
Leptoderris, a New Genus of Leguminosae

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fasciculorum; glomeruli circa 2 cm. diametro, ad 10-12 spiculas fertiles cum multis sterilibus minoribus et bracteis paleaceis ferentes; spiculae 5-7 mm. longae, glaberimae, basi bracteis 1-3 parvis suffultae; glumae vacuae 2-3, ovatae, mucronatae, inferior 3 mm., superior 4-5 mm. longae; flores fertiles 2; glumae florentes (valvae) ovatae, longe mucronatae, floris inferioris 6 mm. longae, superioris 8 mm. longae; palea floris inferioris bicarinata, carinis ciliatis, apice marginata, 5-nervis, floris superioris convoluta, glabra, apiculata. *Stamina* purpurea; juniora subsessilia, libera, vetustiora filamentis in tubum longissimum exsertum coalitis; antherae lineares, apice mucronatae. *Ovarium* ovato-lanceolatum, in stylum gracilem pubescentem attenuatum. *Caryopsis* ignota.

INDO-CHINA. Burma: Thatone District; E. of Salwen river, Hlaingbwe Forest Reserve and Melaung, *J. H. Lace*, 4578, 4584.

LVI.—LEPTODERRIS, A NEW GENUS OF LEGUMINOSAE.

S. T. DUNN.

In 1860 Bentham described two leguminous climbing shrubs collected by Heudelot in Senegambia as *Lonchocarpus? fasciculatus* and *L.? brachyptera*, remarking that they differed from all other species of the genus known to him in their stiff, narrow standard and narrow calyx. These and three more plants of similar habit, and possessing the same peculiarities of floral structure, were included by Baker in the genus *Derris* in his account of the *Leguminosae* in the Flora of Tropical Africa in 1871. Three more have been described since that date, one as a *Lonchocarpus* and two as *Derris*. These eight species and six more, described for the first time in this paper, are distinguishable at a glance from all other species of *Derris*, *Lonchocarpus* and *Milletia* by reason of their conspicuously crowded racemes of narrow flowers.

These genera as at present defined are distinguished with certainty only when quite ripe fruit is available, and as the species referable to them collectively are very numerous but usually unknown in ripe fruit, considerable confusion has resulted. Certain marked types of inflorescence and floral structure are observable among them, and it has been in the matching of flowering specimens with these types that the greater part of the confusion has arisen. It has therefore become a matter of pressing importance that any distinct and self-contained groups distinguishable from all allied ones even in the absence of fruit, should be extricated from these genera and given separate generic status. The present paper represents a step in this direction. These 14 species, which are all African, are so closely allied in the characters of their flowers and inflorescence, and are so distinct from all other known species of those genera even when the ripe fruit is unknown, that they form a compact and uniform generic group, and it is proposed to extricate them from the overburdened genera to which they have been previously referred and to treat them as a new genus under

the name of *Leptoderris*. The fruit is that of *Derris* and the name refers to this fact and to the circumstance that the genus has narrow petals and calyces.

This being a natural and uniform genus as regards the floral and (where known) the fruiting characters, some light is thrown upon the value for purposes of generic segregation, in this part of the Natural Order, of other characters, such as the presence or absence of stipellae and of callosities or auricles at the base of the standard. Both these characters vary considerably in this genus, being in fact, only of importance in distinguishing small groups of species, and appear to be here only of secondary taxonomic importance.

All the species inhabit Western Tropical Africa, with the exception of *L. Kirkii* and *L. Harmsiana* which come from the eastern region and *L. calva* which is a native of Uganda.

By the courtesy of the Director of the Royal Botanic Gardens, Kew, this paper has been prepared in the Kew Herbarium and the specimens referred to are there, with the exception of the fine set of Welwitsch's Angola plants preserved at the British Museum Herbarium, leave to examine which and some other material was kindly given by the Keeper of that Department.

Leptoderris, *Dunn*, gen. nov. [Leguminosae-Dalbergaceae]; affinis *Derrei*, Lour., sed floribus dense nodoso-racemosis, calyce anguste campanulato, vexillo angusto, cymbiformi, haud reflexo differt.

