., Pa., A., V., G.); Lourenço Marques, *Rogers* 11819 (K., B.M., Z., W., A.M.); *Rogers* 2247 (P., W., T.M.); *Junod* 215 (T.M.); *Borle* 423 (P.); near sea, Catemba, Lourenço Marques, *Borle* 450 (P.); *Muir* 478 (N.); Beira, *Dummer* 669 (K.); *Rogers* 4567 (B.M., Z., B.H., T.M.).

This small shrub occurs on the sand dunes along the Natal coast, extending to Zululand and up the East Coast to Beira. It is an attractive plant, especially when in bloom, for the bright pinky-mauve flowers contrast well with the silvery-white leaves and stems.

14. ***T. stricta*** (L.f.) Pers. Syn. 2.329 (1807); DC. Prod. 2.253 (1825); Spreng. Syst. Veg. 3.233 (1826); Ecklon and Zeyher Enum. Pl. Afr. Aust. Extratrop. 246 (1825); Harvey in Harv. and Sond. Fl. Cap. 2.205 (1861-62).
Syn. *Galega stricta* Ait. Hort. Kew. 3.70 (1789); Linn. Syst. Nat. ed. 13 per Gmelin 2.2.1130 (1792); Thunb. Prodr. 133 (1800) (sphalm. striata); Willd. Sp. Pl. 3.2.1244 (1803) (sphalm. Galega). *Galega pulchella* Scopol. Delic. Insub. 1.3. t. 2 (1786); Vahl. Symb. 2.85 (1791). *Galega mucronata* Thunb. Prodr. 134 (1800). *Indigofera stricta* L.f. Suppl. 334 (1781); Linn. Syst. ed. Murray 678 (1784); Linn. Syst. Nat. ed. 13 per Gmelin 2.2.1129 (1792); Jacq. Hort. Schroenbr. 2.58 t. 236 (1797); Thunb. Prodr. 133 (1800); Willd. Sp. Pl. 3.2.1232 (1803); Spreng. Syst. Veg. 3.276 (1826).

Type specimen, *Ecklon* and *Zeyher* 1630, is deposited in the Thunberg Herbarium, Uppsala.

Suffruticose. *Stems* erect, branching, terete, clothed with cinereous tomentum. *Leaves* subsessile, 2-6-jugate. *Leaflets* 0.7-1.3 cm. long, 3-5 mm. broad, oblong or cuneate, mucronate, mucro recurved, glabrous above, pubescent below. *Stipules* 4-6 mm. long, subulate. *Flowers* few, almost sessile in axils of upper leaves, or occasionally a few borne on a short peduncle about 2.5 cm. long. *Pods* 2.7-4 cm. long, 4 mm. broad, velvety when young, at length glabrescent.

CAPE.—Swellendam district: on plains of George and Swellendam, *Bowie* 5 (B.M.); Riversdale district: *Burchell* 6728 (K.); George district: on the plains of Outeniqua, *Bowie* 3 (B.M.); Uitenhage district: inter frutices (alt. 111) collium prope Van Stadens rivier and in Olifantshoek, *Ecklon* and *Zeyher* 1630 (K., Pa., G., V., B., U., S.A.M.). No definite locality: *Dervaux* (G.); Cape 1772, *Oldenburg* 1103 (B.M.); *Masson* (B.M.).

15. ***T. polystachya*** E. Mey. in Comm. Pl. Afr. Aust. 10 (1836); Harvey in Harv. and Sond. Fl. Cap. 2.206 (1861-62); O. Kuntze Rev. Gen. Pl. 1.175 (1891); Xalbh. Ann. K.K. Naturhist. Hofmus. 20.3.24 (1905); Wood Fl. of Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Burt Davy and Pott in Ann. Tvl. Mus. 3, 3.146 (1912); Phillips in Ann. S.A. Mus. 16.1.82 (1917); Bews Fl. Natal and Zululand 111 (1921).

Type specimen, *Drège* s.n. (5462 in Herb. E. Meyer), in Museum, Berlin-Dahlem.

Suffruticose, erect. *Stems* slender, straight, angular, rib-striate, clothed with close or spreading yellowish pubescence. *Leaves* shortly petioled, 3-9-jugate, 3-8.5 cm. long; leaflets cuneate-oblong, mucronate, flat or complicate, thinly pubescent above, more densely below, 0.7-3 cm. long, 3.5-9 mm. broad. *Stipules* subulate, 0.5-1 cm. long. *Peduncles* terminal and axillary, laxly racemose and many-flowered, up to 27 cm. long. *Flowers* 1-1.2 cm. long; pedicels 4-6 mm. long. *Calyx*-tube 3 mm. long, lobes ovate-acuminate, slightly shorter or equalling or exceeding the tube in length. *Vexillum* 1-1.1 cm.

long and broad, densely hairy without. *Ovary* densely long hairy. *Style* glabrous. *Legumes* narrow, linear or slightly curved, pubescent, 3.5-4 cm. long, 3 mm. broad.

CAPE.—Stockenstrom district: edge of forest, Bergmans Kloof, Stockenstrom, *Scully* 205 (P.); Queenstown district: Mountains, Queenstown, *Galpin* 1757 (B.); grassy slopes, Lesseyton Nek, *Galpin* 1952 (K., A.M., P., B.H.); Bongola Dam, Abrahams, *Moss* 13237 (W.); Umtata district: in collibus pr. Umtata, *Schlechter* 6335 (B., A.M., B.H.); near Umtata, *Flanagan* 2853 (S.A.M.); *Boius* 8878 (B.H., S.); Baziza, Tembuland, *Baur* 77 (K., B., A.M., S.A.M., B.H.); inter Gekau and Bashee, *Drège* s.n. (K., B.); Omsamcaba, Pondoland, *Drège* s.n. (K., B.M., B.); Kreilis Country, Kaffraria, *Bowker* (K.); no definite locality, *Drège* in Herb. E. Meyer 5460, 5461, 5462 (B.); *Drège* 409 (V.); *Drège* s.n. (O., Pa., Z., V., G.); *Hennegart* 45 (Pa.); ex Herb. *Mrs. F. W. Barber* (A.M.).

NATAL.—Port Natal, *Drège* (S.A.M.); edge of wood, Sydenham near Durban, *Wood* (G.); Pinetown district: Botha's Hill, *Wood* 6734 (P.); Pietermaritzburg district: near Howick, *Wood* 11432 (P.); Karkloof, *Dimock-Brown* 319 (P.); Krantzkop district: near Greytown, *Wylie* [Herb. No. 2046] (N., T.M.); *Wylie* [Herb. No. 22343] (N., T.M.); edges of bush, Tugela Valley, Krantzkop, *Thode* (B.); Klip River district: Van Reenen, *Wood* 1073 (N., T.M.); Districts unknown: Riet Spruit, *Wood* 10226 (N., T.M.); hills above Lynedock, *Wood* 4542 (K., B.); grassy slopes, Koenigsberg, *Thode* (B., S.); Zululand: Umgoya, *Wylie* [Wood 5665] (Pa.).

Var. **longidens** H. M. Forbes var. nov.

Lobis calycis multo longioribus et anguste lanceolatis valde distincta.

Type specimen, *Flanagan* 631, in National Herbarium, Pretoria.

CAPE.—Komgha district: grassy valleys near Komgha, *Flanagan* 631 (Z., N., A.M.); Albany district: in humidis umbrosis prope Grahamstown, *MacOwan* 2026 (B.M., A.M., K.); Grahamstown, *Rogers* 1578 (B.H.); Kentani district: in valleys, *Pegler* 404, 100 ft., 1904 (B.H.); 1200 ft., 1905, 1910, 1914 (N.); Umtata district: forests, Bazeia, *Baur* 38 (B.).

NATAL.—Ixopo district: Ixopo, *Schlechter* 6643 (A.M.).

This variety of *T. polystachya* is very similar in appearance to the variety *hirta*, but it is easily distinguished by the long narrow lanceolate calyx lobes. It is an erect shrubby plant, 2-4 feet high, with numerous pink or pale mauve flowers. The flowering period is from January to March.

Var. **hirta** Harv. in Harv. and Sond. Fl. Cap. 2.206 (1861-62).

Type specimen, *Sutherland* s.n., in Herbarium, Kew.

Stems, branches and inflorescence roughly rusty-pubescent, racemes shorter and more densely flowered than usual, and legumes more hairy.

CAPE.—Transkei, Indutywa district: near Colosa, *Krook* [*Penther* 2606] (V.); East Griqualand, Umzimkulu district: ad rivos Clydesdale prope flumen Umzimkulu, *Tyson* 1435 (Z., B., G., O., S.); in pratis apud rivulos circa Clydesdale, *Tyson* 2048 (K., G., S.A.M., B.H.); Pondoland, *Bachmann* 604, 617, 621 (B.).

NATAL.—Port Natal, *Guinzius* 307 (Pa., V.); coast land, 0-1,000 ft., *Sutherland* (K.); Prospect, Durban North, *Forbes* 630 (N.); near Durban, *Wood* (G., A.M.); *Wood* 6269 (B.M., P.); edge of wood, Sydenham, near Durban, *Wood* (G.); Pinetown district: Hillary, *Wood* 13070 (N.); Pinetown, *Junod* 97 (Z.); Trappisten Kolonie, Mariannhill, *Landauer* 95 and 213 (B.); Umgeni district: Field's Hill, *Wood* 242 (B.M., N., B.H., S.A.M.); Krantzkloof, *Kuntze* (K.); Botha's Hill, *Wood* 6734 (Pa., B., P.); Greytown district: *Wylie* [H. No. 20461] (N.); *Wylie* [H. No. 22343] (N.); Krantzkop district: edge of bush, Krantzkop, Tugela Valley, *Thode* (B., S.); Estcourt district: Cathkin Park, Drakensberg, *Galpin* 11742 (K., P.); Tugela Valley, Mont-Aux-Sources, *Bayer* and *McClellan* 226 (K.,

B.H., P., A.M.); Inanda district: Inanda, *Wood* 793 (K., B.M., N., B.H., Z., S.A.M.); Kearsney, *Milner* (N.); Tugela district: Nonoti, *Wood* 9188 (B.); Zululand, *Gerrard* 1106 (K., B.M., Pa., V.); Mtunzini, *Mogg* 4275 and 4374 (P.); Farm Egoa, *Curson* (P., S.); Farm 273, *Curson* 191 (P.); Bank of Pongola River, W. of Lebombo Mtns., Mkuzi, *Galpin* 13647 (Pa.); North Zululand, *Baker* [*Evans* 562] (N.).

ORANGE FREE STATE.—No definite locality, *Cooper* 1042 (K., B.M., V., Z., B.H.).

TRANSVAAL.—Pretoria district: Wonderboompoort, *Leendertz* 458 (T.M.); *Leendertz* 703 (B.H., T.M.); *Smith* 6062 (K., Pa., V., P.); Barberton district: Kaapmuiden, *Rogers* 23786 (W.); *Rogers* 25032 (Z., S.); Komatipoort, *Rogers* 21027 (K.); *Rogers* 12877 (W., A.M.); Lydenburg district: between Pilgrims Rest and Sabie, *Rogers* 24754 (Z.); Waterberg district: Messina, *Rogers* 19897 (K., W.); *Moss* and *Rogers* 99 (Z.); *Turner* 12 (P.); Potgietersrust, *Rogers* 1311 (Z.); Warmbaths, *Puttrill* 589 (P.); Pietersburg district: Makapansberge, Strydpoort, *Rehmann* 5536 (Z.); Houtbosch, *Rehmann* 6226 (Z.); Macoustie River, Farm Balloon, *Breyer* (T.M.).

PORTUGUESE EAST AFRICA.—Lourenço Marques, *Moss* 11856 (W.); Incanhine, *Schlechter* 12036 (K., Pa., G., Z., V., B., P., B.H., S.A.M., A.M.); Delagoa Bay, *Junod* No. M (Z., G.).

Var. *latifolia* Harv. in Harv. and Sond. Fl. Cap. 2.206 (1861–62); Burt Davy Fl. Tvaal. 1.2.378 (1932).

Type specimen, *Gueinzius* 616 in Herbarium, Kew.

Leaves 5–8 jugate; leaflets oblong, uncial, retuse, 1.1–3.2 cm. long, 0.5–1.3 cm. broad; longer, broader, thinner and less hairy than *T. polystachya*.

CAPE.—Eastern Province: Engcobo Mtn., *Bolus* 8875 (B.H.); Insizwa, *Krook* [*Penther* 2641] (B., V.); near streams in thorns, Scottspoort, *Thode* (B., S.); Port St. Johns, *Moss* 2742 (W.).

NATAL.—At Port Natal, *Gueinzius* 616 (K., V.); Richmond district: Bush, Deepdale, *Evans* 102 (N.); Utrecht district: Klipspruit, *Breyer* (T.M.).

TRANSVAAL.—Barberton district: in damp valleys or margins of woods, Brown's Creek, *Galpin* 809 (K., P., B.H., S.A.M.); Barberton, *Thorncroft* 1907 (B.H.); *Thorncroft* [in Herb. *F. A. Rogers* 14217] (P.); Lydenburg district: Spitzkop Goldmines, Lydenburg, *Wilms* 351 (B.M., B.); Pietersburg district: Shiluvane, *Junod* 2376 (B.); Houtbosch, *Rehmann* 6237 (K., B.M., B.H.); in montibus saxosis, Houtbosch, *Bolus* 10997 (K., P., N., A.M., B.H.); *Schlechter* 4380 (B., B.H., T.M., A.M.); in bush on hills, New Agatha, *McCallum* 137 (Pa., G., P.); in collibus lapidosus graminosisque prope Potgietersrust, *Bolus* 11072 (B.H.); Vallon du Masetane, *Junod* 1124 (K., B., Z., G., P.); Spelonken, *Junod* 54 (T.M.); Zoutpansberg district: edge of wood, The Downs, *Junod* 4352 (P., T.M.); Magoebas Kloof, *Pole-Evans* 3951 (K., P.); Minastone, Louis Trichardt, *Breyer* (T.M.); Hanglip, Louis Trichardt, *Bremekamp* and *Schweickerdt* 389 (P., T.M.).

SWAZILAND.—Mbabane, *Rogers* 11476 (B.H.); Hlatikulu, *Stewart* 93 (K., S.A.M., T.M.).

PORTUGUESE EAST AFRICA.—Lourenço Marques, *Quintas* 4 (B.).

An erect shrubby plant bearing a profusion of white, pink or pale mauve flowers. *Galpin* has a note on his specimen No. 809 that both pink and white flowers were borne on the same peduncle.

16. **T. noctiflora** Bojer in Hort. Maurit. 93 (name only) (1837); *Baker* in Oliv. Fl. Trop. Afr. 2.112 (1871); Dur. and Syll. Fl. Congol. 132 (1909); De Wild. Comp. Kasai 308 (1910); De Wild. Etudes Fl. Bas-et-Moyen-Congo 3.202 (1910); De Wild. Etudes Fl. Bas-et-Moyen-Congo 5.412 (1912); De Wild. in Bull. Jard. Bot. Bruxelles 4.98 (1914); De Wild. in Bull. Soc. Bot. Belg. 57.123 (1925); Burt Davy in Fl. Tvaal. 1.2.376 (1932).

Type specimen, *Bojer* (ad margines sylvarum et in agris ins. Zanzibaræ, 1830), in Naturhistorisches Museum, Vienna.

Suffruticose. *Stems* diffusely branched, densely silky-pilose with short ascending brown hairs, particularly on the young parts. *Leaves* 5–8-jugate, 7–10 cm. long, subsessile; leaflets narrowly oblanceolate, apex rounded and mucronate, glabrous above, appressedly silky beneath, 1.5–3.5 cm. long, 3–5 mm. broad. *Stipules* linear-subulate, 8–9 mm. long. *Peduncles* terminal and occasionally leaf-opposed, 8.5–25.5 cm. long; racemes laxly flowered; pedicels 3–5 mm. long; bracts lanceolate, short. *Calyx* densely ferruginous-silky, tube 2 mm. long, four upper teeth deltoid, 1.5 mm. long, lowest lobe 2.5 mm. long. *Vexillum* 1–2.1 cm. long, 6 mm. broad, slightly falcate, densely silky-villous with brown hairs.

TRANSVAAL.—Barberton district: Komatipoort, *Schlechter* 11809 (K., B.M., Pa., G., Z., V., B.); Moss and *Rogers* 505 (W., B.H.); Barberton, *Thorncroft* [Herb. *Rogers* 22661] (Z., B.H.).

SOUTHERN RHODESIA.—On banks of Umzingwani River, Doddieburn Ranch, *Davison* 12 (P.) and *Davison* 51 (B.M., P.).

This species also occurs up the East Coast as far as Zanzibar.

17. *T. Dregeana* E. Mey. in *Linnaea* 7.169 (1832); Ecklon and Zeyher Enum. Pl. Afr. Aust. Extratrop. Pt. 2 (1834–35); Harvey in Harv. and Sond. Fl. Cap. 2.207 (1861–62). O. Kuntze Rev. Gen. Pl. 1.175 (1891); Ann. Bol. Herb. 1.1.15 (1914); Ann. S.A.; Mus. 9.4.256 (1915); Ann. Bol. Herb. 3.1.20 (1920); Bak. f. Leg. Trop. Afr. 1.189 (1926).

Syn. *Tephrosia brachyloba* E. Mey. Comm. Drège 110 (1835–36); *Tephrosia Damarensis* Engl. in Bot. Jahrb. 10.29 (1888); Die Veg. der Erde. 9.3.588 (1915); *Tephrosia Dinteri* Schinz in Vierteljahrsschr. Nat. Ges. Zurich 52.423 (1907).

Type specimen, *Drège* s.n., in Botanisches Museum, Berlin-Dahlem.

Suffruticose, branching from the base. *Stems* woody at base, rigid, striate, thinly appressedly hairy. *Leaves* 1.3–8 cm. long, 2–4-jugate, petiolate; leaflets linear-lanceolate, pale green above, thinly appressedly pubescent beneath, 0.8–8.5 cm. long, 1–8 mm. broad. *Stipules* 2–8 mm. long, narrow subulate, acuminate. *Peduncles* 3.5–38 cm. long, leaf-opposed and terminal, laxly flowered. *Flowers* small, 5–6 mm. long; pedicels 3–7 mm. long. *Calyx* thinly appressedly hairy, two upper lobes very small, three other lobes about equal (1.5–2 mm. long) and about equal to the length of the calyx-tube. *Vexillum* orbicular, 5 mm. long and broad, thinly hairy without; carina and alae 4.5–5 mm. long, 1.5–2 mm. broad. *Ovary* 3 mm. long, pubescent. *Style* 2 mm. long, glabrous. *Pod* curved, 3–4 seeded, 1.5–3 cm. long, 3–4 mm. broad, sub-glabrous, pale yellowish-green.

SOUTH WEST AFRICA.—Otavi, *Dinter* 5486 (D. Coll.); Inachab, *Dinter* 1154 (Z., B.) [type of *T. Dinteri* Schinz]; Koes-Riedmond, *Pfiel* 138 (B.); between Ausis and Khuias, *Schenck* 62 (Z.); Lichtenstein, *Dinter* 4247 (D. Coll.); Utschoa, *Prayer* 61 (B.); granite slopes at Welwitsch, March, *Pearson* 4417 (K.); Welwitsch, *Galpin* and *Pearson* 7620 (K., S.A.M., P.); and *Galpin* and *Pearson* 7628 (K.); on rocky mtns. at Natamas, *Lindner* (Z.); Damarabezirk Namib Kan-Tal Sandige Keissteppe, *Engler* 6056 (B.); Haikamehab, *Galpin* and *Pearson* 7613 (K., S.A.M., P.); near Hykamhab, *Marloth* 1210 (K., S.A.M., P., B.H.); Wustennuusale ca. 50 Km. ostl. Swakopmund, *Dinter* 6699 (D. Coll.); Rossing, *Boss* A104 (T.M.); Langer Heiririch Granitberge, *Boss* A89 (T.M.); Okahandja-Otjisani, *Dinter* 4567 (D. Coll.); *Dinter* s.n. (B.); Quickborn, Okahandja, *Bradfield* 398 (P.); Okahandja, *Dinter* 568 (B.); Windhoek, *Gillman* 123 (S.A.M.); *Pearson* 9775 (K., B.H.); *Fermer* 28 (B.); Rehoboth, *Fleck* 683 (Z.); Naukluft Mtns., river bed between Nautzurus Noab and Gous Koichas, *Pearson* 9078 (K.); between Gelwater and Gt. Fish River, *Pearson* 9222 (K., S.A.M., B.H.); Gt. Karas Mtn., E. of Holog, *Pearson* 9757 (K., B.H.); Gt.

Karasberg Ravine on Kleiap River 5 miles S.E. of Wasserfall, *Pearson* 7891 (K., B.M., A.M., N., B.H., S.A.M.); nach Garub Zu Kriszes, 1400 m., *Dinter* 3705 (D. Coll.); Garub, *Range* 261 (B.); Kuibus-Klippdachs River, *Engler* 6735 (B.); Keetmanshoop, *Fenchel* 1921 (Z.); *Fleck* 682 (Z.); Kalkfontein, *Schafer* 45 (B.); In arenosis prope Aiais, *Marloth* 4773 (B., P., S.); Aiais, *Prager* 621 (B.); sand south of Warmbad, *Pearson* 5031 (K., B.H.); Klein Karas, *Ortendahl* 224 (P.); *Schafer* 57 (B.); common in valleys N. of Sabiesis, *Pearson* 4113 (K.); near Grundoon, *Pearson* 4576 (K., B.H.); dry shale banks, Gt. Fish River, *Pearson* 9263 (K., B.H.).

CAPE.—Little Namaqualand.—dry sandy bed of Oorlap River, Richtersveld, *Herre* (S.); 11867 (S.); sides of dry bed of Koodas River, *Pillans* 5530 (B.H.); dry water courses between hills S.E. Sendling's Drift, *Pillans* 5098 (B.H.); dry sandy bed of river at Anisfontein, *Pillans* 5500 (B.H.); sandy soil S. of Viool's Drift, *Taylor* 1178 (B.H.); sandy flats near Viool's Drift, Orange River, *Thorne* (S.A.M.); shale hills N. of Rooival near Orange River, *Pillans* 6410 (B.H.); near Ramans Drift, *Pearson* 4521 (K.); near Gariep ditiones, Beaufort, *Drège* (K., B.M., Pa., G., B.); Great Bushmenland; common in dry river beds near Pella, *Pearson* 3556 (K.); Herbert district: Honeyneest Kloof Kop near Station, *Victor* [Herb. No. 1474] (Kim., K., T.M.); on koppie among stones, Honeyneest Kloof Station, *Victor* 983 (Kim.); the berg above the Kloof, Campbell, *Wilman* 1473 (Kim.); The Koppen, Rooipoort, *Wilman* 2267 (A.M., Kim.); Barkly West district: on the hills, Newlands, *Wilman* 3222 (Kim., B.H.); Hay district: Klipfontein, *Wilman* (B.H.); Bushmans district: Bushmans Fountain, *Wilman* (B.H.); Prieska district: Prieska, *Bryant* 361 (P.); Gathand around Prieska, *Bryant* 1086 (K.); Prince Albert district: Prince Albert Road, *Thoday* and *Delf* 102 (S.). No definite locality: *Drège* 413 (V.); *Hennegart* 92 (Pa.).

18. *T. pallens* (Ait.) Pers. Syn. 2.329 (1807); DC. Prodr. 2.254 (1825); Spreng. Syst. Veg. 3.235 (1826); Ecklon and Zeyher Enum. Pl. Afr. Aust. Extratrop. 247 (1835); Steudel Nomen. Bot. 666 (1840); Harvey in Harv. and Sond. Fl. Cap. 2.205 (1861–62); O. Kuntze Rev. Gen. Pl. 1.185 (1891); Wood Fl. of Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Bews Fl. Natal and Zululand 111 (1921).

Syn. *Galega pallens* Ait. Hort. Kew. 3.71 (1789); Linn. Syst. Nat. ed. 13 per Gmelin 2.11.1129 (1792); Willd. Sp. Pl. 3.11.1245 (1803); Linn. Syst. Nat. 6.1215 (1806); *Galega humilis* Thunb. Prodr. 134 (1800); *Tephrosia angulata* E. Mey. Comm. 109 (1836).

Type specimen, *Thunberg* s.n., in Thunberg's Herbarium, Uppsala, Sweden.

