

A REVISION OF THE AFRICAN SPECIES OF SESBANIA.

By E. P. PHILLIPS, Division of Botany, Pretoria, and J. HUTCHINSON (Kew).

THE present paper is an attempt to revise the African species of the genus *Sesbania*, family *Papilionaceae*. Imperfect as it may prove to be, it is long overdue, chiefly because of the great accumulation of herbarium material since the publication of the second volume of the "Flora of Tropical Africa" in 1871, much of this material having remained unnamed or imperfectly determined. The results of this investigation might very well have been more satisfactory to the authors had there been more field notes available regarding the situation, habit, floral colouring, etc., of the specimens accumulated in the various herbaria which they have been able to consult.* That this information is vital in the determination and limitation of the species of *Sesbania*, at least, has been well demonstrated by Prain † in his critical elucidation of the Indian species.

The genus *Sesbania* contains about fifty species which occur in the warmer parts of the world, mainly in or by the sides of streams, lakes, and swamps. It appears to attain its greatest development in tropical Africa, a few of the species extending into South Africa as far as Natal, and into various parts of the Transvaal and Bechuanaland. In the present revision of the species from this area twenty-three are recognized to be distinct. They belong to two sections, nineteen to *Eusesbania* and four to *Daubentonia*, the latter characterized by its four-winged fruits. The third and purely American section into which *Sesbania* was divided by Bentham and Hooker (Gen. Pl., 1, 502) is now recognized by American botanists ‡ as a distinct genus, *Glottidium*, and the present authors' views coincide in respect to this. They cannot, however, go so far as to accept the American view regarding the generic status of *Daubentonia* which occurs in the three widely separated areas, namely, the south-eastern United States and Mexico, sub-tropical South America, and tropical East Africa. This broken distribution seems to point to a separate origin of the species of *Daubentonia* from the basal stock, *Eusesbania*, species of which occur in all these areas. *Glottidium*, on the other hand, a native of Florida, is well separated from *Sesbania* by its short fruits with only two seeds and the manner of dehiscence, the seeds remaining inside the dry bladder-like endocarp which detaches itself as a whole from the outer shell.

In the case of the African species we have found a most useful and constant character in the nature of the appendages on the claw of the vexillum. In the first five species shown in the key these are long and quite free from the vexillum in their upper half. In

* For the privileges of examining the specimens under their charge, the authors tender their thanks to Sir David Prain, Director, Royal Botanical Gardens, Kew; Dr. A. B. Rendle, Natural History Museum, South Kensington; Dr. I. B. Pole Evans, Director, Botanical Survey, South Africa; Mrs. Bolus, Bolus Herbarium, Capetown; Dr. L. Perinquey, South African Museum; Dr. Schönland, Albany Museum, Grahamstown; the Director, Transvaal Museum, Pretoria; and Mr. Fred Eyles, Salisbury, Rhodesia.

† Prain in Journ. Anat. Soc., Bengal, LXVI, 366-370 (1897).

‡ Small, Fl. South-Eastern Unit. States, Ed. II, 615 (1913).

all the other species they are sessile and adnate to the claw, whilst they are not perceptible in one species, *S. leptocarpa*. These appendages on the claw of the vexillum in *Sesbania* are probably closely connected with pollination, and no doubt, as in some other *Leguminosae*, their function is to clasp and lift open the free stamen in order to give insects ready access to the nectaries.

We have considered it sufficient to restrict ourselves in regard to synonymy to those names to which have been applied to the African species.

KEY TO THE AFRICAN SPECIES OF *SESBANIA*.

I. *Eusesbania*.—Fruits not winged on the margins of the valves (in *S. sphaerocarpa* fruits acutely keeled down the middle of the valves).

Appendages of claw of vexillum free in their upper half or third :

Vexillum yellow, plain or finely speckled on the back with dark spots :

Stems and leaves rather densely villous pubescent :

Flowers solitary or in pairs ; leaflets 5–10 pairs, stipules deciduous ; appendages to vexillum obtuse..... 1. *S. Goetzei*.

Flowers several in each inflorescence ; leaflets more than 10 pairs ; stipules persistent ; appendages to vexillum acutely acuminate..... 2. *S. speciosa*.

Stems and leaves glabrous or nearly so :

Inflorescence branched ; peduncles smooth ; West African species..... 3. *S. punctata*.

Inflorescence not branched :

Peduncles smooth..... 4. *S. aegyptiaca*.

Peduncles aculeate..... 5. *S. Dummeri*.

Vexillum and tips of wings suffused throughout with dark purple..... 4. *S. aegyptiaca*
var. *bicolor*.

Appendages of vexillum wholly adnate to the claw or absent :

Flowers very large, 5–10 cm. long ; fruits about 30 cm. long ; leaflets 3–3.5 cm. long ; cultivated species..... 6. *S. grandiflora*.

Stipules foliaceous, broad, about 1 cm. long, more or less persistent :

Peduncles smooth :

Flowers pale blue, not speckled..... 7. *S. caerulescens*.

Flowers yellow, vexillum speckled..... 8. *S. cinerens*.

Peduncles strongly aculeate..... 9. *S. macrantha*.

Stipules more or less subulate, never foliaceous, and mostly soon falling off :

Stems and leaves or leaves only rather densely pubescent :

Calyx glabrous outside :

Pod not torulose..... 10. *S. pubescens*.

Pod strongly torulose..... 11. *S. Dalzielii*.

Calyx pubescent outside..... 12. *S. Wildemannii*.

Stems and leaves glabrous or only slightly pubescent :

Leaflets usually well over 1 cm. long ; leaves nearly always as long or longer than the inflorescence :

Valves of the fruit not keeled down the middle :

Appendages absent from the claw of the vexillum ; fruits torulose, much constricted between the seeds..... 13. *S. leptocarpa*.

- Appendages present on the claw of the vexillum :
 Margins of the fruits straight :
 Fruits about 7 mm. broad ; seeds separated
 by partitions of the endocarp ; stems and
 leaf-rachis never aculeate 14. *S. pachycarpa*.
 Fruits 3 mm. thick, seeds not separated ;
 stems and leaf-rachis often aculeate.... 15. *S. aculeata*.
 Margins of fruits much constricted between the
 seeds..... 16. *S. arabica*.
 Valves of the fruits sharply keeled on the back,
 Angolan, species..... 17. *S. sphaerocarpa*.
 Leaflets very small, averaging about 5 mm. long ; leaves
 much shorter than the inflorescence :
 Vexillum mottled with purple spots..... 18. *S. microphylla*.
 Vexillum striate, not mottled..... 19. *S. mossambicensis*.

II. *Daubentonia*.—*Fruits broadly winged on the margins of the valves ; peduncles aculeate towards the base.*

- Stems not aculeate ; peduncles aculeate only near the base :
 Leaves much shorter than the fruits ; inflorescence very
 few (1-3) flowers ; N.E. Tropical Africa..... 20. *S. tetraptera*.
 Leaves much longer than the fruits ; inflorescence several
 flowered ; Zambezi basin..... 21. *S. Kirkii*.
 Stems aculeate :
 Leaflets about 18 pairs ; inflorescence up to 11 cm. long ;
 staminal sheath shorter than the free parts of the filaments.. 22. *S. hamata*.
 Leaflets about 10 pairs or less ; inflorescence 1-3 flowered,
 very short ; staminal sheath longer than the free part of
 the filaments..... 23. *S. Rogersii*.

EUSES BANIA.

1. *Sesbania Goetzei*, *Harms.*, in *Engl. Bot. Jahrb.*, XXX, 327 (1902).

A shrub 2-3 m. high, branchlets rather densely and softly grey-pubescent, the older ones becoming striate or somewhat angular. *Leaves* shorter than the inflorescence, 3-5 cm. long ; rachis and leaflets densely and softly grey-pubescent ; leaflets about 6-10 pairs, shortly stalked, oblong, rounded and unequal-sided at the base, rounded and very minutely mucronate at the apex, 1-1.5 cm. long, 3-6 mm. broad ; stipules soon falling off, triangular-lanceolate, acute, 3-4 mm. long, pubescent ; stipules minute. *Inflorescence* mostly two-flowered, axillary ; peduncle softly pubescent ; pedicels about 5 mm. long, with two linear-lanceolate fugacious bracteoles towards the apex. *Flower buds* ellipsoid, turbinate at the base, subacute at the apex. *Calyx* widely campanulate, abruptly contracted into a solid turbinate base, about 5 mm. long, with five acute subulate-triangular lobes scarcely 1.5 mm. long, sparsely pubescent outside. *Vexillum* large, orbicular, about 3 cm. long and broad, strongly and closely mottled with purple, with two free linear curved obtuse appendages towards the base about 7 mm. long. *Alae* about 2.5 cm. long and 8 mm. broad. *Carina* 3 mm. long, the claw slightly longer than the broadly boat-shaped limb. *Staminal-sheath* 2 cm. long, free parts of filaments curved upwards and about 8 mm. long. *Ovary* with a very thin line of hairs along the top ; style glabrous. *Fruits* not known.

TROPICAL AFRICA : Tanganyika Territory, Ubungu, Rukwa Lake, moist banks, 800 m., July, *W. Goetze*, 1115 (type). British East Africa, between Kikuyu and Eldama Ravine, 1898, *A. Whyte* ; Eldama Ravine, *A. Whyte*.

A very beautiful species with short leaves, few hairy leaflets, large handsome flowers, the standard petals densely mottled with purple.

2. *Sesbania speciosa*, Taub., ex Engl. in Abh. Preuss. Akad. Wiss., 1894, 21, 42, et in Engl. Pflanzenw. Ost-Afr. C. 213 (1895); *S. Hildebrandtii* Taub., l.c.

