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Peglera and Nectaropetalum

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membranaceo-scariosa, reticulato-venosa, etuberculata, sed basi ad sinum callo parvo reflexo truncato vel obtuso instructa. *Achaenium* acute vel subalato-trigonum, laeve, brunneum, faciebus lanceolatis subacuminatis.

SOUTH AFRICA. Natal : Itafaman, Wood, 644 ; near Lambonjiva River, 4000 ft., Wood, 3583. Transvaal : north and south of Carolina in sandy soil, 5800 ft., Burt Davy, 2714 ; Ermelo Experimental Farm, 5575 ft., Burt Davy, 3919 ; Wemmers Hoek, Lydenburg, 5400 ft., Burt Davy, 7625.

This species is also allied to the North American *R. hymenosepalus*, Torr., but is less stout, with smaller leaves, and the venation of the fruiting sepals is entirely different. As in the case of *R. cordatus*, Desf. the root of *R. Woodii* may be tuberous ; its leaves and stems are often marked with bright red or scarlet patches formed of minute papillae, caused by a minute mite, probably some species of *Eriophyes*.

1020. *Coelocaryon oxycarpum*, Stapf [Myristicaceae] ; fructu acuto a speciebus caeteris distinctum.

Arbor ramulis glabris teretibus. *Folia* obovato oblonga vel oblonga, acuminata, basi obtusa, 10-15 cm. longa, 5-6 cm. lata, tenuiter coriacea, in gemmis rufo-pubescentia, citissime glabrata, nervis lateralibus utrinque 6-8, petiolo 12-18 mm. longo flexuoso. *Racemi* umbellarum masularum graciles, 3-5 cm. longi, ramis infimis 4-6 mm. longis, receptaculo discoideo 2-4 mm. diametro 10-25 flores gerente, pedicellis tenuibus ad 4 mm. longis. *Perianthium* 3-fidum, 1.5 mm. longum. *Antherae* 3, 0.3 mm. longae, stipiti aequilongae. *Flores* foeminei ignoti. *Infructescentiae* ex axillis foliorum summorum ortae, 5-8.5 cm. longae, glabrae ; umbellae solitariae vel paucae in racemos dispositae, fructus 2-3 tantum maturantes, pedicellis subtenuibus 1-1.2 cm. longis. *Perianthium* persistens, 3-partitum, fere 2 mm. longum. *Fructus* ovoideo-oblongus vel ellipsoideo-oblongus, basi angustior, acutus vel subacutus, 2.5-3 cm. longus, pericarpio tenui glabro. *Semen* ellipsoideo-oblongum, testa brunnea laevi, endospermate fere ad centrum ruminato.

WEST AFRICA. French Guinea: Farana, in gallery woods, Chevalier, 13178, 13425.

XX.—PEGLERA AND NECTAROPETALUM.

O. STAFF and L. A. BOODLE.

The genus *Peglera* was described by Dr. H. Bolus in the *Kew Bulletin* for 1907, p. 362, and placed near *Weihea* and *Cassipourea* in *Rhizophoraceae*. A figure of it was subsequently published in *Hooker's Icones Plantarum*, t. 2841. In the accompanying text it was pointed out that Dr. Bolus was not quite satisfied that he had correctly placed it, and that closer examination indicated relationships with *Irvingia* (*Simarubaceae*). Mr. Boodle at the same time stated that although the anatomy of *Peglera* agreed in some respects with that of the *Simarubaceae*, it differed in others.

Whilst the plate and letterpress for *Peglera* were prepared for the *Icones Plantarum*, I independently dealt with *Nectaropetalum Kaessneri*, which had also been selected for publication in the *Icones*. The two plates were accidentally placed next one another in the volume. It was then discovered, but too late for correction, that the figures of *Peglera capensis* and *Nectaropetalum Kaessneri* were so similar as to suggest that the species figured under those names were actually congeneric. Further examination left no doubt on that point, and *Peglera capensis* becomes now *Nectaropetalum capense*. *Nectaropetalum*, originally described by Engler as a genus of *Linaceae*, was transferred (*Icones Plantarum*, t. 2840) to *Erythroxyloaceae*, an order not previously taken into consideration by Mr. Boodle in connection with *Peglera*. He extended, therefore, his comparative studies of the *Peglera* material to *Nectaropetalum* and the *Erythroxyloaceae*, with the result that the generic identity of *Peglera* and *Nectaropetalum* and their place in *Erythroxyloaceae* may now be considered as well established. Mr. Boodle's account is given below, whilst a revised description of *Nectaropetalum* and a *clavis* of the species is added here as a summary of our present knowledge of the genus.