Suffruticose. *Stems* erect or ascending, angularly bent, rib-striate, pubescent. *Leaves* shortly petiolate, 4–8-jugate, 2–6 cm. long; leaflets narrow, cuneate-oblong, mucro recurved, striolate and thinly pubescent, dark green above, silky and pale green below, 0.8–2.5 cm. long; 0.2–0.7 cm. broad. *Stipules* subulate, 3–6 mm. long. *Peduncles* terminal and leaf-opposed, angular, furrowed, 6–19 cm. long. *Flowers* about 1 cm. long. *Calyx* subequally 5-toothed. *Vexillum* subrotund, sericeous or pubescent without. *Style* glabrous. *Legume* 3.5 cm. long, 0.3 cm. broad, linear, flat, velvety pubescent.

CAPE.—Graaff Reinet district: on Sneeuwberg, *Wallich* (B.M., G.); Somerset East district: Somerset, *Bowker* (K.); Uitenhage district: near Olifantshoek, *Ecklon* and *Zeyher* 5728 (B.); *Zeyher* s.n. (S.A.M.); near Olifantshoek and Bushman's River, *Ecklon* and *Zeyher* (K., B.M., O., Pa., Z., V., G., B., P., S.A.M.); Albany district: on plains of Albany, *Bowie* 10 (B.M.); Albany, *Alexander* 104 (K.); Howisonspoort pone Grahamstown, *Zeyher* 2708 (Pa., S.A.M.); Grahamstown, *Robertson* (P.); Longmore Forest Reserve, *Long* 1036 (K.); in lapidosis ad ped. Bothasberg, *MacOwan* 478 (K., B., Pa., N., A.M.); Alexandria, *Galpin* 10813 (K., P., B.H.); *Galpin* 10638 (K., P., B.H.); *Burt Davy* 12104 (P.); Kleinmond, *White* 967 (Z., A.M.); Bathurst district: Bathurst, *Rogers* (A.M.); Port Alfred, Kowie, *Tyson* (P., T.M., S.). No definite locality, *Drège* 2708 and 407 (V.); *Thunberg* (U.); *Banks* (V.); *Drège* in Herb. Meyer 6697 (B.).

19. **T. delagoensis** H.M. Forbes sp. nov., affinis *T. Dregeanae* E. Mey., sed foliis brevioribus, fructibus differt

Suffrutex erectus. *Caules* ramosi. *Folia* 3-8-jugata, 2-5.5 cm. longa; foliola oblanceolata, 0.8-1.8 cm. longa, 2-5 mm. lata, retusa, mucronata, supra glabra, subtus appresse pubescentia; stipulae subulatae, 3-4 mm. longae, nervatae. *Flores* circiter 1 cm. longi; pedicelli 3-4 mm. longi; dentes calycis tubo longiores. *Fructus* angustus, planus, 3-4.5 cm. longus, 3 mm. latus, apice leviter falcatus, parce pubescens.

Type specimen, *Schlechter* 11521 in National Herbarium, Pretoria.

Suffruticose. *Stems* erect, branching, woody. *Leaves* 3-8-jugate, 2-5.5 mm. long, shortly petioled; leaflets oblanceolate, mucronate, retuse, glabrous above, appressedly pubescent below, 0.8-1.8 cm. long, 2-5 mm. broad. *Stipules* subulate, 3-4 mm. long, nerved. *Peduncles* terminal and leaf-opposed, laxly flowered; bracts short, linear; pedicels 3-4 mm. long. *Calyx*-tube about 3 mm. long, lobes 3-4.5 mm. long. *Vexillum* 1 cm. long, 6 mm. broad, pubescent without. *Ovary* pubescent, 4 mm. long. *Style* 2-5 mm. long, flattened, glabrous. *Legume* narrow, apex slightly falcate, 3-4.5 cm. long, 3 mm. broad, thinly pubescent.

PORTUGUESE EAST AFRICA.—In arenosis Lourenço Marques, *Schlechter* 11521 (K., P., A.M., B.H.).

20. **T. amoena** E. Mey. Comm. Pl. Afr. Aust. 109 (1836); Harvey in Harv. and Sond. Fl. Cap. 2.206 (1861-62); O. Kuntze Rev. Gen. Pl. 1.174 (1891); Wood Fl. Natal 41 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Bews Fl. Natal and Zululand 110 (1921).

Type specimen, *Drège*, in Botanisches Museum, Berlin-Dahlem.

Fruticulose. *Stems* erect, branching, branches very slender, subfastigiata. *Leaves* shortly petiolate, 7-9-jugate, subrecurved-patulate, 2.5-6 cm. long; leaflets 2-5 mm. broad, up to 1.5 cm. long, cuneate-linear, obtuse, subtruncate or mucro-recurved, glabrous above, appressedly hirsute below. *Stipules* subulate, 3-6 mm. long. *Peduncles* axillary and terminal, slender, 4-13 cm. long, laxly racemose. *Flowers* about 7.5 mm. long, usually in pairs. *Pedicels* longer than the bracts, 3-7 mm. long. *Bracts* subulate, 2-3 mm. long. *Calyx*-tube 2 mm. long, 5.5 mm. in diam., lobes unequal, 1-2 mm. long, upper two slightly connate. *Vexillum* silky without, about 7 mm. long and broad. *Ovary* silky, 4 mm. long. *Style* glabrous, 3 mm. long. *Legumes* narrow, pubescent or glabrescent.

CAPE.—Queenstown district: Queenstown, *Page* (B.H.); Pondoland district: grassy fields above Ngogwane Falls, Lusikisiki, *Galpin* 9531 (K., P.); Omsamcaba, *Drège* (B.); Pondoland, *Drège* (K., V.).

NATAL.—Umkomaas district: Umkomaas, *Wylie* (N.); Zululand, Ntondweni, *Wood* 10938 (A.M.); no definite locality, *Wylie* (Pa.).

SOUTH AFRICA.—No definite locality, *Drège* 408 (D.,V.); *Drège* 5466 (B.).

21. **T. Medleyi** H.M. Forbes sp. nov., affinis *T. amoenae* E. Mey., sed foliis latioribus longioribusque, floribus majoribus differt.

Suffrutex caulibus erectis glabris vel parce pubescentibus. *Folia* 4-8-jugata, 3-7 cm. longa; foliola cuneato-oblonga, 1-2.5 cm. longa, retusa, mucronata, utrinque glabra vel subtus parce pubescentia; pedunculi terminales axillaresque, usque 9 cm. longi; bractea ovato-acuminata, caducae, 5 mm. longae. *Flores* 1.5 cm. longi; dentes calycis tubo excedentes; stylus pilosus.

Type specimen, *Wood* 5984, in Natal Herbarium, Durban.

Suffruticose. *Stems* erect, branching, glabrous or very sparsely pubescent. *Leaves* 4-8-jugate, shortly petioled, 3-7 cm. long; leaflets cuneate-oblong, retuse, mucronate, glabrous on both sides or very sparsely pubescent below, 1-2.5 cm. long, 0.5-0.8 cm. broad; petiolules about 1.5 mm. long, more or less densely pubescent. *Stipules* subulate-acuminate, 0.5-1 cm. long. *Peduncles* terminal and axillary, up to 9 cm. long, few-flowered at apex. *Bracts* ovate-acuminate, 5 mm. long, soon caducous. *Calyx* teeth linear-lanceolate, longer than the tube, lowest longest. *Style* bearded. *Legumes* not seen.

NATAL.—Krantzkop district: near Greytown, *Wood* 5984 (N.).

This is, apparently, a slender shrubby plant. The stems, petioles, stipules and bracts are a dark reddish colour and the veining on the lower surface of the leaflets is also a dark brown. The flowers are pink.

This plant has been named in honour of the late Dr. Medley Wood, one of the great pioneer botanists of Natal.

22. **T. discolor** E. Mey. Comm. Pl. Afr. Aust. 1.1.110 (1836); Harvey in Harv. and Sond. Fl. Cap. 2.207 (1861-62); O. Kuntze Rev. Gen. Pl. 1.175 (1891); Wood Fl. of Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Bews Fl. Natal and Zululand 111 (1921); Bak. f. leg. Trop. Afr. 1.189 (1926).

Type specimen, *Drège* s.n., in Botanisches Museum, Berlin-Dahlem.

Suffruticose. *Stems* erect, slender, virgate, angular, rib-striate, canescent. *Leaves* 1-6-jugate, shortly petiolate, 1-3 cm. long; leaflets linear, subobtusate, margins thickened, mucro recurved, glabrous and green above, more or less densely canescent beneath, 1.2-3.5 cm. long, 1-3.5 mm. broad. *Stipules* subulate, 3-6 mm. long, pedicels 3 mm. long. *Calyx* silky, tube 5 mm. in diam., 2.5-3 mm. long; lobes narrow, acuminate, unequal, 2.5-4.5 mm. long. *Vexillum* 1 cm. long, 6 mm. broad. *Ovary* 5.5 mm. long, densely silky. *Style* 3.5 mm. long, glabrous. *Legumes* 5.5 cm. long, 3-4 mm. broad, narrow-linear, fulvous-pubescent, many-seeded; seeds small, dark brown.

NATAL.—Grassy places near Port Natal, *Drège* (K., Pa., O., G., B., P.); *Gueinzius* (K., B.M., P.); Natal, *Gerrard* 756 (K., P.); Durban Flat, *Wood* (N.); *Wood* 3127 (K.); near Durban, *Wood* 5586 (G.); *Wood* 6373 (P.); *Wood* (N.); *Wood* 9565 (B., S.A.M.); no definite locality, *Drège* 414 (V.); *Gerrard* and *McKen* 419 (N.).

PORTUGUESE EAST AFRICA.—Delagoa Bay, *Junod* 179 (G., Z.).

23. **T. euchroa** Verdoorn in Bothalia 3.239 (1937).

Type specimen, *Obermeyer*, *Schweickerdt* and *Verdoorn* 73, in National Herbarium, Pretoria.

Small suffrutex more or less 30 cm. high, many-branched, erect or branches decumbent. Branches cano-pubescent, glabrescent. *Leaves* imparipinnate, 2-6-jugate; leaflets oblanceolate-oblong or oblong, 0.9-3 cm. long, 3-9 mm. broad, cano-pubescent on both sides, upper at length glabrescent, apex minutely mucronate or retuse, petiolate, petiolules 3 mm. long, densely cano-pubescent. *Stipules* lanceolate, acute, 3-5 mm. long, cano-pubescent, 3-nerved. *Racemes* 3.5-11.5 cm. long, terminal, longer than the leaves, laxly flowered, lower flowers sometimes in axils of upper leaves. *Flowers* 1.5-2 cm. long, reddish, 1-3 together, pedicels 3-5 mm. long; bracts lanceolate, acute, cano-pubescent, 3-4 mm. long, 1.5 mm. broad. *Calyx* cano-pubescent, tube 6 mm. in diam., 2 mm. long, lobes triangular, narrow, acute, unequal, 1.5-3.5 mm. long. *Vexillum* appressedly pubescent without, suborbicular, 1.5-2 cm. long and broad, with two small swollen appendages at apex of claw. *Ovary* 5 mm. long, densely pubescent. *Style* glabrous. *Legumes* linear, appressedly cano-pubescent, 3-3.5 cm. long, 3 mm. broad.

TRANSVAAL.—Zoutpansberg district: rocky slope, N.W. slopes, Zoutpansberg, *Obermeyer*, *Schweickerdt* and *Verdoorn* 73 (P., T.M.); among rocks, lower slopes of Zoutpansberg, *Schweickerdt* and *Verdoorn* 529 (B.M., P.); Messina, *Young* [14565 in Herb. Moss] (W.); *Young* [14566 in Herb. Moss] (B.M., W.); *Rogers* 23664 (P., W.); Waterval Boven, *Mason* (K.); no definite locality, *Rogers* 15651 (B.H.).

This is very distinct from all the known Transvaal species of *Tephrosia*. The silvery-grey colour of the bush and the pinkish-red flowers suggested the specific name. It is somewhat like *T. noctiflora* but has much larger flowers. The flowers of each raceme develop at different intervals and one finds several large open flowers while the buds above are still very immature. [Verdoorn in *Bothalia* 3.2.239 (1937).]

24. **T. pallida** H. M. Forbes sp. nov., affinis *T. euchroae* Verdoorn, sed foliolis minoribus glabris supra pallido-viridibus, pedunculis longioribus differt.

Suffruter caulibus erectis canescentibus. *Folia* 5–9-jugata, 7–13.5 cm. longa; foliola oblanceolata, mucronulata, 0.8–1.8 cm. longa, 0.4–0.5 cm. lata, subtus canescentia supra pallida glabraque, marginibus involutis; stipulae lineari-sublatae, 3–4 mm. longae; pedunculus 18–35 cm. longus, laxiflorae; bractae lineares; stylus glaber. *Fructus* 4.5 cm. longus, 0.4–0.5 cm. latus, apice leviter falcatus, parcissime pubescens.

SOUTH WEST AFRICA.—Stingbank, legit *E. G. R. Erdale*, Com. *Rogers* 15386 in Herbarium Kew, Type.

Suffrutex. *Stems* erect, branching, striate, densely canescent. *Leaves* 5–9-jugate, long petioled, 7–13.5 cm. long, petiole 1.5–2.5 cm. long before first pair of leaves, internodes between leaflets 1–1.5 cm., leaflets oblanceolate, shortly mucronate, mucro recurved, margins involute, densely canescent below, pale and glabrous above, 0.8–1.8 cm. long, 4–5 mm. broad; petiolules 1–2 mm. long. *Stipules* linear-lanceolate, 3–4 mm. long. *Peduncles* terminal, 18–35 cm. long, laxly flowered, flowers 2–3-nate. *Calyx* canescent, lobes longer than tube. *Style* glabrous; ovary densely canescent. *Legume* 4.5 cm. long, 4–5 mm. broad, linear, slightly falcate towards apex, thinly pubescent, 7–8-seeded.

Only one specimen of this plant was seen. It appears to be a fairly tall shrubby plant, densely canescent in all parts.

25. **T. Kraussiana** Meisn. in Hook. Lond. Journ. Bot. 2.87 (1834); Cape Plants, Krauss and Engler 54 (1846); Harvey in Harv. and Sond. Fl. Cap. 2.206 (1861–62); O. Kuntze Rev. Gen. Pl. 1.175 (1891); Wood and Evans Natal Plants 3. pl. 249 (1901); Wood Fl. of Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 2.147 (1908); Bews Fl. Natal and Zululand 111 (1921); Watt and Breyer-Brandwyk Med. and Pois. Pl. S.A. 74 (1932).

Type specimen, *Krauss* 40, in Herbarium, Kew.

Fruticose, branches straight, erect, sulcate or angular, especially at the extremity, densely leafy. *Leaves* shortly petiolate, 2.5–3.8 cm. long, 6–12-jugate; leaflets 0.8–3.6 cm. long, 2–6 mm. broad, linear, usually complicate, very shortly mucronate, mucro recurved, glabrous or very thinly pubescent above, more densely pubescent below. *Stipules* linear-setaceous, longer than the petiole, pubescent, 0.5–1.3 cm. long. *Peduncles* terminal and in axils of upper leaves, simple or branching, laxly racemose, 5–14 cm. long. *Flowers* 0.7–1 cm. long, 2–3 together in axils of setaceous bracts, pedicellate. *Calyx*-tube 6–7 mm. in diam., 2–3 mm. long, lobes lanceolate, acuminate, unequal, 1–4 mm. long, whole calyx pubescent. *Vexillum* pubescent without, 0.75–1 cm. long, 6–8.5 mm. broad. *Ovary* 4.5–6 mm. long, densely silky. *Style* glabrous. *Legumes* narrow, linear, thinly canescent, 3–3.5 cm. long, 4 mm. broad.

CAPE PROVINCE.—East London district: sandy grassy places, East London, *Thode* (S.); *Ratray* 297 (A.M.); hillside near Kentani River Mouth, *Galpin* 6549 (A.M., P.); Komgha district: grassy hills near Kei Mouth, *Flanagan* 48 (P., B.H., A.M., S.A.M.); Pondoland: no definite locality, *Bachmann* 614 (K., B.M., Z., B.).

NATAL.—Port Shepstone district: Margate, *Rump* (N.); sandy grassy places, Beach Terminus, *Thode* (B., S.); Ixopo district: farm Friedenau, Dumisa, *Rudatis* 821 (K., B.M., V., G., Z., B., P.); *Rudatis* 257 (K., B.M., Pa., B., P.); Durban district: Port Natal, *Krauss* 49 (K., B.M., G., P.); *Gueinzius* 17 (Pa., Z., S.A.M.); Coastland, *Sutherland* (K.); Clairmont, *Wood* (G.); Durban, *Wood* 9983 (N.); *Wood* (A.M.); *Wood* 6260 (B., Z., P.); Sydenham near Durban, *Wood* 225 (K., B.M., B., N., S.A.M., A.M., B.H.); Palmiet near Durban, *Wood* 8427 (Pa., N.); *Wood* 10924 (Z., N., W.); Pinetown district: New Germany, *Wood* 12695 (N., T.M.); Bothas Hill, *Wood* 10262 (P., T.M.); Inanda district: Inanda, *Wood* 807 (K., S.A.M.); and 807 A (K., B.M.); near Umzinyati Falls, *Haygarth* [Herb. *Wood* 4717] (G., Z.); Chakas Kraal, *Thode* (S.); Nonoti, *Wood* 8733 (B., Z.); *Wood* 9207 (N.); Zululand, Entonjaneni, *Gerstner* 3687 (N.). No definite locality, *Gerrard* 642 (B.M.); *Gerrard* 1079 (K., B.M.); *Gerrard* 724 (K.); *Gerrard* and *McKen* 352 (K., B.M., Pa., V.).

SWAZILAND.—Kubuta Estate, Hlatikulu, *Pierce* 14 (P.).

The Zulus know this plant as “inSangwana” or “isiPhungo” and they make a warm infusion of the root as a remedy for a troublesome night cough.

26. **T. sparsiflora** H. M. Forbes sp. nov., affinis *T. purpureae* (L.) Pers., sed foliolis minoribus, caulibus gracilioribus, floribus paucis minoribus differt.

Caules erecti vel ascendentes, pubescentes. *Folia* 3-5-jugata, 2.5-4.5 cm. longa; foliola oblonga-cuneata, mucronata, 0.8-2.5 cm. longa, 0.5-1.3 cm. lata, utrinque appresse pubescentia; stipulae setaceae, 4 mm. longae; pedunculi 8-16 cm. longi; bractae setaceae, 2 mm. longae. *Flores* pauci, 5 mm. longi; dentes calycis tubo aequilongi; stylus glaber. *Fructus* linearis, 3-3.5 cm. longus, 0.4 cm. latus, parce breviterque appresse pubescens, apice leviter falcatus.

Type specimen, *Repton* 1614, in National Herbarium, Pretoria.

Stems erect or ascending, pubescent. *Leaves* 3-5-jugate, 2.5-4.5 cm. long, very shortly petioled; leaflets oblong-cuneate, mucronate; appressedly pubescent on both sides, 0.8-2.5 cm. long, 0.5-1.3 cm. broad. *Stipules* setaceous, 4 mm. long. *Peduncles* 8-16 cm. long, terminal and leaf-opposed, very laxly flowered, flowers 1-2 together. *Bracts* setaceous, 2 mm. long. *Flowers* 5 mm. long, “pinkish”. *Calyx* teeth subequal to tube. *Style* glabrous. *Legumes* linear, 3-3.5 cm. long, 0.4 cm. broad, slightly and shortly appressedly pubescent, apex slightly falcate.

TRANSVAAL.—Pretoria district: Wonderboom Reserve, S. side of Magaliesberg, *Repton* 1614 (P., N.); Marico district: Zeerust, *Thode* A. 1392 (P., N.).

BECHUANALAND.—Vryburg, *Mogg* 4902 (P.).

27. **T. polystachyoides** Bak. f. Leg. Trop. Afr. 1.193 (1926); Burt Davy Fl. Tvaal. 1.2.378 (1932).

Type specimen, *Teague* 14, in Herbarium, Kew.

Suffruticose. *Stems* erect, branching, often rufo-tomentose above. *Leaves* 5-17-jugate; leaflets 1.5-3 cm. long, 0.5-1.2 cm. broad, oblong or elliptic, apex shortly mucronulate, mucro recurved, glabrous or thinly appressedly pubescent above, more or less densely pubescent below, pubescence white or tawny. *Stipules* 4-6 mm. long, linear. *Peduncles* 6-30 cm. long, laxly racemose. *Flowers* 0.8-1.5 cm. long, 3-4 together, lowest flowers sometimes in axils of upper leaves; pedicels 3-5 mm. long; bracts linear. *Calyx* densely long pilose, lobes linear-lanceolate, much longer than the tube. *Style* glabrous. *Legumes* 3-3.8 cm. long, 3-4 mm. broad, falcate, densely tawny pubescent.

TRANSVAAL.—Pretoria district: Derdepoort, *Rehmann* 4778 (K., B.M.); Rietfontein, *Venter* (Pa., P.); Pretoria, *Fouche* (P.); Silkaats Nek, *van Dam* (T.M.); Saltpan, *Leeman* (T.M.); Wonderboompoort, *Schlechter*, 4164 (K., B.M., Pa., G., B.H., V., A.M.); *Leendertz* 703 (B.H., T.M.); *Thode* A 408 (K., P., N.); *Smith* 1656 (P.); 1932, *Smith* 6202 (K., P., N.); 1932, *Smith* 6203 (P., V.); Barberton district: Pyramid Estate near Potgietersrust, *Galpin* 8958 (P.); Griffin Mine, *Breyer* (T.M.); Kaapsche Hoop, *Rogers* 20834 (K., Pa., P., T.M.); Nelspruit, *Breyer* (T.M.); *Liebenberg* 2466 (P.); Rustenburg district: stony koppie S.W. of town, Rustenburg, *Nation* 156 (K., B.H.); *Nation* 164 (B.H.); *Fouche* 23 (P.); Pietersburg district: Houtbosch, *Rehmann* 6238 (K., B.M., Z.); *Schlechter* 4400 (B., B.H., A.M., T.M.); Pietersburg, *Rogers* 14644 (K.); in graminosis prope pagum Pietersburg, *Bolus* 10912 (K., P., B.H., A.M.); Gravelotte, *van Dam* in Tvl. Mus. 25040 and 25041 (T.M.); Rooikop, *Pole Evans* 1261 (K., P.).

RHODESIA.—Umtali Div.,—Marico district: Odanzi River Valley, *Teague* 14 (K., B.H., P.); Salisbury, *Eyles* 2050 (Pa., P., S.A.M.); Ses-Heke, Barotseland, *Borle* (P.); Mazabuka, *Rogers* 26147 (T.M.).

28. **T. Ehrenbergiana** Schweinf. Beitr. Fl. Aethiop. 18 (1827); Bak. f. Leg. Trop. Afr. 1.209 (1926); Klotzsch in Peters Reise Mossamb. Bot. 576 Corrigenda (1863).

Syn. *Tephrosia villosa* sec. Bak. f. Leg. Trop. Afr. 1.208 (1926) non (L.) Pers.; Baker in Oliver Fl. Trop. Afr. 2.122 (1871) pro parte; Die Veg. der Erde 9.3.589 (1915); *Cracca villosa* sec. Hiern in Cat. Afr. Pl. Welw. 1.223 (1896), non Linn.; *Cracca villosa* L. var. *incana* sec. Hiern in Cat. Afr. Pl. Welw. 1.223 (1896), non O. Ktze; *Tephrosia Apollinea* sec. Klotzsch in Peters Reise Mossamb. Bot. 47 (1861) non (Del.) DC.; sec. Eyles in Trans. Roy. Soc. S. Afr. 5.4.375 (1916) non (Del.) DC. pro parte. *Tephrosia rhodesica* Bak. f. Leg. Trop. Afr. 1.208 (1926); Burt Davy Fl. Tvaal. 1.2.378 (1932); *Tephrosia incana* sec. Bak. in Oliv. Fl. Trop. Afr. 2.123 (1871) excl. syn. pro parte, non Graham; Die Veg. der Erde 9.3.589 (1915).