Branchlets flexuose, obtusely angular, shortly pubescent. *Leaves* about as long as the inflorescence up to 15 cm. long; rachis and leaflets on both sides fairly densely pubescent; leaflets about 15 pairs, stalked, narrowly oblong, slightly narrowed and almost equal-sided at the base, acutely mucronate at the apex, 2-2.5 cm. long, 6-8 mm. broad; stipules persistent, obliquely lanceolate, very acutely acuminate, 1-1.3 cm. long, about 4 mm. broad at the base, adpressed-pubescent on both sides; stipels minute. *Inflorescence* 6-10 flowered, axillary; peduncle stout towards the base, pubescent; pedicels about 1.5 cm. long, nearly glabrous; bracts persistent, linear, about 6 mm. long, pubescent, margins membranous towards the base; bracteoles deciduous. *Flower buds* not seen. *Calyx* widely campanulate from an acute turbinate base, about 8 mm. long, with five subulate acute teeth about 1.5 mm. long, glabrous outside. *Vexillum* (probably yellow) finely mottled with purple, rather broadly elliptic, shortly clawed, 3 cm. long, 2 cm. broad, with two linear free appendages at the base. *Alae* 3.5 cm. long, 8 mm. broad. *Carina* 3 cm. long, the boat-shaped limb a little longer than the claw. *Staminal-sheath* 2.5 cm. long. *Ovary* slightly hairy. *Fruit* up to nearly 33 cm. long, about 8 mm. broad, rather thick, with undulate edges, nearly glabrous. *Seeds* somewhat kidney-shaped, dark brown.

TROPICAL AFRICA: East African Protectorate, Usambara; Maschena, in meadows, July, 1893, C. Holst, 3508; banks of the Kingani, 6 ft. high, fl. and fr., Hildebrandt, 960 (Herb. Mus. Brit.).

3. *Sesbania punctata* D.C. Prodr., ii, 265 (1825); Baker in Oliv. Fl. Trop. Afr., ii, 133 (1871), partly.

A shrub or slender tree, growing on banks of streams; branches pale straw-coloured when dry, slightly flexuous, sometimes slightly mucronate below the leaves, otherwise glabrous. *Leaves* shorter than the inflorescence, 7-10 cm. long; rachis pubescent on the upper side, soon becoming nearly glabrous, not prickly; leaflets 12-22 pairs, shortly stalked, oblong-linear, a little narrowed and sub-equal-sided at the base, shortly and acutely mucronate at the apex, 1.2-2 cm. long, 3-5 mm. broad, glabrous or slightly pubescent on the thickened mid-rib and margins, stipules deciduous, recurved, about 3 mm. long, slightly pubescent; stipels very minute. *Inflorescence* mostly branched, longer than the leaves, up to 20-flowered, often about 12-flowered; peduncle glabrous or very slightly pubescent, especially at the base, not prickly; pedicels slender, up to 2 cm. long, glabrous, with two small caducous bracteoles towards the apex; bracts small and early caducous. *Flower buds* broadly ellipsoid, obtuse, glabrous. *Calyx* broadly campanulate from a turbinate base, about 6 mm. long, with five rather short broadly triangular lobes slightly puberulous on the margins. *Vexillum* finely mottled with purple, about 2.5 cm. long, rather shortly clawed, with two large free acuminate appendages about 5 mm. long at the base. *Alae* 2.3 cm. long, about 6 mm. broad. *Carina* more or less broadly spoon-shaped, 2.5 cm. long, the claw slightly longer than the limb. *Staminal sheath* 2 cm. long, free part of the filaments about 5 mm. long. *Ovary* and style glabrous. *Fruits* up to 24 cm. long, slender, at first torulose, but sometimes becoming nearly straight when ripe, beaked for some time by the persistent style. *Seeds* dark brown, about 4.5 mm. long.

TROPICAL AFRICA: Senegambia: Without definite locality, Perrottet 231 (type); 1839, Guillemin (H.K.) Hendelet (H.K.). Roger in Herb. Gay (H.K.); Richard-tol, 26th January, 1823, Dollinger (H.K.). Northern Nigeria. Sokoto Province, shrub or slender tree overhanging rivers, December, 1910, J. M. Dalziel 324; Abinsi and vicinity, banks of streams, common, 15th December, 1912, J. M. Dalziel 613; Katagum District, banks or streams, J. M. Dalziel 7, Benne River, October, 1907, C. A. Parsons 154, Nupe, sand banks, small shrub with yellow flowers, 1858, C. Barter, 970.

Vernacular: "Alambo" (Dalziel 324, 613).

Sesbania punctata * D.C., has been much misunderstood in herbaria, and has been considered to be widely distributed over tropical Africa and other countries. This is not, however, the case, and it appears to be confined to the banks of streams, in the Savannah country from Senegambia to Northern Nigeria, probably as far as Lake Chad or may be further. Parsons (No. 154) says it is a very common river shrub, 10 ft. high or so, overhanging and sometimes forming dense impenetrable hedges.

The species may be at once recognized by its small *branched inflorescence*, *mottled standard-petal* with very long *free-appendages* and *smooth* (not aculeate) peduncles.

4. *Sesbania aegyptiaca* Poir. Encyc., vii, 128; Pers. Syn., ii, 316; D.C. Prodr., ii, 264 (1825); Baker in Oliv. Fl. Trop. Afr., ii, 134 (1871); Prain in Journ. As. Soc., Bengal, lxi, 367 (1897).

A tall shrub or small tree. *Branches* pilose or pubescent, rarely almost glabrous, usually ribbed. *Leaves* 3.5–13 cm. long, petiole 0.3–1 cm. long, pubescent or villous; rachis flattened or grooved above, pilose, rarely glabrous; leaflets 9–27-jugate; subsessile, 0.6–2.8 cm. long, 1.5–6 mm. broad, oblong, truncate, rounded, or sometimes retuse at the apex, apiculate, scarcely narrowed to the base, pubescent beneath, pubescent or glabrous above, not punctate with minute black dots, with the mid-rib distinct beneath; the terminal leaflets somewhat oblong-ovate. *Stipules* about 5 mm. long, ovate, acuminate, pubescent, usually deciduous, if persistent then coiled. *Inflorescence* an axillary raceme, 2–10 cm. long, 3–8-flowered, usually longer than, sometimes shorter than, the subtending leaf, the base of the peduncle densely or scantily pilose, otherwise usually glabrous. *Bracts* 3–4 mm. long, ovate, acuminate, acute, pilose, deciduous; bracteoles 1.5 mm. long, linear, pubescent without, deciduous. *Pedicels* 0.5–1.5 cm. long, glabrous. *Calyx-tube* 3–5 mm. long, 5–7 mm. in diameter, glabrous, truncate, with five small teeth or lobes 1 mm. long, ovate, usually minutely ciliate. *Vexillum* 1.1–1.9 cm. long, 1.2–1.9 cm. broad, obovate, suborbicular, or transversely oblong, rounded and usually retuse at the apex, with a short claw 2–3 mm. long and with two free appendages above the claw; alae 1.3–1.8 cm. long, 3–6 mm. broad, oblong, rounded or retuse at the apex, with a curved linear claw 5–6 mm. long, and with a projecting tooth from the base of the lamina forming a horse-shoe-shaped loop with the claw; carina 1.4–1.5 cm. long, 5–6 mm. broad, almost plano-convex in outline, with a linear claw 6–8 mm. long, and a projecting tooth from the lamina forming a horse-shoe-shaped, or distinct, loop with the claw. *Staminal-sheath* 0.8–1.1 cm. long, 2–3.5 mm. broad at the base, with evident or distinct veins; free portion of filaments arcuate; anthers 0.75 mm. long, oblong; free stamen bent near the base. *Ovary* 1–1.3 cm. long, sub-compressed, glabrous, with two longitudinal bands; style 3–5 mm. long, arcuate; stigma small, capitate. *Fruit* twisted, 6–14 cm. long, 3–4 mm. thick, subterete, long-acuminate, acute, glabrous, divided into compartments within. *Seeds* oblong, truncate at both ends, reddish-brown, 4 mm. long, 2 mm. broad, glabrous.

TROPICAL AFRICA: Senegambia: *Perrottet*, Sierra Leone, *Vogel* 24. Northern Nigeria: Kontagora, shrub or tree by streams, *J. M. Dalziel* 38; 50 miles from Maifoni, Bornu, *A. C. Parsons*. Lake Chad and Bornu, *Talbot* 1242. Attah, branched shrub, *Vogel* 45. Congo: *Burton*; Stanley Pool, *Hens* 348. Angola Kiteve, Kunene River, *Baum* 955. Eastern Sudan: Kordofau, *Pfund* 404; *Kotschy* 72, 223, 347, 539, White Nile, *Brownell*; *Lynes*; *Schweinfurth* 998; *Muriel* 107; Kassala, *Schweinfurth*, tree near wells, Mut Oasis; Daklila, *MacDougal and Sykes* 187 (Herb. Mus. Brit.), Khartoum, *Schweinfurth* 865. Sedan, *Schweinfurth* 537. Blue Nile, *Muriel*, 69; *Schweinfurth* 962; near Matamma, *Schweinfurth* 1865. Colonia Eritrea: Adi Gana, *Pappi* 192; Abyssinia: *Cockburn*; *Quartin-Dillon and Petit* 167; *Wellby*; *Schweinfurth and Riva*, 681. British East Africa: various localities; *James*; *Elliot* 313; *Whyte-Grenfell*; *Dümmer* 1781, 2008; *Dowson* 336;

* De Candolle's description reads as follows:—

S. punctata, herbacea glabra, foliis oblongo-linearibus obtusissimis mucronatis, 10–30-jugis, petiolo laevi superne pubescente, racemis multifloris, corolla calyce sextriplo longiore, leguminibus compressis subtorulosis rachi duplo triplove longioribus—in Senegal. (*Perrottet*), Flores flavi lin. 8–9 longi, vexillo punctis purpureis extus maculato (v.s. comm. a cl. *Perrottet*).