Calyx anguste campanulatus, sericeus, dentibus brevibus 4, uno bidentulato. *Petala* glabra. *Vexillum* anguste oblongum, cymbiforme, erectum vel patens, rigidum, laminae basi plana vel callosauriculata. *Alae* oblique oblongae, carinae supra unguem leviter adhaerentes. *Carina* parum incurva, petalis dorso cohaerentibus. *Stamina* monadelphae, vexillari basi caeteris soluto autem vexilli ungui plus minusve adhaerente. *Antherae* versatiles. *Ovarium* sessile 2-(1 vel 3) ovulatum, pubescens. *Stylus* filiformis, incurvus; stigmatibus parvo terminati. *Legumen* oblongum, planum, membranaceum, indehiscens, stylo terminali; sutura superiore alata. *Semina* 1-(vel 2) planocompressa.

Frutices scandentes vel raro erecti. *Folia* alterna imparipinnata; foliolis oppositis saepe retusis. *Flores* in ramis paniculae dense nodoso-racemosae. *Bracteae* parvae caducae; bracteolae ovatae vel subulatae, parvae.

Species 14, Africae tropicae incolae.

CLAVIS SPECIERUM.

- Foliola matura subtus sericea vel saltem in venis tomentosa
 Foliola subtus adpresse argenteo-sericea ... 1. *L. hypargyrea*.
 Foliola subtus tomentosa
 Foliola supra opaca, membranacea, non reticulata ... 2. *L. brachyptera*.
 Foliola supra nitentia, coriacea vel chartacea, infra reticulata
 Foliola subsessilia 3. *L. Goetzei*.
 Foliolorum petioluli 4 mm. vel longiores
 Tomentum calycis paniculaeque longum squarrosum
 4. *L. Kirkii*.

Tomentum breve densum

Nodi floriferi lineares ad 1·2 cm. longi

5. *L. Harmsiana*.

Nodi breves

Foliola acuta 6. *L. nobilis*.

Foliola obtusa vel retusa

Foliola subtus ubique tomentosa

Foliola apice rotundata ... 7. *L. micrantha*.

Foliola apice retusa, flores 1·2 cm. longi

8. *L. reticulata*.

Foliola subtus in venis tantum tomentosa

Panicula ad apicem ramosa 9. *L. congolensis*.

Panicula inferne tantum ramosa

10. *L. glabrata*.

Foliola matura glabra

Foliola venis 4-5-paribus 11. *L. fasciculata*.

Foliola venis 7-8-paribus

Flores 8 mm. longi

Foliola parva, 5-6 cm. longa, basi rotundata

12. *L. nyanzae*.

Foliola magna, basi cuneata 13. *L. calva*.

Flores 1·2 cm. longi 14. *L. macrothyrsa*.

1. *L. hypargyrea*, *Dunn*; affinis *L. brachypterae*, *Dunn*, sed foliolis subtus argenteo-pubescentibus ab illo et ceteris generis speciebus differt.

Frutex scandens? ramis et rachidibus foliorum paniculaeque tenuiter tomentosis. *Folia* bijuga, 15-20 cm. longa; foliola late cuneata, apice obtusa vel truncata, apiculata, ad 10 cm. longa, chartacea, venis exceptis supra glabra, nitentia, subtus adpresse argenteo-sericea, venis 8-paribus ascendentibus rectis parallelis subtus prominulis; petiolulis 0·8-1 cm. longis, stipellis obscuris vel 0. *Panicula* terminalis, ramis paucis longis. *Flores* dense nodoso-racemosi, nodis 2-5 mm. longis, pedicellis 3 mm. longis. *Calyx* anguste campanulatus, 3 mm. longus, lobis parvis triangularibus 4, sicut pedicellus adpresse sericeus. *Petala* glabra, 8-9 mm. longa. *Vexillum* anguste oblongum, cymbiforme, exauriculatum. *Stamen* vexillare basi liberum vexilli ungui adhaerens. *Ovarium* 2-ovulatum, sericeum.

Derris hypargyrea, Harms MS.