Stems erect, branching, yellow-villous. *Leaves* 9–10 cm. long, 5–9-jugate; leaflets 2–3–7 cm. long, 0·6–1·2 cm. broad, narrow oblong, apex obtuse or emarginate, mucronate, upper surface thinly, lower surface densely pubescent. *Stipules* linear, 0·5–1 cm. long. *Peduncles* terminal and lateral, 11–18 cm. long, laxly-flowered, lower flowers 3–4 together. *Flowers* shortly pedicellate, about 1–1·2 cm. long. *Calyx* densely silky, tube 7–8 mm. broad, 2·5–3 mm. long, lobes more or less sub-equal, linear-subulate, 4–6 mm. long. *Vexillum* ovate or suborbicular, 1–1·2 cm. broad, 1–1·1 cm. long, densely silky on the back. *Ovary* densely silky, 6–6·5 mm. long. *Style* glabrous 4–5 mm. long. *Pod* pubescent, falcate, 4 cm. long, 0·5 cm. broad.

SOUTH WEST AFRICA.—Grootfontein, *Schoenfelder* 948 (D. Coll.); Gaub Gneissburg, *Dinter* (B.); Okahandja, *Dinter* 4608 (D. Coll.); auf sandalluv in Okahandja River, *Dinter* II 13. (B.); Karibib Landsternhuzel, *Dinter* 6915 (D. Coll.); Karibib am Damm von Roseman's farm Okongawa, *Dinter* 6808 (D. Coll.); Amerb. Gramtbanke, *Dinter* 6852 (D. Coll.); Uaobos in zu Kuimfulsu, *Dinter* 1413 (B.); Omburo Platze am Rivier, *Dinter* 1409 (B.); Kaross, *Thorne* (S.A.M.).

TRANSVAAL.—S.A. Gold Fields, *Baines* (K.); Waterberg district: Messina, *Rogers* 19242 (K., P.); *Rogers* 20813 (T.M.); *Rogers* 20984 (Wits., Z.); Rooikop, *Pole-Evans* 1261 (Pa.); Palala River, *Breyer* (T.M.).

RHODESIA.—Mazabuka, *Rogers* 26147 (T.M.); Deka River, Wankie, *Eyles* 7962 (K.); Victoria Falls, *Rogers* 5558 (K., B.H.); Bulawayo, *Eyles* 1062 (K., A.M.) [*Type* of *T. rhodesica* Bak. f.]; *Borle* 162 (K., Z., P.); Odanzi River Valley, Umtali, *Teague* 435 (K., B.H., S.); Que Que, *McLeod* 52 (K., Pa.).

This species also occurs in Angola, Portuguese East Africa and Tanganyika.

Tephrosia villosa (L.) Pers. and *T. incana* Graham are Indian species which, in their typical form, do not occur in Africa. African material placed under the above species by various authors, l.c., are referable to the Tropical African *T. Ehrenbergiana* Schweinf. *T. rhodesica* Bak. f. exhibits no striking differences from *T. Ehrenbergiana* Schweinf. except in the colour of the indumentum. This, however, appears to be variable, for Schweinfurth, l.c. 19, states the pubescence of the specimens he examined to be silvery white and in parts, as a result of drying, somewhat brownish.

T. villosa (L.) Pers. is based on *Galega villosa* L., which in turn is based on a figure in Burm. Thes. Zeyl. 73 t. 33 (1737). Unfortunately, there is no specimen of *Galega villosa* L. in the Linnean Herbarium. Burmann's figure represents a species which is more slender and smaller in most parts than the African material usually incorrectly identified with this species. Modern gatherings of the true Indian plant in the Herbarium, Kew, confirm this statement.

T. incana Graham has already been stated by Baker, l.c., not to occur in Africa.

T. Apollinea (Del.) DC. is an Egyptian plant which apparently does not occur in Southern Africa. It is likewise a more slender species with smaller and far less densely pubescent vegetative and reproductive parts than typical *T. Ehrenbergiana*. The plants referred to *T. Appollinea* by Klotzsch l.c. and Eyles l.c., should be placed under *T. Ehrenbergiana*.

29. **T. oxygona** Welw. in Oliv. Fl. Trop. Afr. 2.114 (1871); Engl. Bot. Jahrb. 9.29 (1888); Die Veg. der Erde 9.3.588 (1915); Bak. f. Leg. Trop. Afr. 1 (1926).

Type specimen, *Welwitsch* 2104, in Herbarium, Kew.

An erect shrub, 3-4 ft. high, branching freely; stems argenteo-canescens. *Leaves* 8.5-15.5 cm. long, 5-10-jugate (13-19-jugate in Fl. Trop. Afr.); leaflets 1-3.5 cm. long, 0.5-2 cm. broad, obovate-oblong, coriaceous, mucronate, canescent on both surfaces, densely when young, more thinly and sparsely when older, veining on lower surface tawny, distinct and slightly raised. *Stipules* linear, rigid, 2-7 mm. long. *Peduncles* axillary and terminal, laxly flowered, 12-27.5 cm. long. *Flowers* approximately 1.5 cm. long. *Pedicels* 2-5 mm. long, longer than the linear bracts. *Calyx*-tube 3 mm. long, 7 mm. in diam., lobes unequal, two upper deltoid-cuspidate, about 1.5 mm. long, lower lanceolate, about equalling the tube in length. *Vexillum* silky without, 1.5 cm. long and broad. *Ovary* silky, 7 mm. long. *Style* glabrous, 4 mm. long, flattened, penicillate at apex. *Pods* curved, 4.5-6 cm. long, glabrescent.

ANGOLA.—*Welwitsch* 2104 (K., Pa., B.); river bed in open at Kint on the Mossamedes Railway, *Pearson* 2393 (K., B.H., B.); Mossamedes, *Welwitsch* 21110 (K.).

SOUTH WEST AFRICA.—Damaraland: in arenosis Otyimbinque, *Marloth* 1382 (B., S.A.M., P., B.H.); between Kaientes and Kaross, *Thorne* (S.A.M.); Kaurasib River west of Otavi, *Barnard* (S.A.M.); Wilhmeshal, Okahambia, *Dinter* 563 (B.); Toles River, *Dinter* 2085 (B.); Namaqualand: Namib bei Klawami, *Belek* 54 B (B.); no definite locality, *Dinter* 1410 (B.).

30. **T. zoutpansbergensis** Bremekamp in Ann. Tvaal. Mus. 15.2.242 (1933); Bothalia 3.2.239 (1937).

Type specimen, *Bremekamp* and *Schweickerdt* 279, in Herbarium, Transvaal Museum, Pretoria.

Suffruticose, stems erect, densely sericeo-pubescent. *Leaves* 2-4 jugate, petiolate, petioles 1.5-2 cm. long; terminal leaflet shortly petiolate, petiole 3 mm. long; leaflets broadly lanceolate or oblanceolate, 1.5-4.5 cm. long, 0.5-1.5 cm. broad, base acute, apex obtuse, mucro minute, recurved, sericeous when young, sparsely pubescent when older;

common petiole 2·4–5 cm. long, stout. *Stipules* filiform, pubescent, 2–4 mm. long. *Racemes* terminal, densely many-flowered, flowers binate, lower in axils of reduced leaves (1–2-jugate or simple), others in axils of deciduous filiform bracts, both rhachis and calyces densely sericeo-villous. *Flowers* 1·5 cm. long, shortly pedicellate, pedicels with minute bracteoles. *Calyx*-tube campanulate, 1 cm. in diam., 3 mm. long, lobes subulate to subulate-ovate, unequal, 1·7–8 mm. long. *Vexillum* unguiculate, reniform, pubescent without, 1–1·4 cm. broad. *Ovary* sericeo-villous, 8 mm. long. *Style* dorsiventrally flattened, inconspicuously glandulose, 4·4–5 mm. long, stigma penicillate. *Legume* ovoid or oblong, 1·2–1·5 cm. long, 6–7 mm. broad, obliquely apiculate, densely pubescent.

TRANSVAAL.—Zoutpansberg district: Zoutpan, Zoutpansberg, *Bremekamp* and *Schweickerdt* 279 (P., T.M.); lower slopes of Zoutpansberg, *Obermeyer*, *Schweickerdt* and *Verdoorn* 174 (K., P., T.M.); Waterpoort, *Rogers* (T.M.).

31. **T. griseola** H. M. Forbes sp. nov., affinis *T. zoutpansbergensi* Bremekamp, sed foliis 1–2-jugatis, foliis supra pallido-viridibus, pedunculis laxe-floris differt.

Suffrutex circiter 13–23 cm. altus, canescens. *Folia* 1–2-jugata, nonnumquam unifoliata; foliola oblanceolata, mucronata, 2–4 cm. longa, 0·6–1 cm. lata, supra glabrescentia, subtus canescentia; stipulae lineares, 2–5 mm. longae. *Pedunculi* laxiflorae, 6·5–10·5 cm. longi; bracteeae 3 mm. longae; pedicelli 4–5 mm. longi. *Flores* 1·5 cm. longi; dentes calycis tubo excurrentes, subulato-acuminati; ovarium 1 cm. longum, pilosum; stylus 5 mm. longus, complanatus, penicillatus.

SOUTH WEST AFRICA.—Cayimaais, *Thorne* (S.A.M. 31721) Type in South African Museum Herbarium.

Suffruticose, about 13–23 cm. high, whole plant more or less canescent. *Leaves* 1–2-jugate or sometimes simple, rhachis of pinnate leaves 1·5–2·5 cm. long, 0·9–1·5 cm. long before first pair of leaflets, petiole of simple leaves 5–6 mm. long; leaflets glabrous and pale green above, thinly canescent below, oblanceolate, mucronate, 2–4 cm. long, 0·6–1 cm. broad. *Stipules* linear, 2–5 mm. long. *Peduncles* 6·5–10·5 cm. long, laxly flowered, 1–2 flowers together at intervals of 2·5–3 cm., 1–2 flowers together in axils of upper leaves; bracts 3 mm. long; pedicels 4–5 mm. long. *Flowers* 1·5 cm. long. *Calyx* pubescent, tube 3 mm. long, lobes subulate, acuminate, 4 mm. long. *Vexillum* orbicular, 1·5 cm. long and broad. *Ovary* 1 cm. long, pilose. *Style* 5 mm. long, complanate, penicillate at apex. *Legumes*, immature, densely pubescent.

32. **T. purpurea** (L.) Pers. Syn. Pl. 2.329 (1807); DC. Prod. 2.251 (1825); G. Don. Syst. Nat. 2.230 (1832); Bak. in Oliv. Fl. Trop. Afr. 2.124 (1871); Bak. in Hook. f. Fl. Brit. Ind. 2.112 (1876); Ficalho and Hiern. in Linn. Soc. Ser. 2.2.19 (1881); Mildbraed in von Micklenberg Deuts. in Afr. Exped. 1907–8 2.254 (1911); Fries in von Kosen Schwed. Rhod. Congo Exped. 1911–12 1.84 (1914); De Willd. in Bull. Soc. Bot. Belg. 57.2.124 (1925); Bothalia 3.2.239 (1937).

Syn. *Galega purpurea* Linn. Syst. Nat. 2 Editio Decimo Reformato 1172 (1759); Linn. Syst. Nat. 2 Ed. XII 497 (1767); *Cracca purpurea* Linn. Sp. Pl. Edit. 1.752 (1753). *Cracca purpurea* (L.) O. Ktze. in Hiern Cat. Afr. Pl. Welw. 1.218–225 (1896).

Type specimen, sheet No. 7, in Linnean Herbarium, Burlington House, London.

A copiously branched perennial 1–2 ft. high. *Stems* slender, firm, subglabrous. *Leaves* 7–9-jugate or 13–17-jugate, 5–9 cm. long; leaflets 1·8–2·5 cm. long, 0·5–2 cm. broad, oblanceolate, apex blunt, mucronate, sub-coriaceous, both sides grey-green, upper glabrous, lower pubescent or nearly glabrous. *Stipules* linear to linear-subulate, 4–8 mm. long. *Peduncles* terminal and leaf-opposed, 7·5–15 cm. long, laxly 6–20 flowered. *Flowers* up to 8 mm. long, pedicellate, red-purple. *Bracts* linear 2–4 mm. long. *Calyx* silky, teeth lanceo-

late-acuminate, exceeding the tube in length. *Style* glabrous, penicillate at apex. *Legumes* linear, slightly recurved, glabrous or softly pubescent, 1.8–2.5 cm. long, 0.4–0.5 cm. broad, 6–10 seeded.

SOUTH WEST AFRICA.—Namakunde, *Rautanen* 511 (Pa., V., Z., B.); Olukonda, *Schinz* 563 (B.); Otavi, *Dinter* 5771 (D. Coll.); Tsumeb, *Dinter* 7466 (D. Coll.).

TRANSVAAL.—Zoutpansberg district: Zoutpansberg, *Schweickerdt* and *Verdoorn* 543 (P., T.M.); Messina, *Rogers* 20988 (Z.).

T. purpurea is a very widely distributed species occurring in all parts of the tropics. In Africa it extends throughout tropical and central Africa, South West Africa, Rhodesia and the northern Transvaal. From the material seen it appears to be a very variable plant. The specimen, "Sheet No. 7" in the Linnean Herbarium, which is said to be the type, does not agree with the early descriptions, as it appears to be a much smaller plant.

The following is an extract from Wight and Arnott *Prod. Fl. Pen. Ind. Or.* 1.213 (1834):—

"The supposed type of this species has the whole plant, especially the stems and legumes, almost glabrous, but we have observed so many transitions between that state and those in which the stems might almost be called villous, and the legumes decidedly pubescent, and forms as variable as the soil in which this species is found, that we have been induced to neglect the pubescence as a character insufficient to mark a variety."

References are also made to the more or less pubescent forms and to the densely pubescent or slightly villous forms which had been cited under different species.

In India the plant is used medicinally by Indian doctors.

33. **T. Evansii** Hutch. and Burtt Davy in *Fl. Tvaal.* 1.2. p.p. XXXI, 378 (1932).

Type specimen *Pole-Evans* H. 16853, in Herbarium, Kew.

An erect slender branching plant. *Stems* softly pubescent with greyish hairs. *Leaves* 6–9-jugate, 4.5–10 cm. long; leaflets oblanceolate, thinly pubescent above, more densely pubescent below, mucronate, 1–3 cm. long, 4–9 mm. broad. *Stipules* linear-lanceolate, 5–6 mm. long. *Peduncles* terminal, 17–25 cm. long, more or less laxly racemously flowered. *Flowers* 2–4 together, often in the axils of the upper leaves. *Calyx*-tube 3 mm. long, 6–9 mm. in diam., lobes triangular-subulate, 3–5 mm. long. *Vexillum* 1.1 cm. long, 0.9–1 cm. broad, pubescent without. *Style* 3–4 mm. long, glabrous, penicillate at apex. *Legumes* 3–4 cm. long, 3–4 mm. broad, slightly falcate, densely and softly tomentose.

TRANSVAAL.—Barberton district: Komatipoort, *Pole-Evans* H 16853 (K.); *Schlechter* 11763 (K., B.M., P., G., Z., V., B., B.H., A.M.); *Dyke* [Marloth Herb. 5502] (P.); Godwan River, *Rogers* 22651 (P.); White River, *Rogers* 20097 (P.); Nelspruit, *Thorncroft* 2108 (P.).

34. **T. transvaalensis** Hutch. and Burtt Davy in *Fl. Tvaal.* 1.2 p. XXXII and 378 (1932); *Ann. Tvl. Mus.* 17.4.204 (1937).

Type specimen, *Schlechter* in Herbarium, Kew.

Suffruticose. *Stems* erect, densely pilose-pubescent. *Leaves* 3–8-jugate, 4–6.5 cm. long; leaflets 2–4.5 cm. long, 3–6 mm. broad, narrow-oblong or oblanceolate, mucro short, recurved, glabrous above, softly appressedly cinereo-pilose below. *Stipules* narrow, 5–7 mm. long, 3-nerved. *Peduncles* 8–14 cm. long, terminal and leaf-opposed, laxly racemose, flowers usually in pairs. *Flowers* 7–8 mm. long; bracts 2–5 mm. long, narrow. *Calyx*-tube 2 mm. long, 5 mm. in diam., lobes 2–5 mm. long, narrow triangular-subulate, pilose

without. *Style* 3-4 mm. long, glabrous, flattened, penicillate at apex. *Ovary* 4 mm. long, pubescent. *Legumes* 4 cm. long, 4 mm. broad, flat, apex slightly falcate, thinly and shortly pubescent.

BECHUANALAND PROTECTORATE.—Mochudi, *Harbor* [Rogers 6881] (Z.).

TRANSVAAL.—Lydenburg district: Komatipoort, *Schlechter* 11783 (B.H., Pa., A.M.).

35. **T. inandensis** H. M. Forbes sp. nov., affinis *T. grandiflorae* (Ait.) Pers., sed stipulis subulatis differt.

Suffrutex caulibus erectis. *Caules*, pedunculi, petiolique dense pubescentes demum glabrescentes. *Folia* 6-7-jugata, 6-11 cm. longa; foliola cuneato-oblonga, retusa, mucronulata, 2.5-4 cm. longa, 1-1.5 cm. lata, supra glabra, subtus pubescentia; stipulae subulato-acuminatae, usque ad 1 cm. longae; pedunculi usque ad 7 cm. longi, terminales vel axillares; bracteae ovato-acuminatae, mox caducae; pedicelli usque ad 1 cm. longi, pubescentes. *Flores* 2 cm. longi; calyx pubescens, dentes calycis lanceolato-acuminati tubo aequilongi sed uno longiore; stylus pilosus.

NATAL.—Inanda district: *Wood* 289, Inanda, Type in Natal Herbarium, Durban.

Suffruticose. *Stems* erect, with stems, peduncles and petioles densely pubescent, but becoming glabrous at length. *Leaves* petioled, 6-7-jugate, 6-11 cm. long; leaflets cuneate-oblong, retuse, mucronulate, glabrous above, pubescent below, 2.5-4 cm. long, 1-1.5 cm. broad. *Stipules* subulate, acuminate, up to 1 cm. long. *Peduncles* terminal and axillary, up to 7 cm. long. *Bracts* ovate-acuminate, soon caducous. *Flowers* 2 cm. long, "rosy", pedicels up to 1 cm. long, pubescent. *Calyx* pubescent, four lobes equalling the tube in length, lowest much longer. *Ovary* shortly and densely pubescent along margins. *Style* bearded. *Legumes* not seen.

Only one specimen of this plant is in the Natal Herbarium. It appears to be an erect shrubby plant.

36. **T. otaviensis** Dinter in Fedde Rep. 30. 204 (1932).

Type specimen, *Dinter* 5747, in Dinter's Private Herbarium.

A perennial, many-stemmed, woody, erect shrub up to 70 cm. high. *Stems* terete, thinly appressedly pubescent, branches long. *Leaves* 3-6 cm. long, petioles about 7 mm. long, 3-6-jugate; leaflets 2.5-7 cm. long, 0.5-1.2 cm. broad, oblong, shortly mucronate, midrib prominent, glabrous above and closely appressedly grey-hairy below; petiolules about 1.5 mm. long, very hairy, rotund, with a round glabrous gland on the under-surface. *Stipules* subulate, 2-nerved. *Peduncles* about 15 cm. long, angular, grooved; inflorescence rigid, laxly flowered, about 10 cm. long. *Flowers* single or two together, pale mauve; pedicels 2.5 mm. long, shortly and densely hirsute; bracts stiffly erect, awl-shaped. *Calyx* broadly campanulate, tube 9 mm. in diam., 3.5 mm. long, two upper lobes 2 mm. long, three lobes 3 mm. long, all lobes 1-1.5 mm. broad, whole calyx thickly hairy with short brownish hairs. *Vexillum* hairy without, 1.8 cm. long, 1.4 cm. broad. *Ovary* 1.3 cm. long, densely silky. *Style* 4 mm. long, bearded. *Legume* linear, 13-15 seeded, 5.5-8 cm. long, 5-5.5 mm. broad, densely white hirsute.

SOUTH WEST AFRICA.—Otavi, *Dinter* 5747 (D. Coll., B., G., Pa., B.H., N., Kim.) Bei Bobos in lichten sandigen Buschvelde, *Dinter* 7570 (K., D. Coll., B.).

37. **T. lactea** Schinz in Vierteljahrsschr Nat. Ges. Zurich 52.425 (1907).

Type specimen, *Rautanen* 530, in Botanisches Museum, Zurich.

Suffruticose, branches cinereo-holosericeous. *Leaves* 7-14-jugate, 6-14 cm. long; leaflets 1.2-2.5 cm. long, 0.4-0.8 cm. broad, oblong-obovate, apex rotund or emarginate,

mucronate, base cuneate acute, glabrous above, lacto- or cinereo-holosericeous below. *Stipules* 2.5 mm. long. *Peduncles* terminal, 8–30 cm. long, many-flowered. *Flowers* pedicellate, about 1.45 cm. long. *Calyx* holosericeous, tube about 3 mm. long, lobes triangular, lanceolate, 3–5 mm. long. *Vexillum* 1.4 cm. long, silky without. *Style* bearded. *Legumes* 4.5–5 cm. long, 4–5 mm. broad, sericeous.

SOUTH WEST AFRICA.—Hereroland: Epaho, in sandigen Boden, Halbkraut, *Rautanen* 530 (Z.); *Luderitz* 1 (Z.); Namaqualand: Sendlingsgrab, Rehlboth, *Fleck* 631 a (Z.); Namieb bei Khoianii, *Belek* 54 b (Z.).

38. ***T. tzaneenensis*** H. M. Forbes sp. nov., affinis *T. elongatae* E. Mey., sed foliis sessilibus vel breviter petiolatis differt.

Suffrutex caulibus erectis vel ascendentibus glabris vel parce pubescentibus; foliola 1–4-juga, linearia vel oblongo-linearia, 2–9 cm. longa, 0.5–2 cm. lata, subtus glabra vel parce pubescentia; stipulae lineari-subulatae. *Pedunculus* 7.5–32 cm. longus; racemi laxiflorae. *Flores* 1.3 cm. longi; dentes calycis tubo longiores. *Fructus* 5.5–7.5 cm. longus, 0.3 cm. latus, parce pubescens.

Type specimen, *Pole-Evans* 4024, in National Herbarium, Pretoria.

Suffruticose, stems erect or ascending, glabrous or appressedly pubescent. *Leaves* 1–4-jugate, sessile or subsessile, common petiole 1.6 cm. long; leaflets linear to oblong-linear, 2–9 cm. long, 0.5–2 cm. broad, glabrous on both sides or sparsely appressedly pubescent below. *Stipules* linear-subulate, 2–6 mm. long. *Peduncles* terminal or leaf-opposed, laxly racemosely flowered, 7.5–32 cm. long; flowers 2–4-nate, 1.3 cm. long; pedicels 1 cm. long, pubescent. *Calyx* pubescent, tube 2.5 mm. long, lobes 3–5 mm. long, upper lobes connate for almost entire length; vexillum about 1.3 cm. long, 1 cm. broad. *Ovary* 4 mm. long, pubescent. *Style* 2.5 mm. long, flattened, glabrous. *Legumes* 5.5–7.5 cm. long, 0.3 cm. broad, many seeded, sparsely appressedly pubescent.

TRANSVAAL.—Pietersburg district: Tzaneen, *Pole-Evans* 4024, (P., B.H.); *Mogg* (K.); *Rogers* 12400 (K., P., N., W., Z.); *Phillips* 3292 (P.); Haenertsberg, *Moss* and *Rogers* (K.); The Downs, Pietersburg, *Rogers* 21953 (B.M., Z., W., T.M.); Thabina, *Pole-Evans* H 15803 (K.); Duivel's Kloof, *Mogg* H 10719 (P.); Weltevreden, *Grant* (P.); Pusela, *McCallum* (P.); Shiluwane, *Junod* 632, 761, 2310 (G.); Northern Transvaal, *Le Doux* 43 (A.M.).

This species is similar in appearance to *T. elongata* but is readily distinguished by the sessile or very shortly petioled leaves.

39. ***T. elongata*** E. Mey. Comm. Pl. Afr. Austr. 111 (1835); Sond. in Linn. 23.30 (1850); Harv. in Harv. and Sond. Fl. Cap. 2.208 (1861–62); Wood Fl. Natal 42 (1907); Wood in Trans. S. A. Phil. Soc. 18.2.147 (1903); Ann. Tvl. Mus. 3.3.147 (1912); Bews Fl. Natal and Zululand 111 (1921); Burt Davy Fl. Tvaal. 1.2.378 (1932).

Syn. *T. aurantiaca* R. G. N. Young in Ann. Tvl. Mus. 14.4.398 (1932).

Type specimen, *Drège* s.n., in Botanisches Museum, Berlin-Dahlem.