Kassner 623, 628, Uganda; *Speke and Grant* 710; *Whyte*; *Scheffler* 227; *Scott Elliot* 7547, 6560, *Dümmer* 225; *Bagshawe* 491, 99, Tanganyika Territory: *Hildebrandt* 961; *Holst* 3442; *Riddelsdell* 150; *Goetze* 53; Rhodesia: Livingstone, *Rogers*, 7227; Victoria Falls, *Allen* 7; *Flanagan* 3084, 3113; *Galpin* 7046; *Kolbe* 3132; *Lamb* 2293; *Rogers* 5099, 5095, 7407, 13127, 13190, 13289, 13465; Matoppo Hills, *Rogers* 5159. Portuguese East Africa: *Kirk*; Rikatla, *Junod*, 229; Delagoa Bay, *Scott*, Lourenço Marques, *Schlechter* 11585; *Bolus* 7728. Maputa River, *Maputaland Exped. in Herb. Transvaal Mus.* 14402. Gazaland: Lower Buzi, *Swynnerton* 1393.

SOUTH AFRICA: Transvaal: Messina, *Rogers* 19404, Komatipoort, *Rogers* 423, 440, and in *Herb. Transvaal Mus.* 2604, Crocodile Poort; *Galpin* 1074; *Bolus* 7727, Barberton; *Pole Evans* 2944; Sheba Siding, *Thorncroft* in *Herb. Transvaal Mus.* 18235. Barberton, *Rogers* 20314. Swaziland, *Miss Stewart* in *Herb. Transvaal Mus.* 8975. Natal: Unilalasi, *Wylie* in *Herb. Wood* 8551; near Stanger, *Wood* 3859; near Durban, *Gueinzus*; *Gerrard* 1070; Umgeni, *Wood* 9562.

Var. *bicolor*, *Wight and Arn.* Prodr. 214 (1834); Prain in Journ. As. Soc., Bengal, lxi, 367 (1897). *Sesbania atropurpurea*, Taub. in Engl. Bot. Jahrb., XXIII, 188 (1896); like the typical form in vegetative characters, but the standard petal entirely suffused with purple.

TROPICAL AFRICA: Senegal: *Perrottet* 232. Egyptian Sudan: Khartoum, in the garden of the Catholic Monastery and cultivated in the gardens below the town on the Blue Nile, 20–30 ft. high, *Schweinfurth* 796, 779. Cordofan, *Kotschy* 35.

SOUTH AFRICA: Natal: near Durban, *Wood* 8890.

A common species in most tropical countries. The tropical form of *Sesbania aegyptiaca* is said to have uniformly yellow flowers; a second form described by Persoon as *S. picta* has the standard finely mottled with purple. Whilst we have not considered it worth while to distinguish these two conditions, owing to the difficulty of determining them from dried specimens, we have maintained the var. *bicolor* of Wight and Arnot, which is probably only found in cultivation, and has the standard petal entirely suffused with purple. In Africa, as in parts of India, the mottled form appears by far the most common.

According to Prain (*l.c.*), *S. aegyptiaca* is a very familiar hedge plant in Indian fields and gardens. Its wood is still (in India) highly reputed as a source of charcoal for gunpowder manufacture.

5. *Sesbania Dummeri** n. sp.

A slender shrub up to 5 cm. high, branchlets glabrous except when quite young; nearly terete. Leaves shorter or nearly as long as the inflorescence, 8–11 cm. long; rachis glabrous or slightly pubescent, not prickly; leaflets 14–16 pairs, stalked, oblong-linear, slightly narrowed and sub-equal-sided at the base, rounded and distinctly mucronate at the apex, 1.5–2 cm. long, about 4 mm. broad, glabrous or with a few minute hairs on the margin; stipules sub-persistent, linear or linear-lanceolate, acutely acuminate,

* *Sesbania Dummeri* Phillips et Hutchinson, sp. nov.

Affinis *S. punctatae* DC. et *S. aegyptiacae* Poir., sed ab. ambilus pedunculis basin versus aculeatis inflorescentiis simplicibus differt.

Frutex gracilis usque ad 5 m. altus; ramuli maturi glabri, fere teretes. *Folia* inflorescentia breviora vel fere aequilonga; rachis glaber vel leviter pubescens, haud aculeatus; foliola 14–16-juga, petiolulata oblongo-linearia, basi leviter attenuata et subaequilata, apice rotundata et mucronata, 1.5–2 cm. longa, circiter 4 mm. lata, marginibus glabris vel minute pubescentibus; stipulae subpersistentes, lineares vel lineari-lanceolatae, acutae acuminatae, 7–10 mm. longae, sicco-brunneae, parce ciliolatae; stipellae minutae. *Inflorescentia* racemosa, folia aequilonga vel longior, usque ad 8-flora; pedunculi basin versus aculeati, pedicellis graeilibus, usque ad 1 c. longis, apicem versus bracteolis parvis caducis munitis; bracteae mox caducae. *Alabastra* oblique ellipsoidea, apice obtuse contracta. *Calyx* e basi turbinato late et leviter oblique, campanulatus, circiter 7 mm. longus, lobis 5 late triangularibus mucronulatis marginibus intra puberulo-ciliatis. *Vexillum* flavum, brunneo maculatum, circiter 2.5 cm. longum, breviter unguiculatum, ungue appendiceibus oblique lanceolatis liberis circiter 7 mm. longis munito. *Alae* 2.5 cm. longae, circiter 7 mm. latae. *Carina* 2 cm. longa, limbo rhomboideo. *Tabus staminalis* 2 cm. longus, filamentorum partibus liberis 6 mm. longis. *Ovarium* et stylus glaber. *Fructus* junior leviter torulosus, maturus non visus.

7–10 mm. long, brown when dry, sparingly ciliolate; stipels minute. *Inflorescence* racemose, as long or longer than the leaves, up to about eight-flowered; peduncle finely prickly, especially towards the base; pedicels slender, up to 1 cm. long, with two small caducous bracteoles towards the apex; bracts very early caducous. *Flower-buds* obliquely ellipsoid, obtusely contracted at the apex. *Calyx* broadly and slightly obliquely campanulate from a turbinate base, about 7 mm. long, with five broadly triangular mucronulate lobes puberulous-ciliolate within the margin. *Vexillum* yellow, finely mottled with brown, about 2.5 cm. long, rather shortly and broadly clawed, with two large obliquely lanceolate free appendages about 7 mm. long. *Alae* 2.5 cm. long, about 7 mm. broad. *Carina* 2 cm. long, the claw about as long as the more or less rhomboid limb. *Staminal sheath* 2 cm. long, free parts of the filaments 6 mm. long. *Ovary* and style glabrous. *Young fruits* slightly torulose; mature ones not seen.

TROPICAL AFRICA: Uganda: Kirerema, 4000 ft., margins of swamps, flowers yellow, spotted with brown, September, 1913, *R. Dümmer* 225. Without definite locality, *A. Whyte*.

6. *Sesbania grandiflora* Poir. Encycl., vii, 127 (1806); Pers. Syn., ii, 316 (1807).

A small tree or shrub; branchlets rather thick, very shortly and softly pubescent when young. *Leaves* much longer than the inflorescence, up to about 20 cm. long; rachis subterete, slightly pubescent or glabrous; leaflets about 15–20 pairs, stalked, rather elongate-oblong, rounded and slightly unequal-sided at the base, rounded and minutely mucronate at the apex, about 2.5–3 cm. long and 0.5–1 cm. broad, thinly chartaceous, shortly pubescent or glabrous, often glaucous, with about six pairs of lateral nerves; stipules deciduous; stipels subulate, minute. *Inflorescence* few-flowered, axillary; peduncle softly pubescent. *Flowers* large and showy, usually about 10 cm. long, pink or red. *Fruits* about 30 cm. long, flat.

This well-marked species, the native country of which is doubtful, is widely cultivated in the tropics for its handsome flowers. The leaves are often used as a substitute for spinach. We have seen African specimens from Senegambia (Herb. Gay), Gold Coast (Axim, *T. F. Chipp*, 391), and Lagos (*Dr. J. W. Rowland*).

7. *Sesbania caerulescens* Harms in Warb. Kunene-Sambesi Exped., 260 (1903). *S. Hockii*, De Wild, in Fedde Rep., XI, 544 (1913).

An erect plant about 3–5 m. high (*Eyles*); stems ribbed, glabrous, marked with brown lines. *Leaves* 5–13 cm. long; petiole 0.8–1.1 cm. long, glabrous; rachis channelled above, glabrous; leaflets 10–18-jugate, subsessile, 0.3–1.8 cm. long, 1.5–5 mm. long, oblong, obtuse, with an acute apiculus 0.5 mm. long, slightly narrowed at the base, punctate above with minute black dots, glabrous. *Stipules* 7 mm. long, oblanceolate, with a long point striped with brown, glabrous, deciduous. *Inflorescence* an axillary raceme, 4–6.5 cm. long, 1–4-flowered, as long as or shorter than the subtending leaf; bracts 7 mm. long, lanceolate, long-acuminate, striped with reddish-brown, glabrous, deciduous; bracteoles 3 mm. long, linear, otherwise similar to the bracts; pedicels 0.8–2.3 cm. long, glabrous. *Calyx-tube* spotted, 6–7 mm. long, 6.5–7 mm. broad, campanulate, glabrous; teeth 3 mm. long, ovate, acuminate, acute, ciliated. *Vexillum* a "washed-blue" (*Eyles*), spotted, 2.5–2.9 cm. long, 2.4–2.85 cm. broad, rounded, retuse at the apex, with a claw 3 mm. long. *Alae* spotted, 2.5–2.6 cm. long, 0.9–1 cm. broad, obtuse, with a linear claw 5 mm. long, 2 mm. broad, and with a downward projecting tooth. *Carina* spotted, 2–2.5 cm. long, 0.75–1.1 cm. broad, obtuse, with a linear claw 1–1.2 cm. long and a tooth from the lamina slightly projecting upwards. *Staminal sheath* 1.7–2 cm. long, 3–4 mm. broad at the base, with the free portion of the filaments arcuate; free stamen curved at the base. *Ovary* spotted, 1.7–2 cm. long, subcompressed; style 7–8 mm. long, arcuate, glabrous; stigma small, ellipsoid. *Fruit* 23–25 cm. long, 3.5–4 mm. broad, linear, long acuminate, with a broad suture on one side, somewhat keeled on the other, glabrous. *Seeds* dark reddish-brown, 5 mm. long, 2.5 mm. broad, oblong, slightly narrowed at each end, glabrous.

