NEW OR NOTEWORTHY EUPHORBIACEAE FROM SURINAME

by

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Among the collections made by H. E. ROMBOUTS from 1935—1938 on the expeditions to the Suriname-Brazil frontier there are a number of Euphorbiaceae which are either new, or rare. As I was engaged in other work I could not begin the study of these specimens before August of this year. Because of the international troubles I have not been able to secure type-specimens from foreign herbaria, so that in some cases my interpretation of earlier described species may be wrong, though most of the problems could be solved satisfactory with the aid of the material preserved at Leiden and Utrecht.

Most of these specimens were collected by ROMBOUTS on the Great Savanna near the sources of the Sipaliwini River, which forms part of the boundary between Brazil and Suriname. Former studies on ROMBOUTS' collections had shown already that this region is comparatively rich in rare or new species. It would be of the utmost importance if a botanist could visit this region to collect on a large scale and to make a study of the vegetation. Without doubt the results would justify the comparatively low expenses needed for such an expedition.

Croton Pullei LANJ. Euph. of Surinam (1931) p. 18, t. III; LANJOUW in Pulle, Fl. of Suriname II. 1 (1932) p. 34.

var. **glabrior** LANJ. nov. var.

A typo differt foliis ad 16 cm longis et 11 cm latis, late ovatis vel oblongo-ovatis, subtus pilis stellatis parvis sparse vestitis, supra fere glabris.

S u r i n a m o ad fluv. Tapanahoni, pr. catar. Kapoea (ROMBOUTS n. 654, typus in Herb. U).

This species was known from a single collection only. The above described variety differs from the type especially by the indumentum. The female flowers of this variety are in a better state of

development than those of the type. They are angular and provided with reduplicative sepals. The latter are outside stellate-lepidote and inside stellate-tomentose, and they are triangular-ovate. The disk is subannular. The styles are united at the base into a short column, in the upper part they are several times divided, the branches are covered with stellate hairs. The ovary is densely covered with stellate hairs.

In the original description it was stated (from a note on the collecting label) that this species is a climber. ROMBOUTS states that it is a tree. As none of the species of *Croton* are climbers I think that the note made by Prof. STAHEL was a mistake, and that this species is really a tree.

Croton sipaliwinensis LANJ. nov. spec. (fig. 1).

A *C. Lundiano* MÜLL. ARG. cui affinis est, differt foliis minoribus, staminibus c. 5, stylis fere semper semel dichotome divisis, ovario glabro.

Frutex parvus. Ramuli juveniles petiolique pilis stellatis, appressis, flavis vestiti. Folia 2—5 mm petiolata; limbus ovatus, 2.5—5 cm longus, 12—22 mm latus, basin versus angustatus, apice acutus, dupliciter crenatus, margine calloso, revoluto, basi 5-nervius, binis exterioribus valde inconspicuis, chartaceus, utrinque scaber, supra pilis simplicibus nonnullis et secus nervos primarios impressos pilis stellatis sparse vestitus, subtus pilis stellatis appressis densiuscule munitus, basi glandulis patelliformibus binis, breviter stipitatis praeditus. Stipulae setaceae. Inflorescentiae in axillis foliorum superiorum, c. 1.5—4.5 cm longae, inter flores foemineos et masculos longiusculo spatio, 1—2.5 cm longo nudo interruptae, floribus ♀ ima basi in axillis bractearum solitariis, floribus ♂ pluribus in axillis bractearum lineari-lanceolatarum vel subulatarum, subdenticulatarum fasciculatis. Flores ♀ breviter, vix 1 mm pedicellati, sepalis 6—7, c. 3—4 mm longis, lineari-lanceolatis, subspathulatis, extus pilis stellatis appressis sparse vestitis, intus glabris, persistentibus, in statu fructigero accrescentibus, petalis subulatis vel 0, disco annulare, tenui, lobulato, stylis usque ad basin bipartitis, raro ramo uno (vel ramis pluribus) bifido, c. 2 mm longis, sparse pilis simplicibus vestitis. Capsula c. 4 mm longa, laevis, glabra; semina minute foveolata. Flores ♂ breviter pedicellati, sepalis 5 lanceolatis vel subspathulatis, glanduligero-puncticulatis, apice breviter lanato-ciliatis ceterum glabris, petalis 5, spathulatis, apice, parte basali intus longe lanatis, disci glandulis parvis oblique recurvo-apiculatis. Stamina plerumque 5, raro 4, filamentis glabris, antheris oblongis.