W. TROPICAL AFRICA. Kamerun: Bipinde forest, *Zenker*.

2. *L. brachyptera*, *Dunn*. *Lonchocarpus brachypterus*, Benth. in Journ. Linn. Soc. iv. Suppl. (1860), 100; *Derris brachyptera*, Baker in Oliver, Fl. Trop. Afr. ii. (1871), 246; Wildem. in Ann. Mus. Congo, sér. 5, i. (1904), 149; *Pterocarpus brachypterus*, O. Kuntze, Rev. Gen. Pl. i. (1891), 203; *Dequelia brachyptera*, Taub. in Bot. Centralbl. xlvii. (1891), 387.

W. TROPICAL AFRICA. Senegambia, *Heudelot*, 828; Congo (fide *Wildem.*); Angola, *Welwitsch*, 1889.

There seems to have been some doubt as to whether the specimens with more coriaceous reticulate leaflets are an older stage of the above, but *Welwitsch's* beautiful series at the British Museum Herbarium makes it clear that the membranous character of the leaflets of the above species is retained until full maturity.

3. *L. Goetzei*, *Dunn*. *Derris Goetzei*, Harms in Engl. Jahrb. xxx. (1901), 330.

CENTRAL AFRICA. Nyasa region (fide *Harms*).

The description of this species, specimens of which have not been seen, leaves no doubt that it belongs to this genus, but its relations with *L. brachyptera* are not quite clear. It is provisionally placed next to that species in the key.

4. *L. Kirkii*, *Dunn*; affinis *L. brachypterae*, *Dunn*, sed foliis subcordatis brevi-petiolulatis, rachide foliorum glabra, paniculae tomento laxo distincta.

Frutex scandens. *Folia* bijuga, 25 cm. longa, rachide glaberrima; foliola ovata, apice obtusa vel truncata, basi rotundata subcordata, ad 10 cm. longa, margine revoluta, coriacea, supra glabra nitentia, subtus tenuiter laxe tomentosa, venis 6-8-paribus subtus prominulis; petiolulis 4 mm. longis, stipellis 0. *Panicula* terminalis, ad apicem pauciramosa, ramis rachideque laxe squarrose tomentosis. *Flores* dense nodoso-racemosi, pedicellis 1-2 mm. longis, bracteolis parvis lanceolatis. *Calyx* anguste campanulatus, sicut rami tomentosus, lobis parvis triangularibus 4, 4-5 mm. longus. *Vexillum* anguste oblongum, cymbiforme, bicallosum, fortiter auriculatum, stamini vexillari per totam unguem adhaerens, 1.2 cm. longum. *Ovarium* sericeum, 2-ovulatum.

Derris Kirkii, *Dunn* MS.

E. TROPICAL AFRICA. Zanzibar: Mafia Island, *Kirk*.

5. *L. Harmsiana*, *Dunn*; affinis *L. brachypterae*, *Dunn*, sed floribus minoribus nodisque floriferis elongatis distincta.

Frutex scandens?; ramulis foliis in pagina inferiore panicula calycibusque pube brevi densa tomentosa vestitis. *Folia* ad 35 cm. longa, bijuga; foliola obovata, apice rotundata vel truncata, basi obtusa, ad 12 cm. longa, coriacea, supra glabra nitida, venis 5-6-paribus subtus prominulis; petiolulis 5 mm. longis, stipellis persistentibus. *Panicula* terminalis, 30-40 cm. longa, inferne ramosa, nodis floriferis ad 1.2 cm. longis. *Florum* pedicelli 2 mm. longi. *Calyx* anguste campanulatus, 3 mm. longus, dentibus 4 brevibus triangularibus. *Vexilli* lamina oblonga, basi callose sulcata auriculis parvis involutis, cum ungui 9 mm. longa. *Ovarium* sericeum, 1-2-ovulatum.

Derris Harmsiana, *Dunn* MS.

W. TROPICAL AFRICA. Usambara: Derema, *Scheffler*, 170.

6. *L. nobilis*, *Dunn*. *Derris nobilis*, Welw. ex Baker l.c. 245; Wildem. l.c. 149; *Pterocarpus nobilis*, O. Kuntze l.c. 203; *Deguelia nobilis*, Taub. l.c. 387; Hiern, Cat. Welw. Afr. Pl. i. (1896), 283.