TROPICAL AFRICA : Angola : Miane River at Kavamba, 1175, m., swampy ground, March, 1900, *Baum* 782 (type). River Kumpulua-Kuito, *Gossweiler* 3195. Luco plantations, an annual, erect, glaucous green herb up to 15 ft. high, fls. pale blue, in inundated marshes, February, 1906. *Gossweiler* 3745 (Herb. Mus. Brit.). Congo State : between Chiniama and Elisabethville, *Hock*. Rhodesia : Salisbury, April, *Flanagan*, 3121 ; Cleve-land Dam. In colonies on moist land 5000 ft., 10 ft. high, February, *Eyles*, 600.

8. *Sesbania cinerascens* *Welw. ex Baker*, in Oliv. Fl. Trop. Afr., ii, 134 (1871) ; Hiern in Cat. Afr. Pl. Welw., i, 231, under *Sesban* (1896).

A tall arborescent herb or shrub up to 5 m. high, ashy grey in colour. Branches glabrous, smooth. Leaves 10–24 cm. long, 14–30-jugate ; petiole 1–2.5 cm. long, glabrous ; leaflets 14–30 pairs, subsessile, oblong or oblong-linear, rounded above, minutely punctate, usually unequal at the base, 0.7–2.8 cm. long, 3–8 mm. broad, glabrous, with the mid-rib distinct beneath. Stipules foliaceous, 1–2 cm. long, ovate, acuminate, soon deciduous. Inflorescence axillary, racemose, 11–24 cm. long, rarely only 7 cm. long, longer or shorter than the subtending leaf ; peduncle glabrous ; pedicels 1–2 cm. long, glabrous ; bracts 1.5–5 mm. long, setaceous, caducous. Flowers yellow. Calyx-tube 5–6 mm. long, campanulate, with five distinct veins, glabrous ; lobes 1.5–2 mm. long, ovate, acute, woolly-ciliate. Vexillum spotted, 1.8–2.1 cm. long, 1.7–2.2 cm. broad, obovate, retuse at the apex, narrowed into a short claw, with two ridges above the claw ; alae 1.8–2 cm. long, 6–7 mm. broad, oblong or oblong-obovate, rounded above, produced into a curved claw 5–6 mm. long, with a downward projecting tooth above the claw ; carina 1.7 cm. long, obtuse, produced into a linear claw 1 cm. long, and with a downward projecting tooth above the claw. Staminal sheath 1–1.2 cm. long, 3.5–6 mm. broad at the base ; free portion of filaments arcuate ; anthers 0.5 mm. long, oblong. Ovary 0.9–1.4 cm. long, linear, with two longitudinal bands ; style 5 mm. long, at right angles to the ovary ; stigma small, capitate. Fruit 26 cm. long, semi-terete, acuminate. Seed 9 mm. long, 3 mm. in diameter, oblong, rounded at each end, glabrous.

TROPICAL AFRICA : Angola : Pungo Andongo, in thickets near the River Lombe, fl. and fr. Mar. *Welwitsch*, 1999 ; in bushy places by streams, near Pedra Cabondo, fl. and fr. Apr., *Welwitsch*, 2000. Rhodesia : Matoppos, c. 4000 ft., May, *Rogers* 7924 ; Mazoe near Salisbury, April, *Flanagan* 3122, Victoria, C. F. H. *Monro*, 1932 ; near Bulawayo, *Rand* 448 ; *Eyles* 1235, 1514.

SOUTH AFRICA : Natal : Itafamasi, *Wood*, 882, Insuzi, April, *Wood*, 5311, and in Natal Govt. Herb. 8677 ; Natal, *Gerrard* 32. Transvaal : Barberton Div., banks of Kaap River, 2000, September, *Galpin* 1074 B ; Barberton, *Rogers* 21567, 23891 ; Pietersburg Div., Macoutsie River, *Breijer in Herb. Transvaal Mus.* 18664.

Mr. Eyles says in regard to his specimen No. 1235 : " In December, 1917, I planted here several of the seeds of No. 1235 (over fourteen years old) after soaking forty-three hours in water. Germination was 100 per cent., and one of the plants has been growing since. It is about 12–15 ft. high, and in March it was profusely covered with medium-sized yellow flowers which never opened until 4.30 p.m. daily."

9. *Sesbania macrantha* * *Welw.*, MSS. *S. punctata* Hiern. in Cat. Afr. Pl., Welw., i, 231, partly, non D.C.

* *Sesbania macrantha* *Welw. mss.*, sp. nov. affinis *S. cinerascens* *Welw.* sed. caulibus et pedunculis dense aculeatis differt.

Herba usque ad 5 m. alta ; rami leviter costati, plerumque aculeati. Folia 5.5–18 cm. longa ; petioli 0.7–2 cm. longi, glabri vel parce aculeati ; foliola 5–34-jugata, petiolulata, 0.9–2.4 cm. longa, 2–6 mm. lata, oblonga vel oblongo-linearia, apice rotundata et mucronata, basi inaequalia, glabra, punctis minutis nigris ; stipulae usque ad 1.4 mm. longae, lanceolatae, acuminatae foliaceae, subpersistentes. Inflorescentia 13–20 cm. longa, 6–14-flora ; pedunculi inferne aculeati ; bractae mox deciduae ; pedicelli 0.6–1.5 cm. longi, glabri. Calycis tubus 5–6 mm. longus, campanulatus glaber, dentibus 1 mm. longis, ovatis, subacuminatis, lanato-ciliatis. Vexillum 1.7 cm. longum, 2 cm. latum, rotundatum, retusum. Alae 1.8 cm. longae, 8 mm. latae, obovatae, obtusae. Carnia 1.5 cm. longa, 5.5 mm. lata. Vagina staminalis 1.2 cm. longa. Ovarium compressum. Fructus 25–29 cm. longus, leviter compressus, circiter 6 mm. latus, acuminatus marginibus incrassatis. Semina 6 mm. longa, 3 mm. lata, oblonga, utrinque rotundata, glabra.

Herb. up to 5 m. high. *Branches* slightly ribbed, usually covered with prickles, glabrous. *Leaves* 5.5–18 cm. long; petiole 0.7–2 cm. long, glabrous, sometimes with a few prickles; leaflets 5–24-jugate, petiolulate, 0.9–2.4 cm. long, 2–6 mm. broad, oblong to oblong-linear, rounded and mucronate at the apex, unequal at the base, glabrous, punctate with minute black dots; petiolule 1 mm. long; stipules up to 1.4 mm. long, lanceolate, acuminate, foliaceous, subsistent. *Inflorescence* 13–20 cm. long, 6–14-flowered; lower portion of peduncle covered with prickles; bracts deciduous, not seen; pedicels 0.6–1.5 cm. long, glabrous. *Calyx-tube* 5–6 mm. long, campanulate, five-veined, glabrous; teeth 1 mm. long, ovate, subacuminate, woolly-ciliate. *Vexillum* 1.7 cm. long, 2 cm. broad, rounded, retuse above, produced into a claw 2 mm. long; alae 1.8 cm. long, 8 mm. broad, somewhat obovate, obtuse, produced into a curved linear claw 5 mm. long, and with an inclined tooth forming a horse-shoe-shaped loop with the claw; carina 1.5 cm. long, 5.5 mm. broad, obtuse, with a downward projecting claw. *Staminal sheath* 1.2 cm. long, 6 mm. broad at the base; the free portion of the filaments arcuate; free stamen kneed near the base. *Ovary* compressed, with two longitudinal bands; style arcuate; stigma capitate. *Fruit* 25–29 cm. long, somewhat compressed, about 6 mm. broad, acuminate; the valves thickened. *Seeds* 6 mm. long, 3 mm. broad, oblong, rounded at each end, glabrous.

TROPICAL AFRICA: Uganda: Kampala, tall handsome shrub, *Scott Elliot* 7267. "Elephant grass" land near Kasala Forest, slender, up to 15 ft. high, fls. yellow, *Dümmer* 742. British East Africa: Aberdare Mts., 5000–6500 ft., *Battiscombe* 8; two days' march from Mumias, *A. Whyte*; Nyasaland: Nyika Plateau, 6000–7000 ft., *A. Whyte*; Congo: Elizabethville, *Rogers* 26224; Southern Rhodesia: Odzani River Valley, Manica Dist., *A. J. Teague* 15; Angola: Huilla, in bushy places along the banks of the River Monino, fls. and fr., *Welwitsch* 1995; Pungo Andongo, in palm groves on the banks of the River Cuanza, near Sansamanda, rather rare, *Welwitsch* 1997.

SOUTH AFRICA: Transvaal: Waterval Onder, *Jenkins in Herb. Transvaal Mus.* 6724.

This appears to be a very fine species, resembling in its aculeate stems and peduncles *S. aculeata*, but with much larger stipules, inflorescence, and fruits than in that species.

10. *Sesbania pubescens*, D C. Prodr. ii, 265 (1825); Baker in Oliv. Fl. Trop. Afr. ii, 135 (1871); Hiern. in Cat. Afr. Pl. Welw. i, 231 (under *Sesban*) (1896). *Emerus pubescens*, Schum. Guin. Pl., 354 (1827).

