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Spatallopsis, a New Genus of Proteaceae

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The graph is confined advisedly to the returns given in the above mentioned statement.

The foreign countries include Germany, Netherlands, Belgium, France, Austrian Territories, U.S. America, San Salvador, Colombia, Philippines, and Ecuador, involving probably the produce of three species of *Indigofera*, viz., *Anil*, *arrecta*, and *tinctoria*.

Egypt as a source of Indigo is mentioned once in the returns covered by the chart—17 cwts., value £122 in 1897, and also the French Possessions in India—85 cwts., value £1090.

The British Possessions include Bengal (the chief source), Bombay and Sind, Madras, Straits Settlements, Ceylon and British Honduras, the produce of *Indigofera tinctoria*, and in recent years possibly also of *Indigofera arrecta*. Returns from the Niger Coast Protectorate appear once only—13 cwts., value £19 in 1896, which may have been derived from *Indigofera tinctoria*, but it is possible that it may also have been in part the produce of *Lonchocarpus cyanescens*.

The countries from which Synthetic Indigo comes are Germany (the chief source of supply to this country), France and the Netherlands.

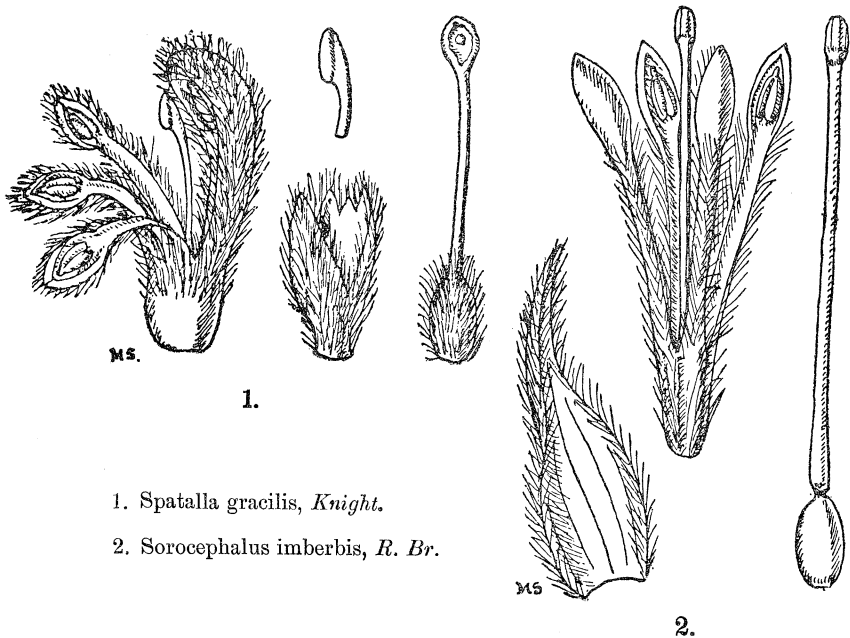
As showing the extent of the trade in Synthetic Indigo between Germany and other parts of the world, in 1905 the exports of Indigo (almost exclusively Synthetic or Artificial) from Germany were (in metric tons) as follows:—To Belgium, 235; France, 135; United Kingdom, 1561; Italy, 467; Netherlands, 640; Austria-Hungary, 1141; Russia, 316; Sweden, 81; Switzerland, 82; Spain, 63; Turkey, 25; Egypt, 281; India, 155; China, 2597; Japan, 639; and to the United States of America, 2536 (Dip. and Cons. Rep. No. 3544, Ann. 1906, p. 66, which see for Exports for the years 1902, 1903, and 1904).

XLII.—SPATALLOPSIS, A NEW GENUS OF PROTEACEAE.

E. P. PHILLIPS.

Knight in his description of the genus *Spatalla*, in his *Proteaceae* (pp. 73–78) included three plants *S. thyrsoiflora*, Knight, *S. ericaefolia*, Knight, and *S. caudaeiflora*, Knight, which differ from his other species in the genus in having conical stigmas (described as clavate). R. Brown (Trans. Linn. Soc. x. 150) also described three plants under the genus *Spatalla*, namely, *S. propinqua*, R.Br., *S. caudata*, R.Br., and *S. Thunbergii*, R.Br. (= *S. caudaeiflora*, Knight), regarding at the same time *Spatalla thyrsoiflora*, Knight, as a *Sorocephalus*, and describing it as *S. setaceus*, R.Br. l.c. 140. Later authors, as Roemer and Schultes in their *Systema Vegetabilium*, iii., 389–396, and Meisner (in DC. Prodr. xiv., pp. 303–310), whose monograph is the last important systematic work on the *Proteaceae*, followed Robert Brown, ignoring Knight. When working through the genus *Spatalla* I found that all the above-mentioned species not only differed from the true *Spatallas* in having a conical and not a flat obovate stigma but also that the calyx was regular, whereas in *Spatalla* the inner

