

if, as I suspect, the spathes of this species are spreading. The upper part of the spadix might almost be mistaken for the same part of *C. ramosissimus*, and only differs from the same part of the section *Platyspathæ* in the greater degree of contraction.

39. (29) *C. grandis*, (n. sp.) aculeis petiolorum dorsalibus uncinatis cum marginalibus (infra pinnas) inæqualibus interdum spiniformibus; pinnis glaucescentibus lineari-lanceolatis (long. 18-20 uncialibus lat.  $1\frac{1}{4}$  uncialibus) supra 1-carinatis, vena media utrinque et margine cum vel absque setis, spathæ extimæ spinis planis latis deflexis, rostro æquante, calyce subintegro margine ciliato, fructibus globosis.

HAB.—Malacca. Sent by E. Fernandez under the names *Rotang Sumambo*, and *Rotang Chry*?

DESCR.\*—A stout Palm, diameter of the stem (including the sheaths) about two inches. *Sheaths* armed with broad, flat, generally very obliquely seriate, dark brown or black, spreading, unequal spines. *Leaves* 15-16 feet in length. *Petiole* swollen at its insertion, stout; in the lower two feet without pinnae, plano-convex, armed along the centre of the convex face towards the base with a good many scattered rather deflexed small prickles; these upwards become hooked; along the margins they present a few broad flat short thorns pointing downwards, and within the margins a number of still shorter, generally solitary, ascending thorns; the pinniferous part, which is 6-9 feet long, armed below with strong hooked prickles generally in threes, these are continued into the *flagellus*. *Pinnae* alternate, equidistant, of a whitish glaucous aspect, linear-lanceolate, 18-20 inches in length, one inch and a quarter in breadth, acuminate at the apex into a long awl-shaped point, 1-carinate above, without setæ on either face or along the margins, or with the midvein setigerous on both sides, as well as the margins.

\* Specimen: an entire upper part of a male and female plant in flower, and several spadices in fruit.

*Spadices* axillary, erect, 14-15 inches long, including spathes; peduncles adhering to the next sheath, free scarcely an inch long, much armed towards the summit with short prickles. *Spathes* several, coriaceous, more or less boat-shaped, one to each branch of the spadix. The outermost largest, bicarinate, and with the second and third entirely enclosing the others, armed on the back, especially the outermost, with flat ascending brown spines, tapered at the point (especially the outer) into a long flat beak, which is armed towards the base with a few thorns. The inner ones generally unarmed, all more or less covered with rust-coloured scurf.

*Male spadices* 15-18 inches long, of which the beak forms one-half; branches decomposed. *Spikes* short, scarcely exceeding half an inch in length, flexuose. *Cup* with the margins nearly entire, about three times shorter than the calyx. *Calyx* oblong, shortly 3-toothed, margins villous-ciliate. *Corolla* cylindric-oblong; *petals* three,\* oblong, erect. *Stamina* 6; *filaments* blood coloured, lower halves united into a fleshy mass, (free) subulate; *anthers* oblong-sagittate. *Pollen* 1-3 plicate. Rudiment of the *Pistillum* deeply 3-lobed.

Female spadix very stout with the internodes swollen at the centre, and having a corky appearance, all sprinkled with rust-coloured scurf. Branches of the female spadix stout, ascending. *Spikes* short, stout, similarly scurfy, flexuose. *Flowers* on short stalks, the uppermost about sessile, with one bractea at the base, and two bracteoles, that close to the base of the flower almost cup-shaped, entire.†

*Calyx* barrel-shaped, almost entire, striate-veined; margin fringed with reddish cellular processes. *Corolla* about  $\frac{1}{3}$  longer than the calyx, ventricose from the middle downwards, divided nearly to the base into 3 erect segments. Six rudimentary *stamina* line the lower half of the corolla. *Ovarium* oblong, three-celled, covered with scales, continued into a stout short cylindrical style, with three long, revolute, horn-shaped branches, stigmatose on the inner face, which is also longitudinally furrowed. *Ovula* solitary.

\* The internode is long; the petals being distinct as far as the base of the rudimentary *Pistillum*.

† A niche exists between this and the back of the second, (which is sub-bicarinate) as though there should be another flower.

*Fruits* more exposed than the flowers, the spathes being gaping, and at length these falling off, quite exposed, surrounded at the base by the calyx and corolla, (the latter being generally split) terminated by the persistent base of style about the size and shape of a large marble; scales light tawny colour with white edges, central furrow narrow, on either side of which the scale is more than usually gibbous. *Seed* (immature) erect, the covering abounding with resin of a rich blood colour. *Albumen* horny-cartilaginous, very much ruminant. *Embryo* basilar.

This seems to me distinct from *Dæmonorops melanochætes*, Bl.\* by the large leaves, the broad glaucous pinnæ the large spines of the outer spathes, and their beaks equaling or exceeding them in length.

40. (30) *C. intermedius*, (n. sp.) aculeis petiolorum dorsalibus uncinatis, spinis et aculeis marginalibus inæqualibus infra pinnas superadditis, pinnis lineari-lanceolatis (long. 15-uncialibus, lat. uncialibus) supra carina una cum vel absque setis et venis 2 lateralibus setigeris, subtus vena media setigera, spadiceis pedunculo inermi, spathis externis spinis longis gracilibus deflexis armata, rostro longissimo.

HAB.—Malacca. Sent by E. Fernandez, with the name *Rotang Chrysa*. ?

\* *C. Melanochætes*, spinis petioli dorsalibus lanceolato-subulatis aliis setiformibus marginalibus supra additis, pinnis æquidistantibus linearibus (long: subpedalibus lat. 3-4-linealibus) secus venam mediam et margines setoso-aculeolatis, spadiceis pedunculo (infra spathas) spinis armato, spathis breviter rostratis extimis spinis parvis armatis.\*

“*Palmijuncus niger*. *Rumph. Hb. Amb.* 5. p. 101. t. 52. *Calamus niger*, *Willd. Sp. Pl.* 2. p. 203. *Lam. Enc.* 6. p. 306.” *Dæmonorops melanochætes*. Bl. in *Syst. Veg. ed. Schultes.* 7. pt. 2. p. 1333. *Mart. Palm.* p. 198. t. 117, 125. f. 1.

HAB.—Penang. Wallich.

The spathes in plate 125, the only one I have seen, are represented as partially open, in which respect it approaches *C. nutantiflorus* and *Jenkinsianus*. The pinnæ are said to be 3-4 feet long.