A slender shrub growing near water; branches ascending, slightly angular when older, finely and rather laxly pubescent; young growths densely silky-pubescent. *Leaves* three or four times as long as the inflorescence, about 12 cm. long; rachis thinly pubescent; leaflets 12–18 pairs (usually about 17 pairs), shortly stalked, elongated-oblong, rounded on one side, slightly narrowed on the other, rounded and with a prominent subulate mucro at the apex, 1.5–2.3 cm. long, 5–6 mm. broad, glabrous but densely covered with minute black spots above, adpressed silky-pubescent below; stipules soon falling off, linear-subulate, very acute, 6–7 mm. long, with narrowly membranous edges, slightly pubescent up the middle; stipels minute. *Inflorescence* about 3 cm. long, or up to 8 cm. very slender, simply racemose or rarely branched; peduncle thinly pubescent; pedicels about 5 mm. long; bracts like the stipules, but with wider membranous margins, soon falling. *Flowers* yellow, about 1 cm. long; buds ellipsoid, beaked at the apex, about 5 mm. long, glabrous. *Calyx* campanulate from a broadly turbinate base, 5 mm. long, with five broadly triangular acute lobes slightly puberulous on the margin. *Vexillum* probably not spotted, about 8 mm. long, with two wholly adnate appendages on the claw. *Alae* about 8 mm. long. *Carina* limb as long as the claw. *Ovary* and style glabrous. *Fruits* curved, about 15 cm. long, 3 mm. broad, with thickened margins, acutely beaked, glabrous. *Seeds* oblong, reddish-brown, about 3 mm. long.

TROPICAL AFRICA: Senegambia: Marshes near Nboro, 1840, *Brunner*; without locality, *Thiery*; *Perrottet* 228. Gold Coast: Accra, *T. W. Brown* 419; Axim, *T. F. Chipp* 426; Aburi Gardens, *W. H. Johnson* 950. Dahomey: Cotonou, *Debeaux* 150

(Herb. Mus. Brit.). Western Sudan: between Madoo and Berirem, *A. Chevalier* 10095. St. Thomas Island, *A. Moller* 86. Angola: Loanda; rather rare in moist sandy places (near Praia de Zamba Grande, fl. and fr. Mar., Apr., *Welwitsch* 1992. Tanganyika Territory, *Stuhlmann* 7906.

This species is distinguished especially by its very small flowers and slender inflorescences. *S. sericea* D.C. from Ceylon is a very closely allied species, with fruits usually broader than those of *S. pubescens*.

11. *Sesbania Dalzielii* * n. sp.

A slender shrub up to 2 m. high; branches weak, angular when young, slightly pubescent, at length striate. *Leaves* usually longer than the inflorescence, 15–25 cm. long; rachis and leaflets silky pubescent; leaflets up to 40 pairs, shortly stalked, linear-oblong, rounded and acutely mucronate at the apex, obliquely acute at the base, 0.8–2.5 cm. long, 2–3.5 mm. broad, coriaceous, appressed silky-pubescent on both surfaces; stipules linear-subulate, acute, very soon falling off; stipels very minute. *Inflorescence* slender and laxly flowered; the uppermost ones longer than their subtending leaves; peduncle pubescent towards the base; pedicels slender, glabrous, bibracteolate towards the apex; bracteoles linear, 2 mm. long, falling off before the flower opens. *Flower-buds* ellipsoid-turbinate, shortly acuminate, glabrous. *Calyx* campanulate, acutely turbinate at the base, 5 mm. long, glabrous outside, ciliate within the five acutely acuminate lobes. *Vexillum* with two small sessile appendages on the claw. *Ovary* glabrous. *Fruit* about 20 cm. long, strongly torulose, shortly and acutely beaked, about 25-seeded. *Seeds* oblong-ellipsoid, 5 mm. long, green and shining.

TROPICAL AFRICA: Northern Nigeria: Abinsi and vicinity in marshy places, *J. M. Dalziel* 614 (type). Katagum District, marshy places, *J. M. Dalziel* 8, "Niger," *Bakie* 9. Jeba, on the Niger, *Barter*. Western Sudan: Koulikoro, *Chevalier* 3390.

12. *Sesbania Wildemannii*, nom. nov.

Sesbania affinis De Wild, in Ann. Mus. Cong. Ser. V, 1, 141 (1904), non Schrad.

Stems terete, finely longitudinally grooved, glabrous. *Leaves* up to about 9 cm. long; rachis angular, shortly pubescent; leaflets about 20–25 pairs, linear-oblong, rounded and mucronate at the apex, obliquely unequal-sided at the base, about 8 mm. long and 2 mm. broad, grey, at length glabrous above, finely appressed-pubescent below; stipules small, deciduous. *Inflorescence* few-flowered, very slender; peduncle slightly pubescent; pedicels nodding, 7 mm. long; bracts and bracteoles deciduous. *Flowers* about 1.5 cm. long. *Calyx* ribbed, pubescent outside, with five acutely triangular teeth. *Vexillum* finely mottled outside, with two sessile appendages on the claw. *Fruits* very narrow, about 15 cm. long and 2.5 mm. broad, glabrous, straight or very slightly torulose. *Seeds* oblong, rounded at the ends, 3 mm. long, brownish.

TROPICAL AFRICA: Belgian Congo: Between Leopoldville and Mombazi, *Gillet*. 2626.

We have seen rather an imperfect specimen of this species, which appears distinct on account of its hairy calyx tube.

* *Sesbania Dalzielii*, *Phillips et Hutchinson*, sp. nov., affinis *S. pubescenti* DC., sed fructibus torulosis differt.

Frutex gracilis usque ad 2 m. altus; rami debiles, primum angulares, leviter pubescentes, demum striati. *Folia* inflorescentia plerumque longiora, 15–25 cm. longa; rachis et foliola sericeo-pubescentia; foliola usque ad 40-jugata, breviter petiolulata, lineari-oblonga, apice rotundata et acute mucronata, basi oblique acuta, 0.8–2.5 cm. longa, 2–3.5 mm. lata, coriacea, utrinque appresse sericeo-pubescentia; stipulae lineari-subulatae, acutae, mox deciduae; stipellae minutissimae. *Inflorescentia* gracilis et laxiflora; pedunculii basin versus pubescentes; pedicelli graciles, glabri, bibracteati; bracteolae lineares, 2 mm. longae, mox deciduae. *Alabastra* ellipsoideo-turbinata, breviter acuminata, glabra. *Calyx* campanulatus, basi acute turbinatus, 5 mm. longus, extra glaber, lobis 5 acute acuminatis intra ciliatis. *Vexillum* basin versus appendicibus sessilibus instructum. *Ovarium* glabrum. *Fructus* circiter 20 cm. longus, valde torulosus, breviter et acute rostratus. *Semina* circiter 25, oblongo-ellipsoidea, 5 mm. longa, viridia et nitida.

13. *Sesbania leptocarpa*, D.C. Prodr. ii, 265 (1825); Guill. et Perrott. Fl. Seneg. i, 199, (1830-33); Baker in Oliv. Fl. Trop. Afr., ii, 135, partly (1871).

Stem herbaceous, sparingly branched, glabrous, finely grooved. *Leaves* up to 9 cm. long, longer than the inflorescence; rachis very slightly aculeate towards the base; leaflets 8-18 pairs, distinctly stalked, narrowly oblong, very unequal-sided at the base, rounded and finely mucronate at the apex, 1-1.3 cm. long, about 2.5-3 mm. broad, finely punctate with numerous black spots on both surfaces, otherwise glabrous; stipules very soon falling off, linear-lanceolate, acute, about 2.5 mm. long, slightly hairy towards the tips; stipels minute, like little points. *Inflorescence* a simple raceme, about three-flowered; peduncle slender, slightly aculeate towards the base; bracts like the stipules, very soon falling off; bracteoles small, at the base of the calyx tube. *Flowers* small, about 1 cm. long. *Calyx* turbinate-campanulate, 4 mm. long, glabrous, with five triangular subacute teeth slightly puberulous on the margin. *Vexillum* suborbicular, striate and slightly punctate, about 1 cm. long; claw without appendages at the base or only slight thickenings representing them. *Alae* and keel striate. *Ovary* and style glabrous. *Fruits* 12-15 cm. long, 3 mm. broad, torulose, with a dark blotch between the joints, acutely acuminate, 14-24 seeded. *Seeds* black, 3 mm. long.

TROPICAL AFRICA: Senegambia: Moist plains around St. Louis, at north Point, near the Walo River, Richard-Tol, Dagana, etc., *Hendelot* 489; *Perrottet* 233.

This species is distinguished by its slightly aculeate peduncles, by the *absence of appendages* from the claw of the vexillum, and the torulose blotched fruits. It is apparently confined to Senegambia.

14. *Sesbania pachycarpa* D.C. Prodr. ii, 265 (1825); Guill. et Perrott. Fl. Seneg. 200, t. 50 (1830-33); Baker in Oliv. Fl. Trop. Afr., ii, 134, partly (1871). *Sesban phaeocarpus*, Hiern. in Cat. Afr. Pl. Welw. i, 232, partly, non Welw.

Stems herbaceous, pithy, glabrous. *Leaves* 40 cm. long, many times longer than the inflorescence; rachis contracted at the base, glabrous; leaflets very numerous, linear-oblong, truncate or rounded and mucronate at the apex, slightly oblique at the base, 1-2 cm. long, 3-5 mm. broad, glaucous-green, glabrous, very minutely punctate with black spots; stipules linear, nearly 1 cm. long, glabrous. *Inflorescence* short, slender, few-flowered, or sometimes reduced to two or three flowers; peduncle smooth; pedicels up to 1 cm. long, with two early deciduous bracteoles towards the apex. *Calyx* broadly campanulate, from a sharply turbinate base, 5 mm. long, finely puberulous within the margins of the acutely triangular lobes. *Petals* yellow; the vexillum densely mottled with dark spots. *Appendages* to vexillum adnate to the claw. *Fruits* erect, curved, about 15 cm. long and 7 mm. broad, when ripe acutely beaked, with straight margins to the valves, but with slight constrictions between the seeds between the margins. *Seeds* separated by partitions of the sub-membranous endocarp, broadly oblong, truncate at each end, 3.5 mm. long, rarely 3 mm. thick, pale brown.