Suffruticose. *Stems* ascending from the base, erect, subangular, flexuous, glabrous or pubescent, up to 60 cm. long. *Leaves* 1–2-jugate, lower occasionally simple, common petiole 1.1–5.5 cm. long; leaflets linear-lanceolate, glabrous or pubescent, mucronate, 4.7–9 cm. long, 0.6–1.2 cm. broad. *Stipules* subulate-acuminate, 4–8 mm. long. *Peduncles* 6–20 cm. long, laxly racemosely flowered. *Flowers* up to 1.3 cm. long; pedicels 2–4 mm. long. *Calyx*-lobes about equalling the tube in length. *Ovary* 6.5 mm. long, pubescent. *Style* glabrous. *Legumes* 5–6 cm. long, 0.3–0.4 mm. broad, pubescent or glabrescent.

Natal:— in clivis circa Clydesdale, *Tyson* 2052 (K., H.B.); in graminosis clivis Clydesdale ad flumen Umzimkulu, and Umkomaas, *Drège* (B.); Durban district: on Durban Flat, *Wood* (N.); near Durban, *Wood* 5586 (G., V., P.); *Wood* 149 (B.M., G., B.); Umbilo, *Wood* (N.); Inanda district: Inanda, *Wood* 1230 (K.); Pinetown district: Pinetown, *Rogers* 2811 (Z.); Umgeni district: near Howick, *Wood* 5226 (G., Z., B.); Vryheid district: Lancaster Hill, *Burt Davy* 11422 (P.); *Galpin* 9767 (K., P.); Vryheid, *Burt Davy* 11472 (P.); Utrecht district: amongst rocks on granite outcrops, Paulpietersburg, *Galpin* 10884 (K., P.). No definite locality, *Gerrard* and *McKen* (Pa., V., N.).

TRANSVAAL.—Heidelberg district: *Leendertz* [T.M. 7733] (T.M.); Lichtenburg district: Grasfontein, *Sutton* 399 (P.); Potchefstroom district: Potchefstroom, *Jenkins* (T.M.); Welverdiend, *Moss* 20491 (W.); Krugersdorp district: Klip River, Krugersdorp, *Fry* 3 (P.); Johannesburg district: Kopje, Park View, Johannesburg, *Moss* 8887 (W.); *Leendertz* 6056 (T.M.); Jeppes Ridge, *Gilfillan* 26 and 52 A (P.); Milner Park, *Moss* 10583 (B.M., W.); *Moss* 14012 (W.) [Type of *T. aurantiaca* R. G. N. Young]; dry veld, Johannesburg district, *Ommanney* 81 (B.M.); Mulders Drift, *Moss* 13634 (B.M.); Witwatersrand, *Hutton* (A.M.); Modderfontein, *Haagner* (A.M.); Elsberg, *Rogers* 12138 (W.); on veld near Boksburg, *Murray* (P.); Benoni, *Bradfield* 289 (P.); Carolina district: stony slope on farm Bergendal, Carolina, *Galpin* 12499 (K., P., G., B.) Waterval Boven, *Mason* 40 (W.) and *Rogers* 14424 (Z.); Barberton district: in monte Sheba pr. Barberton, *Bolus* 7726 (B.H.); Pretoria district: S. slopes Meintjies Kop, Pretoria, *Mogg* 16522 (P.); Bryntirion, *Smith* 3347 (K., P.); dry lands, Groenkloof, *Phillips* 3059 (P.); Vaal rivier und Magaliesberg, *Zeyher* 335 and 457 (K., B.M., Pa., A.M., S.A.M.); Magaliesberg, *Burke* (K., Z., Pa.); Premier Mine, *Rogers* 15653 (B.H.); Marico district: on hillside, Marico, *Oberholzer* S. 34 (B.); Rustenburg district: Rustenburg, *Leendertz* 3471 (T.M.); Lydenburg district: Burtplaatz bei Lydenburg, *Wilms* (G.); Farm Zwagershoek, *Obermeyer* 197 (T.M.); Spekboom River, 4 miles N. of Lydenburg, *Young* A 459 (T.M.); bei der Stadt, Lydenburg, *Wilms* 401 (B.M., Pa., G., V., Z., B.); Pietersburg district: Kratzenstein, Woodbush, Pietersburg, *Hoffman* 62 (T.M.); in montibus saxosis Houtbosch, *Bolus* 11070 (H.B.); Houtbosch, *Rehmann* 6233 (K.); Shiluwane, *Junod* 1404 (G.); no definite locality, Vaal River, *Burke* 335 (Pa.); Spitzkop Goldmines, *Wilms* 402 (B.M., G., Z.); *Barber* 659 (A.M.); *Zeyher* (B.); *Drège* 456 (V.).

Var. *pubescens* E. Mey. Leaflets, stems and legumes pubescent.

NATAL.—Port Natal: *Peddie* (K.); Durban district: *Rogers* 1496 (W.); Umgeni, *Thode* A. 3117 (S.); Inanda district: Kearsney, *Milner* (N.); Inanda, *Wood* 351 (K., B.M., S.A.M.); Pinetown district: New Germany, *Thode* (S.); Warrock, *Thode* (S.); pr. Krantzklouf, *Schlechter* 3214 (Z., B., G.B.); no definite locality, *Gerrard* 1110 (K., B.M., Pa., V.).

SWAZILAND.—Grassy hills near Dalriach, *Bolus* 11817 (P., B.H., A.M.); Hlatikulu, *Stewart* (T.M.).

TRANSVAAL.—Krugersdorp district: Witpoortjie Kloof, *Moss* 7472 (W.); Johannesburg district: Turffontein, *Weeks* (W.); Pretoria district: S. slope of Meintjies Kop, Pretoria, *Smith* 3290 (P.); slope of Meintjies Kop on N.E. side, *Smith* 759 (P.); Doornkloof, *Pole-Evans* 1031 (P.); Fountains Valley, *Repton* 255 (P.); Bavianspoort, *Smith* 1060 (P.); Wonderboompoort, *Smith* 1740 (P.); Kopje, Pretoria, *Moss* 10514 (W.); colles supra Aapies River, Pretoria, *Rehmann* 4394 (K., B.M., Z.); Koedoespoort, *Mogg* (P.); Premier Mine, *Rogers* 25054 (Z.) and 18944 (W.); Boekenhouts Valley, *Jenkins* (T.M.); Lydenburg district: Godwan River Stn., *Davison* and *Hofmeyer* 107 (P.); Barberton district: Eastern slopes, Saddleback Mtn., *Galpin* 1146 (K., P., A.M.); White River, Barberton, *Rogers* 23491 (Z.); Nelspruit, *Breyer* (T.M.); at Schagen, Nelspruit, *Liebenberg* 3300 and 3300A (P.); on top of Mt. Schagen, *Liebenberg* 2473 (P.); no definite locality, Rocker Sanatorium, *Junod* 908 (G.); Transvaal. S.A. Botanical Tour, *Hutchinson* 2335 and 2559 (K.).

In "Annals of the Transvaal Museum", 14.4.398 (1932), Mr. R. G. N. Young described a new species, *T. aurantiaca*. I have examined his material and can find no grounds for removing it from *T. elongata*. The colour of the flowers, which he gives as a "deep orange-brown", is not a reliable character on which to separate it, as in *T. elongata* the colour of the flowers, according to collectors' notes, varies from vermilion-red to deep orange-red.

Should further collections prove Mr. Young's plant to be worthy of specific rank, another specific name will have to be given it, the name "*aurantiaca*" being invalid, as it has already been used by Harms for a *Tephrosia* described by him in Engl. Jahrb. XXVIII. 402.

40. **T. angustissima** Engl. Bot. Jahrb. 10.29 (1888).

Type specimen, *Marloth* 1086, in Botanisches Museum, Berlin-Dahlem.

Stems elongate, ascending, slender; stems and lower surface of leaves appressedly sericeo-pilose. *Leaves* 2-3-jugate, 2-6.5 cm. long, petiole 2-4.5 cm. long before first pair of leaflets; leaflets narrow linear-lanceolate, margins cartilaginous, apex acute, 2-5 cm. long, 0.2-0.3 cm. broad. *Stipules* linear-subulate, brown, 4-5 mm. long. *Peduncles* terminal, 8-20 cm. long, densely flowered above; bracts 4-6 mm. long, subulate, brown; pedicels 3-5 mm. long; flowers 1.3 cm. long. *Calyx* densely pilose, teeth deltoid, subequal in length to tube. *Style* bearded. *Legume* narrow linear, flat, apiculate, 5-6 cm. long, 3 mm. broad, many seeded.

BECHUANALAND.—Pr. Kuruman, in summo montium "Ga Mhana", *Marloth* 1086 (B., P., A.M., S.A.M., B.H.).

Engler remarks: "It is near *T. lurida*, which, however, has longer leaflets and fewer flowers."

Apparently this plant has only been collected once. Further collectings may prove that it is merely a form of *T. lurida*.

41. **T. lurida** Sond. in Linnaea 23.30 (1850); Harvey in Harv. and Sond. Fl. Cap. 2.208 (1861-62); O. Kuntze Rev. Gen. Pl. 1.175 (1891); Burt Davy and Pott in Ann. Tvl. Mus. 3 3.146 (1912); Bak. f. Leg. Trop. Afr. 1.200 (1926); Bot. Survey of S.A. Mem. 12.68 (1928); Young in Ann. Tvl. Mus. 14.4. 402 (1932); Burt Davy Fl. Tvaal. 1.2.378 (1932); Watt and Breyer-Brandwyk Med. and Pois. Pl. S.A. 74 (1932).

Syn. *Cracca lurida* (Sond.) O. Ktz. Rev. Gen. Pl. 1.175 (1891); O. Ktz. Rev. Gen. Pl. 3.2.57 (1893).

Type specimen, *Zeyher* 456, in Herbarium, Kew.

Suffruticose. *Stems* erect, branches ascending from the base, angular, hispid. *Leaves* 1-4-jugate, very rarely simple leaves present, up to 13 cm. long, length of petiole before first pair of leaflets 1-7.5 cm. long; leaflets elongate-linear, mucronate, glabrous above, appressedly pubescent below, midrib prominent, lutescent, 2-12 cm. long, 1-9 mm. broad. *Stipules* setaceo-subulate, 0.8-1.3 cm. long. *Peduncles* up to 30 cm. long, few flowered towards the apex. *Flowers* 1.5 cm. long. *Calyx* sericeous without, lobes acuminate, longer than the tube. *Vexillum* sericeous without. *Style* flattened, bearded. *Legume* linear, compressed, lurido-tomentose, many seeded, 7-8 cm. long.

TRANSVAAL.—Potchefstroom district: Potchefstroom, *Goossens* 1460 (B.); Ventersdorp, *Sutton* 576 (Pa.); Marico district: Zeerust, *Leendertz* (T.M.); *Jenkins* (S.A.M.); Thode A 1393 (P., N.); Lichtenburg district: Lichtenburg, *Jenkins* (T.M.); Grasfontein, *Sutton* 299 (P.); Klipveld, *Liebenberg* 79 (P.); Heidelberg district: Heidelberg, *Thode* A 1308 (P.); *Leendertz* 2455 (T.M.); Witwatersrand district: Natal Spruit, Johannesburg, *Bryant* D 81 (P.); Observatory Ridge, *Burt Davy* 18896 (K.); Jeppes town, *Galpin* 1379

(K., A.M.); Jeppes Ridge, *Galpin* 1499 (P., A.M.); Kopjes, Houghton Ridge, *Moss* 2274 and 2741 (W.); Kopjes, *Omanney* 24 and 28 (B.M.); open veld, Johannesburg, *Rand* 843 (B.M.); Witwatersrand, *Hutton* 887 (Z.); Benoni, *Bradfield* 269 (P.); Krugersdorp district: Witpoortjie, *Moss* 8361 (W.); Krugersdorp, *Jenkins* (T.M.); Pretoria district: Irene, *Rogers* 23806 (Z.); Aapies River pr. Pretoria, *Bolus* 10833 (K., A.M., G.B.); Fountains Valley, *Repton* 127 (P.); N.E. slopes of Curtis Hill, *Pole-Evans* 110 (K.); Sunnyside, *Goossens* 107 (P.); Waterkloof, *Verdoorn* 31 (P.); Arcadia, *Burt Davy* 2433 (P., B.H.); Meintjies Kop, *Bolus* 11818 (B.H.); along N. slopes of hill near Union Buildings, *Smith* 1295 (Z., P.); near Trichardts Poort, *Smith* 3467 (P.); Wonderboompoort, *Smith* 6190 (P.); *Rehmann* 4611 (K., Z., B., B.H.); Groenkloof, *Burt Davy* 14631 (P.); Koedoespoort, *Obermeyer* (T.M.); Koppies, Pretoria, *Leendertz* (T.M.); Pretoria, *Pont* 793 (Z.); in saxosis Mt. Magaliesberg, Aapies R., *Schlechter* 3659 (B., A.M.); Magaliesberg, *Burke* (B.M., G., K., P.); *Zeyher* 456 (K., B.M., S.A.M.); Magaliesberg and Mooi R., *Zeyher* 182 (S.A.M.); ad Mooi R., Magaliesberg, Premier Mine, *Rogers* 19832 (Pa.); *Rogers* 14726 (N.A.M.); Rustenburg district: Waterkloof, *Collins* (T.M.); Rustenburg, *McClelland* (G.U.C.); *Nation* 58 (K., B.H.); *Rogers* 23577 (Z.); Vlaktefontein near Rustenburg, *Liebenberg* 144 (P., G.); Waterberg district: Mosdene, Naboomspruit, *Galpin* M 87 and M 628 (P.); near Ypres Halt, *Schlechter* 11581 (B.H.); Leeuwpoort, *Rogers* 22792 (Z.); Carolina district: Waterval Boven, *Mason* 38 (K., W.); Godwan River, *Rogers* 22650 (K., Pa., T.M.); Barberton district: Pilgrims Rest, *Greenvek* (B.M.); Barberton, *Galpin* 697 (B.H., Z.); Kaap Valley, *Galpin* 759 (N., A.M., Z.); Lydenburg district: bei der Stadt, Lydenburg, *Wilms* 401 b (Pa., B.); *Wilms* 401 (K., Pa.); Pietersburg district: in graminosis pr. pagum Pietersburg, *Bolus* 11069 (B.H.); Houtbosch, *Rehmann* 6235 (K., Z.); Waterberg district: Makapansberge, Streydport, *Rehmann* 5544 (Z.).

RHODESIA.—Matopos, Bulawayo, *Rogers* 5682 (B.H., S.A.M., T.M.); Bulawayo, *Eyles* 1206 (P., S.A.M., B.); Salisbury, *Eyles* 2170 (Pa., P., S.A.M.); Mazoe, *Eyles* 265 (B.H.).

The Zulu name for this species is "iShoba-lehashi". A cold infusion of the root is mixed with an infusion of *Dianthus crenatus* and the froth is used for washing the face so as to attract the attention of the opposite sex. As a further measure, some of the liquid is also drunk.

42. **T. longipes** Meisn. Hook. Lond. Journ. Bot. 2.87 (1843); Cape Plants, Krauss and Engler, 54 (1846); Walpers Rep. Bot. Syst. 5.515 (1846); Harvey in Harv. and Sond. 2.208 (1861-62); Baker in Oliv. Fl. Trop. Afr. 2.120 (1871); Grant and Oliv. in Trans. Linn. Soc. Lond. 29.56 (1872); Ficalho and Hiern. in Trans. Linn. Soc. Bot. Ser. 2.2.19 (1881); O. Kuntze Rev. Gen. Pl. 1.175 (1891); Wood Fl. Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Burt Davy and Pott in Ann. Tvl. Mus. 3. 3.146 (1912); Bews Fl. Natal and Zululand 111 (1912); Baker f. in Leg. Trop. Afr. 1.199 (1926); Young in Ann. Tvl. Mus. 14.4.398 (1932); Burt Davy Fl. Tvaal. 1.2 (1932).

Syn. *Cracca longipes* O. Kuntze Rev. Gen. Pl. 1.175 (1891).

Type specimen, *Krauss* 20, in Herbarium, Kew.

Suffruticose. *Stems* erect, branching, angular, subcanescent. *Leaves* 2-8-jugate, 5-13 cm. long, length of petiole before first pair of leaves 1-4 cm.; leaflets 1.5-11 cm. long, 2-7 mm. broad, narrow linear, usually complicate, mucronulate, glabrous above, argenteous beneath. *Stipules* setaceo-subulate, 0.4-1 cm. long. *Peduncles* terminal, up to 50 cm. long. *Flowers* about 1.7 cm. long, few in remote fascicles; pedicels and bracts 3-5 mm. long. *Calyx* fulvo-pilose without, tube 7-8 mm. in diam., 2.5 mm. long, lobes narrow, acuminate, unequal, 1-4 mm. long. *Vexillum* densely fulvo-pilose without, 1.6 cm. long, 1.2 cm. broad. *Ovary* densely silky. *Style* bearded. *Legumes* flat, linear, 3.5-7.5 cm. long, 4 mm. broad.

NATAL.—Durban district : Port Natal, *Krauss* 20 (K., G., O.); *Gueinzii* 308 (K., V.); *Krauss* s.n. (V.); *Zeyher* (Z.); near Durban, *Wood* 9565 (B., S.A.M.); Umzinyati Falls, *Wood* 1202 (K., B.M., N., B.H., S.A.M.); Umlaas, *Evans* 327 (N.); Lower Tugela district : Ntondweni, *Wood* 9214 (P.); near Tugela River, *Wood* (S.A.M., G., B.); no definite locality, *Gerrard* (P.).

PORTUGUESE EAST AFRICA.—Ad sinum Delagoa, *Forbes* 134 (K., Pa.); Delagoa Bay, *Monteiro* (K.); Lourenço Marques, *Schlechter* 11580 (K., B.M., Pa., G., V., Z., N., P., A.M., G., B.).

A note on the specimen collected by Mrs. Monteiro states : "The Kaffirs steep the leaves of this plant and rub them on the body to keep them in health when going a journey."

Var. *uncinata* Harv.

Leaflets obtuse, recurvo-mucronulate.

Type Specimen of the variety, *Zeyher* 455, in Herbarium, Kew.

TRANSVAAL.—Carolina district : Carolina, *Moss* and *Rogers* 1075 (Z.); Potchefstroom district : Holwater, Christiana, Bloemhof, *Burt Davy* 11239 (P.); Pretoria district : in nemorosis ad Aapies R., *Zeyher* 455 (K., B.M., Pa., G., Z., A.M., S.A.M.); Aapies and Orange Rivers, *Burke* (K.); in campis ad Magaliesberg and Vaal River, *Zeyher* 373 (S.A.M.); Magaliesberg, *Burke* (K.); colles supra Aapies R., *Rehmann* 4393 (K., B.M., Z.); Pretoria, *Leendertz* [T.M. 104] (T.M.); Meintjies Kop Range, Pretoria, *Smith* 3447 (P.); Wonderboompoort, *Smith* 6190 (K.); Barberton district : Louws Creek, *Thorncroft* 1154 (P.); Barberton, *Rogers* 29406 (Z.); Pietersburg district : Modjadjes, Pietersburg, *Rogers* 18129 (K.); Waterberg district : Kaalfontein, *Galpin* 13382 (P.); Nooitgedacht farm near Ypres Halt, *Galpin* 11518 (Pa., B.H.); Mosdene, Naboomspruit, *Galpin* M 85 (P.); Houtbosch, *Rehmann* 6234 (Z.); Zoutpansberg district : Zoutpansberg Range, *Smuts* (P.); no definite locality, *Rehmann* 4928 (Z.); *Drège* 455 (V.); *Junod* 1573 (G., Z.); *Holland* (Z.).

43. *T. multijuga* R. G. N. Young in Ann. Tvl. Mus. 14. 4. 402 (6th July, 1932.).

Syn. *Tephrosia Woodii* Burt Davy Fl. Tvaal. 1.2.378 (28th July, 1932.).

Type specimens, *Moss* 7473 and *Young* 676, in Herb. Young in Witwatersrand University, Johannesburg.

Suffruticose. *Stems* ascending, 1-2 ft. high; branches slender, flexuous, sulcate, angular, sparsely patently or appressedly clothed with reddish hairs, or glabrescent. *Leaves* 2.5-5.5 cm. long, petiole long, 3-10-jugate; leaflets 0.7-2 cm. long, 1.5-4.5 mm. broad, narrow oblong-elliptic, acuminate, mucronate, glabrous above, thinly pubescent below, veining below usually dark reddish-brown. *Stipules* 2-7.5 mm. long, linear, setaceous. *Peduncles* 15-16 cm. long, usually laxly flowered. *Flowers* 7-8 mm. long, 1-3 together. *Calyx*-tube 3.5-5 mm. broad, 1.5-2 mm. long, lobes 0.5-2 mm. long, deltoid acuminate. *Vexillum* 6.5-7.5 mm. long and broad, subrotund, canescent without. *Style* 2-3 mm. long, glabrous, penicillate at apex. *Legumes* 3.5 cm. long, 3 mm. broad, linear subfalcate, appressedly pubescent.

CAPE.—Eastern Province, Transkei : rocky slopes, Komgha, *Flanagan* 1139 (Z., P., A.M., B.H.); Kei River, *Drège* (K.) [Type of *T. Woodii* B. Davy]; Fikus' Territory, *Sutherland* (K.); East Griqualand : ad rivos pr. "Clydesdale" ad flumen Umzimkulu, *Tyson* 2775 (K., Z., V., G., B., S.A.M.).

NATAL.—Umzinto district : in lapidosis pr. fl. Umkomanzi, *Schlechter* 6689 (B., A.M.); Durban district : pr. Durban, *Wood* 7523 (B.M., B.H.); Pinetown district : Emberton, *Schlechter* 3204 (Z., A.M.); Maritzburg district : Umlaas Drift, *Wood* 1887 (K., N., A.M., B.H.); Howick, *Franks* (N., T.M.); Weenen district : "Thorns" pr. Weenen, *Wood*

4477 (K., N.); Klip River district: Pieters pr. Ladysmith, *Wood* 6671 (K., Pa., N., P., S.A.M.); no definite locality, *Gerrard* 1073 (K., B.M., Pa., V., N.); Zululand: Entumeni, *Wylie* (N.).

ORANGE FREE STATE.—Bloemfontein district: Bloemfontein, *Kuntze* (B., K.); Kopje facing Tempe farm, *Potts* 2936 (K., P.); no definite locality, *Cooper* 2211 (K., Z.).

TRANSVAAL.—Standerton district: Standerton, *Leendertz* 4113b (T.M.); Potchefstroom district: Potchefstroom, *Leendertz* (T.M.); Klerksdorp, *Convent* 90 (A.M.); Maquassi Route, *Liebenberg* 3412 (K., P.); Krugersdorp, *Jenkins* (T.M.); Witwatersrand district: Witpoortjie Kloof, Witwatersrand, *Moss* 10802 (W.); and *Moss* 16195 (B.M., W.); Hill-sides, Jeppes Town, *Galpin* 1402 (K., P., A.M.); Houghton Ridge, *Moss* 7473 (W.); Johannesburg, *Leendertz* (T.M.); *Rand* 1146 (B.M.); *Ommanney* 27 (B.M.); Modderfontein, *Conrath* 231 (Z.); Pretoria district: Meintjies Kop, *Mogg* 14648 (P.); *Bolus* 11820 (B.H.); S. side of Meintjies Kop, *Smith* 2307 (P.); Kopjies south of Pretoria, *Obermeyer* (T.M.); Fountains Valley, *Repton* 212 (P.); Aapies Poort, *Rehmann* 4169 (Z.); near Pretoria, *Moss* 13255 (W.); Curtis and Bournes Hill, *Pole-Evans* 97 (K.); Crocodile River, *Leendertz* 723 (T.M., B.H.); Wonderboompoort, *Smith* 1739 (P.); Hartebeestepoort, *Gillett* 1075 (P.); Carolina district: Waterval Boven, *Mason* 34 and 34 A (K.); Carolina, *Rogers* 19117 (K., Z.); Barberton district: Nelspruit, *Breyer* (T.M.); *van Elden* 12 (P.); *Rogers* 21001 (P.); Barberton, *Thorncroft* (T.M.); Komati Poort, *Schlechter* 11804 (B., P., A.M., B.H.); *Moss* and *Rogers* 620 (K., Pa.); *Rogers* 20814 (K., G., Z.); Lydenburg district: bei der Stadt, Lydenburg, *Wilms* 363 (K., B.M., Pa., G., B., V.); *Wilms* 363b (G.); Waterberg district: Houtbosch, *Rehmann* 6236 (K., B.M.); Burtplaats bei Krugerspark, *Wilms* 363 a (K., B.M.); Blue Kranz River, 1895, *Schlechter* 6864 (B., P., A.M., B.H.).