Nectaropetalum, *Engl.* in *Engl. Jahrb.* vol. xxxii, p. 109 (emend.). *Erythroxylo* affine, sed ovario 2-loculari, stylo simplice stigmata 2 recurva gerente, petalorum squamis maxime reductis vel plane obsoletis et filamentorum tubo brevi vel brevissimo distinctum.

Calyx 5-(rarius 4-) partitus; segmenta triangularia, acuta, praeter margines crassiuscula, valvata (?). *Petala* 5-(rarius 4-) unguiculata, calyce pluries longiora, lamina ima basi squamula biloba minuta cum ea foveolam formante instructa vel nuda, sed ab ungue textura distincta. *Stamina* petalorum numero duplo basi in tubum brevem vel annulum connata; filamenta episepala breviora, epipetala longiora; antherae dorso infra medium affixae. *Ovarium* ovoideum, 2-loculare; ovula solitaria, ab apice pendula, raphe axiscopa; stylus simplex, antheras superans; stigmata 2, brevina, ovata, recurva. *Fructus* ignotus. *Frutices* vel arbusculae, ramis novellis basi cataphyllis (ramentis vel perulis) deciduis paucis obtectis. *Folia* papyracea vel subcoriacea, integra; stipulae intrapetioloares connatae (vel demum fissae?), scariosae, sub 2-carinatae, acutae, longitudinaliter striatae. *Flores* axillares, solitarii vel pauci fasciculati, brevissime pedicellati, ut videtur albidii vel florescentes.

Species 3, in East and South Africa from Mombasa (Bome River), to the Kentani District in Transkei, Cape Colony.

Petala 3 cm. longa, ad laminae basin fovea instructa 1. *N. Carvalhoi*.

Petala 0.7-1.3 cm. longa.

Folia magis minusve elliptica, obtusa vel sub-acuta; petala ad laminae basin squama biloba instructa, quam stamina longiora; filamenta basi in tubum brevem connata... 2. *N. Kaessneri*.

Folia utrinque acuta vel apice acutissima; petala nuda, quam stamina breviora, filamenta ima basi in annulum connata ... 3. *N. capense*

Following the diagnosis of *Peglera capensis* and the remarks on the systematic position of this species in the *Kew Bulletin* (1907, pp. 362-3), a short description of the anatomical structure of the plant was given, and a comparison was made with the anatomical characters of the *Legnotideae* (*Rhizophoraceae*) and the *Simarubaceae*. The conclusion arrived at was that the genus *Peglera* "would find a more natural place in the *Simarubaceae* than in the *Legnotideae*."

A comparison has now been made between *Peglera capensis* and *Nectaropetalum Kaessneri*, and the agreement of the anatomy in these two plants proves to be sufficiently marked to establish a fairly close affinity between them.

The re-examination of *Peglera*, for the purpose of this comparison, has led to the detection of two characters, which had been overlooked at the time when the previous anatomical description of the genus was written. One of these is the presence of occasional scalariform perforations in the vessels, simple perforations being general in the wood, and those of the scalariform rare. The other character is the occurrence of cortical vascular bundles which, however, are restricted to a small portion of the internode just below the node.

The agreement between *P. capensis* and *N. Kaessneri* extends to most of the lesser anatomical details, while of the points of difference the chief are as follows: vascular system of midrib slightly simpler in *Nectaropetalum*; papillae on the lower epidermis of the leaf in *Nectaropetalum* but not in *Peglera*; cortical bundles extending throughout the internode in *Nectaropetalum*, but occurring only near the top of the internode in *Peglera*. The first two differences are quite unimportant, and the third, though considerable (*see below*), is one that would not be very surprising if found within the limits of a genus.