calyx-segment is always larger, more densely villous and longer-bearded than the other three. On account of their having a regular calyx and a conical stigma I placed these species in *Sorocephalus*, but found when preparing a key that these plants separated out from the rest of the genus. On re-examining all the specimens and preparing in a tabulated form the differences and resemblances between these doubtful specimens and species of *Spatalla* and *Sorocephalus*, I came to the conclusion that those hitherto considered as belonging to *Spatalla* and the one regarded as a *Sorocephalus* belonged to neither genus, and to accommodate them I have founded the genus *Spatallopsis*.



1. *Spatalla gracilis*, Knight.
2. *Sorocephalus imberbis*, R. Br.

The genus *Spatallopsis* differs from *Spatalla*, Salisb., principally in having a regular calyx and a conical stigma. From *Sorocephalus* it differs in having a quadrangular calyx tube $\frac{1}{3}$ – $\frac{1}{2}$ the length of the whole calyx, in the style being inserted obliquely on the ovary and not constricted at the base, and in having the inflorescence in the form of a cylindric spike or raceme and not globose. In vegetative characters there is no difference, all three genera having simple, entire, usually filiform leaves. The cylindric inflorescence, however, gives the species of *Spatallopsis* more the appearance of a *Spatalla* than of a *Sorocephalus*.

Spatallopsis, Phillips, gen. nov. [Proteaceae-Proteeae]; *Spatallae*, Salisb. et *Sorocephalo*, R. Br. proxima sed ab illa calycis symmetria et stigmatе conico vel clavato, et ab hac calycis tubo quadrangulo, floribus in spicam vel racemum cylindricum confertis et stylo haud basi constricto differt.

Flores hermaphroditі. *Capitula* parva 2–4-flora, in spicam vel racemum terminalem solitarium vel 2–9-natum disposita, sessilem vel subsessilem. *Bracteae* ovatae vel lanceolatae. *Involucri squamae*

basi connatae, bilabiatae; labium inferius fere ad basin tripartitum; segmenta ciliata, pilosa vel glabra. *Calyx*, 4-lobus, ad $\frac{1}{2}$ - $\frac{1}{3}$ tubulosus; tubus quadrangulus, pubescens vel glaber; lobi aequales, spathulato-lineares, barbigeri et villosi. *Stamina* 4; antherae subsessiles, ellipticae, apice glandibus minutis instructae. *Ovarium* obovatum vel obovato-oblongum, hirsutum vel villosum, aliquando subpedicellatum. *Stylus* filiformis, raro attenuatus, supra rectus vel curvus, saepe oblique ovario insidens, glaber. *Stigma* conicum vel clavatum, rectum vel curvum. *Squamae* hypogynae 4, lineares. *Fructus* obovatus vel globosus, fere subpedicellatus, hirsutus vel glaber.

Frutex parvus. *Folia* filiformia vel teretia, acuta, mucronata, supra unisulcata, pilosa vel glabra.

Species 5, Capenses.

CLAVIS SPECIERUM.

Folia 4-9 mm. longa.

Folia mucrone obtuso.

Folia pilosa; stigma conicum ... 1. *S. ericaefolia*.

Folia glabra; stigma clavatum ... 2. *S. confusa*.

Folia mucrone acuto 3. *S. caudaeiflora*

Folia 1-2 cm. longa.

Folia 1-1.5 cm. longa; bractee glabrae 4. *S. caudata*.

Folia 1.5-2 cm. longa; bractee pilosae 5. *S. propinqua*.