W. TROPICAL AFRICA. Congo (fide *Wildem.*); Angola, *Welwitsch*, 1890, 1891; Angola, *Gossweiler*, 1746.

7. *L. micrantha*, *Dunn*; affinis *L. glabratae*, *Dunn*, sed foliorum pagina inferiore ubique tomentosa floribusque minoribus siccitate purpureis nec albidis diversa.

Frutex scandens; foliorum pagina superiore petalisque exceptis ubique tomento brevi denso vestita. *Folia* bijuga, ad 15 cm. longa; foliola obovata, apice rotundata, apiculata, basi obtusa vel

truncata, ad 18 cm. longa, chartacea, venis 7-paribus subtus prominulis; petiolulis 4 mm. longis, stipellis parvis mox deciduis. *Paniculae* ex parte inferiore rami, paucae, longae. *Flores* dense nodoso-racemosi, nodis omnibus parvis 1-3 mm. longis, bracteolis subulatis 1-2 mm. longis. *Calyx* anguste campanulatus, 1-2 mm. longus, lobis 4 parvis triangularibus. *Vexilli* lamina oblongo-lanceolata, exauriculata, cymbiformis. *Carina* in siccitate purpureo-venosa. *Ovarium* 2-ovulatum.

W. TROPICAL AFRICA. Lagos: Ijero, *Millen*.

8. *L. reticulata*, *Dunn*; affinis *L. congolensi*, *Dunn*, sed foliolis subtus in venis tomentosis reticulatis differt.

Frutex scandens?; foliis paniculaeque? ramis tantum visis. *Folia* bijuga, 20-30 cm. longa; foliola cuneato-obcordata, apiculata, basi angustata rotundata, 8-12 cm. longa, coriacea, supra glabra nitida, venulis subtus tomentosis reticulatis, venis utrinque 6-8. *Paniculae* rami ad 30 cm. longi. *Flores* dense nodoso-racemosi nodis brevibus, subsessiles, 1.2-1.3 cm. longi, bracteolis parvis ovatis. *Calyx* anguste campanulatus, 4 mm. longus, dense sericeus, lobis 4 late triangularibus. *Vexilli* lamina oblongo-cymbiformis, basi fortiter auriculata, glabra, ceteris petalis paullo brevior. *Ovarium* sericeum, 2-ovulatum.

W. TROPICAL AFRICA. West Lagos, *Rowland*.

9. *L. congolensis*, *Dunn*. *Derris congolensis*, *Wildem.* in *Ann. Mus. Congo*, ser. 5, i. (1904), 149, t. xxxviii.; *D. brachyptera*, *Wildem.* l.c. ser. 3, i. (1901), 73, non *Baker*.

W. TROPICAL AFRICA. Congo, *Chr. Smith*, 51, 62. *Herb. Mus. Brit.*

10. *L. glabrata*, *Dunn*. *Derris glabrata*, *Welw.* ex *Baker* l.c. 244; *Pterocarpus glabratus*, *O. Kuntze* l.c. 203; *Deguelia glabrata*, *Taub.* l.c. 387; *Hiern* l.c. 282.

W. TROPICAL AFRICA. Angola, *Welwitsch*, 1888.

11. *L. fasciculata*, *Dunn*. *Lonchocarpus fasciculatus*, *Benth.* l.c. 100; *Derris fasciculata*, *Baker* l.c. 246.

W. TROPICAL AFRICA. Senegambia, *Heudelot*, 693; *Chevalier*, 3424. Siera Leone, *Morson*, *Scott Elliot*, 5934, *Smythe*, 24. Kamerun: *Bipinde*, *Zenker*, 3629.

12. *L. nyanzae*, *Dunn*; affinis *L. calvae*, *Dunn*, sed foliolis minoribus basi rotundatis distincta.

