

REMARKS ON THE SOUTH-AMERICAN SPECIES OF
THE GENUS CASSIPOUREA (RHIZOPHORACEAE)

by

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Though an excellent, critical monograph of the genus *Cassipourea* was published some years ago by ALSTON (in Kew Bulletin, 1925, p. 241—276), I should like to make a few remarks on the South-American species of this genus as my revision for PULLE's Flora of Suriname III.2 has brought to light a few new facts. It will also give me an opportunity to refer to a publication of BRIQUET on some American representatives of this genus (in Candollea IV, 1931, p. 342—350), which disagrees with regard to a number of species with ALSTON's interpretations.

The species which covers the largest area is the chiefly West-Indian *C. elliptica* (Sw.) Poir. Formerly also a number of West-Brazilian and Peruvian specimens were referred to it, but ALSTON pointed out that these plants belonged to another species for which he introduced the name *C. peruviana*. A new West-Indian species, based on Broadway nr. 3841 and 4631, both from Tobago, was described by BRIQUET under the name *C. Broadwayi*. This species is, in my opinion, conspecific with *C. elliptica*. BRIQUET amply discussed the differences with *C. latifolia* Alston from Trinidad, but does not mention its relationship to *C. elliptica*, though, in view of the latter's area of distribution, this would have been more to the point. That ALSTON had already referred Broadway nr. 3841 to *C. elliptica* was apparently overlooked by BRIQUET. In opposition to BRIQUET I agree with ALSTON that no value should be set on the varieties of *C. elliptica* described by GRISEBACH (Fl. Br. W. Ind. Isl., 1860, p. 274).

C. elliptica was considered by ALSTON as a chiefly West-Indian species, occurring from Cuba to Trinidad and also in Honduras and Panama, but wanting in the South-American continent. Among the unnamed *Cassipourea* material of Suriname, I found however a specimen, collected by VAN EMDEN on Brownsberg, which at first sight completely agreed with *C. elliptica*. On a closer exami-

nation however, it appeared to possess a quite glabrous, smooth, more or less shining ovary, which is the more remarkable as all American Cassipoureas, except *C. macrodonta* Standl., have a densely villous one. *C. macrodonta*, known from Panama and Costa Rica, differs however in the coarsely serrate leaves. The same kind of ovary I found in two fragmentary specimens, preserved in the Leyden herbarium and according to the label duplicates, distributed by the herb. De Candolle and collected in Cayenne, French Guiana. The collector is not mentioned and it is only known that the specimens came to Leyden in the times of BLUME's directorship. Possibly they represent duplicates from the PATRIS collection, made in the interior of French Guiana. On the labels of these specimens DE CANDOLLE, who did not know exactly where they had been collected, had written Cayenne (De Candolle, *Phytographie*, 1880, p. 439: "Patris. Environ 2.000 esp. de la Guyane française, herb. de Candolle. Collection unique, venant d'une partie du pays qui n'a pas été explorée depuis (Dr. Sagot, verbalement). De Candolle, n'ayant pas eu connaissance, a mis sur les étiquettes et cité: Cayenne"). In consequence of the present international situation, I was unaware to borrow from Geneva PATRIS' specimens.

I describe the specimens of the Utrecht herbarium as a new, continental variety of *C. elliptica*.

Cassipourea elliptica (Sw.) Poir., var. *psilogyna* Jonk., nov. var. Specimina a typo differt ovario glabro, nitido.

Surinamo, in colli Brownsberg, legit v. Emden s.n., d.d. 25-IX-1921, typus, in herb. Rheno-trajectino (Utrecht).

Guiana gallica, legit coll. ign., in herb. Lugduno-batavorum (Leyden).