1. *S. ericaefolia*, *Phillips*. *Rami* glabri, demum pubescentes. *Folia* 4-6 mm. longa, recta, apice paullo incurva, linearia, apice obtusa, minute punctata, infra convexa, supra unisulcata, pilosa,



demum glabra. *Capitula* 3-4-flora in spicis terminalibus solitariis vel adnatis 1.2-2.5 cm. longis. *Bractee* 6 mm. longae, ovato-lanceolatae, acuminatae, apice acutae, ciliatae, pilosae. *Involucrum* 4 mm. longum, bilabiatum, pilosum; labium inferum tripartitum; segmenta lateralia 3 mm. longa, ovata, acuminata, apice acuta, ciliata; segmentum medium 3 mm. longum, lanceolatum, acuminatum, apice acutum, ciliatum. *Tubus calycis* 3 mm. longus, superne pubescens, basi glaber; laminae 4 mm. longae, spathulato-lineares, villosae, apice dilatato 0.7 mm. longo elliptico obtuso barbigeri villosi. *Stamina* 7 mm. longa. *Stylus* 5.5 mm. longus, filiformis, oblique ovario insidens. *Stigma* 0.33 mm. longum, conicum. *Ovarium* 2 mm. longum, obovatum, hirsutum. *Squamae*

hypogynae 1.5 mm. longae, lineares, acuminatae, apice acutae. *Fructus* 3 mm. longus, obovatus, pilosus.

Spatalla ericaefolia, Knight, Prot. 75.

SOUTH AFRICA. Verhoode Valley, *Niven*; without precise locality, *Masson*; no collector in *Herb. Forsyth*.

2. *S. confusa*, Phillips. *Rami* pubescentes vel glabri. *Folia*

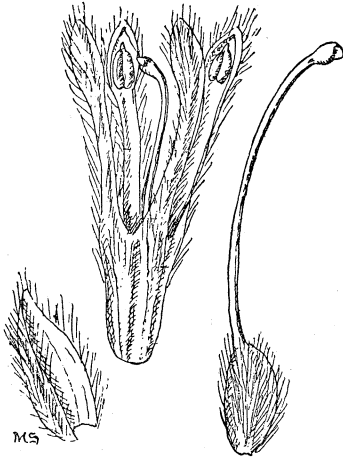


MS

1 cm. longa, circiter 1 mm. lata, apice subobtusata, minute mucronata, glabra. *Capitula* 2-4 flora, in racemis subsessilibus terminalibus solitariis vel 2-3-natis 1.5-2 cm. longis. *Bracteae* 4 mm. longae, lanceolatae, apice acutae, ciliatae, glabrae; labium inferum tripartitum; segmenta inaequalia. *Tubus calycis* 3.5 mm. longus, glaber; laminae 5 mm. longae, spathulato-lineares, ciliatae, sparse pilosae vel glabrae, apice dilatato elliptico obtuso barbigerio villosus. *Stamina* 1 mm. longa. *Stylus* 6 mm. longus, filiformis, supra curvus, oblique ovario insidens. *Stigma* 5 mm. longum, clavatum. *Ovarium* 2 mm. longum, villosum. *Squamae* hypogynae 1 mm. longae, lineares.

SOUTH AFRICA. Clanwilliam Div.: Ezelbank, Drège; Schlechter, 8838; Ceres Div.: Gydouwberg, Schlechter, 10225; Schoongezigt, Schlechter, 10180. Prince Albert Div.: Zwartberg Pass, Bolus, 11627.

3. *S. caudaeiflora*, Phillips. *Rami* pilosi. *Folia* 0.6-1 cm. longa, linearia, apice acuta, mucronata, minute sed distincte punctata, pilosa. *Capitula* 3-4-flora in spicis cylindricis terminalibus solitariis 2.5-4 cm. longis. *Bracteae* 4 mm. longae, lanceolatae, apice subobtusae, ciliatae, pilosae. *Pedunculus* 0.75 mm. longus. *Involucrum* bilabiatum; labium inferum tripartitum; segmenta lanceolata, apice subacuta, longe denseque ciliata, pilosa. *Tubus calycis* 2 mm. longus, superne pubescens, inferne glaber; laminae 4 mm. longae, spathulato-lineares, hirsutae, apice dilatato 1 mm. longo ovato subobtusato barbigerio dense villosus. *Stamina* 0.75 mm. longa. *Stylus* 5 mm. longus, filiformis, supra curvus, oblique in ovario insertus. *Stigma* 5 mm. longum, globoso-conicum. *Ovarium* 1 mm. longum, subpedicellatum, hirsutum. *Squamae* hypogynae 1 mm. longae, lineares. *Fructus* 3 mm. longus, pedicellatus, hirsutus.