Frutex scandens, gummi rubrum exudans; ramorum adutorum cortice scabro. *Folia* 15-20 cm. longa, 3-juga, petiolulis exceptis glaberrima; foliola oblongo-obovata, apice rotundata-truncata, basi rotundata, 5-6 cm. longa, chartacea, venis 7-8-paribus; petiolulis pubescentibus 3-4 mm. longis, stipellis 0. *Panicula* terminalis. *Flores* in ramis dense nodoso-racemosi nodis brevibus, subsessiles, bracteolis duobus minutis suffulti. *Calyx* anguste campanulatus dentibus 4 brevibus late triangularibus, 3-4 mm. longus, dense sericeus. *Vexillum* anguste oblongum, cymbiforme, exauriculatum, 8 mm. longum, glabrum. *Ovarium* sericeum, 2-ovulatum. *Legumen* planum, oblongum, acuminatum, basi obtusum, 8-12 cm. longum, 2-3 cm. latum, margine superiore alato ala 4 mm. lata, membranaceum, tenuiter adpresse rubro-sericeum, venis tenuiter reticulatis. *Semina* 1-2.

Derris nyanzae, Dunn MS.

CENTRAL AFRICA. Victoria Nyanza : Buruma Island, *Bagshawe*, 605. Herb. Mus. Brit.

13. *L. calva*, *Dunn*; affinis *L. macrothyrsus*, *Dunn*, sed foliolis exstipellatis, floribus tertia parte brevioribus minime bracteolatis distans.

Frutex scandens; ramis foliisque mox glabris. *Folia* 3-4-juga, 30-40 cm. longa; foliola oblongo-ovata, apice rotundata, apiculata, basi acuta, ad 15 cm. longa vix matura, membranacea, glabra, venis utrinque 7-8; petiolulis 5 mm., stipellis 0. *Paniculae* ex parte inferiore rami, paucae longae, brevissime fusco-tomentosae. *Flores* lutei, dense nodoso-racemosi, nodis ad 6 mm. longis, pedicellis 1-2 mm. longis, bracteolis 1 mm. longis ovatis. *Calyx* anguste campanulatus, 2-3 mm. longus, adpresse tomentosus, lobis 4 brevibus triangularibus. *Vexilli* lamina anguste oblonga, exauriculata, cum ungue 7-8 mm. longa. *Ovarium* rubro-sericeum, 2-ovulatum, stylo glabro.

Derris calva, *Dunn* MS.

E. TROPICAL AFRICA. Uganda: Entebbe, about 1200 m., *E. Brown*, 358.

14. *L. macrothyrsa*, *Dunn*; *Lonchocarpus macrothyrsus*, *Harms* in *Engl. Jahrb.* xxvi. (1899), 300; *Derris macrothyrsa*, *Dunn* MS.

W. TROPICAL AFRICA. Kamerun: Yaúnde forest region, *Zenker and Staudt*, 573.

LVII.—GARDEN NOTES ON NEW TREES AND SHRUBS.

W. J. BEAN.

V. *New Chinese Species.*

Acer griseum, *Pax* [Sapindaceae].

A rather bewildering number of new maples have been found in recent years in North-East Asia, but *A. griseum* is one of the most distinct. It is one of the *Acers* with trifoliolate leaves—a not very numerous group represented in gardens for a good many years by *A. nikoense*. *A. griseum* is a tree 20 to 40 feet high with woolly young branchlets and a trunk furnished with peeling bark which hangs in large, loose flakes. Mr. Wilson found it in Central China and introduced it for Messrs. Veitch in 1901; a young tree has been kindly presented by them to Kew. The collector says it is the most striking of the trifoliolate maples, because of the fine autumnal red and orange colouring of its leaves, and because of the peeling bark just alluded to. The leaflets are 2 to 2½ inches long, oval-lanceolate, coarsely toothed, the terminal one short-stalked, the lateral ones smaller, sessile and oblique. Fruit with very pubescent nutlets and wings, each of the keys 1¼ inch long, ½ inch wide, the pair forming an angle of 60° to 90°.

Berberis parvifolia, *Sprague* [Berberidaceae].

Among recent additions to cultivated barberries two species from China stand out as very distinct. The one is *B. Wilsonae*, *Hemsl.*