In Guiana the common species is *C. guianensis* Aubl., occurring from Trinidad to Amazonian Brazil. This species is rather variable, especially in the size and shape of the leaves and the incisions of the leaf margin. BENTHAM (in Hook., *Journ. of Bot.* II, 1840, p. 223) described another species, *C. serrata*, based on Schomburgk nr. 527, Essequibo Riv. and Aupunury. The latter was considered by ENGLER (in Martius, *Flor. Bras.* XII.II, 1876, p. 430) as a variety of *C. guianensis*; by ALSTON it was placed in the synonymy of this species; but BRIQUET, returning to BENTHAM's standpoint, considered it as a distinct species. It differs from the typical *C. guianensis* by its large, distinctly serrate leaves, the large number of stamens and the pilose calyx and basal leaf veins. BRIQUET moreover described a new variety of *C. guianensis*: var. *trichopoda*, characterized

by a persistently pilose calyx and densely pilose petioles. Of this variety I saw three specimens: one from Suriname (B.W. nr. 2133), one from Amazonian Brazil (Kuhlmann nr. 17931) and one from British Guiana, unknown collector nr. 39, preserved in the Göttingen herbarium. According to the label, the latter specimen was cited by MEYER in Prim. Fl. Esseq., 1818, p. 204. (In sylvis siccis insulae Arowabisch). The label bears no collector's name, but most probably it was collected by E. C. RODSCHIED, for according to MEYER's preface, the specimens cited by him in this work, were collected either by RODSCHIED or loaned to him by professor MERTENS from Bremen. As this specimen is in the Göttingen herbarium however, it is probably a part of the RODSCHIED collection. The question arises whether this variety is intermediate between the typical *C. guianensis* and *C. serrata*, perhaps even a connecting link between these two species which in that case would lower their specificity. This question is the more legitimate as in *C. guianensis* and its variety *trichopoda* the leaves are towards the apex often slightly serrate. As the duplicate of the type of *C. serrata*, which I saw in the Leyden herbarium, looks, with its large and distinctly serrate leaves, quite different, I hold myself entitled to maintain in agreement with BRIQUET both *C. serrata* and *C. guianensis*, var. *trichopoda*. As so far *C. serrata* has been collected but once, it is not impossible however, that when more material becomes available, the differences between this species and *C. guianensis* might prove unreliable.

Both *C. serrata* and *C. guianensis* var. *trichopoda* are different from *C. lasiocalyx* Alston, up to now known only from British Guiana. This species agrees in its richer pubescence with the forms mentioned above, but it is easily recognisable by its large, ovate stipules. In *C. guianensis* and *C. serrata* the latter are smaller and lanceolate to ovate-lanceolate.

C. Ulei, described by BRIQUET as new, is without doubt conspecific with *C. peruviana* Alston. This species inhabits a rather isolated area in the Western part of the South-American continent (see map, fig. 1).

I was unable to study material of Poeppig nr. 2088 and 2234, which have been considered by ENGLER as a variety (var. *dentata*) of this species and on which BRIQUET based his *C. Poeppigiana*. ALSTON, who did not see the specimens, either presumed that they belonged to *C. peruviana*, but BRIQUET did not agree with this opinion. As *C. Poeppigiana* however has apparently been based on incomplete material, I did not include it in the map of the distribution of the American species (fig. 1).



Fig. 1. Map of the distribution of the American species of the genus *Cassipourea* Aubl.

C. Spruceana Benth. is a good species, which seems to be limited to the vicinity of Santarem, Para State, Brazil, from where I saw, besides the Spruce collection, a specimen of DUCKE (nr. 17927).

Of the other American species of the genus, which are West-Indian or Central-American, I only saw *C. obtusa* Urb., from Porto Rico. I have not been in a position to compare material of *C. latifolia* Alston (Trinidad), *C. sessilis* Britt., *C. subcordata* Britt., *C. Brittoniana* Fawc. et Rendle (all three Jamaica), *C. Guilingii* Briq. (Cuba and St. Vincent), *C. podantha* Standl. (Panama, closely related to *C. elliptica* and perhaps conspecific) and *C. macrodonta* Standl. (Panama and Costa Rica).