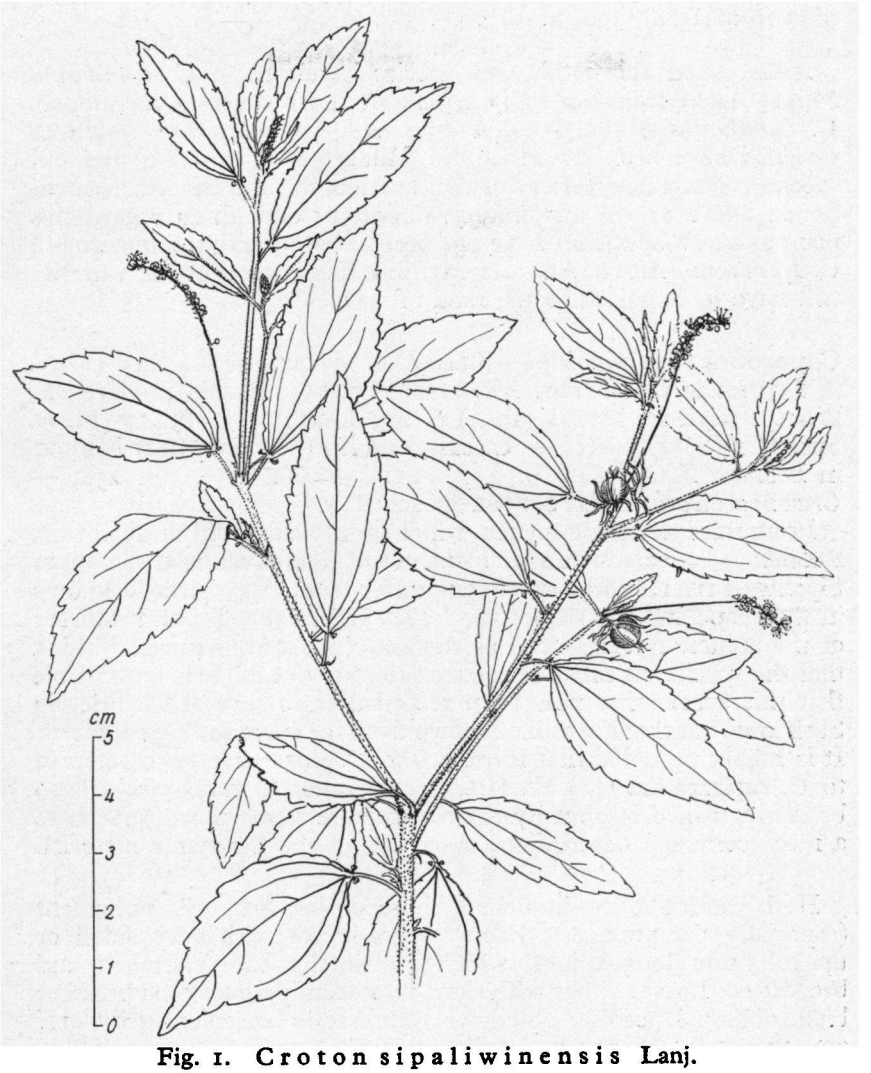

Fig. 1. Croton sipaliwinensis Lanj.

Surinamo, in savannis ad fluv. Sipaliwini sup. (ROMBOUTS n. 357, fl. et fr. m. Dec., typus in herb. U).

As is stated above this new species is related to *C. Lundianus* MÜLL. ARG., from which it differs in the characters mentioned. *C. Lundianus* MÜLL. ARG. is a variable species, from which 18 varieties have been described by Müller. It is possible that our species too is a new variety of that species, but the characters mentioned above are in my opinion important enough to regard this plant as a new species. I have not been able to study the material of *C. Lundianus* MÜLL. ARG., but I think that several of the varieties will have to be raised to the rank of species.