TROPICAL AFRICA: Senegambia: *Perrottet* 230 (Herb. Mus. Brit.). Northern Nigeria: Bornu, *E. Vogel* 79; Katagum District, *J. M. Dalziel* 9; near Abinsi, *J. M. Dalziel* 615. Eastern Sudan: South Kordofan, *Pfund* 134; *Kotschy* 72. "Upper Nile," *Freeman and Lucas*. Abyssinia: Terrefera Valley, *Schimper* 775. Angola: Loanda, *Welwitsch* 1991 (Herb. Kew. non Herb. Mus. Brit.); Mossamedes, *Welwitsch* 1996b.

Known in Nigeria as "Zamarke" (*Dalziel*).

15. *Sesbania aculeata* Pers. Synops. ii, 316, partly (1807); D.C. Prodr., ii, 265 (1825); Prain in Journ. Asiat. Soc., Bengal, lxvi, 369 (1897). *Sesban punctatus*, Hiern. in Welw. Cat. Afr. Pl. i, 230, partly. *Sesban aegyptiacus* Hiern, l.c., 231, non Poir.

A weed of moist places often up to 5 m. high; stem patently branched from the base to apex, often aculeate, but sometimes smooth. *Leaves* up to 25 cm. long; rachis generally aculeate below; leaflets about thirty pairs, generally about 1.5 cm. long and

3 mm. broad, glabrous and often glaucous; stipules linear-lanceolate, very acute, about 7 mm. long, glabrous, often sub-persistent. *Inflorescence* mostly rather few-flowered and much shorter than the subtending leaf; peduncle aculeate or smooth; pedicels slender, about 5 mm. long, glabrous. *Flowers* yellow, about 1.5 cm. long. *Calyx* tube 3 mm. long, campanulate, glabrous; teeth 1-2 mm. long, subacute. *Vexillum* yellow spotted on the back, with two sessile linear appendages on the claw. *Alae* oblong or oblong-obovate. *Carina* 1.3 cm. long, 4 mm. broad. *Staminal sheath* 1-1.2 cm. long. *Ovary* glabrous. *Fruits* 15-20 cm. long, straight or slightly curved, about 3 mm. thick, tipped with a long slender acute beak. *Seeds* oblong-ellipsoid, rounded at both ends, about 3 mm. long.

TROPICAL AFRICA: Senegal, *Perrotet* 229. Sierra Leone: Falaba, *Scott Elliott* 5220; near Luseniya, about 15 ft., with purplish flowers, *Scott Elliott* 4219. Gold Coast: Accra, *Krauss*; Lagos, *J. M. Dalziel* 1227; *Macgregor* 13. French Congo: Ft. Sibut, Krebedje, *Chevalier* 5675. Cameroons: Yaunde, *Zenker and Staudt* 501. Angola: Quiballa, *Monteiro*. Mossamedes, *Welwitsch* 1996. Between Huilla Mission Station and Chibia, *H. H. W. Pearson* 2699, 2724. Golungo Alto, *Welwitsch* 1994. Mossamedes. Eastern Sudan: *Schweinfurth* 1046, 1869; *Kotschy* 539; *Brown* 1075. Abyssinia: *Quartin-Dillon and Petit* 169. Colonia Eritraea: Beni-Amer, *Pappi* 161. British East Africa: Mombassa, in damp meadows, *Hildebrandt* 1990; *Kassner* 471; *Usambara*, *C. Holst* 3212. Nyasa Highlands, *Stolz* 267. Nyasaland: *Johnson* 361; *Buchanan* 910. Rhodesia: Matopos, *Allen* 731. Ngamiland: Kwebe Hills, swampy places, *Lugard* 161, 161a, 168. Portuguese East Africa: Lourenço Marques, *Schlechter* 11585; *Wilms* 422.

SOUTH AFRICA: Transvaal: Shilovane, *Junod* 1131. Crocodile Poort, shrub 8 ft., *Galpin* 1074a. Aapies River, north of Pretoria, *A. Haagner in Herb. Conrath* 1185. Barberton Division: Nelspruit, *Rogers* 23858. Natal, *Drege*, *Sutherland*; *Gerrard* 32; *Keun*, *Wood* 287, 1593; *Gerrard and McKen.* 734.

A common weed in most tropical countries.

16. *Sesbania arabica*, *Hochst. ex Steud.*, *Nom. ed. II, ii, 572* (1840).

Stems glabrous, rather slender, finely grooved. *Leaves* up to 15 cm. long, much longer than the inflorescence; rachis smooth; leaflets up to thirty pairs, distinctly stalked, linear-oblong, rounded and minutely mucronate at the apex, obliquely one-sided at the base, about 1.5 cm. long and 2.5-3 mm. broad, glaucous-green; stipules lanceolate, with a long linear acuminate apex, slightly pubescent on the margin, sub-persistent; stipels very minute, like little points. *Inflorescence* mostly about two or three flowered, slender; peduncle glabrous or nearly so; bracteoles paired at the base of the calyx, narrowly lanceolate, with membranous margins. *Flowers* apparently yellow; the vexillum finely mottled with purple. *Calyx* broadly campanulate from a shortly turbinate base, about 5 mm. long, slightly pubescent within the margins of the acute triangular teeth. *Vexillum* with two linear sessile appendages on the claw. *Fruits* erect, nearly straight, up to about 25 cm. long, strongly constricted between the seeds, segments about 6 mm. long. *Seeds* oblong-ellipsoid, rounded at both ends, 4.5 mm. long, dark brown, slightly shining.

TROPICAL AFRICA: Northern Nigeria: Benne Valley, Muri Province, Nov., *P. H. Lamb* 69. Eastern Sudan: S. Kordofan, *Pfund* 132, 308; *Kotschy* 47. Blue Nile, near "Camp Ardeba," *Muriel* 65. Mestra Zeraf Wood Station, *Brown* 1737. Colonia Eritrea: Beni-Amer, *Pappi* 166.

Occurs also in Southern Arabia. Arabic name, "Tawri" (*Muriel*).

17. *Sesbania sphaerocarpa* *Welw.* *Apont.* 590, No. 82 (1858); *Hiern. in Cat. Afr. I* *Welw.*, i, 232, partly. *Sesbania sphaerosperma*, *Welw. ex Baker in Oliv. Fl. Tro. Afr.*, ii, 135 (1871).

Herb, rather woody at the base, about 30 cm. high or more; stems smooth or sparingly aculeata. *Leaves* up to 15 cm. long; rachis slightly aculeate below; leaflets up to about twenty pairs, elongate-oblong, rounded and minutely mucronate at the apex, unequal-sided at the base, 1.5-2.5 cm. long, about 5 mm. broad, pale glaucous-green, glabrous; stipules linear-subulate, acutely acuminate, about 8 mm. long, slightly hairy on the margins, soon falling off. *Inflorescence* very small, 2-3-flowered, about 1.5 cm. long; peduncle slender, slightly hairy towards the base; pedicels very slender, about 5 mm. long, glabrous; bracts and bracteoles caducous. *Calyx* widely campanulate, acutely turbinate at the base, with five short acute lobes. *Vexillum* broadly orbicular, with two sessile linear appendages on the claw. *Fruits* about 16 cm. long, 3 mm. broad, linear, acutely acuminate, with an undulate wing on the back of the valves. *Seeds* nearly rounded, small.

TROPICAL AFRICA: Angola: Loanda District, *J. Gossweiler* 253, 1479; Loanda-*Welwitsch* 1991, 1993.

18. *Sesbania microphylla*, *Harms* in Kunene-Samb. Exped., 260 (1903).

An erect branching herb, up to 2 m. high; branches ribbed, glabrous. *Leaves* 2-12 cm. long; petiole 0.2-1 cm. long, glabrous; rachis flattened on the upper surface, glabrous, leaflets 5-30-jugate, subsessile, 2-7 mm. long, 0.5-2.5 mm. broad, oblong or elliptic, obtuse, shortly mucronate, slightly unequal at the base, punctate above with minute black dots, glabrous, with the mid-rib distinct beneath. *Stipules* 2.5-3 mm. long, setaceous, deciduous, or persistent. *Inflorescence* axillary, racemose, three or four flowered, 2-6 cm. long, longer or shorter than the subtending leaf; base of peduncle glabrous; bracts deciduous, not seen; bracteoles 2.5 mm. long, setaceous, persistent in mature flowers; pedicels 1-2 cm. long, glabrous. *Calyx-tube* 3 mm. long, 3 mm. in diameter, campanulate, with five broad brown bands; teeth 1 mm. long, ovate, with brown acuminate tips. *Vexillum* yellow, mottled with numerous fine purple spots on the back, 1.5 cm. long, 1.1 cm. broad, ovate-oblong, rounded above, with two adnate linear-appendages within a short claw 1.5 cm. long. *Alae* 1.6 cm. long, oblong, obtuse, with a linear claw 2.5 cm. long, and a downward projecting tooth from the base of the lamina. *Carina* 1.65 cm. long, 5 mm. broad, almost plano-convex in outline, with a linear claw 6 mm. long, and a downward projecting tooth from the lamina. *Staminal sheath* 1 cm. long, 2 mm. broad at the base, with the free portion of the filaments arcuate; free stamen slightly bent at the base; anthers 0.75 mm. long, ovate. *Ovary* 1.3 cm. long, sub-compressed, with two faint longitudinal bands; style 4 mm. long, arcuate; stigma capitate. *Fruit* 11.5-12.5 cm. long, 2-2.5 mm. broad, linear, acutely acuminate, laterally compressed, moniliform. *Seeds* dark brown, 3 mm. long, 1.5 mm. broad, oblong, rounded at both ends, glabrous.

TROPICAL AFRICA: Angola: Mouth of the Longa River, 3480 ft., 22nd December, 1899, *H. Baum* 569. Eastern Sudan: Bahr. el Ghazal, flowers yellow mottled with black, *A. F. Broun.* Rhodesia: Lomagundi, Darwendale on pierite formation, in vleis, April, *Eyles*, 695; Bulawayo, *J. S. MacDonald* in *Herb. Dept. Agric.* 4942.