SOUTH AFRICA.—No definite locality, *Junod* 162 (P.); *Schlechter* 3240 (Z.); *Krook* [Herb. Penther 2544] (V.); *Thode* (B.).

44. **T. semiglabra** Sond. in *Linnaea* 23.29 (1805); Harvey in *Harv. and Sond. Fl. Cap.* 2.205 (1861–62); O. Kuntze *Rev. Gen. Pl.* 1.175 (1891); Burt Davy and Pott in *Ann. Tvl. Mus.* 3.3.146 (1912); *Ann. Bolus Herb.* 3.1.20 (1920); *Bot. Survey S.A. Mem.* 12.68 (1928); Young in *Ann. Tvl. Mus.* 14. 4. 404 (1932); Burt Davy *Fl. Tvaal.* 1.2.378 (1932); Watt and Breyer-Brandwyk in *Med. and Pois. Pl. S.A.* 74 (1932).

Syn. *Cracca semiglabra* O. Kuntze *Rev. Gen. Pl.* 1.175 (1891).

Type specimen, *Zeyher* 459, in Herbarium, British Museum (Natural History), London.

Stems decumbent, arising from the base, up to 3 feet long, flexuous, clothed with rufous tomentum, angular. *Leaves* 3–6-jugate, 1.5–6 cm. long, shortly petiolate; leaflets oblong-lanceolate, recurved-mucronate, glabrous above, rufo-tomentose below, 1–2.5 cm. long, 0.5–1 cm. broad. *Stipules* subulate acuminate, 4–6 mm. long. *Peduncles* 7.15–20 cm. long. *Flowers* 0.9–2.3 cm. long, pedicels 0.4–1.2 cm. long. *Calyx* rufo-tomentose, tube 0.6–1.2 cm. diam., 2.5–4 mm. long, lobes lanceolate-acuminate, unequal, 1–3 mm. long. *Vexillum* 0.9–2.3 cm. long and broad, pubescent without. *Ovary* pubescent, 5–6 mm. long. *Style* glabrous. *Legumes* shortly pubescent, 3.5–4.5 cm. long, 3–4 mm. broad.

BECHUANALAND PROTECTORATE.—Mochudi, *Harbor* [*Rogers* 6500] (B.H., S.); Kuruman district: *du Toit* (G.U.C.).

CAPE PROVINCE.—East Griqualand: in *graminosis clivis Clydesdale prope flumen Umzimkulu*, *Tyson* 2783 (K., B., S.A.M., P., S.).

NATAL.—Pinetown district: Drummond, *Franks* (N.); Maritzburg district: near Maritzburg, *Wood* 3162 (K.); Newcastle, *Wood* 7191 (K., P., N.).

BASUTOLAND.—Leribe, *Dieterlen* 129 (K., Pa., N., P., S.A.M., A.M., Z.).

ORANGE FREE STATE.—Kroonstad district: *Pont* 328 (Z., P., G.U.C.); Viljoen's Drift, *Rogers* 4806 (B.M.); *Rogers* (T.M.); Bethlehem district: Dunelm Farm, Fouriesburg, *Potts* (K.); on slopes of hill near Little Caledon river, "Wyndford", Fouriesburg, *Gemmell* (G.U.C.); no definite locality, *Cooper* 2226 (K., Z.).

TRANSVAAL.—Vereeniging district: Vereeniging, *Bruyn* 163 (P.); Witwatersrand district: Jeppeshtown Ridge, Johannesburg, *Gilfillan* [Herb. Galpin 6100] (P., A.M.); *Holden* (T.M.); *Moss* 61715 bis (W.); grass-veld, Milner Park, *Moss* 6250 (B.M., W.); Mulder's Drift, *Moss* 13596 (W.); Klipriviersberg Range, *Rand* 1116 (B.M.); Observatory, *Weeks* 357 (W.); Modderfontein, *Conrath* 230 (Z., B.); on veld near Geduld Dam, Witwatersrand, *Murray* (P.); grass-veld, Rietfontein, *Moss* 16428 (W.); Kaalfontein, *Pole-Evans* H 13531 (K.); Pretoria district: in collibus lapidosis Aapies River pr. Pretoria, *Bolus* 10834 (K., B.H.); Irene near Pretoria, *Obermeyer* (T.M.); in grass near the Fountains Stn., Fountains Valley, *Repton* 195 (P.); Pretoria, *Smith* 1588 (P.); Commonage, Arcadia, *Smith* 1772 (P.); Riviera, *Smith* 1800 (Z., P.); Meintjies Kop, *Smith* 2305 (P.); in lapidosis ad ped. mont. Magaliesberg, *Zeyher* 459 (B.M., O., S.A.M.); Silverton, *Leendertz* 565 (T.M.); Hatherley, *Collins* (T.M.); Middelburg district: near Witbank, *Gilfillan* (P., A.M.); Carolina district: Leeuwoort, Carolina, *Burt Davy* 7436 (P.); Farm Nooitgedacht, Ermelo, *Henrici* 1383 (P.); Dasal, Ermelo, *Hoffe* 9 (P.); Barberton district: Bushveld, Warmbaths, *Moss* 16584 (W.); Waterval Boven, *Mason* 34 (K.); Waterval Onder, *Jenkins* (T.M.); Saddleback Mtn., Barberton, *Galpin* 678 (Z., A.M., B.H., N., P.); Nelspruit, *Liebenberg* 2714 (P.); ridge to Pretorius Kop from White River, Lydenburg district: *Gillett* 1049 (P.); Farm Zwagershoek, Lydenburg district, *Obermeyer* 193 (T.M.); bei der Stadt, Lydenburg, *Wilms* 362 (B.M., G., V., B., T.M., B.H.); Mbabane, Swaziland, *Rogers* 11447a (B.H.).

PORTUGUESE EAST AFRICA.—In solo arenoso in colle pone Lourenço Marques, *Bolus* 7725 (B.H.).

South Africa.—No definite locality, 1843, *Burke* (B.M., O.); in turfosis pr. Blackkopjes, *Schlechter* 4177 (K., B.M., Pa., V., G., B., B.H., A. M., T.M.).

The Suto name for *T. semiglabra* is "Pelo-di-marobaya-thaba". A decoction of the roots of this plant together with the roots of *Haplocarpha scaposa* is used in the treatment of chest colds.

45. **T. Burchellii** Burt Davy in Kew Bull. 50 (1921); Burt Davy Fl. Tvaal. 1.2.378 (1932).

Type specimen, *Burchell* 1932, in Herbarium, Kew.

Slender prostrate herb. *Stems* annual, arising from a perennial root-stock, 20–30 cm. long, flexuous, branching from the base. *Leaves* shortly petiolate, 5–8-jugate, 4·4–5 cm. long, rhachis hirsute with long hairs; leaflets 0·8–1·4 cm. long, 4–8 mm. broad, obovate, retuse, mucronulate, glaucous, ciliate, glabrous above, lower surface sparsely hirsute, chiefly along the veins. *Stipules* linear, 3–5 mm. long. *Peduncles* axillary, slender, 5–12·5 cm. long, laxly flowered. *Flowers* about 6 mm. long, 2–3 together. *Calyx* hirsute with long white hairs, tube about 1–1·5 mm. long, lobes narrow subulate, about 3 mm. long. *Vexillum* pubescent on the back. *Style* glabrous. *Legumes* 3–4 cm. long, 3–3·5 mm. broad, slightly falcate, appressedly puberulous.

SOUTH WEST AFRICA.—Ondonga, Amboland, *Rautanen* 644 (K., Z., V., G.); Okahandja, *Dinter* s.n. (D. Coll.); Farm Quickborn, Okahandja, *Bradfield* 60 (T.M.); *Dinter* 419 (B.); Omahehe, *Dinter* 25636 (B.); Leutueim, *Dinter* s.n. (B.); in river bed between Hoffnungs-felde and Hans, *Pearson* 9528 (K.).

BECHUANALAND PROTECTORATE.—Goruah, East Bamangwato Territory, *Holub* (K.); Batlapin Territory, *Holub* (K.); Mochudi, *Rogers* 6070 (K.); *Harbor* [*Rogers* 6590] (Z., P.); *Harbor* 985 (Kim.); *Harbor* s.n. (T.M.); *Harbor* [*Rogers* 6501] (P.); *Harbor* [*Rogers* 6500] (B.H.); *Harbor* [*Rogers* 6878] (P.).

CAPE PROVINCE.—British Bechuanaland: Vryburg district: Armoeds Vlakte, *Mogg* 8686 (P.); *Sharpe* (P.); Sheppards Gift, *Burt Davy* 13749 and 13771 (P.); Experimental Farm, Vryburg, *Going* 7199 (P.); Takoon, *Burt Davy* 13965 (P.); Litaken, *Burt Davy* 13915 (P.); Griqualand West: Barkly West district: Daniels Kuil, *Wilman* (B.H.); Hardeveld, Priel, *Acocks* 1578 (Kim.); Hay district: Wildealsput, *Auchamp* 982 (Kim.); Griquatown, *Burchell* (K., Pa.); Bermolli, *Wilman* (K.); Kimberley district: Kimberley, *Marloth* 802 (P.); Karreeboom, Kimberley, *Wilman* 1366 (K., B.H., A.M., T.M.); in loose red sand, Karreeboom, *Wilman* 1366 bis (K., P., A.M., S.A.M., B.H.); Bushman's Fountain, *Wilman* (B.H.); Magersfontein, *Wilman* (T.M.); Reit Pan, *Reinhardt* 980 (Kim.) and *Wilman* (P.); Newlands, *Wilman* 3063 (Kim.); Herbert district: St. Clair, Douglas, *Orpen* 132 A (K.) and *Orpen* 133 (S.A.M.); Prieska district: Niekerk's Hoop, *Wilman* (P., K., T.M., A.M., B.H.); Krantz kop near Niekerk's Hoop, *Bryant* 1138 (P.).

ORANGE FREE STATE.—Boshof district: Karree Pan, *Wilman* 3327 (Kim.); Smitskraal, *Burt Davy* 10161, 11283, 11322, 11360, 12905 (P.).

TRANSVAAL.—Bloemhof district: Christiana, *Burt Davy* 11378, 12818, 14487 (P.); Wolmaransstad district: Wolmaransstad, *Rogers* 18470 (K.); Lichtenburg district: grass veld, Coligny, *Blenkiron* (W.); Potchefstroom district: Vereeniging, *Leendertz* 3747 (T.M.); Pretoria district: Hebron, *Dehuke* (T.M.); foot of south slope, Meintjies Kop, *Smith* 2312 (P.); Barberton district: Komatipoort, *Moss* and *Rogers* 618 (K., P.); Rustenburg district: Rustenburg, *Nation* 164 (K.) and *Nation* 246 (K.); Pietersburg district: in plantibus graminosis prope pagum Pietersburg, *Bolus* 11073 (B.H.); Mosdene, Naboomspruit, *Galpin* M 83 (P.); Klippan, Bushveld, *Rehmann* 5191 (K., B.M.); Zoutpansberg district: Valdezia, *Obermeyer* 1155 (T.M.).

PORTUGUESE EAST AFRICA.—Lourenco Marques, *Moss* and *Rogers* 742 (K., Z., W.).

46. **T. retusa** Burt Davy Fl. Tvaal. 1.2. pp. XXI, 378 (1932).

Type specimen, *Bolus* 7724, in Herbarium, Kew.

Stems flexuous, procumbent, erect or ascending, branching from the base and above, glabrous or slightly pubescent, dark brown. *Leaves* subsessile or very shortly petiolate, 3.5–7 cm. long, 3–7-jugate; leaflets 0.8–2 cm. long, 3.5–7 mm. broad, oblong-oblancoate, apices very much retuse, mucronulate, glabrous above, glabrescent or very sparsely pubescent below. *Stipules* subulate, 4–6 mm. long. *Peduncles* terminal or leaf-opposed, laxly flowered, 3.5–15 cm. long. *Flower* 1.7 cm. long, pedicels 3–5 mm. long; bracts lanceolate, narrow, about equalling the pedicels. *Calyx* thinly and shortly pubescent, tube 7 mm. in diam., 3 mm. long, lobes triangular-subulate, two upper lobes connate, very short, others 2–3 mm. long. *Vexillum* thinly pubescent on back, 1.7 cm. long, 1.8 cm. broad. *Ovary* thinly pubescent. *Style* bearded. *Legumes* linear, very thinly and shortly pubescent, light brownish-yellow, 4.5–5 cm. long, 4–5 mm. broad.

TRANSVAAL.—Middelburg district: Middelburg, *Rogers* 24827 (K., G., Z., P.); Barberton district: juxta Kaap River prope Barberton, *Bolus* 7724 (K., B.H.); Kopje, Kaap Valley, Barberton, *Galpin* 1180 (K., P., N., S.A.M., A.M.); Barberton, *Pott* 5326 (T.M.); Lydenburg district: Schagen, Nelspruit, *Liebenberg* 3317 (K., Pa., P.); Pietersburg district: in clivibus Mt. Elandspruitbergen, *Schlechter* 3837 (B.H.); Shiluwane, *Junod* 1125 (K., Z.).

SWAZILAND.—In graminosis in terra "Middel Veld" dicta pr. pagum Bremersdorp, *Bolus* 11821 (K., B., B.H.).

47. **T. capensis** (Jacq.) Pers. Syn. 2.330 (1807); DC. Prodr. 2.252 (1825); Spreng. Syst. Veg. 3.233 (1826); Linnaea 7.168 (1832); E.Mey. Comm. Pl. Afr. Aust. 1.1.110 (1836); Ecklon and Zeyher Enum. Pl. Afr. Aust. Pt. 2 (1836); Hook. Lond. Journ. Bot. 2.88 (1843); Cape Plants, Krauss and Engler (1846); Harvey in Harv. and Sond.

Fl. Cap. 2.207 (1861-62); Bolus and Wolley Dod in Trans. S.A. Phil. Soc. 14.3.237 (1903); Zahlbr. Ann. K. K. Naturhist. Hofmus. 20.3.24 (1905); Wood Fl. Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Burt Davy and Pott in Ann. Tvl. Mus. 3.3.146 (1912); Die Veg. der Erde 9.3.590 (1915); Phillips in Ann. S.A. Mus. 16.1.82 (1917); Bot. Survey S.A. Mem. 1.64 (1919); Bews Fl. Natal and Zululand 110 (1921); Bot. Survey S.A. Mem. 12.68 (1928); Bot. Survey S.A. Mem. 13.35.38 (1929); Levyns Guide to Flora of Cape Peninsula (1929); Burt Davy Fl. Tvaal. 1.2.378 (1912); Watt and Breyer-Brandwyk Med. and Pois. Pl. S.A. 74 (1932); Bothalia 3.2.239 (1937).

Syn. *Tephrosia capensis* (Jacq.) Pers. var. a. *Jacquini* Harv. in Fl. Cap. 2.207 (1861-62); E. Mey. Comm. Pl. Afr. Aust. 1.1.110 (1836); *Tephrosia capensis* (Thbg.) Pers. in O. Kuntze Rev. Gen. Pl. 1.174 (1891); *Tephrosia ternatifolia* R. G. N. Young, in Ann. Tvl. Mus. 14.4.406 (1932); *Galega capensis* Jacq. Coll. 2.292 (1788); Jacq. Ic. Pl. Rar. 3.14 t. 574 (1786-93); Linn. Syst. Nat. ed. 13 per Gmelin 2.11.1130 (1792); Thunb. Prodr. 134 (1800); Willd. Sp. Pl. 3.11.1250 (1803); Linn. Syst. Nat. 6.1216 (London 1806); *Cracca capensis* (Thbg.) O. Ktze. Rev. Gen. Pl. 3.2.57 (1893).

Suffruticose. *Stems* procumbent, several from a woody root-stock, pubescence variable, branches slender. *Leaves* long petiolate, 2-4-jugate, 1-3 cm. long; leaflets sub-cuneate oblong or lanceolate, obtuse or acute, glabrescent above, glabrous or hirsute below, veining usually dark reddish-brown on lower surface, 1-3 cm. long, 0.5-1.4 cm. broad. *Stipules* subulate, 3-5 mm. long. *Peduncles* opposite leaves, slender, 7-15 cm. long, interruptedly few-flowered. *Flower* 0.65-1 cm. long; pedicels 3-5 mm. long. *Calyx*-teeth equalling or longer than the tube. *Ovary* 4-5 mm. long, silky. *Style* glabrous, *Legume* linear, narrow, 3.5 cm. long, 0.3 cm. broad, pubescent, thinly puberulous or glabrescent, about 8-seeded.

CAPE.—Capetown district: Cape Town, *Prior* (K.); *Alexander* 109 (K.); *Rogers* 17800 (G.); Camps Bay, *Prior* (K.); *Young* (T.M.); Hillside above Bantry Bay, Sea Point, *Smith* 2938 (P.); W. slopes, Lions Head, *Levyns* (S.A.C.); steinige stellen am westlichen Abhang des Kasteel Berg, *Zeyher* 4824 (B.; H.S.); Kasteels Poort, Table Mtn., *Thorne* (S.A.M.); in fruticetis inter lapides alt. 2 mont. tab., *Ecklon* 817 (K.); Contour Path, N. slopes of Table Mtn., *Moss* 7803 (W.); Devils Peak, *Wolley Dod* 16 (B.H.) and 585 (K.); in Monte Diaboli, *Rehmann* 1096 (B.M., Z.); and 1097 (Z.); W. slopes of Apostles, *Pillans* 3472 (P.); in ericetis, Rondesbosch, *Zeyher* (S.A.M.); Kirstenbosch, *Adamson* (S.A.M.); Wynberg Hill, *Guthrie* 256 (S.A.C.); slopes behind Wynberg Park, *Kensit* (B.H., T.M.); Wynberg Hill, *Bolus* 3895 (B.H., A.M.); Simonstown, *Salter* (B.M.); Simons Bay, *Wright* (Pa.); Caledon district: Hermanus, *Rogers* 2644 (T.M.); *Galpin* 12902 (P.); *Gillett* 644 (B.H.); Swellendam district: on plains of George and Swellendam, *Bowie* 4 (B.M.); Riversdale district: Riversdale, *Schlechter* 1863 (1) (W.); *Levyns* 3155 (S.A.C.); *Rust* 217 and 305 (B.); Mossel Bay district: Mossel Bay, *Moran* (Kim., T.M.); George district: George, *Moss* 6099 (W.); Knysna district: Knysna, *Keet* 678 (P.); *Rosenbrock* 1159 (B.); Humansdorp district: The Glen, Humansdorp, *Burt Davy* (P.); Kouja R., near drift on road from Zuur Anys, *Fourcade* 3092 (K.); Uitenhage district: on fields by Zwartkop R. and on hills of Adow, *Zeyher* 59 (K., B.H., A.M.); Uitenhage, *Penther* 2462 (V., B.); *Zeyher* 282 (Pa., G., B.); *Prior* (K.); *Thode* A 641 (P.); Zuurberg Sanatorium, *Long* 262 (K., P.) Enon near Zuurberg, *Thode* A 2638 (P., N.); Aloes, *Drege* 3068 (P., A.M.); Port Elizabeth district: near Port Elizabeth, *Baur* (K.); Emerald Hill, *Paterson* 2342 (P., B.H., A.M.) Somerset East district: common along Sky Parlour Level, *Scott Eliot* 498 (B.); Graaff Reinet district: summit of Cave Mtn. near Graaff Reinet, *Bolus* 247 (K., B.H.); Queenstown district: Fincham's Nek. Queenstown, *Young* (W.); Plains, Queenstown, *Galpin* 1679 (B., P.); Cathcart district: Cathcart, *Kuntze* (K.); Albany district: Fish River Heights, *Hutton* (P.); Bathurst district: road to Three Sisters, *Britten* 718 (A.M.); East London district: East London, *Otley* 2523 (W.); Nahoon R. Valley, *Smith* 3763 (P.); Buffalo River, *Rogers* (T.M.); Komgha district: grassy hills, Komgha, *Flanagan* 132 (A.M., P., S.A.M.); British Kaffraria, *Cooper* 540 (B.M., Z., V.); Franklin district: near Newmarket, *Krook* (B.).

NATAL.—Port Natal, *Gueinzus* 332 (V.); *Gueinzus* 625 (V.); *Gueinzus* 312 (Pa., V.); Mayville, *Wood* (N.); Inanda district: Umhlanga, *Wood* 572 (B.M.); Umhlanga, *Wood* 1000 (N.); Pinetown district: New Germany, *Indian Collector* (N.); Dundee district: The Dam, Talana, Dundee, *Truscott* 58 (P.); Vryheid district: Vryheid, *Pole-Evans* 3896 (P.); Weenen district: among rocks, South Downs, Weenen Cty, *Evans* 478 (N.); New-castle district: Boscobello, *Jenkins* (T.M.); no definite locality, *Wood* 779 (K., B.H.). Zululand, *Gerrard* and *McKen* (B.M., Pa.).

BASUTOLAND.—Plateau slopes, Leribe, *Dieterlen* 333 (P., N., S.A.M., Pa.); on slopes of mtn., S. Basutoland, *Castignani* (G.U.C.).

ORANGE FREE STATE.—Harrismith district: Harrismith, *Sankey* 55 (K.); Bethlehem district: Fouriesburg, *Potts* 4911 (K., G.U.C.); Heilbron district: Leeuw Spruit and Vredefort, *Barrett-Hamilton* (B.M.); Bloemfontein district: E. side of Grants Hill, Bloemfontein, *Potts* (K., P., G.U.C.); Top of Grants Hill, Bloemfontein, *Potts* 2364 (P.).

TRANSVAAL.—Standerton district: Standerton, *Leendertz* 4113a (T.M.); Heidelberg district: Bolton Wold, Vereeniging, *Burt Davy* 15083 (P.); grass veld, Doorntree Kloof, *Moss* 14249 (W.); Benoni *Bradfield*. 127 (P.); Middelburg district: Pan, Middelburg, *Burt Davy* 13236 and 13237 (P.); Pretoria district: in graminosis pr. Aapies River, *Schlechter* 3665 (B., T.M., B.H.); Skinners Court, Pretoria, *Burt Davy* (P.); Meintjies Kop, Pretoria, *Smith* 1417 (Z., P.); Wonderboompoort, *Rehmann* 4593 (B.M., Z.); Barberton district: Komatiipoort, *Moss* and *Rogers* 619 (Z.); Marico district: Sandy Hill, Marico, *Oberholzer* s. 32 (B.); Waterberg district: Potgietersrust, *Crawley* (P., T.M.); road between Pietersburg and Louis Trichardt, *Pole-Evans* and *Van Nouhuys* 1941 (P.); Zoutpansberg, *Junod* 4372 (P., T.M.); on lower slopes of Zoutpansberg, *Schweickerdt* and *Verdoorn* 531 (P.). No definite locality, Vaal River, *Zeyher* (B., S.A.M.); Bushveld inter Elands R. and Klippan, *Rehmann* 5046 (Z.); *Ecklon* and *Zeyher* 2398 (V.).

SOUTH AFRICA.—No definite locality: *Burchell* 92 (G.); *Burchell* 6146 (Pa.); *Krauss* (V.); *Krebs* (G., B.); *Bayer* (B.); *Rehmann* 1098 (Z.); *Harvey* 733 (K.); *Engler* 47 (B.); *Bergius* (B.); *Lehmann* (Pa.); *Lichtenstein* 50 (B.); *Moricand* (G.); *Mund* and *Maire* (V., B.); *Mund* (K.); *Ecklon* and *Zeyher* 1629 (V.); *Vaillaur* (Pa.).

Var. *a hirsuta* Harv. Leaflets more or less densely pubescent or hirsute below; oblong, obtuse or acute.