Caperonia corchoroides MÜLL. ARG. in Linnaea XXXIV (1865) p. 153; id. in DC. Prodr. XV.2 (1866) p. 753; PAX in Engler, Das Pflanzenreich IV.147.VI (1912) p. 45; LANJOUW in PULLE, Fl. of Sur. II.1 (1932) p. 41; — *C. castaneifolia* (non ST. HIL.) MIQUEL in Linnaea XXI (1848) p. 477; PULLE, Enum. (1906) p. 258; — *Croton aculeatus* SPLITGERGER in sched.

From this interesting species, which is only known from Suriname, ROMBOUTS collected two specimens in the great savanna at the upper Sipaliwini river. These specimens differ from those already known in the shape and the size of the leaves and in the size and number of the spines. Nevertheless, as there are many transitions, I think that the specimens must be referred to this species. It is remarkable that this species has now been recorded from several localities in Suriname, but that it is still unknown from the surrounding countries. It is highly probable that forms without spines have been referred to *C. castaneifolia* (L.) ST. HIL., from which *C. corchoroides* is to be distinguished at once by the non-septate stems. I will give here a more complete description, based on all the Suriname material.

Herb. Stems erect, branched, more or less patently pubescent (especially the youngest shoots), sparsely set with very small or up to 5 mm long spines, which are at the base flattened and broadened. Leaves either with short pubescent petioles or subsessile; blade oblong, lanceolate-oblong or ovate, rarely lanceolate, 4.5 × 11, 3 × 12.5, 1.8 × 6, or 1.3 × 6.5 cm, membranaceous or chartaceous, sprinkled especially beneath, with adpressed hairs, and beneath often with 1—5 small or large spines along the lower half of the midrib, margin sharply serrate; lateral nerves 8—16, rarely up to 20. Flowers monoecious, in racemes in the axils of the upper leaves. Racemes c. 1—2 cm long, with a 2—6 cm long peduncle, a few

female flowers at the base, and several male flowers at the top; bracts ovate or triangular, acuminate, outside setulose, and ciliate along the margin. Flowers ♂: sepals connate up to the middle or above the middle, lanceolate or oblong-lanceolate, acute, outside setulose; petals obovate or oblanceolate, spathulate, slightly peltate, cordate-sagittate at the base, longer than the calyx, attached above the base of the staminal column; the latter provided with a single thick gland below the insertion of the petals; stamens 10 in two series springing from the rather long column; rudimentary ovary undivided, obconical, 5-gonous. Flowers ♀: sepals 5—6, slightly inequal, acuminate, outside setulose; petals obovate or oblanceolate, unguiculate, longer than the calyx; ovary densely covered with thick fusiform (glandular?) emergences, ending in filiform hairs, and also with simple hairs; styles free or nearly so, 2—3-partite; branches terete, linear, glabrous. Capsule 4 mm broad, 2—3 mm long, setulose and densely covered with the fusiform emergences. Seeds globose, foveolate.

Besides the specimens mentioned in the Flora of Suriname: Upper Sipaliwini R., small creek in the savanna (ROMBOUTS n. 358, fl. Dec.; ROMBOUTS n. 448, fl. Febr.).

Sebastiania linearifolia LANJ. nov. spec. (fig. 2).