19. *Sesbania mossambicensis*, *Klotzsch* in Peters, Reise Mossamb. Bot. 45 (1861). *Sesbania macowaniana* Schinz. in Verh. Bot. Ver. Brand, XXX, 165 (1888).

A weak sparingly branched herb about 1 m. high. *Branches* striate, glabrous. *Leaves* 1.5-11 cm. long; petiole 2-7 mm. long, glabrous; rachis flattened or channelled above, glabrous, rarely sparsely covered with hairs; leaflets 7-33-jugate, subsessile, oblong or oblong-linear, rounded at the apex, shortly apiculate, unequal at the base, glabrous, 0.3-1 cm. long, punctate with minute black dots on the upper surface, with the mid-rib distinct beneath; stipules usually persistent, 2-5 mm. long, ovate or ovate-lanceolate, acuminate, acute. *Inflorescence* an axillary raceme, 1-7 cm. long, 3-8-flowered, longer or shorter than the subtending leaf; peduncles glabrous; bracts generally persistent, 2 mm. long, linear; bracteoles persistent, 1.5 mm. long, linear; pedicels 3-7 mm. long,

glabrous. *Calyx-tube* 3-4 mm. long, 2-3 mm. in diameter, campanulate, glabrous, with five dark-brown bands; teeth 1-1.5 mm. long, acuminate from a triangular base, acute, with black tips, usually with cottony hairs on the margins. *Vexillum* striped with dark veins, but not mottled, 0.8-1.1 cm. long, 0.8-1.1 cm. broad, subrotund, obovate or transversely oblong, rounded and retuse at the apex, with a claw 2 mm. long. *Alae* 0.8-1.2 cm. long, 3-4 mm. broad, obovate or obovate-oblong, obtuse, with a linear claw 1.5-3 mm. long, and a short downward projecting tooth from the lamina. *Carina* 0.9-1.2 cm. long, 3-4 mm. broad, almost plano-convex in outline, obtuse, with a linear claw 5-7 mm. long, and a downward projecting claw from the lamina. *Staminal sheath* 0.7-1 cm. long, 1-3 mm. broad at the base, with the free portions of the filaments arcuate; free stamen dilated at the base. *Ovary* 0.7-1.1 cm. long, subcompressed, with two faint longitudinal bands; style 3-4 mm. long, arcuate, glabrous; stigma capitate. *Fruit* 4-6 cm. long, moniliform, long-acuminate. *Seeds* dark reddish-brown, 2.5 mm. long, 1.25 mm. broad, oblong, rounded at each end, glabrous.

TROPICAL AFRICA: Maniniam: On the Tubbo River, *G. Schweinfurth* 3674. Portuguese East Africa: Cabaceira Peninsula and near Quillimane, *Peters* (type). Congo: Elisabethville, *Rogers* 10872; without locality, *Rogers* 13641.

SOUTH AFRICA: Herbert Div., Biddulphis, nine miles north of Orange River at Hopetown, February, *Bolus* 1835; Gariep River, *Pappe*: Transvaal: Makapansberge, Streydpoort, *A. Rehmman* 5543. Pretoria Div., near the Aapies River, 4500 ft., January, *Schlechter* 4179; *Miss Leendertz* 3205; Pretoria, March, *Mrs. Pott in Herb. Transvaal Mus.* 11333; *Miss Leendertz* 4413; Hatherley, near Pretoria, *Rogers* 23943; Rustenburg Div., Rustenburg, January, *Playford in Govt. Herb.* 17268; Crocodile River, March, *Burt-Davy*, 9297; Zeerust Div., Zeerust, *Rogers* 22672; Potchefstroom Div., Potchefstroom, *Miss Leendertz* 3205; Pietersburg Div., grassy plains near Pietersburg, 4000 ft., February, *Bolus* 10879. Bechuanaland: Masupa River, *E. Holub*. S.W. Protectorate: Klein Namutoni, *J. W. F. Breijer in Herb. Transvaal Mus.* 20618.

§ DAUBENTONIA.

20. *Sesbania tetraptera*, *Hochst. ex Baker* in *Oliv. Fl. Trop. Afr.*, ii, 136 (1871).

Stems ridged, otherwise glabrous, about 4 mm. thick. *Leaves* up to 12 cm. long, nearly twice as long as the inflorescence; rachis sparingly pubescent when young, soon becoming quite glabrous or with a few small prickles on the lower side towards the base; leaflets about fifteen pairs, shortly stalked, narrowly oblong, unequal-sided at the base, truncate-rounded and sharply mucronate at the apex, 1.2-2 cm. long, 3-4.5 mm. broad, glabrous, spotted with minute black dots on the upper side, with no visible nerves or veins; stipules subsistent, subulate-lanceolate, very acute, 5-6 mm. long, very slightly pubescent inside; stipels very minute and subulate. *Inflorescence* a simple raceme, few (up to seven) flowered; peduncle up to 6 cm. long, thickened at the base and there closely beset with subulate-triangular prickles; bracts linear-subulate, about 3 mm. long, persistent; pedicels about 7 mm. long, filiform, with a pair of linear deciduous bracteoles at the apex about one-third the length of the calyx. *Calyx* campanulate, turbinate at the base, 5 mm. long, with five short triangular lobes, the latter minutely pubescent inside the margin. *Vexillum* broadly orbicular, 1.2 cm. long, cuneate into a short claw about 2 mm. long, with two linear sessile ridge-like appendages about 2 mm. long near the base. *Alae* oblong; limb 8.5 mm. long; claw bent, 5 mm. long. *Carina* broadly semilunar; limb 8 mm. long, with an acutely triangular tooth on the upper side; claw curved, 5 mm. long. *Staminal sheath* 0.8 cm. long, free part of filaments 3-4 mm. long; anthers 0.75 mm. long. *Ovary* 8 mm. long, four-winged; style bent at right angles, 3 mm. long, puberulous towards the top. *Fruits* much longer than the leaves, 15 cm. long, 1 cm. broad, broadly four-winged, stipitate, for about 1 cm. at the base, acutely acuminate at the apex. *Seeds* reddish-brown, oblong-elliptic, broadly rounded at both ends, 6 mm. long, with a small circular hilum in the middle.

TROPICAL AFRICA: Nubia: In dry limestone of Arasch-Cool, 7th October, 1839, *Kotschy* 131 (H.K.). "Upper Egypt and Cordofan," without definite locality, 1837-38, *Kotschy* 83 (H.K.).

21. *Sesbania Kirkii* * n. sp.

Stems slightly ridged or nearly smooth, not prickly, rather stout, about 5-6 mm. thick. *Leaves* up to 30 cm. long, more than twice as long as the inflorescence; rachis sparingly pilose when very young, soon glabrous or with one or two small prickles on the lower side towards the base; leaflets up to about 35 pairs, shortly stalked, elongate-oblong or linear-oblong, slightly unequal-sided at the base, rounded and mucronate at the apex, 2.5-3.5 cm. long, about 5-6 mm. broad, spotted with minute black dots on the upper surface, otherwise glabrous, with several faint lateral nerves; stipules persistent, lanceolate or linear-lanceolate, acutely acuminate, 1 cm. long, pubescent inside; stipels distinct, subulate, about 1 mm. long. *Inflorescence* several flowered, racemose, slender, up to 14 cm. long; peduncle slender, broadened towards the base and there provided with numerous subulate spreading prickles; bracts persistent, longer than the pedicels, linear-lanceolate, very acute, 5-6 mm. long, sparingly ciliate; pedicels about 4 mm. long, slender, glabrous, with a pair of persistent bracteoles a little more than half as long as the calyx. *Calyx* campanulate, turbinate at the base, 4 mm. long, with five triangular lobes about 1 mm. long, the latter minutely ciliate. *Petals* as in *S. tetraptera* Hochst. *Fruits* much shorter than the leaves, about 15 cm. long and nearly 1.5 cm. broad, stipitate for about 1 cm. at the base, very acutely beaked, acuminate, broadly four-winged. Ripe seeds not seen.

TROPICAL AFRICA: Zambezi Basin: Tette, fls., February, 1859, *Dr. J. Kirk* (H.K.); near Sena, fr., June, 1859, *Dr. J. Kirk* (H.K.). Lower Shire, elephant marsh, especially on the banks of the river, fls. and fr., February, 1887, *L. Scott* (H.K.).

22. *Sesbania hamata*, † n. sp.

* *Sesbania Kirkii*, *Phillips et Hutchinson*, sp. nov.; affinis *S. tetraptera*, Hochst., sed foliis, fructus brevioribus foliolis numerosissimis majoribus inflorescentiis multifloris differt.

Caulis leviter costati vel fere teretes, haud aculeati, tatis robusti, circiter 5-6 mm. crassi. *Folia* usque ad 30 cm. longa, inflorescentiae ultra duplo-longiora; rachis primum parce pilosus, mox glaber vel inferne aculeis paucis instructus; foliola usque ad 35-jugate, breviter petiolulata, elongato-oblonga vel lineari-oblonga, basi leviter inaequilatera, apice rotundata et mucronata, 2.5-3.5 cm. longa, circiter 5-6 mm. lata, supra punctis nigris minutis maculata, ceterum glabra, nervis lateralibus subdistinctis; stipulae persistentes, lanceolatae vel lineari-lanceolatae, acute acuminatae, 1 cm. longae, intra pubescentes; stipellae distinctae, subulatae, circiter 1 mm. longae. *Inflorescentia* pluriflora, racemosa, gracilis, usque ad 14 cm. longa; pedunculi graciles, basin versus latiores et aculeis numerosis subulatis patulis instructi; bractae persistentes, pedicellis longiores, lineari-lanceolatae, acutissimae, 5-6 mm. longae, parce ciliatae; pedicelli circiter 4 mm. longi, graciles, glabri, apice bracteolis calyce dimidio brevioribus instructis. *Calyx* campanulatus, basi turbinate, 4 mm. longus, lobis triangularibus 5 circiter 1 mm. longis minute ciliolatis. *Petala* ut in *S. tetraptera*, Hochst. (supra). *Fructus* foliis multo brevior, circiter 15 cm. longus et fere 1.5 cm. latus, basi 1.5 cm. stipitatus, apice acutissime rostrato-acuminatus, late 4-alatus. *Semina* matura non visa.