CAPE.—Riversdale district: Zandhoogte, *Muir* 86 (P.); in graminosis pr. Riversdale, *Schlechter* 1863 (B.M., G., Pa., Z., B., P., A.M.); George district: pone Georgetown, *Zeyher* (S.A.M.); George, *Moss* 6095 (W.); *Rogers* 26469 (K.); *Wilman* 823 (S.A.M.); in montibus Long Kloof, Montagu Pass, *Fr. de Castelnau* 97 (Pa.); Outeniqua Mtns., Montagu Pass, *Rehmann* 12 and 13 (Z.); Knysna district: Poort Hills, *Fourcade* 589 (Z., A.M.); Knysna, *Schonland* 3474 (A.M., Pa.); *Breyer* (T.M.); Karatora Village, *Keet* 1149 (A.M.); Voetzie, Knysna, *Keet* 678 (A.M.); on hillsides, E. Head, Knysna, *Williamson* 106 (A.M.); Hackerville-Knysna, *Breyer* (T.M.); Plettenberg Bay, *Zeyher* (S.A.M.); *Rogers* 27942 and 28391 (P.); *Rogers* 28392 (K.); Uniondale district: on edge of road, De Vlucht, *Keet* 593 (A.M.); along the Avontuur Line, *Britten* 1035 (P.); Humansdorp district: mixed Duine veld at Slang River, Humansdorp, *Phillips* 3418 (K., P.); Uitenhage district: Aloes, *Drège* 3157 (P.); Uitenhage, *Thode* A 641 (N., P.); near road from Uitenhage to Van Stadens, *Schonland* 3271 (P., A.M.); in lapidosis ad van Stadens Mtns., *Zeyher* 2396 (S.A.M.); Van Stadens, *Paterson* (T.M.); grassy hills, van Stadens R. near Mine Road, *Bolus* (B.H.); Port Elizabeth district: buschige Felder, Port Elizabeth, *Rosenbrock* 87 (B.); Humewood, *Holland* 3724 (B.H.); Mill Park, Port Elizabeth, *Moorshead* (W.); *Moss* 15417 (W.); Alexandria district: Zuurburg, *Paterson* 33 (A.M.); Sandflats, Hillary, *Burt Davy* (P.); Grahamstown district: Grahamstown, *Daly* and *Cherry* 925 (T.M.); *Burt Davy* 11543 (P.); *Burt Davy* 12166 (P.); *Rogers* 27329 (K., Z., P.); near Grahamstown, *Gillett* 2494 (B.H.); *Zeyher* (S.A.M.); dry slopes, Gowies Kloof, Oatlands, *Rennie* 186 (S.A.C.); flats, Hofman's Bosch, *Britten* 1035 (A.M.); in lapidosis clivis, Bothas Hill, *MacOwan* 478 (K.);

Bothas Hill, *Dyer* 1426 (B., P., A.M.); Peddie Road, *Dyer* 1360 (A.M.); Albany, *Parry* (A.M.); *Britten* 718 (P.); *Gawl* (P.); Bathurst district: Port Alfred, *Potts* 221 (A.M.); Kingwilliamstown district: Kingwilliamstown, *Hilner* 110 (A.M.); Stockenstrom district: grassy ridges, Willsdale Commonage, Stockenstrom, *Scully* 228 (S.A.M.); Queenstown district: grassy plains, Queenstown, *Galpin* 1679 (A.M.); Aliwal North district: on rocky mountain sides, Elands Hoek, near Aliwal North, *Bolus* 293 (B.H.); East London district: grass plains, Shelley Beach, *Galpin* 7344 (A.M., P.); Cambridge, *Wormald* 9 (A.M.); Coldstream, *Schonland* 1521 (A.M.); Komgha district: grassy hills near Komgha, *Flanagan* 617 (P., A.M., S.A.M.); Willowvale district: River mouth, Mazeppa Point, *Hilner* 462 (P., A.M.); Umtata district: near Umtata, *Flanagan* 2854 (B.H.); Cafferland, *Gill* (K., Z.); East Griqualand: in clivis saxosis Kokstad, *Tyson* 2976 (S.A.M.); in graminosis clivis "Clydesdale" ad flumen Umzimkulu, *Tyson* 1432=2783 (Pa., V., Z., P., S.A.M., T.M.). No definite locality, "Mofube, Cape", *Jacottet* (Z.).

BASUTOLAND.—Leribe, *Phillips* 522 (S.A.M.).

NATAL.—Heavetree Farm, *Ralfe* (P.).

ORANGE FREE STATE.—Bethlehem district: Witziess Hoek, *Code* (B.H.); Bloemfontein district: in collibus lapidosis prope Bloemfontein, *Bolus* 10802 (B.H.); Winburg district: Houtenbek near Brandfort, *Burt Davy* 14700 and 14694 (P.); Kroonstad district: Kroonstad, *Pont* 443 (P.).

TRANSVAAL.—Potchefstroom district: on veld preservation experiment plots, Potchefstroom, *Liebenberg* 915 (P.); Johannesburg district: Thorntree Kloof, *Moss* 6803 and 10533 (W.); Modderfontein, *Conrath* 231 A (Z., B.); Pretoria district: Pretoria, *Leendertz* 466 (B.H.); colles supra Aapies River, *Rehmann* 4399 (Z.); Barberton district: Komati-poort, *Rogers* 2266 (Z.); in graminosis pr. Crocodile River, *Schlechter* 3987 (B., B.H.); Lydenburg district: bei der Stadt, Lydenburg, *Wilms* 365 (K., B.M., P., G., Z., B.).

Var. *β. angustifolia* Harv. Leaflets very narrow, lanceolate, complicate, mucro recurved, slightly hirsute below.

CAPE.—Swellendam district: in collibus graminosis ad Buffelsjagts River, Swellendam, *Zeyher* (S.A.M.); Mossel Bay district: Vrigers Berg, *Muir* 2046 (P.); Uniondale district: rocky hill N. of Joubertina, *Fourcade* 2935 (K.); Humansdorp district: Loerie Plantation, Humansdorp, *Dix* 119 (B.H.); Uitenhage district: in montibus ad Elandsriver, Uitenhage, *Zeyher* (S.A.M.); *Bolus* (B.H.); *Burchell* (K.); ad flumen Zwartkopsrivier, *Zeyher* (S.A.M.); in arenosis ad Zwartkopsrivier, *Zeyher* 2397 (S.A.M.) Albany district: Redhouse, *Paterson* 296 (A.M.); Grahamstown, *Rogers* 27426 (A.M.), and *Rogers* 27326 (K., P.); Penrich Farm, Botha's Ridge, *Dyer* 1165 (A.M., P.); Assegai Bosch, *Breyer* (T.M.); Graaff Reinet district: Cave Mt. near Graaff Reinet, *Bolus* 11822 (B.H.); Cradock district: in lapidosis aridis prope Mortimer in Ditione Cradock, *Kensit* (B.H.); Cathcart district: *Drège* (K.); Pondoland: Port St. Johns, *Flanagan* (P.).

NATAL.—No definite locality, *Cooper* 2221 and 2222 (K.).

Var. *γ. longipetiolata* H. M. Forbes var. nov.

A typo petiolis longioribus differt.

Leaves 1-3-jugate, 3-10 cm. long, petiole before first pair of leaflets 2.5-9 cm. long; leaflets 1.9-3.5 cm. long, 4-7 cm. broad.

CAPE.—Grahamstown district: Trapps Valley, *Anstey* 4 (A.M.); Bothas Hill, *MacOwan* (B.H.); East London district: East London, *Breyer* (T.M.); Kentani district: prostrate among grasses, Coast, *Pegler* 1295 (T.M., P.).

T. ternatifolia R. G. N. Young in Ann. Tvl. Mus. 14.4.406 (1932). I have examined all the material of this species cited by Young and can find no legitimate reason for separating it from *T. capensis*. The distinguishing character used by Young in his key is "terminal leaflets equalling the petiole," but this feature is not constant, as in speci-

mens written up and cited by Young, the terminal leaflets not only equalled the petioles, but exceeded them or were much shorter. These differences in length quite frequently occurred on the same specimen. The interrupted inflorescence and dark venation on the lower sides of the leaflets are both characteristic of *T. capensis*, therefore, in my opinion, the specimens cited by Young as *T. ternatifolia* should be transferred back to *T. capensis*.

The very large amount of material included in this species shows a great range of variety in general habit, and, in particular, in the length and breadth of the leaflets, and in the almost complete absence of pubescence to types which are distinctly hairy. These variations frequently so merge into each other that it is puzzling to decide definitely to which variety a specimen may belong, so that the varieties tend to become rather artificial. In a few instances, specimens, generally collected only once, do appear to differ, but until such time as more complete material has been collected from the same localities, it is, I think, advisable to retain them in this group.

To the Zulus this plant is "isiKhwali" and they use the root to make an emetic for biliousness. The Suto name is "pelo-di-maroba" and the Suto use the cooked root with a decoction of *Commelina africana* for nervousness and weak heart.

48. ***T. pseudocapitata*** H. M. Forbes sp. nov., affinis *T. macropodae* Harv., sed caulibus brevioribus, stipulis subulatis, dentibus calycis tubo brevioribus differt.

Caules ascendentes vel decumbentes, e basi ramosi, parce fulvo-pilosi. *Folia* 2-4-jugata, 2.5-8 cm. longa; foliola obovato-cuneata, 2.5-5.5 cm. longa, 0.8-2 cm. lata, mucronata, supra glabra, subtus leviter pilosa; stipulae subulatae, usque ad 1.5 cm. longae; pedunculi usque ad 14 cm. longi. *Flores* 1.5 cm. longi; bractea lineari-subulatae; dentes calycis triangulari-subulati, tubo breviores; ovarium pubescens; stylus pilosus.

Type specimen, *Wylie* (N.H. 21787), in Natal Herbarium, Durban.

Stems ascending or decumbent, branching from the base, thinly tawny pilose. *Leaves* 2-4-jugate, 2.5-8 cm. long; leaflets obovate-cuneate, mucronate, glabrous above, thinly pilose below, 2.5-5 cm. long, 0.8-2 cm. broad. *Stipules* subulate, up to 1.5 cm. long. *Peduncles* terminal, up to 14 cm. long, flowers few in a short dense raceme, almost capitate. *Flovers* purple, 1.5 cm. long; bracts linear-subulate. *Calyx*-lobes triangular-subulate, shorter than the tube. *Ovary* pubescent. *Style* bearded.

NATAL.—Krantzkop district: Greytown, *Wylie* [N.H. 21787] (N.); *Wylie* [N.H. 2799] (N., P.).

49. ***T. natalensis*** H. M. Forbes sp. nov., affinis *T. pseudocapitatae* H. M. Forbes, sed inflorescentiis laxe racemosis, dentibus calycis tubo longioribus differt.

Caules ascendentes vel decumbentes, e basi ramosi, fulvo-pilosi. *Folia* 3-5-jugata, 6.5-12 cm. longa; foliola cuneata vel obovato-cuneata, 2.4-5 cm. longa, 0.7-2 cm. lata, apice truncata vel emarginata, supra glabra, subtus leviter pilosa; stipulae subulatae, acuminatae, 1-2 cm. longae, 3-5 nervatae; pedunculi 6.5-19.5 cm. longi. *Flores* 1.3-2 cm. longi; bractea lineari-subulatae, 7-8 mm. longae; calyx dense fulvo-pilosus, dentibus lineari-lanceolatis tubo excedentibus; ovarium fulvo-pubescens; stylus pilosus.

Type specimen, *Wood* 8341, in Natal Herbarium, Durban.

Stems ascending or procumbent, branching from the base, fulvous pilose. *Leaves* 3-5-jugate, 6.5-12 cm. long; leaflets cuneate or obovate-cuneate, truncate or emarginate, mucronulate, glabrous above, thinly pilose below, 2.4-5 cm. long, 0.7-2.2 cm. broad. *Stipules* subulate, acuminate, 1-2 cm. long, 3-5 nerved. *Peduncles* terminal, 6.5-19.5 cm.

long, flowers in a lax raceme, in fascicles of 2-4. *Flowers* 1.35-1.9 cm. long; pedicels 0.6-1 cm. long; bracts linear-subulate, 7-8 mm. long. *Calyx* densely fulvo-pilose, teeth longer than the tube, linear-lanceolate. *Ovary* fulvo-pubescent. *Style* bearded.

NATAL.—Maritzburg district: Hawthorns Hill, Maritzburg, *Allsopp* 465 (N.); near Maritzburg, *Bell* (N.); Howick, *Wood* 8431 (K., N.); Harding district: Harding, *Oliver* 98 (N.).

50. *T. apiculata* H. M. Forbes sp. nov., affinis *T. natalensi* H. M. Forbes, sed foliis distincte apiculatis, dentibus calycis tubo subaequilongis differt.

Caules decumbentes vel ascendentes, e basi ramosi, parce pubescentes. *Folia* 2-5-jugata, 1.5-4.5 cm. longa; foliola elliptico-cuneata, apiculata, 2-4 cm. longa, 0.5-1.2 cm. lata, supra glabra, subtus leviter pilosa; stipulae lineari-subulatae, acuminatae, 1-1.5 cm. longae; pedunculi terminales axillaresque, usque ad 16 cm. longi; bractae lineares, 7-8 mm. longae. *Flores* 1.3-1.5 cm. longi; calyx dense pubescens, lobi tubo subaequilongi uno longiore; ovarium dense pubescens; stylus pilosus. *Fructus* non visus.

Type specimen, *Acocks* 11749, in Natal Herbarium, Durban.

Stems decumbent or ascending, several arising from a woody root-stock, thinly pubescent. *Leaves* 2-5-jugate, 1.5-4.5 cm. long, shortly petioled; leaflets elliptic-oblong, apiculate, thinly pilose below, glabrous above, 2-4 cm. long, 0.5-1.2 cm. broad. *Stipules* linear-subulate, acuminate, 1-1.5 cm. long. *Peduncles* terminal and axillary, up to 16 cm. long, few-flowered at apex or flowers in an interrupted raceme, 2-4 together; bracts linear, 7-8 mm. long. *Flowers* 1.3-1.5 cm. long; vexillum densely tawny-velvety without. *Calyx* densely pubescent, four lobes subequal to tube in length, lowest longer, lobes lanceolate. Vexillary stamen free; ovary densely pubescent. *Style* bearded. *Legumes* not seen.

NATAL.—Utrecht district: Kaffir Drift, *Thode* A 224 and A 268 (N., P.); Paulpietersburg district: between Paulpietersburg and Sunkelsdrift, *Acocks* 11749 (N.); Paulpietersburg, *Galpin* 9707 and 10908 (K., P.).

TRANSVAAL.—Piet Retief district: Piet Retief, *Jenkins* (T.M.); Ermelo district: Spitzkop, Ermelo, *Pott* (T.M., B.H.).

KEY TO SECTION 4.

Stems erect.....	A.	
Stems ascending, decumbent or trailing.....	B.	
A. Peduncles terminal.....	C.	
Peduncles terminal, axillary or leaf-opposed.....	D.	
C. Peduncles 2-7 cm. long, densely flowered.....		51. <i>zombensis</i> .
Peduncles up to 5 cm. long, few (2-4) flowered.....		52. <i>Bachmannii</i> .
D. Peduncles terminal and leaf-opposed.....	E.	
Peduncles terminal and axillary.....	F.	
E. Peduncles racemosely few-flowered towards apex.....		53. <i>Wyliei</i> .
Peduncles not racemosely flowered.....	G.	
G. Flowers fasciculato-corymbose at apex.....		54. <i>grandiflora</i> .
Flowers 2-3 together in interrupted spicate glomerules.....		55. <i>glomeruliflora</i> .
F. Peduncles up to 2 cm. long; calyx lobes much longer than tube..		56. <i>subulata</i> .
Peduncles exceeding 2 cm.; calyx lobes subequal to tube.....		57. <i>shilwanensis</i> .
B. Stems ascending or decumbent.....	H.	
Stems trailing or diffuse.....	I.	
H. Stems, etc., densely albo-pilose.....		58. <i>albissima</i> .
Stems, etc., not albo-pilose.....	J.	
J. Stipules cordate; leaves 5-6-jugate.....		59. <i>cordata</i> .
Stipules ovate; leaves 1-4-jugate.....	K.	
K. Stems erect or ascending; calyx teeth longer than tube.....		60. <i>spathacea</i> .
Stems decumbent or ascending; calyx teeth subequal to tube L.	L.	

- | | |
|--|--|
| L. Stems bearing several leaves and peduncles ; leaves long petioled
Stems bearing one leaf and 1-2 peduncles ; leaf shortly petioled . . | 61. <i>Galpinii</i> .
62. <i>unifolia</i> . |
| I. Flowers subtended by minute lanceolate bracts ; leaves 5-7-jugate
Flowers subtended by ovate bracts ; leaves not more than
4-jugate | 63. <i>radicans</i> .
M. |
| M. Leaves shortly petioled
Leaves long petioled | 64. <i>zuluensis</i> .
N. |
| N. Stems more or less robust ; stipules broadly ovate, up to 1.2 cm.
long
Stems subfiliform ; stipules ovate, up to 6 mm. long | 65. <i>macropoda</i> .
O. |
| O. Leaves 1-2-jugate ; stamens monadelphous
Leaves 3-4-jugate ; stamens diadelphous | 66. <i>aemula</i> .
67. <i>diffusa</i> . |

51. **T. zombensis** Baker in Kew Bull. 257 (1897) ; Baker f. Leg. Trop. Afr. 1.213 (1926) ; Burt Davy Fl. Tvaal. 1.2.377 (1932).

Type specimen, *Whyte*, in Herbarium, Kew.

A shrub, branches woody, densely clothed with white or tawny hairs. *Leaves* shortly petiolate, 5-15-jugate, 3.5-18.5 cm. long ; leaflets oblong, obtuse, mucronate, green and glabrous above, sericeous below, 1.5-4.5 cm. long, 0.6-1.5 cm. broad. *Stipules* ovate, acuminate, densely pilose on back, 2-3 mm. broad, 0.5-1 cm. long. *Peduncles* terminal, 2-7 cm. long, racemes densely flowered, subglobose. *Flowers* up to 1.8 cm. long, pedicellate ; pedicels 6-7 mm. long ; bracts lanceolate, pubescent. *Calyx* densely pilose, tube 4 mm. long, 1 cm. in diam., lobes acuminate, 0.7-1 cm. long, much longer than the tube. *Vexillum* orbicular, sericeous on the back, 1.4 cm. long, 1.5 cm. broad. *Ovary* linear, pilose, 9 mm. long. *Style* thinly bearded along inner surface. *Legumes* about 3 cm. long, 6 mm. broad, densely velvety.

CAPE.—Piquetberg district : open mountain side, De Hoek, *Taylor* 646 (P.).

TRANSVAAL.—Pietersburg district : Magoebas Kloof, Houtboschberg, *Burt Davy* 2600 (P.) ; upper slopes of Magoebas Kloof, *Obermeyer* (T.M., N.) ; New Agatha, *Rogers* 18886 (K., Z., B.H., T.M.) ; De Hoek, *Taylor* 646 (P.).

The type specimen was collected by *Whyte* at Mt. Zomba, Nyasaland in 1896. It has also been collected in Nyasaland by Buchanan and in Southern Rhodesia by Eyles.

In general appearance *T. zombensis* Bak. is similar to *T. Vogelii* Hk. f., but there are points of difference, particularly in the long acuminate calyx lobes of the former species. *T. zombensis* is reputed to have toxic properties similar to those of *T. Vogelii*.

52. **T. Bachmannii** Harms in Engl. Bot. Jahrb. 26.286 (1899).

Type specimen, *Bachmann* 616, in Botanisches Museum, Berlin-Dahlem.

A shrub, branching freely, branches ascending, appressedly puberulous when young, becoming quite glabrous. *Leaves* 3-6-jugate, shortly petiolate, 1-4 cm. long ; leaflets linear-oblancoate, narrowed towards the base, apex obtuse or acute, mucronulate, glabrous above, pubescent below, 1.8-4.5 cm. long, 2.5-5.5 mm. broad. *Stipules* ovate, acute, pubescent or subglabrous, 5-nerved, 4-6 mm. long, 2-3 mm. broad. *Peduncles* up to 5 cm. long, terminal, few-flowered (2-4 flowers) ; bracts ovate, sericeous, up to 5 mm. long. *Flowers* about 2 cm. long ; pedicels 4-7 mm. long, sericeous. *Calyx* densely fulvous silky, lobes not longer than the tube, upper lobe lanceolate-ovate, acute ; lateral lobes a little shorter, deltoid-ovate, acute, lower broadly 2-dentate. *Vexillum* about 2 cm. long and broad, densely fulvous silky without. *Ovary* with long fulvous hairs along the sutures. *Style* bearded. *Legumes* 2-7 cm. long, 0.8 cm. broad, fulvous along the margins.

CAPE.—Pondoland : no definite locality, *Bachmann* 616 (B.).

NATAL.—Port Shepstone district: near Murchison, *Wood* 3021 (N.); *Wood* 3101 (K., N.); Margate, *Rump* (N.); Oribi Flats, *Rump* (N.).

A shrub with large showy mauvy-pink flowers. It is readily distinguished from the other large flowered species by the tawny hairs on the petioles, peduncles, calyx and vexillum which are a striking contrast to the canescent pubescence of the bracts subtending the flowers and the undersurface of the leaves.

53. **T. Wyliei** H. M. Forbes sp. nov., affinis *T. grandiflorae* (Ait.) Pers., sed foliolis floribus bracteisque multo minoribus differt.

Suffrutex. *Caules* erecti, glabrescentes vel parce pubescentes. *Folia* 4-7-jugata, 4-7.5 cm. longa; foliola cuneata, apice retusa vel emarginata, 1-2.2 cm. longa, 0.5-1 cm. lata, mucronata, supra glabra, subtus parce appresse pubescentia; stipulae ovato-cordatae, acuminatae, 5-6 mm. longae; pedunculi usque ad 22 cm. longi; bractee ovatae, 3-5 mm. longae, mox caducae. *Flores* 1.3-1.5 cm. longi; calyx leviter pubescens, dentibus lanceolatis tubo subaequilongis; stylus pilosus. *Fructus* linearis, 3.5-4 cm. longis, 0.7 cm. latus, glaber.

Type specimen, *Wylie* (Wood 5219), in Natal Herbarium, Durban.

Suffrutex. *Stems* erect, branching, glabrescent, or very slightly pubescent, dark reddish-brown. *Leaves* 4-7-jugate, 4-7.5 cm. long; petiole 1.5-3.5 cm. long before first pair of leaflets; leaflets cuneate, apex retuse or emarginate, mucronate, glabrous above, shortly appressedly pubescent below, 1-2.2 cm. long, 0.5-1 cm. broad. *Stipules* ovate-cordate, acuminate, 5-6 mm. long. *Peduncles* terminal and leaf-opposed, 6-22 cm. long, few-flowered towards apex. *Flowers* purple, 1.3-1.5 cm. long. *Bracts* ovate, 3-5 mm. long, soon caducous. *Calyx* sparsely pubescent, lobes lanceolate, subequal to tube. *Style* bearded. *Legumes* linear, 3.5-4 cm. long, 0.7 cm. broad, glabrous.

NATAL.—Elandskop district: Sevenfontein near Boston, *Wylie* [Wood 5219] (N.); *Wylie* [Wood 9928] (N., Z., P., B.H.); Maritzburg district: Zwartkop, *Wood* 10235 (N., P.); *Wood* 11142 (N.).

This plant has been named in honour of Mr. J. Wylie who, for many years, worked with the late Dr. Medley Wood. On his many trips throughout Natal and Zululand he collected extensively, many of his specimens being new to science.

54. **T. grandiflora** (Ait.) Pers. Syn. 2.329 (1807); DC. Prodr. 2.251 (1825); Spreng. Syst. Veg. 3.232 (1826); Ecklon and Zeyher Enum. Pl. Afr. Aust. Extratrop. 246 (1835); E. Mey. Comm. Drège Pl. Afr. Aust. 1.1.110 (1836); Cape Plants, Krauss and Engler, 54 (1846); Harvey in Harv. and Sond. Fl. Cap. 2.209 (1861-62); O. Kuntze Rev. Gen. Pl. 1.175 (1891); Bolus and Wolley Dod in Trans. S.A. Phil. Soc. 14.3.257 (1903); Zahlbr. Ann. K. K. Naturhist. Hofmus. 20.3 (1905); Wood Fl. of Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Burtt Davy and Pott in Ann. Tvl. Mus. 3.3.146 (1912); Die Veg. der Erde 9.3.590 (1915); Bot. Survey S.A. Mem. 1.64 (1919); Bews Fl. Natal and Zululand 111 (1921); Watt and Breyer-Brandwyk Med. and Pois. Pl. S.A. 74 (1932).