Planta herbacea, in parte inferiore lignescens, ramulis pubescentibus, internodiis longioribus, c. 2—5 cm longis, cum brevissimis, vix 1—2 mm longis, alternantibus, folia eo subopposita. Stipulae parvae, subtriangularies, intus et margine praesertim apice glandulis stipitatis praeditae. Petiolus 1—3 mm longus, pubescens. Limbus 2—5 cm longus, 2—6 mm latus, linearis vel lineari-lanceolatus, longe acuminatus, basi rotundatus vel obtusus, firme chartaceus vel subcoriaceus, margine minute et adpresse hyalino-serratus, subtus et supra secus costas primarias sparse adpresse pilosus, subtus in parte inferiore prope margines glandulis crateriformibus nonnullis praeditus, nervis secundariis vulgo inconspicuis. Racemi quasi laterales et extra-axillares, foliis oppositi, re vera terminales, c. 1.5—2 cm longi, basi floribus ♀ solitariis, ceterum floribus ♂ 1—2 in axillis bractearum praediti, axi pilis patentibus vestito Bracteae subtrilobae, lobis lateralibus obovatis glandulis oblongis, apice profunde emarginatis et saepe subbilobatis munitis, lobo centrali triangulari, acuto. Flos ♂ sepalis late-oblanceolatis, integris, staminibus 3. Flos ♀ in axillis bractearum bracteis ♂ similium, sepalis 3, basi connatis, inter lobos basi glandulis stipitatis 2—3 praeditis, ovario circa apicem appendicibus 6, parvis, basi appendicibus 6, minutis vel obsoletis ornato, ceterum laeve et glabro, stylis elongatis, sate crassis. Capsula

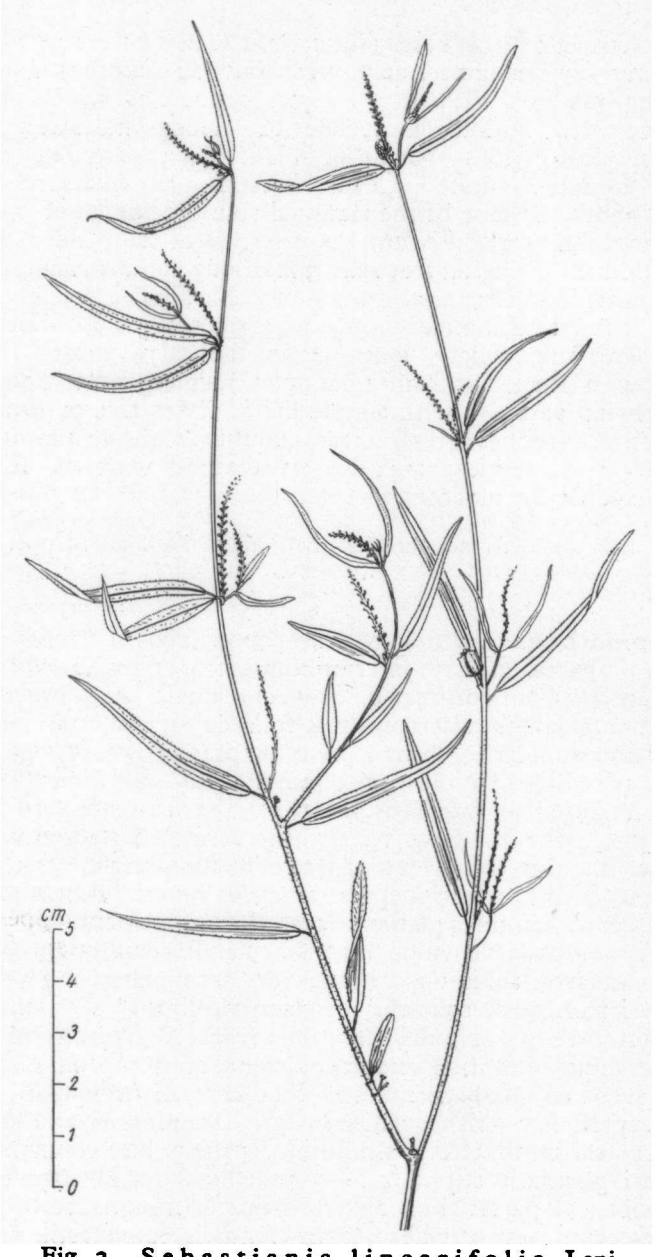

Fig. 2. Sebastiania linearifolia Lanj.

circa apicem breviter 6-appendiculata, circa basin appendicibus obsoletis vel nullis, seminibus nigricantibus, subnitidis, minute puncticulatis.

Surinamo, in savannis ad fluv. Sipaliwini sup. (ROMBOUTS n. 331, fl. et fr. m. Dec., typus in herb. U).

forma **pilosa** LANJ. nov. forma
Ovarium capsulaque pilosa.

