

length, lowermost of the lowest branches 4-5 inches long, spreading, angular.

Fruits on shortish stalks, uppermost of each spike nearly sessile, spreading, oblong-ovate, length six lines, breadth three and a half, attenuated into a short mammilla terminated by the base of the style, surrounded at the base by one envelope! divided below the middle into three oblong segments, between this and the fruit itself is a short cup variously lacerated, and outside at the apex of the stalk, two bractes, the outer one subannuliform. Scales whitish, cartilaginous, with pale margins, the central furrows deep, and consecutive.

Seed (immature,) oblong. *Albumen* ruminant.

This is probably the plant of Rumphius, quoted by most authors as *C. verus*; it resembles it in the length of the spadices, the want of a spathe when in fruit, the distance of the *annulus* or cicatrix of this from the axilla, and its suffulging the lowest branch of the inflorescence.

It is, as may be supposed, very closely allied to the *C. platyacanthus* of Martius,* from which however it differs in the very long two-edged peduncles of the spadix, the want of spathes when in fruit, in which points Martius's plant differs from that of Rumph.

It is the only one I have yet seen of this section in which all the spathes appear to be deciduous or in which the fruit is only surrounded by one envelope, the corolla being apparently for the most part deciduous. In this again it differs from Martius's plant.

From the preceding to which it is closely allied, it is known at once by the absence of the remarkable very long spines to the margins of the mouths of the sheaths, and by the spadix and fruits.

33. (23) *C. Hystrix*, (n. sp.) aculeis vaginalium seriatis vel sparsis marginum longissimis spithamæis vel pedalibus, petioli

* Palm. p. 206. t. 160 f. i. ii. iii.

(flagelliferi) infra pinnas valde inæqualibus sparsis patentissimis, inter pinnas subtus uncinatis supra minutis dentiformibus, pinnis æquidistantibus confertis linearibus (long. 16-uncialibus lat. 5-6 linealibus) supra carina et carinulis duabus setigeris, subtus venis 5 setosis, spadice decomposito erecto, spatha crebre armata spinis marginum apicem versus longissimis, spicis florum fæmineorum ascendenti-convergentibus fructuum patentibus, dentibus calycis villosis vel penicillatis, fructibus oblongis albis.

HAB.—In forests. Ayer Punnus, Rhim; Province of Malacca. Malayan name *Rotang Sabote*.

DESCR.*—Climbing to a great extent, flagelliferous, diameter of stem towards the flowering part $1\frac{1}{4}$ inch. *Sheaths* swollen at the insertion of the petiole, armed with strong large flat spines, distinct, or in the usual incomplete verticils, those of the margins of the mouth of the sheath exceedingly long, a span or a foot in length, and proportionally broader at the base. *Petiole* $1\frac{1}{2}$ to $1\frac{3}{4}$ foot long in its lower naked part; where it is rather angular, and variously armed. The spines of the margin one inch long, subulate, the others aculeiform, while the upper flatter face has small thorny teeth. Pinniferous part 5-6 feet long, rather angular, armed above along the centre with short straight teeth, below with solitary hooked thorns. These are as usual continued into the *flagellus*, which is very long. *Pinnæ* very numerous, generally approximate in pairs, linear, subulato-acuminate, 16 inches long, 6 lines wide, under face with 5 bristle-bearing veins, the upper has the midvein carinate, one lateral one on either side sub-carinate, bearing bristles chiefly above the middle; margins bristly, ciliate; apex as usual hispid.

Spadix $2\frac{1}{2}$ feet long, (exserted 2 feet,) peduncle adhering to the next sheath, in the young state so imbricated with spathes as to be subulate; of these spathes the lowermost 4 are armed, the armature gradually diminishing from the base upwards. In flower it has one *spathe* near the axilla, boat-shaped, 4-5 inches long, flattish or nearly

* Specimens; entire specimens of plant with female flowers and fruit.

revolute at the apex, coriaceous, armed on the back with very strong broad spines, of which the uppermost along the margins are a good deal the longest, and awl-shaped from a flat base. *Branches* several, with the same ascending direction as the peduncle, naked at the base. *Spikes* 2-3 inches long, also ascending, slender, flexuose, ferrugineo-furfuraceous, suffulted at the base by an obscure squamiform bracte.

Flowers solitary on short stalks, occupying the flexures, stalk furnished with one minute bracteole! *Calyx* short, cupshaped, obsoletely three-toothed, teeth short, villous at the points. *Corolla* with a sub-globose base, twice as long as the calyx, divided to the middle; segments half-lanceolate, spreading. *Stamina* adhering to corolla to the base of its segments; *anthers* linear-sagittate, effete, on very short *filaments*. *Ovarium* ovate-roundish, covered with shortly ciliate scales, 3-celled at the base. *Style* divided to the base into three oblong-clavate segments, very lamellar, and papillose on the inner surface and sides.

Fruit bearing spadix with or without the spathe. *Spikes* spreading, very flexuose. Stalks of the fruit spreading. *Fruit* surrounded at the base by the persistent envelopes, elliptic, shortly mammillate at the apex. Scales large, cartilaginous, appearing to the naked eye to have two lines down the centre, margins cartilaginous. *Seed* 1, oblong, erect. *Tegument* dark-brown, with the usual resiniferous pits, rather thick in some parts. *Albumen* horny, deeply ruminant. *Embryo* basilar.

This species is closely allied to *C. platyacanthos*, Mart. from which, however, it is at once distinguishable by the enormously long spines of the margins of the mouths of the sheaths. The armature of the lowermost and most persistent spathe also differs in the analogous elongation of the spine of its apex. The teeth of the calyx are moreover tufted with hairs, and the fruit of the same period of development is oblong, not obovate as in the species alluded to. Martius also gives the spadices in his species as "pedes nonnullos longi."*

* Palm. loc. cit.

It appears to vary a good deal. I have specimens sent by E. Fernandez from Malacca, under the name *Rotang Pusaisur*, which is of smaller size, the spadix (with young fruit) not a foot in length, and the flowers with two bracteoles. But otherwise the plants are so much alike, and there appears to be so great a tendency to vary in the length of the spadices, that I have thought it better to unite the two, particularly as so little is yet known of the real value of the characters employed in the distinction of the species.

The female spikes in flower resemble a good deal the same parts of *C. leptopus*; and it is to be remarked that the lowermost spathe, though persistent for a long time, presents scarcely any sheath.

In the armature of the petioles it may be considered to approach in some degree to *C. castaneus*, the thorns in both being often or generally solitary, and very unequal in size.

Rumph's figure of *Palmijuncus verus angustifolius** gives, with the exception of the want of the long spines, a good idea of this species in fruit.

SECT. III.—(PLATYSPATHÆ.)

Huic sectioni pertinet *Katu-tsjurel*, Rheede. Hort. Mal. 12. t. 65. † *Roxburghio ad Calamum suum latifolium refertus*.

34. (24) *C. leptopus*, (n. sp.) spinis vaginarum seriatis, petiolorum (flagellifer:) partis inferioris nudæ seriatis, aculeis partis pinniferæ uncinatis, pinnis æquidistantibus lineari-lanceolatis (long. 15-16-uncialibus lat. 12-13-linealibus) cirrhoso-acuminatis supra 1-carinatis sub-glabris subtus sæpius

* Herb. Amb. v. t. 54. f. 2. *C. verus* of most authors. *C. platyacanthos*. Mart. loc. cit.

† This species may be distinguished as *C. (Platyspatha) Rheedei*, petiolis spadicebusque aculeatis, pinnis distanter fasciculatis lineari-lanceolatis.