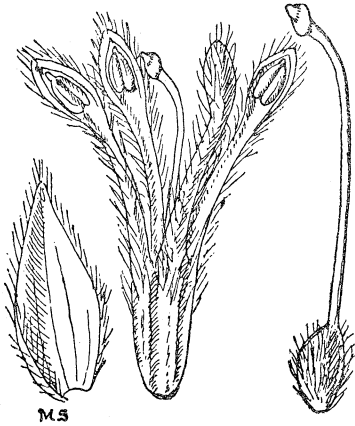


MS

Spatalla caudaeiflora, Knight, Prot. 75; *S. Thunbergii*, R.Br. in Trans. Linn. Soc. x. 150; Roem. and Schultes, Syst. Veg. iii. 396; Meisner in DC. Prodr. xiv. 310 (excl. var.).

SOUTH AFRICA. Caledon Div.: Zwartberg, Niven.

4. *S. caudata*, Phillips. *Rami* glabri vel sparse pilosi. *Folia* 1-1.5 cm. longa, linearia, apice acuta, mucronata, aliquid pilosa vel glabra. *Capitula* 3-4-flora, in racemis sessilibus terminalibus cylindricis solitariis vel 4-natis 2.5-6 cm. longis. *Bracteae* 5 mm.



M.S

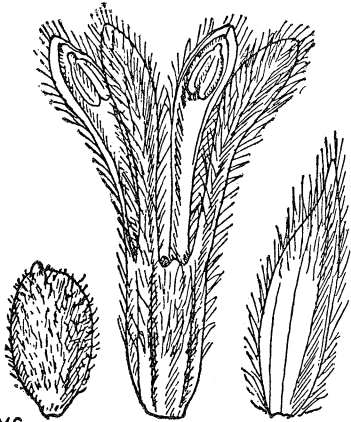
longae, ovatae, subacuminatae, apice acutae, minute ciliatae, glabrae. *Pedunculus* 1 mm. longus, pubescens. *Involucrum* bilabiatum; labium inferum tripartitum; segmenta lateralia ovata, apice acuta, minute ciliata, pubescentia vel glabra; segmentum medium lanceolatum. *Tubus calycis* 2 mm. longus, superne pubescens, inferne glaber; laminae 4 mm. longae, spathulato-lineares, villosae, apice dilatato 1 mm. longo ovato acuto barbigerio dense villosio. *Stylus* 5 mm. longus, filiformis, supra curvus, vix oblique ovario insidens, persistens. *Stigma* 0.5 mm. longum, conicum,

obliquum. *Ovarium* obovato-oblongum, villosum. *Fructus* subpedicellatus, 4 mm. longus, globosus, superne pilosus.

Spatalla caudata, R.Br. in Trans. Linn. Soc. x. 150; Roem. and Schultes, Syst. Veg. iii. 396; Meisner in DC. Prodr. xiv. 310; *Protea caudata*, Thunb. Diss. Prot. 26 t. 2.

SOUTH AFRICA. Caledon Div.: Palmiet River, Masson; without precise locality in *Herb. Forsyth* (no collector).

5. *S. propinqua*, Phillips. *Rami* sparse pilosi. *Folia* 1.7-2 cm. longa, filiformia, apice acuta, mucronata, pilosa. *Capitula* 3-4-flora, in racemis terminalibus pedunculatis circiter 9-natis 5-8 cm. longis.



M.S

Bracteae 5 mm. longae, lanceolatae, apice subacutae, ciliatae, pilosae. *Pedunculus* 1 mm. longus, hirsutus. *Involucrum* 4 mm. longum, bilabiatum, pilosum; labium inferum tripartitum; segmenta lateralia, ovata, apice acuta, ciliata; segmentum medium lineare, ciliatum.

Tubus calycis 2.5 mm. longus, glaber; laminae 3.5 mm. longae, spathulato-lineares, villosae, apice dilatato 1 mm. longo ovato obtuso barbigerio dense villosio. *Stylus* 5 mm. longus, cylindricus, oblique ovario insidens. *Stigma* 0.5 mm. longum, conicum, obliquum. *Ovarium*

1.5 mm. longum, oblongum, villosum. *Fructus* subpedicellatus, 2 mm. longus, obovatus, hirsutus.

Spatalla propinqua, R.Br. in Trans. Linn. Soc. x. 150; Meisner in DC. Prodr. xiv. 309; *Protea australis*, Poir. Suppl. iv. 579.

SOUTH AFRICA. Without precise locality, Auge.