Surinamo, in savannis ad fluv. Sipaliwini sup. (ROMBOUTS n. 238A, fl. et fr. m. Oct., typus in herb. U).

This species is related to *S. corniculata* (VAHL) MÜLL. ARG., *S. hispida* (MART.) PAX and *S. salicifolia* (MART.) PAX. All three are "large species" with a large number of varieties, and they include in my opinion several good species. For the distinction of these species, one would need a good many specimens. By accepting the three species mentioned above, it would have been possible to refer the present plants to one of them, though they do not match one of the varieties already known. Following the key given by PAX (ENGLER, Das Pflanzenreich IV.147.V. 1912. p. 91) one would be inclined to refer our specimens either to *S. corniculata* or to *S. salicifolia*. In the latter species the new species is related to var. *longifolia* only, from which it differs in the herbaceous stems, and in the much narrower and glabrous leaves. In *S. corniculata* it should be referred either to var. *Poeppigii* MÜLL. ARG. or var. *micrantha* (BENTH.) MÜLL. ARG. It certainly does not belong to the latter variety, which is known from Suriname also. That variety had to be raised to the rank of species and will be dealt with below. The double row of rather long appendages near the apex of the fruit prove that it is closer related to *S. corniculata* than our species. The var. *Poeppigii* seems to be a rather good match for our species. However, nothing is said in the description about the appendages of the fruit, which are in my opinion a rather important feature. I have not seen the type collected by POEPPIG. It is possible that it is conspecific with our species, but then it certainly can not be referred, as a variety, to *S. corniculata*. For the present the best thing I could do was to describe it as a new species under a new name. The new species is easily distinguished from *S. corniculata* and its varieties by the very narrow and thicker leaves, which are not cordate at the base, and by the small or obsolete appendages at both ends of the capsule, and the complete absence of the second row near the apex.

As I said above the variety *micrantha* had to be raised to the rank

of species. It differs from the other varieties of *S. corniculata* by the leaves being lanceolate and not ovate, and at the base never cordate or subcordate, by the less patent indumentum and by the shorter appendages at the base of the capsule. A new description follows here:

Sebastiania micrantha (BENTH.) LANJ. nov. comb.; — *Microstachys micrantha* BENTH. in HOOK. Journ. Bot. VI (1854) p. 326; — *Sebastiania corniculata* var. *micrantha* (BENTH.) MÜLL. ARG. in DC. Prodr. XV.2 (1866) p. 1173; id. in MART. Fl. Bras. XI.2 (1874) p. 563; PAX in ENGLER, Das Pflanzenreich IV.147.V (1912) p. 99; LANJOUW in PULLE, Fl. of Sur. II.1 (1932) p. 84.

Annual? Herbaceous or in the lower part sublignescent, c. 30—40 cm high. Internodes alternately long and short, the short ones 5—10 mm long, the long ones c. 2—3 cm long. Young shoots and petioles pubescent, afterwards glabrescent. Leaves distinctly petiolate, lanceolate, 2—3.5 cm long, 4—7 mm wide, obtuse or acute at the apex, sometimes mucronulate, narrowed and rounded at the base, chartaceous, eglandular, sparingly pilose on both surfaces; lateral nerves very thin, but distinct. Male spikes opposite the leaves, very short, c. 3—4 mm long; rhachis pubescent; male flowers 2 in the axils of small 3-lobed bracts; lateral lobes with a stipitate oblong, emarginate gland, midlobe obcuneate, with the broadest part near the apex, shortly acuminate; sepals 3, oblanceolate, spathulate; stamens 3. Female flowers solitary, inserted directly above the axil of the leaf below the male spike, and provided with a bract similar to that at the base of the male flower pairs. Ovary patently pilose with a double row of 6, rather long and acute appendages near the apex, and a single row of appendages at the base; styles 3 shorter than the appendages. Capsule pilose with rather long and conspicuous appendages at both ends. Seeds pale brown, minutely puncticulate.

Distribution: Brazil and French Guiana (I did not see the specimens from these regions).

Suriname: Para R., savanna near plant. Hannover & Onoribo (WULLSCHLAEGEL n. 458 (BR); SPLITBERGER n. 667, fl. and fr. March (L)).