Syn. *Galega grandiflora* Ait. Hort. Kew 3.70 (1789); Vahl. Symb. 2.84 (1791); Thunb. Prodr. 134 (1800); Willd. Sp. Pl. 3. ii. 1244 (1803); Linn. Syst. Nat. 6.1215 (1806); Ait. Hort. Kew ed. 2.4.356 (1812); Thunb. Fl. Cap. ed. Schultes 601 (1823); Bot. Reg. 9 t. 769 (1824); Juel, in Plantae Thunberg 221 (1918); *Apodynomene grandiflora* E. Mey. Comm. Pl. Afr. Aust. 111 (1835-36); Hook. Lond. Journ. Bot. 2.88 (1843); Krauss Fl. des Cap und Natallandes 54 (1846); *Galega rosea* Lam. Encycl. 2. 599 (1786) sec. Persoon Syn. 2.329 (1807).

Type specimen, *Aiton Cult. Hort. Kew* is non extant. Aiton (1789) cites *Galega grandiflora* as being figured in L'Heritier Stirp. nov. t. 44, but according to Britten and Woodward Journ. Bot. 43.270 (1905), this plate was never published. Aiton (1812) withdraws this reference in the second edition of his "Hortus Kewensis."

Fruticose, erect. *Stems* subglabrous to densely pubescent. *Leaves* up to 7.5 cm. long, shortly petiolate, 4-8-jugate; leaflets variable in length and breadth, cuneate-oblong, obovate or sometimes almost lanceolate, obtuse or acute, retuse or mucronulate, glabrous or pubescent above, canescent below, 1-3.8 cm. long, 0.4-1.8 cm. broad. *Stipules* broadly ovate, 0.5-1.3 cm. long. *Peduncles* terminal and opposite leaves, 3-12 cm. long, fasciculato-corymbose at apex; young flowers enclosed by broad ovate deciduous bracts up to 1.8 cm. long and 1 cm. broad at base. *Flowers* up to 2 cm. long, pedicellate; pedicels 0.5-1.3 cm. long. *Vexillum* densely fulvescent without. *Calyx* thinly to densely pubescent, tube up to 3 mm. long, lobes subulate, unequal, two upper slightly shorter than tube, lateral and lowest 2.5-3.5 mm. long, lowest longest. *Ovary* 1.4-1.6 cm. long, hairy along sutures. *Style* bearded. *Legumes* 4-7.5 cm. long, 0.9-1 cm. broad, linear, compressed, glabrous, thinly hairy along sutures.

CAPE.—Humansdorp district: Clarkson, *Penther* 2473 (V., B.); *Thode* A 812 (K., N., P.); Kabeljous river, *Penther* 2469 (B.); Humansdorp, *Rosenbrock* 456 (B.); *West* 92 (K.); about 7 m. N. of Humansdorp, *Schonland* 8044 (A.M.); between Gamtoos River and Humansdorp, *West* 207 (B.H.); Uitenhage district: Diep Valley, *Zitzikamma*, *Fourcade* 780 (A.M.); *Zitzikamma*, *Krauss* 29 (V.); ad sylv. marginis in *Zitzikamma*, *Murray* 39 (Z., B.); among shrubs in district of Uitenhage, *Ecklon* and *Zeyher* (B.); Hofman's Bosch near St. Albans, *Britten* 1053 (A.M., Pa.); on banks of the Krom River, *Bowie* 1 (K., B.M.); Krom River, *Zeyher* (A.M.); *Thunberg* (U., B.M.); *Pappe* (K.); Albany district: in humidis vallibus pr. Grahamstown, *Read* (K.); hill above Grahamstown, *Prior* (K.); Featherstown Kloof, *Rennie* 179 (S.A.C.); Grahamstown, *Rogers* 1579 (K.); *Rogers* 336 (B.M.); *Schonland* (Z., B.); *Schlechter* 2617 (B., A.M.); *Williamson* 20 (B.M.); *Daly* and *Sole* 131 a (P.); and *Daly* and *Sole* 1013 (A.M.); *Gower* 4 (Pa.); *Alexander* 112 (K.); *Bolus* (T.M.); *Haagner* 235 (Z., B.); ad ripas fluviorum pr. Grahamstown, *MacOwan* 1929 (A.M.); *MacOwan* 206 (B.M., Z., N.); edge of forest, Howison's Poort, *Zeyher* (S.A.M.); dry rocky hills at Grahamstown, *Bunbury* 41 (B.M.); Signal Hill, *Bolus* 1930 (B.H.); in collibus inter Grahamstown and Coldstream, *Bolus* 10634 (B.H.); inter Grahamstown and Assegai Bosch, *Zeyher* (K., S.A.M.); on stony hills between Grahamstown and Assegai Bosch, *Zeyher* 191 (V., O.); Flats, Oudebosch, *Fourcade* 866 (K., Z., A.M.); Trapps Valley, *Daly* 631 (A.M., P.); Garrow, *Burt Davy* 11597 (P.); Albany, *Harvey* 191 (K., B.M.); Victoria district, near Alice, *Cooper* 374 (K., B.M., Z., V., P.); Kingwilliamstown district: *Drège* (K.); Hoffmanskloof and Driefontein, *Drège* (S.A.M.); Stockenstroom district: Elands River above Waterfall, Stockenstroom, *Scully* 216 (P.); Stutterheim district: Amabele, *Moss* 20491 (W.); Fort Cunynghame, *Schonland* 80 (A.M.); pr. Fort Cunynghame, *Bolus* 21777 (B.H.); Bathurst district: Port Alfred, *Rogers* 28073 (Z.); East London district: East London, *Breyer* (T.M.); *Galpin* 3299 (A.M., P.); *Rogers* 17015 (Z., W.); *Thode* (S.); *Outley* 2529 (B.M., W.); Nahoon River Valley, *Smith* 3750 (K., P.); Blood River Valley, Southernwood, *Smith* 3666 (P.); Kei Road, *Schlechter* 6134 (B., A.M.); along road to Buffalo Bridge, *Colmer* (G.U.C.); Komgha district: among shrubs near Komgha, *Flanagan* 632 (Z., S.A.M., B.H., A.M.); Komgha, *Krook* [Penther 2540 and 2545] (V., B.); Kentani district: *Pegler* 458 (K., B.M., P., S.A.M., A.M.); Qutosa, Kentani, *Edwards* [Moss 17581] (W.); Kaffraria, *Cooper* 82 (K., B.M., Z., G., V., N., P., B.H.); Pondoland district: Port St. Johns, *Schonland* 4046 (A.M.); *Moss* 2723 (W.); *Bachmann* 618 (B.); Libode, *Schonland* 3895 (A.M.); apud litus ad ostia fl. Umkwani, *Tyson* 2624 (K., B.M., Z., S.A.M.); Pondoland, *Bachmann* 609 and 610 (B.); *Bachmann* 611 (B.M., B.); *Bachmann* 612 (Z., B.); an moorig Rand v. Sandsteinbachen, *Beyrich* 252 (B.); inter Omsamwubo and Omsamcabo Rivers, *Drège* (K.); Umtata district: Colossa-Umtata, *Krook* [Penther 1612] (V., B.); East Griqualand, Mt. Ayliffe district: In montibus pr. Mt. Ayliffe, *Tyson* 2752 (P., S.A.M., S.).

NATAL.—Port Shepstone district: Margate, *Beardmore* [Moss 15139] (W.); near Murchison, *Wood* 3022 (K., N.); Marburg, *Rogers* 544 (B.M.); Ixopo district: open ground, Umgoye, near Dumisa, *Wood* 3865 (B.M., Z.); Umzinto district: Ifafa, *Rudatis* 42 (B.); Durban district: coastland, *Sutherland* (K.); Pinetown district: Northdene, wood near Krantzklouf, *Rogers* 24460 (T.M.); Camperdown district: near, river Umlaas, *Evans* 345 (N.); Impendhle district: Boston, *Wylie* [Wood 9928] (B.M.); Inanda district: Inanda, *Rehmann* 8420 (Z.); edge of wood, Inanda, *Wood* 5589 (B.); Inanda, *Wood* 289 (B.M., N., K., S.A.M., B.H.); Zululand, Eshowe district: margins of forest, Eshowe, *Galpin* 12159 (K., V., P.); Eshowe, *Rogers* 24460 (Z., A.M., W.); *Forbes* [N.H. 20538] (N.); *Forbes* 708 (N.); plantations, Port Durnford, *Kotze* 22 (P.); Nkandhla district: Melmoth, *Mogg* 4574 (P.); Babanango, *King* 450 (N.); Ngoye, *Wylie* [Wood 10363] (Pa.); no definite locality, *Gerrard* and *McKen* 302 (K., B.M., Pa., V.); *Gerrard* 1087 (K.); *Gerrard* 1752 (K., B.M., Pa.).

NO DEFINITE LOCALITY.—*Ecklon* and *Zeyher* 1629 (O., Pa., G., V., B.); *Zeyher* 2395 (P.); *Barber* (A.M.); *Drège* [Herb. E. Meyer 5468] (B.); *Drège* [Herb. E. Meyer 5469] (B.); *Drège* 415 and 416 (V.); *Drège* (O.); *Drège* 2395 (V.); *Ecklon* and *Zeyher* 810 (Z.); *Krebs* 110 (G.); *Krebs* s.n. (B.); *Rohde* (V.); Talbot (K.); *Verreaux* (G.); *Burchell* 3867 (K.); *Cooper* 2224 (K.); *Corvailla* (V.); *Hennegart* (P.); *Mund* and *Maire* (B.); *Masson* (B.M.).

A decoction of the root of this plant, known to the Zulus as "iHlozane" is used as a parasiticide.

55. **T. glomeruliflora** Meisn. in Hook. Lond. Journ. Bot. 2.86 (1843); Cape Plants, Krauss and Engler 54 (1846); Harvey in Harv. and Sond. Fl. Cap. 2.209 (1861–62); Wood Fl. Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Bews Fl. Natal and Zululand 111 (1921).

Type specimen, *Gueinzium*, in Herbarium, Kew.

Suffruticose, erect, whole plant more or less greyish pubescent. *Stems* branching, terete. *Leaves*—3–12-jugate, 3–10·5 cm. long, petiolate; leaflets 1·5–4 cm. long, 0·5–1·2 cm. broad, narrow oblong, obtuse or subacute, mucronate, thinly pilose or glabrous above, more or less densely canescent below; petiolules about 2 mm. long. *Stipules* lanceolate or ovate-lanceolate, striate, 0·5–1 cm. long. *Peduncles* terminal and leaf-opposed, 11–20 cm. long. *Flowers* 1·8–2·2 cm. long 2–3 together in interrupted spicate glomerules. *Bracts* ovate, acuminate, 0·9–3·5 cm. long, deciduous. *Pedicels* up to 1·2 cm. long, short at first but lengthening as the flower develops. *Calyx*-tube 0·9–1·5 cm. in diam., lobes 3–5 long and two upper connate and slightly shorter. *Vexillum* sericeous without, 1·8–2 cm. mm. long, and broad. *Ovary* 1·4–1·8 cm. long, densely hairy along sutures. *Style* 0·6–1 cm. long, bearded. *Legumes* hairy along sutures, compressed, 5–6 cm. long, 8–9 mm. broad.

CAPE.—Pondoland: hillside, Signal Hill, Port St. Johns, *Galpin* 9537 (K., P.); forests, Port St. Johns, *Moss* 2740 (W.); amongst rocks in sea sand, Port St. Johns, *Howlett* 52 (P.).

NATAL.—Port Shepstone district: sandy grassy places near beach, Uvonga, *Thode* (B., S.); Umzinto district: Park Rynie, *Wood* 12367 (N., P., T.M.); Friedenau, Umgaiflat, *Rudatis* 280 (B., P.); Durban district: Port Natal, *Gueinzium* (K.); Berea, Durban, *Wood* 4843 (B.M., G., N., P., B.H.); cult. in Botanic Gardens, Durban, *Wood* 12564 (K., N.); Sydenham, *Wood* 11927 (A.M.); Rooikop near Sydenham, *Forbes* 543 (N., T.M.); Springfield, *Wood* 13062 (N., T.M.); Pinetown district: inter Pinetown and Umbilo, *Rehmann* 8044 (K.); Greytown district: near Greytown, *Wood* 5984 (V., B., B.H., N.); Impendhle district: Boston, *Wood* 11400 (N.); Tugela district: Chaka's Kraal, *Thode* (B.); Zululand, Mtunzini district: Mtunzini, *Wood* 11360 (N., P.); *Mogg* 4348 (A.M., P., B.H.); Eshowe district: Port Durnford Plantations, *Kotze* 22 (P.); Ngoye, *Wylie* [Wood 10345]

(N., P.); Wood 10363 (P.); Wylie [Wood 8482] (B.); Wylie [Wood 5654] (G., P.); open ground, Wood 722 (B.M., B.); Wood 3865 (K., S.A.M., B.M.); Umfolosi district: St. Lucia Bay, Pole-Evans 3647 (P.).

NO DEFINITE LOCALITY.—*Gueinzius* 306 (V.).

56. ***T. subulata*** Hutch. and Burttt Davy in Fl. Tvaal. 1.2. p. XXI and p. 377 (1932).

Type specimen, *Galpin* 843, in Herbarium, Kew.

Suffruticose, stems erect or ascending. *Leaves* pinnate, 4–8-jugate, 5–10 cm. long; leaflets 1–4.3 cm. long, 0.5–1.5 cm. broad, oblong, retuse, mucronulate. *Stipules* broad, more or less ovate, striate, sparsely ciliate and pilose without. *Peduncles* terminal and axillary, up to 2 cm. long, few flowered. *Flowers* 1.5–2 cm. long; bracts acute, 5–7 mm. long, striate, subglabrous, caducous; pedicels 6 mm. long. *Calyx*-tube 2.5–3 mm. long, 8 mm. in diam., lobes linear-subulate, 4–7 mm. long, much longer than the tube, subglabrous. *Vexillum* 1.5–1.7 cm. long, 1.1–1.8 cm. broad, pubescent without. *Ovary* 1.1–1.5 cm. long, thinly hairy along the sutures. *Style* 5 mm. long, bearded along the inner side. *Immature pods* 4.5 cm. long, 0.6 cm. broad, glabrous.

CAPE.—East Griqualand: in graminosis ad rivulos “Clydesdale” ad flumen Umzimkulu, *Tyson* 1434 (K., A., G., V., B., P., S.A.M., S.); apud rivulos circa Clydesdale, *Tyson* 2047 (K., Z., P.).

NATAL.—Umzinto district: Friedenau, Umgai Flat, *Rudatis* 308 (B.); Pinetown district: Trappisten Kolonie, Mariannahill, *Landauer* 236 (B.); Greytown district: grassy places near streams, De Rust, Greytown, *Thode* (B.).

TRANSVAAL.—Barberton district: Highland Creek, Barberton, *Galpin* 843 (K., N., P., S.A.M.); Moodies Hill near stream, *Thorncroft* (K., T.M.); Roses Creek, *Thorncroft* 36 (T.M.).

57. ***T. shiluwansensis*** Schinz in Vierteljahrsschr. Nat. Ges. Zurich 52.425 (1907); Burttt Davy Fl. Tvaal. 1.2.379 (1932).

Syn. *Tephrosia spathacea* Hutch. and Burttt Davy in Fl. Tvaal. 1.2. pp. XXXI and 377 (1932) in part.

Tephrosia Meisneri Hutch. and Burttt Davy l.c.

Type specimen, *Junod* 2355, in Botanisches Museum, Zurich.

Suffruticose, erect, sparsely branched, branches grey-pilose when young, at length glabrous. *Leaves* 3–6-jugate, petiolate, 5.5–13 cm. long; leaflets oblong-obovate or cuneate, truncate or emarginate, mucronate, glabrous above, thinly appressedly grey-pilose below, 1–4.5 cm. long, 0.4–1.3 cm. broad. *Stipules* ovate-acuminate, pilose, densely ciliate along the margins, 0.5–1 cm. long. *Peduncles* axillary and terminal, racemously few-flowered at apex, 8–11 cm. long, terminal peduncle occasionally up to 20 cm. long; pedicels 2–9 mm. long; flowers subtended by broad ovate bracts, soon caducous. *Flower* 1.5 cm. long. *Calyx* long pilose, tube 3 mm. long, 8 mm. in diam., lobes unequal, 2.5–3.5 mm. long. *Vexillum* densely clothed with adpressed silky golden-brown hairs without, about 1.5 cm. long and 1.4 cm. broad. *Ovary* 1.1 cm. long. *Style* 5 mm. long, bearded along inner side. *Legume* 4 cm. long, 7 mm. broad, glabrous.

TRANSVAAL.—Zoutpansberg district: bas pays, Shiluwane, *Junod* 2355 (Z., G.); *Junod* 1106 (K., Z.) [cited as *T. spathacea* in Fl. Tvaal.]; *Junod* 117 (Z., G.); in cliv. mont. Houtboschberg, *Schlechter* 4417 (B.); Houtbosch, *Rehmann* 6228 (K.); and 6229 (K., Z.); Lydenburg district: hillsides, Sabie Valley, *Galpin* 13598 (B.M., P.); Governments Spruit, north of town, Lydenburg, *Wilms* 341 (K.), [type of *T. spathacea* Hutch. and B. Davy] Spitzkop Goldmine, *Wilms* 341 bis (Pa., G.); Louis Trichardt, *Young*, in Herb. Moss 17248 (W.); Ermelo district: rock crevices, Blaaupan A. *Moss* 16326 (W.).

58. **T. albissima** H. M. Forbes sp. nov., affinis *T. macropodae* Harv., sed caulibus multo brevioribus, omnibus partibus dense longeque albido-pilosis, lobis calycis tubo longioribus differt.

Caules simplices, ascendentes vel decumbentes, e basi ramosi, pilis longis albidis pilosi. *Folia* 1-6-jugata, 2.5-11 cm. longa; foliola obovato-cuneata, retusa, mucronata, 2.5-5.5 cm. longa, 0.8-2.2 cm. lata, supra glabra, subtus pilosa; stipulae ovatae, pilosae, 0.7-1.5 cm. longae, 3-5 mm. latae, 5-7 nervatae; pedunculi 7-12 cm. longi; bracteae ovatae, mox caducae. *Flores* 1.8-2 cm. longi; pedicelli 5-8 mm. longi; dentes calycis lineari-lanceolati tubo excedentes; ovarium marginibus pilosis; stylus pilosus.

Type specimen, *Wylie* (N.H. 21590), in Natal Herbarium, Durban.

Stems simple, ascending or decumbent, branching from the base, clothed with long white hairs. *Leaves* 1-6-jugate, 2.5-11 cm. long; leaflets obovate-cuneate, retuse, mucronate, glabrous above, pilose below, 2.5-5.5 cm. long, 0.8-2.2 cm. broad. *Stipules* broad, ovate, 5-7 nerved, pilose, 0.7-1.5 cm. long, 3-5 mm. broad. *Peduncles* terminal, 7-12.5 cm. long, flowers almost capitate in a short dense raceme at the apex. *Flowers* purple, 1.8-2 cm. long; pedicels 5-8 mm. long, pilose, bracts ovate, soon caducous. *Calyx* pilose, lobes longer than tube, linear-lanceolate. *Ovary* with margins densely pilose. *Style* bearded.

NATAL.—Krantzkop district: Greytown, *Wylie* (N.H. 21590) (N., P.).

59. **T. cordata** Hutch and Burt Davy in Fl. Tvaal. 1.2 p. XXXI and p. 377 (1932).

Type specimen, *Burt Davy* 2886, in Herbarium, Kew.

Suffruticose. *Stems* ascending, soon glabrescent. *Leaves* pinnate, 5-6-jugate, 3-13.5 cm. long; leaflets oblong, 1-3.4 cm. long, 0.4-1.7 cm. broad, mucro up to 2 mm. long, glabrous above, thinly appressedly pilose beneath. *Stipules* broadly cordate at base, broadly ovate, very acute, 1-2.5 cm. long, 0.5-1.2 cm. broad. *Peduncles* terminal, few-flowered towards apex, 4-14 cm. long, pedicel 0.5-1 cm. long. *Calyx* pilose, tube 9 mm. in diam., 3 mm. long, lobes lanceolate, all about 2 mm. long. *Vexillum* pilose without, 1.4 cm. broad, 1.6 cm. long. *Ovary* 1.3 cm. long, hairy along the margins. *Style* 8 mm. long, bearded along inner surface. *Legumes* 3.5-5 cm. long, 6-8 mm. broad, glabrous, narrow-oblong, flat.

TRANSVAAL.—Ermelo district: crevices, Blaaupan A. Moss 16326 (W.); Carolina district: Billy's Vlei, *Mitchell* (Pa.); Lydenburg district: Kluft bei Stephen Schumaan l. v. Lydenburg, *Wilms* 344 (B.M., B.); amongst rocks, Suikerbos Kop, Dullstroom, *Galpin* 13134 (K., B.H., P.); Barberton district: Kaapsche Hoop, *Rogers* 21041 (P.); *Rogers* 21111 (K., B.M., Z., P., W.); Duivels Kantoor near Kaapsche Hoop, *Pole-Evans* 1001 (P.); Zoutpansberg district: Louis Trichardt, *Young* in Moss Herb. 17248 (W.).

SWAZILAND.—In kloofs, Mbabane, *Burt Davy* 2886 (K., B.M., P.); *Rogers* 11610 (B.H.); grassy hillsides near Dalriach, Mbabane, *Bolus* 11819 (B.H.).

PORTUGUESE EAST AFRICA.—Mozambique, *Schlechter* s.n. (B.).

60. **T. spathacea** Hutch. and Burt Davy Fl. Tvaal. 1.2. pp. XXXI and 377 (1932).

Suffruticose. *Stems* erect or ascending, thinly pilose when young, glabrous later. *Leaves* 2-4-jugate, 2.5-8 cm. long, petioled; leaflets elliptic- or oblong-cuneate, mucronate, thinly pilose below when young, glabrous on both sides later, 1.5-3 cm. long, 0.6-1.5 cm. broad. *Stipules* ovate-acuminate, up to 1 cm. long, 0.5-0.6 cm. broad. *Peduncles* terminal and leaf-opposed, few flowered towards apex. *Flowers* small, bracts acuminate. *Calyx* teeth scarcely exceeding the tube, subulate acuminate. *Legumes* linear, flat, very sparsely ciliate along sutures, later quite glabrous.

TEMBULAND.—In collibus prope flumen Chwenka, *Bolus* 8877 (P.).

NATAL.—Maritzburg, *Phillips* 3461 (P.); Zululand, Mahlabathini, *Gerstner* 4247 (N.).

SWAZILAND.—Hlatikulu, *Pierce* (P.).

TRANSVAAL.—Middelburg district: Pan, Middelburg, *Burt Davy* 13254 (P.); *Hodgson* (P.); near Witbank Stn., *Gilfillan* (P.); Zoutpansberg district: New Agatha, *McCallum* (P.).

61. **T. Galpinii** H. M. Forbes sp. nov., affinis *T. albissimae* H. M. Forbes, sed caulibus longioribus, foliis nunquam albido-pilosis, lobis calycis tubo aequilongis differt.

Caules ascendentes vel decumbentes. *Folia* 1-4-jugata, 2.5-8 cm. longa; foliola elliptica vel oblongo-cuneata, mucronata, 2-4 cm. longa, 0.5-0.7 cm. lata, supra glabra subtus leviter pubescentia vel glabrescentia; pedunculi 10-22 cm. longi; bracteae ovatae 5-7 mm. longae, mox caducae. *Flores* 1.3-1.5 cm. longi; dentes calycis tubo aequilongi; stylus leviter pilosus. *Fructus* non visus.

Type specimen, *Galpin* 14755, in National Herbarium, Pretoria.

Stems ascending or decumbent, simple or branching a little, glabrescent. *Leaves* petioled, 1-4-jugate, 2.5-8 cm. long; leaflets elliptic- or oblong-cuneate, mucronate, glabrous on both sides or sparsely appressedly pubescent below, 2-4 cm. long, 0.5-1.5 cm. broad. *Stipules* broadly ovate, acuminate, 1 cm. long, 0.5-0.7 cm. broad. *Peduncles* 10-22 cm. long, terminal and axillary, few flowered towards apex. *Bracts* ovate, 5-7 mm. long, soon caducous. *Flowers* purple, 1.3-1.5 cm. long. *Calyx* glabrous or very sparsely pilose, calyx teeth equal in length to tube. *Style* thinly bearded. *Legumes* not seen.

NATAL.—Greytown district: Greytown, *Galpin* 14755 (P., N.); *Galpin* 14727 (P.); *Wylie* (N.).

The late Mr. E. E. Galpin, in whose honour this plant has been named, was well-known in the botanical world. He was an indefatigable collector and a keen botanist, and his contribution to the botanical knowledge of South Africa is invaluable.