In *Nectaropetalum* two vascular bundles separate from the stele in the upper part of the internode and pass upwards, as cortical bundles, through the node and the next internode. They reach the second node, where apparently* each of them forks into two, one branch going to the leaf-trace, and one to the stipule. It follows that there are two cortical bundles in the lower part of an internode, and four in the upper part. Thus the behaviour of the cortical bundles is similar to that of the cortical bundles in *Erythroxylon*, except that in that genus, according to Van Tieghem,† the cortical bundles originate in the lower, instead of the upper, portion of the internode, and stop at the next node, instead of the next but one. In *Erythroxylon emarginatum*, Schum. et Th.,‡ the two cortical bundles originate practically at the node, but one or both may separate from the stele just before or just after the two cortical bundles from the node below pass out of the stem.§ Hence, as

* The material examined was insufficient for determining the relation of the cortical bundles to the stipules, &c., with certainty.

† Van Tieghem, *Struct. et affin. des Erythroxylacées*, Bull. Mus. d'hist. nat., ix. (1903), p. 289.

‡ Specimen from Namasi, leg. Cameron, No. 3.

§ In this case it was determined with certainty that each of these two bundles forks at the node, giving a small branch for the stipule, and a larger bundle, which fuses with one end of the median leaf-trace, as described by Van Tieghem.

regards the cortical bundles, this species forms a connecting link between *Nectaropetalum Kaessneri* and the species of *Erythroxyton* investigated by Van Tieghem. In *Peglera* four cortical bundles pass out separately from the vascular ring in the upper part of the internode, and stop at the next node, where they apparently behave in the same way as the four bundles due to sub-division of the two cortical bundles of *Erythroxyton*.

On account of the presence of cortical bundles in *Peglera* and *Nectaropetalum* (and especially the behaviour of these bundles in the latter genus), and the general agreement with the *Erythroxylaceae** shown by the anatomy of the stem and leaf, there can be little doubt that these two genera belong to that family.

XXI.—NOTES ON THE INDIAN SPECIES OF SAMBUCUS.

J. HUTCHINSON.

Recent enquiries received at Kew regarding the occurrence of *Sambucus Ebulus*, Linn., in India have rendered it necessary to re-examine the Indian specimens referred to that species by the late Mr. C. B. Clarke and others.

In 1890 Dr. R. von Wettstein described a new species of *Sambucus* from the Himalaya under the name of *S. Gautschii* and referred to it the whole of the Kashmir material mentioned by Clarke under *S. Ebulus*. His description was drawn up from plants, raised in the Botanic Garden of the Vienna University, from seeds distributed by the Saharanpur Botanic Garden in 1886. Dr. von Wettstein was no doubt right in distinguishing this *Sambucus* from *S. Ebulus*, for the latter evidently does not occur in India at all; but he appears to have overlooked *S. Wightiana*, Wall. apud Wight and Arnott, a fairly good description of which is given in Wight and Arnott's Prodrum, p. 388; or he may have been misled by Clarke's identification of *S. Wightiana* with *S. javanica*. From an examination of the type specimen of *S. Wightiana* in Wallich's herbarium at the Linnean Society, consisting of a fruiting specimen, there is little doubt as to its identity with Clarke's "*S. Ebulus*" and Wettstein's *S. Gautschii*, and as *S. Wightiana* is much the earlier name it should in future be employed for the Kashmir plant. Unfortunately, however, there is some uncertainty about the origin of the type specimen of *S. Wightiana*. Wallich in the Catalogue (no. 6303), as well as on the label, quoted merely Hb. Wight, whilst Wight in his Catalogue (no. 1252) and in Wight and Arnott l.c. refers to Wallich. From the fact that the plant was taken up by Wight and Arnott in their Prodrum, it might be inferred that their specimen was from the

* Van Tieghem, l. c.; Solereder, Systematic Anatomy (*Erythroxyton* &c., under *Linaceae*), Eng. Ed., pp. 159, 847. The leaves of *Erythroxyton emarginatum* differ only in unimportant characters from those of *Peglera* and *Nectaropetalum*. The midrib is practically the same as in *Peglera*, and there are no epidermal papillae.