† *Sesbania hamata*, *Phillips et Hutchinson*, sp. nov.; affinis *S. tetraptera* Hochst., sed caulibus aculeis hamatis ornatis inflorescentis plurifloris differt.

Caulis longitudinaliter costatus, aculeis hamatis. *Folia* 9-18 cm. longa; rachis interdum aculeis paucis ornatus; foliola 14-20-jugate, subsessilia, oblonga vel lineari-oblonga, apice rotundata, distincte mucronata, 1.2-2.7 cm. longa, 2.5-6 mm. lata, supra dilute viridia, glabra; stipulae persistentes, lineis rubro-brunneis striatae, 0.6-1 cm. longae, oblique lanceolatae, acuminatae, glabrae. *Inflorescentia* axillaris, racemosa, 9-11 cm. longa, 6-9-flora, folio subtendente circiter aequilonga; pedunculi inferne aculeis numerosis hamatis instructi; bractae persistentes, circiter 5 mm. longae, lanceolatae, acuminatae, acutae, leviter ciliatae; bracteolae bracteis similes sed breviores; pedicelli 0.9-1.5 cm. longi, glabri. *Calycis tubus* 3 mm. longus, 4 mm. latus, campanulatus, glaber, dentibus 1 mm. longis ovatis acutis glabris. *Vezillum* maculatum, 1-2 cm. longum, 1.3 cm. latum, transverse oblongum, ungue 3 mm. longo; alae 1.25-1.3 cm. longae, 4 mm. latae, oblongo-ovatae, superne rotundatae, ungue lineari circiter 3 mm. longo et dente recurvato; carina 1.2 cm. longa, obtusa, ungue 5 mm. longo. *Tubus staminatis* 3 mm. longus, 3 mm. latus, filamentis superne arcuatis liberis; stamen liberum 8 mm. longum. *Ovarium* subsessile, 8 mm. longum, 4-alatum, glabrum; stylus 3 mm. longus, ab ovario sub angulo 45° divergens, pubescens, stigmatibus capitato. *Fructus* immaturi usque ad 9.5 cm. longi, 4.5 mm. lati, lineares, 4-alati, stylo persistente coronati.

Stem with longitudinal ridges, covered with hook-like prickles. *Leaves* 9–18 cm. long; rachis sometimes with a few hook-like prickles on the lower half; leaflets 14–20 pairs, subsessile, oblong or linear-oblong, rounded at the apex, distinctly mucronate, 1.2–2.7 cm. long, 2.5–6 mm. broad, pale green above, glabrous, with the mid-rib distinct beneath; stipules persistent, striped with reddish-brown marks, 0.5–1 cm. long, obliquely lanceolate, acuminate, glabrous. *Inflorescence* an axillary raceme 9–11 cm. long, 6–9-flowered, about as long as the subtending leaf, the lower half of the peduncle covered with numerous hook-like prickles; bracts persistent, about 5 mm. long, lanceolate, acuminate, acute, slightly ciliate; bracteoles similar to the bracts but a little shorter; pedicels 0.9–1.5 cm. long, glabrous. *Calyx-tube* 3 mm. long, 4 mm. broad, campanulate, glabrous; teeth 1 mm. long, ovate, acute, glabrous. *Vexillum* spotted, 1.2 cm. long, 1.3 cm. broad, transversely oblong, with a claw 3 mm. long, widening from the base upwards. *Alae* 1.25–1.3 cm. long, 4 mm. broad, oblong-ovate, rounded above, with a linear claw about 3 mm. long and a downward projecting tooth from the limb forming a loop with the claw. *Carina* 1.2 cm. long, obtuse, with a linear claw 5 mm. long, and with an acute tooth projecting at right angles to the limb and forming a horseshoe-shaped loop with the claw. *Staminal sheath* 4 mm. long, 3 mm. broad, with the upper half of the free filaments arcuate; free stamen 8 mm. long, dilated at the base above a short bent claw. *Ovary* subsessile, 8 mm. long, four-winged, glabrous; style 3 mm. long, bent almost at right angles to the ovary, pubescent; stigma capitate. *Young fruits* up to 9.5 cm. long, 4.5 mm. broad, linear, four-winged, tipped with the persistent style.

SOUTH AFRICA: Transvaal: Moist places near the Brak River, 2800 ft., 9th March, 1894, *Schlechter* 4620.

We have seen only one specimen of this apparently distinct species—in the Bolus Herbarium, Capetown. It extends the distribution of the group *Tetrapterae*, formerly only known by the solitary species (*S. tetraptera*) from the Nile districts, through the Zambezi Basin (*S. Kirkii* and *S. Rogersii*) into the sub-tropical Transvaal.

23. *Sesbania Rogersii* * n. sp.

Branched or unbranched plants 30–69 cm. high. *Stem* ribbed, covered with prickles, otherwise glabrous. *Leaves* 1.5–6 cm. long; rachis 3–4 cm. long, subterete; leaflets less than ten pairs, subsessile, 0.5–1.3 cm. long, 2–4 mm. broad, oblong, obtuse, shortly and bluntly mucronate, punctate above with minute black dots, otherwise glabrous, with the mid-rib distinct below; stipules setaceous, 4.5 long. *Inflorescence* an axillary raceme, 2–5 cm. long, 1–4-flowered, longer or shorter than the subtending leaf; peduncle with a few short prickles at the base; bracts 5 mm. long, lanceolate, acuminate, deciduous; bracteoles similar, soon falling off; pedicels 0.5–1.2 cm. long, glabrous. *Calyx-tube* 4 mm. long, campanulate, glabrous; teeth about 1 mm. long, ovate, acute, minutely ciliate. *Vexillum* mottled, 1–1.3 cm. long, 7–8 mm. broad, obovate, with a linear claw

* *Sesbania Rogersii*, *Phillips et Hutchinson*, sp. nov.; affinia *S. hamatae*, *Phillips et Hutchinson*, sed foliis, paucijugis inflorescentiis 1–3-floris, tubo staminorum filamentorum partibus liberis longiore differt.

Plantae simplices vel ramosae usque ad 30–70 cm. altae; caulis costatus, aculeis ornatus, ceterum glaber. *Folia* 1.5–6 cm. longa; rachis 3–4 cm. longus, subteres; foliola 5–8-juga, subsessilia, 0.5–1.3 cm. longae, 2–4 mm. lata, oblongae, obtusae, breviter et obtuse mucronatae, supra minute nigro-lepidotis; stipulae setaceae, 4.5 cm. longae. *Inflorescentia* axillaris, racemosa, 2–6 cm. longa, 1–4-flora, folio subtendente longior vel brevior; pedunculi basin versus aculeis brevibus instructi; bractae 5 mm. longae, lanceolatae, acuminatae, deciduae; bracteolis similibus mox deciduis; pedicelli 0.5–1.2 cm. longi, glabri. *Calycis tubus* 4 mm. longus, campanulatus, glaber, dentibus circiter 1 mm. longis ovatis acutis minute ciliolatis. *Vexillum* irregulariter maculatum, 1–1.3 cm. longum, 7–8 mm. latum obovatum, ungue lineari 2–4 mm. longo apice bifidenticulato. *Alae* 1.3–1.4 cm. longae, 3 mm. latae, oblongae, obtusae, ungue lineari 3 mm. longo dente reflexo; *carina* 1.3–1.5 cm. longa, obtusa, concava, ungue 5–8 mm. longo lineari. *Tubus staminis* 1–1.3 cm. longus basi 1.5–2 mm. latus, antheris 0.5 mm. longis, oblongis. *Ovarium* breviter stipitatum, 1.1–1.2 cm. longum, 4-alatum; stylus 3–3.5 mm. longus, arcuatus, apicem versus pubescens, stigmatibus parvis. *Fructus* 9–15 cm. longi, 1.1–1.2 cm. lati, lineares, acuminati, late 4-alati, medio pallidiores. *Semina* atrorubrobrunnea, 5 mm. longa, 2.5 mm. lata oblonga, utrinque fere truncata, glabra.

2-4 mm. long and two raised ridges above the claw. *Alae* 1.3-1.4 cm. long, 3 mm. broad, oblong, obtuse, with a linear claw 3 mm. long and a short downward projecting tooth. *Carina* 1.3-1.5 cm. long, obtuse, concave, with a linear claw 5-8 mm. long, and a projecting tooth almost at right angles to the limb. *Staminal sheath* 1-1.3 cm. long, 1.5-2 mm. broad at the base; free portion of the filaments shorter than the tube, arcuate; anthers 0.5 mm. long, oblong; free stamen bent near the base, but not swollen. *Ovary* shortly stipitate, 1.1-1.2 cm. long, four-winged; style 3-3.5 mm. long, arcuate, pubescent near the apex; stigma small. *Fruit* 9-15 cm. long, 1.1-1.2 cm. broad, linear, acuminate, broadly four-winged, with a lighter coloured band in the middle of the valves. *Seeds* dark reddish-brown, 5 mm. long, 2.5 mm. broad, oblong, almost truncate at both ends, glabrous.

TROPICAL AFRICA: Rhodesia: Victoria Falls, April, *Flanagan* 3109; North-West Rhodesia, without locality, *Rogers* 8747.

This is a very peculiar species with exactly the appearance of *S. aculeata* in regard to its vegetative and floral characters, but with fruits broadly four-winged as in *S. tetraptera*. It apparently provides a link between the two sections of the genus.