62. **T. unifolia** H. M. Forbes sp. nov., affinis *T. Galpinii* H. M. Forbes, sed caule brevior, folio unico, nervis secundis nigrescentibus differt.

Caules decumbentes vel ascendentes, graciles, parce pubescentes. *Folia* 1-3-jugata, 0.5-1.7 cm. longa; foliola elliptico-oblonga, mucronata, supra glabrescentia pallidaque, subtus parce pubescentia, usque ad 7 mm. longa; pedunculi 7-23 cm. longi, pauciflorae; bracteae ovato-acuminatae, 3-4 mm. longae. *Flores* 1.6-1.7 cm. longi; pedicelli 5.5-8 mm. longi; dentes calycis tubo subaequilongi; stylus pilosus. *Fructus* complanatus.

WESTERN ZULULAND.—No definite locality, March 1895, *Baker* [*Evans* 566]. Type in Natal Herbarium.

Stems decumbent or ascending, slender, thinly pubescent. *Leaves* shortly petioled, 1-3-jugate, 0.5-1.7 cm. long; leaflets elliptic-oblong, mucronate, mucro usually recurved, glabrous and light green above, thinly hirsute, secondary veining dark below, 1.7-4.5 cm. long, 0.4-1 cm. broad. *Stipules* ovate-acuminate, up to 7 mm. long. *Peduncles* 7-23 cm. long, laxly few-flowered towards apex. *Bracts* subtending young flowers, ovate, acuminate, 3-4 mm. long, soon caducous; pedicels 5.5-8 mm. long. *Flowers* purple-red, 1.6-1.7 cm. long. *Calyx* pubescent, lobes sub-equal to or very slightly longer than tube. *Vexillum* densely silky without. *Style* bearded. *Legumes* (immature) 3.5 cm. long, 6 mm. broad, flat, appressedly hairy along sutures.

Only one gathering of this plant was seen. Apparently several stems arise from the root-stock, each stem bearing only one leaf and one or two peduncles.

63. **T. radicans** Welw. ex Baker in Oliv. Fl. Trop. Afr. 2.121 (1871); O. Kuntze Rev. Gen. Pl. 1 (1891); Die Veg. der Erde 9.589 (1915); Bak. f. Leg. Trop. Afr. 1.214 (1926).

Syn. *Cracca radicans* (Welw.) O. Kuntze, Hiern in Cat. Afr. Pl. Welw. 122; *Tephrosia radicans* Welw. var. *rhodesica* Bak. f. in Journ. Bot. 37.430 (1899).

Type specimen, *Welwitsch* 2082, in Herbarium, British Museum (Natural History), South Kensington, London.

A wide trailing perennial herb with copiously branched, slender, flexuous, prostrate stems, 6-9 m. long, densely clothed with fine spreading pubescence. *Leaves* petiolate, 5-7- jugate; leaflets obovate-oblong, truncate, mucronate, grey-green and glabrescent above, persistently grey-silky below, midrib tawny, 0.7-2.5 cm. long, 0.4-1.3 cm. broad. *Stipules* ovate, 3-5 mm. long. *Peduncles* usually terminal, laxly 6-15 flowered, 2.5-10 cm. long. *Flowers* 1-1.1 cm. long; pedicels 0.3-1 cm. long; bracts lanceolate, minute. *Calyx* pubescent, tube 5-7 mm. in diam., 2-2.5 mm. broad, lobes lanceolate, cuspidate, two upper approximately 1.5 mm. long, lateral and lowest 2-3 mm. long. *Vexillum* silky on back, 1-1.1 cm. long, 7-8 mm. broad. *Ovary* 4-5 mm. long, densely and finely pubescent. *Style* bearded along inner surface. *Legumes* 2-3 seeded, oblong, 1-2.5 cm. long, 5-7 mm. broad, pubescent.

ANGOLA.—Huilla, in pratis humidis ad formicar monticul de Varzeas de Catumba, *Welwitsch* 2082 (K., B.M., Pa., G., B.); high plateau between Humpata and Lubuyo, *Pearson* 2589 (K., B.).

TRANSVAAL.—Pietersburg district: in plantiebus graminosis prope pagum, Pietersburg, *Botus* 10876 (K., V., B., Z., N., S.A.M., B.H.); Makapansberge, Streydpoort, *Rehmann* 5529 (K.); Marabstad, *Schlechter* 4679 (B., A.M., T.M., Pa., B.H.); Pyramid Estate near Potgietersrust, *Galpin* 8959 (Z., P.); Barberton district: near Research Station, Nelspruit, *Liebenberg* 2581 (P.).

SOUTHERN RHODESIA.—Plumtree, *Eyles* 3295 (S.A.M., B.H.); Bulawayo, *Rogers* 13662 (P., S.A.M., A.M.); *Rand* 52 (B.M., A.M.); Matopos, *Rattray* 407 (B.M.); *Flanagan* 3099 (B.H.); Lydiate Siding, *Eyles* 955 (K., S.A.M.); Odanzi River Valley, *Teague* 471 (K., H.B., S.A.M.); no definite locality, *Hislop* 779 (K.).

NORTHERN RHODESIA.—Makolu, *Young* 6 (B.M.); Kalomo, *Rogers* 820 (K.); *Trapnell*: 1015 (K.); Choma, *Rogers* 8011 (K., A.M., Z.); Mazabuka, *Rogers* 8730 (K., N., T.M.) *Rogers* 25127 (K., Z., T.M.); Mumbuwa, *Macaulay* 391 and 1151 (K.).

In the Journal of Botany 37.430 (1899), Baker fil., describes a variety, var. *rhodesica*, which he says differs from *T. radicans* as follows: "Leaflets generally 7, rather broader than in the type. Legume broader than type." In my opinion I do not think this variety can stand, for the type specimen, *Welwitsch* 2082, has quite a few leaves with seven leaflets, also the breadth of the leaflets and legumes is too variable a character to differentiate between typical *T. radicans* and the variety.

64. **T. zuluensis** H. M. Forbes sp. nov., affinis *T. macropodae* sed petiolis brevioribus differt.

Caules decumbentes vel ascendentes, pubescentes. *Folia* 2-3-jugata, 1 cm. longa, petiolis brevibus; foliola cuneato-oblonga, obtusa, mucronulata, 1.7-3.5 cm. longa, 0.75-1.5 cm. lata, supra glabra, subtus parce pubescentia; stipulae ovato-cordatae, acuminatae, 5-6.5 mm. longae, 3.5-5 mm. latae; pedunculus usque ad 24 cm. longus; bractae ovatae, usque ad 6.5 mm. longae. *Flores* 1.5 cm. longi; pedicelli 5.5 mm. longi, pubescentes; dentes calycis lanceolati, tubo excedentes; stylus pilosus. *Fructus* circiter 4.2 cm. longus, 0.6 mm. latus, marginibus hirsutis.

ZULULAND.—Nkandhla, *J. Wylie* (Wood 8966) in Natal Herbarium, Type.

Stems procumbent or ascending, pubescent. *Leaves* 2-3-jugate, 1 cm. long, petioles very short; leaflets cuneate-oblong, obtuse, mucronate, glabrous above, thinly pubescent and with dark brown secondary veining below, 1.7-3.5 cm. long, 0.75-1.5 cm. broad;

petiolules 1 mm. long, densely pilose. *Stipules* ovate-cordate, acuminate, pilose, 6–8-nerved, 5–6.5 mm. long, 3.5–5 mm. broad. *Peduncles* terminal and axillary, up to 24 cm. long, few-flowered at apex. *Bracts* broadly ovate, pilose, up to 6.5 mm. long, soon caducous; pedicels up to 5.5 mm. long, lengthening as flowers develop, pilose. *Flowers* 1.5 cm. long, purple. *Vexillum* suborbicular, densely silky without. *Calyx* lobes longer than the tube, lanceolate, long pilose. *Style* bearded. *Legumes* (immature), 4.2 cm. long, 6 mm. broad, flat, pilose along margins, 7–8 seeded.

Except for the very short petioles, this plant has the appearance of *T. macropoda*, particularly the more robust forms of that species.

65. **T. macropoda** Harv. in Harv. and Sond. Fl. Cap. 2.210 (1861–62); O. Kuntze Rev. Gen. Pl. 1.175 (1891); Zahlbr. Ann. K. K. Naturhist. Hofmus. 20.3.25 (1905); Wood Fl. Natal 42 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Marloth Dict. Common Names 112 (1917); Pott in Ann. Tvl. Mus. 6.4.128 (1920); Bews Fl. Natal and Zululand 111 (1921); Watt and Breyer-Brandwyk Med. and Pois. Pl. S.A. 74 (1932).

Syn. *Apodynomene macropoda* E. Mey. Comm. Pl. Afr. Austr. 112 (1836); Hook. Lond. Journ. Bot. 2.88 (1843); Cape Plants, Krauss and Engler 54 (1846); *Tephrosia triphylla* Harms. in O. Kuntze Rev. Gen. Pl. 3.2.57 (1893). *Cracca macropoda* (E. Mey) O. Kuntze Rev. Gen. Pl. 3.2.57 (1893).

Type specimen, *Drège* (Herb. Meyer 5471), in Botanisches Museum, Berlin-Dahlem.

The two co-type specimens *Drège* (inter Gekau and Bashee) and *Drège* (inter Omtata and Omgaziana) are in the Herbarium, Kew.

Stems several from a large tuberous root-stock, procumbent, more or less robust, up to 3 feet long. *Leaves* 1–3-jugate, 6–14.5 cm. long, petioles usually long before first pair of leaflets; leaflets narrow to broadly elliptical or oblong, glabrous above, pubescent or glabrescent below, 2–6.5 cm. long, 0.6–3 cm. broad. *Stipules* broadly cordate-ovate, 0.5–1.2 cm. long, 0.5–1 cm. broad. *Peduncles* terminal and leaf-opposed, up to 48 cm. long, few-flowered at apex; bracts broadly ovate, bilobed at apex, soon caducous, 0.7–1.3 cm. long. *Flowers* large, 1.4–2.2 cm. long. *Calyx*-teeth linear to linear-lanceolate, longer than tube. *Style* bearded. *Legumes* linear, flattened, glabrous, hirsute along sutures, up to 6 cm. long and 0.8 cm. broad.

CAPE.—Albany district: grassy places, Botha's Hill Spruit, *MacOwan* 452 (N., S.A.M.); Kingwilliamstown district: Keiskamma, *Hutton* (K.); Komgha district: grassy hills near Komgha, *Flanagan* 511 (G., P., S.A.M., B.H.); Kentani, *Pegler* 1362 (P., B.H.); Transkei district: inter Gekau and Bashee, *Drège* (K.); Umtata district: in monte Engcobo; *Bolus* 8877 bis (B.H., P.); Baziza, *Baur* 59 (K.); inter Omtata and Omgaziana, *Drège* (K.).

NATAL.—Port Shepstone district: Port Shepstone, *Weeks* 44 (W.); Beach Terminus, *Thode* (S.); flats behind dunes, Marburg, *Bachmann* 608 (B.); Dumisa, *Rudatis* 874 (K., B.M., V., Z., G., B., P.); Ixopo district: Ixopo, *Mogg* 2299 (P.); Scottburgh, *Howes* (P.); Mid Illovo, *Thode* (S.); Durban district: Merebank, *Wood* 235 (N., B.M., S.A.M., B.H.); Hilltop, Brighton Beach, *Forbes* 512 (N.); Jacobs, *Conrath* 236 (Z., B.); Port Natal, *Sutherland* (K.); Port Natal, *Gueinzius* 28 (V.); Port Natal, *Krauss* 451 (K., B.M., G., P.) and *Krauss* 244 (K., B.M., G.); near Durban, *Wood* 5494 (Pa., B.); Umgeni, *Rehmann* 8701 (Z.); Pinetown district: Pinetown, *Acutt* (P.); New Germany, *Indian Collector* (N.); among grass, Fields Hill, *Evans* 178 (N.); Krantzklouf, *Kuntze* (K.); Inchanga, *Engler* 2638 (B.); *Stohr* 27 (B.M.); *Frith* 122 (W.); Drummond, *Galpin* 10299 (P.); Bothas Hill, *McClellan* 102 (P., N.); Camperdown district: Camperdown, *Franks* (K., N.); *Rehmann* 7722 (Z.); Pietermaritzburg district: Pietermaritzburg, *Wilms* (K., B.M.); Alberton near Maritzburg, *Mogg* 2177 and 6590 (P.); Cedara, *Phillips* 3461 (P.); Shafton, *Howick*, *Evans* (N.); Inanda district: Avoca, *Oliver* 158 (N.); in graminosis, Phoenix, *Schlechter*

2904 (B., A.M.); Oakfort, *Rehmann* 8514 (Z.); Inanda, *Wood* 816 (K., B.M., N., P.); Zululand, Mtunzini, *Mogg* 4436 and 5812 (P.); Eshowe, *Gerstner* 3830 (N.). No definite locality, *Gerrard* 31 (V., Pa., B.M.).

TRANSVAAL.—Witwatersrand district: Brakpan, *Murray* (O.); Pretoria district: Koedoespoort, *Rehmann* 4629 (Z.); Middelburg district: Waterval Boven, *Rogers* 14405 (B.M., Z., W.); Dullstroom, *Galpin* 13074 (K., P.); Witbank, *Rand* 45 (B.M.); Middelburg *Hewitt* (T.M.); Barberton district: eastern slopes, Saddleback Mountains, *Galpin* 1172 (P.); top and upper parts of Mt. Schagen, Barberton, *Liebenberg* 2498 (P.); Tweefontein Experimental Area, Sabie, *Wager* B.172 (P.); between Pilgrims Rest and Sabie, *Rogers* 21765 (Z.); Pietersburg district: Houtbosch, *Rehmann* 6232 (Z.); The Downs, Pietersburg, *Moss* and *Rogers* 325 and 326 (P.); Modjadjes near Pietersburg, *Rogers* 18029 (Z.); Zoutpansberg district: Messina, *Moss* and *Rogers* 25 bis (Z.); in clivis Mt. Elandspruitbergen, *Schlechter* 3997 (Z.).

ORANGE FREE STATE.—Bloemfontein, *Snoek* (G.U.C.).

SOUTH AFRICA.—No definite locality: *Drège* 417 (V.); *Drège* (O.); *Hennegart* (Pa.). *Gueinzius* (K., Pa., V., AM., S.); *Gerrard* and *McKen* (K., B.M., Pa., V.); *Junod* 904 (Pa.); (G., Z) and 2532 (Z.); *Rehmann* 6231 (Z.) [cited as *T. spathacea* in Fl. Tvaal.]; *Watt* and *Brandwyk* 686 (P.).

T. macropoda is an extremely variable species. Meyer, in his description in Comm. Pl. Afr. Austr., divides the material into two varieties, as follows:—

A. *latifolia*. Leaves 2–3-jugate, leaflets broad, oblong, obtuse, roughly hairy below or subglabrous; peduncles generally hispidulous.

B. *angustifolia*. Leaves 3–5-jugate, leaflets lanceolate-oblong, sericeous-argenteous; peduncles glabrescent or sparsely appressedly pilose.

Harvey in "Flora Capensis" does not maintain the varieties.

After a preliminary examination of a large amount of material, it seemed feasible to resuscitate the variety *angustifolia*. A further study of the material, however, showed that it would be very difficult to differentiate clearly, except between the forms with the very broad leaflets and the forms with the very narrow leaflets, for leaflets on the same specimen vary from broad to medium and medium to narrow.

The form with the narrowest leaflets seems to occur chiefly in the Eastern Province of the Cape and is very frequently confused with *T. aemula*. The most robust form with very broad leaflets occurs chiefly along the coastal areas of Natal and Zululand. Further inland in Natal and throughout the Transvaal the plants become less robust and the leaflets narrower.

Another variable character is the trifoliolate leaf, a character which led Harms to describe this plant as *T. triphylla*. Sometimes all the leaves on one stem will be trifoliolate while other stems arising from the same root-stock will bear 2–3-jugate leaves.

Three specimens collected by Tyson in East Griqualand are, in my opinion, dwarf forms of *T. macropoda*. The stems and petioles are shorter than in typical *T. macropoda*, but they agree otherwise.

These specimens are *Tyson* 1430 (K., S.A.M., P.); *Tyson* 1579 (K., B.H.) and *Tyson* 2092 (K., S.A.M., B.H.).

This plant is widely known as a fish-poison and the Zulus also use the powdered root as an insecticide, as well as for medicinal purposes. The Zulu name is "iLozane."

66. *T. aemula* (E. Mey) Harv. in Harv. and Sond. Fl. Cap. 2.210 (1861–62); O. Kuntze Rev. Gen. Pl. 1.174 (1891); Wood Fl. Natal 41 (1907); Wood in Trans. S.A. Phil. Soc. 18.2.147 (1908); Bot. Survey S.A. Mem. 1.64 (1919); Bews Fl. Natal and Zululand 110 (1921).

Syn. *Apodynomene aemula* E. Mey. Comm. Pl. Afr. Austr. 113 (1836). *Cracca aemula* (E. Mey.) O. Ktze. Rev. Gen. Pl. 3.2.57 (1893).

Type specimen, *Drège* s.n. in Botanisches Museum, Berlin-Dahlem.

Subherbaceous. *Stems* very slender, procumbent, glabrous or thinly pubescent. *Leaves* 1-2-jugate, 3-11 cm. long, long petioled; leaflets elliptic- or cuneate-oblong, subobtusate, mucronulate, glabrous above, thinly appressedly pubescent below, 1-2.5 cm. long, 0.5-0.8 cm. broad. *Stipules* ovate, acuminate, 4-6 mm. long. *Peduncles* terminal and leaf-opposed, 10-25 cm. long, laxly few-flowered at apex; bracts ovate, bi-lobed at apex, 4-6 mm. long, caducous. *Flowers* 0.8-1.3 cm. long. *Calyx*-teeth subulate, acuminate, sub-equal to or slightly longer than tube. *Style* bearded. *Legumes* linear, flat, 2.7-3.5 cm. long, 0.5-0.7 cm. broad, glabrous or very shortly appressedly pubescent along margins, about 10-seeded.

CAPE.—Komgha district: between Zandplaat and Komgha, *Drège* (B.); Cape, Belfort, *Jacottet* 124 (Z.).

NATAL.—Alexandra district: Dumisa, *Rudatis* 885 (B.M., V., G., P.); Durban district: pr. Durban, *Wood* (N.); *Wood* 6356 (K., N.); Clairmont, *Wood* 8027 (N.); Merebank, *Wood* 234 (B.M.); Pinetown district: Trappisten Kolonie, Mariannhill, *Landauer* (B.).

This species is frequently confused with the narrow-leaved form of *T. macropoda*. It may be distinguished, however, by its 1-2-jugate leaves, more slender stems, etc., and its more glabrescent habit.

67. *T. diffusa* Harv. in Harv. and Sond. Fl. Cap. 2.210 (1861-62); O. Kuntze Rev. Gen. Pl. 1.175 (1891); *Wood* Fl. of Natal 41 (1907); *Wood* in Trans. S.A. Phil. Soc. 18.2.147 (1908); Burt Davy and Potts in Ann. Tvl. Mus. 3.3.146 (1912); Bews Fl. Natal and Zululand 110 (1921); Watt and Breyer-Brandwyk Med. and Pois. Pl. of S.A. 74 (1932).

Syn. *Apodynomene diffusa* E. Mey. Comm. Pl. Afr. Aust. 113 (1836). *Cracca diffusa* (E. Mey.) O. Kuntze Rev. Gen. Pl. 1.175 (1891).

Type specimen, *Drège* (Herb. Meyer 5478), in Botanisches Museum, Berlin-Dahlem.

Suffruticose, procumbent. *Stems* and branches subfiliform. *Leaves* 2-4-jugate, 2-4 cm. long, long petioled; leaflets subcuneate-oblong, appressedly puberulous, 0.8-2.5 cm. long, 3-7 mm. broad. *Stipules* ovate, striate, 5-7 mm. long, 2-3 mm. broad near the base. *Peduncles* leaf-opposed, few flowered, 1.5-6 cm. long. *Flowers* subtended by ovate, deciduous bracts, 5-6 mm. long and deeply bi-lobed at apex. *Calyx*-tube 2 mm. long, 6 mm. in diam., lobes unequal, subulate, acuminate, very shortly ciliate, four lobes equalling tube, lowest longer. *Vexillum* 1.3 cm. long, 0.9 cm. broad. *Stamens* diadelphous. *Style* about 5 mm. long, thinly bearded. *Legumes* subglabrous, 2-2.5 cm. long, 4 mm. broad.

CAPE.—East Griqualand: Kokstad, *Thode* (B.); New Amalfi, *Forbes* 1123 (N.); hillside above Matatiele, *Galpin* 14077 (N., P.); Pondoland: inter Omsamouba and Omsamcaba, *Drège* [Herb. Meyer 5478] (K., B.); Pondoland, *Beyrich* 256 (B.).

NATAL.—Inanda district: Inanda, *Wood* 886 (K., N.); Umhloti, *Wood* 713 (K., N.) Harding district: Murchison Flats near Oribi Flats, *McClellan* 305 (N., P.); Bulwer district, top of the Peak, Byrne, *Galpin* 11974 (K., V., Pa., P., B.H.); New Hanover district; Noodsberg, *Wood* 886 (N.); Drakensberg district: Dooley Slopes, Mont-Aux-Sources: *Bayer* and *McClellan* 206 (P.); Umlambonya Valley, Cathedral Peak Area, *Schelpé* 977 (N.).

This plant is called "iHlozane" by the Zulus, who use it as a parasiticide. It is said to be very poisonous.

INDEX TO SPECIES.

	Page.		Page.
<i>acaciaefolia</i>	954	<i>Meisneri</i>	994
<i>aemula</i>	999	<i>monophylla</i>	957
<i>albissima</i>	995	<i>multijuga</i>	981
<i>amoena</i>	968	<i>natalensis</i>	988
<i>angustissima</i>	979	<i>noctiflora</i>	965
<i>apiculata</i>	989	<i>otaviensis</i>	976
<i>apollinea</i>	972	<i>oxygona</i>	973
<i>aurantiaca</i>	977	<i>pallens</i>	967
<i>Bachmannii</i>	990	<i>pallida</i>	970
<i>Burchellii</i>	983	<i>Pietersii</i>	957
<i>canescens</i>	962	<i>plicata</i>	959
<i>capensis</i>	984	<i>polystachya</i>	963
<i>contorta</i>	960	<i>polystachyoides</i>	971
<i>cordata</i>	995	<i>pseudocapitata</i>	988
<i>Damarensis</i>	964	<i>pseudosphaerosperma</i>	956
<i>delagoensis</i>	968	<i>purpurea</i>	974
<i>diffusa</i>	1000	<i>radicans</i>	996
<i>Dinteri</i>	961	<i>retusa</i>	984
<i>discolor</i>	939	<i>rhodesica</i>	972
<i>Dregeana</i>	966	<i>salicifolia</i>	954
<i>Ehrenbergiana</i>	972	<i>semiglabra</i>	982
<i>elongata</i>	977	<i>shiluwanaensis</i>	994
<i>euchroa</i>	969	<i>sparsiflora</i>	971
<i>Evansii</i>	975	<i>spathaca</i>	995
<i>Forbesii</i>	956	<i>spathacea</i>	994
<i>Calpini</i>	996	<i>sphaerosperma</i>	955
<i>glomeruliflora</i>	993	<i>stricta</i>	963
<i>gracilentata</i>	958	<i>subulata</i>	994
<i>grandiflora</i>	991	<i>ternatifolia</i>	984
<i>griseola</i>	974	<i>transvaalensis</i>	975
<i>incana</i>	972	<i>tzaneenensis</i>	977
<i>inandensis</i>	976	<i>unifolia</i>	996
<i>Kraussiana</i>	970	<i>villosa</i>	972
<i>lactea</i>	998	<i>virgata</i>	956
<i>longipes</i>	980	<i>Woodii</i>	981
<i>lupinifolia</i>	958	<i>Wyliei</i>	991
<i>lurida</i>	979	<i>Zombensis</i>	990
<i>macropoda</i>	998	<i>Zoutpansbergensis</i>	973
<i>marginella</i>	954	<i>Zuluensis</i>	997
<i>Medleyi</i>	968		

EXCLUDED SPECIES.

T. avasmontana Dtr.—*Dolichos linearis* E. Mey.
T. oblongifolia E. Mey.—*Ophrestia oblongifolia*
 (E.M.) H.M. Forbes.

