

simplex, circa 80 cm. longus, inferne ad 50 cm. pedicelliformis, cum spathis 2-3 bicarinatis, tubulosis, gramineis, plus minusve striatis apice oblique truncatis, acutis vel bifidis involutus, et interdum infra partem ramosam 1-2 bracteolos liguliformes vel lineares ferens; superne in ramos remotos simplices vel ramulosos primo dense pubescentes tarde puberulos vel glabros, plerumque in axilla bracteoli orientes terminatus. *Flores* femininei, vel interdum hermaphroditi, oblongi, 2 mm. longi, 1.2 mm. crassi, in glomerulos distantes spiraliter dispositos 3-5 aggregati; flores masculi ignoti. *Calyx* circa 0.8 mm. longi, glaber, rugosus sepalis late ovato-reniformibus, imbricatis. *Corolla* calyce duplo vel triplo longior, glabra, striata, petalis oblongis, imbricatis. *Stamina* vel staminodia 6, in annulum membranaceum conspicue unita. *Carpella* 3, ventricosa, dense pubescentia, libera, in stigma glabrum abrupte terminata. *Fructus* juvenilis tantum visus, erectus, vestigio stylare apicale vel paulo excentrico; semen aequabile (?).

MALAY PENINSULA: *Langkawi*, Pulau Dayang Bunting in collina calcarea (Henderson, 29134, Holotypus; Curtis, 2661, vern. nom. Serdang Batu); loc. incert. (Fox in Dec. 1904).

Hermaphrodite flowers which are also seen in this species resemble the female flowers. The fruits are too young for an investigation into the nature of the albumen, the position of the embryo, etc.; in the shape and arrangement of the perianth and of the young developing ovaries this species appears to be like *Maxburretia rupicola*.

CURTIS mentions that the stems reach a height of 6-10 ft., and HENDERSON notes that they attain about 10 ft. amongst dry rocks, but that the plants are dwarfed when growing in cracks of the rocks near the sea. That the palm is caespitose has not been recorded by any of the collectors; but I have noticed this character in a plant growing in the Botanic Gardens, Singapore.

B. *Maxburretia* Furtado gen. nov. (CORYPHOIDEAE)

Palmae dioeciae, nanae vel acaulescentes. *Petioli* inermes, apice in costas aequicrassas in lamina producti. *Laminae* frondis flabelliformes. *Spadix* interfoliaris, unisexualis, in inflorescentias partiales divisus; flores solitarii vel glomerati. *Tepala* imbricata; *calyx* brevior quam *corolla*. *Stamina* 6, epipetala. *Carpella* 3, libera. *Fructus* erectus; semine erecto; albumine aequabile; intrusione integumentali brevi, ad latus raphale sito.

Specimen typicum NUR 34370.

1. *Maxburretia rupicola* (Ridl.) Furtado comb. nov.

Livistona rupicola in Journ. Roy. Asiat. Soc. Straits Settl. XLI (1903) 41 et Mat. Fl. Malayan Pen., Monocot., II (1907) 16: *partim*; Becc. in Webbia V (1921) 16 et 20

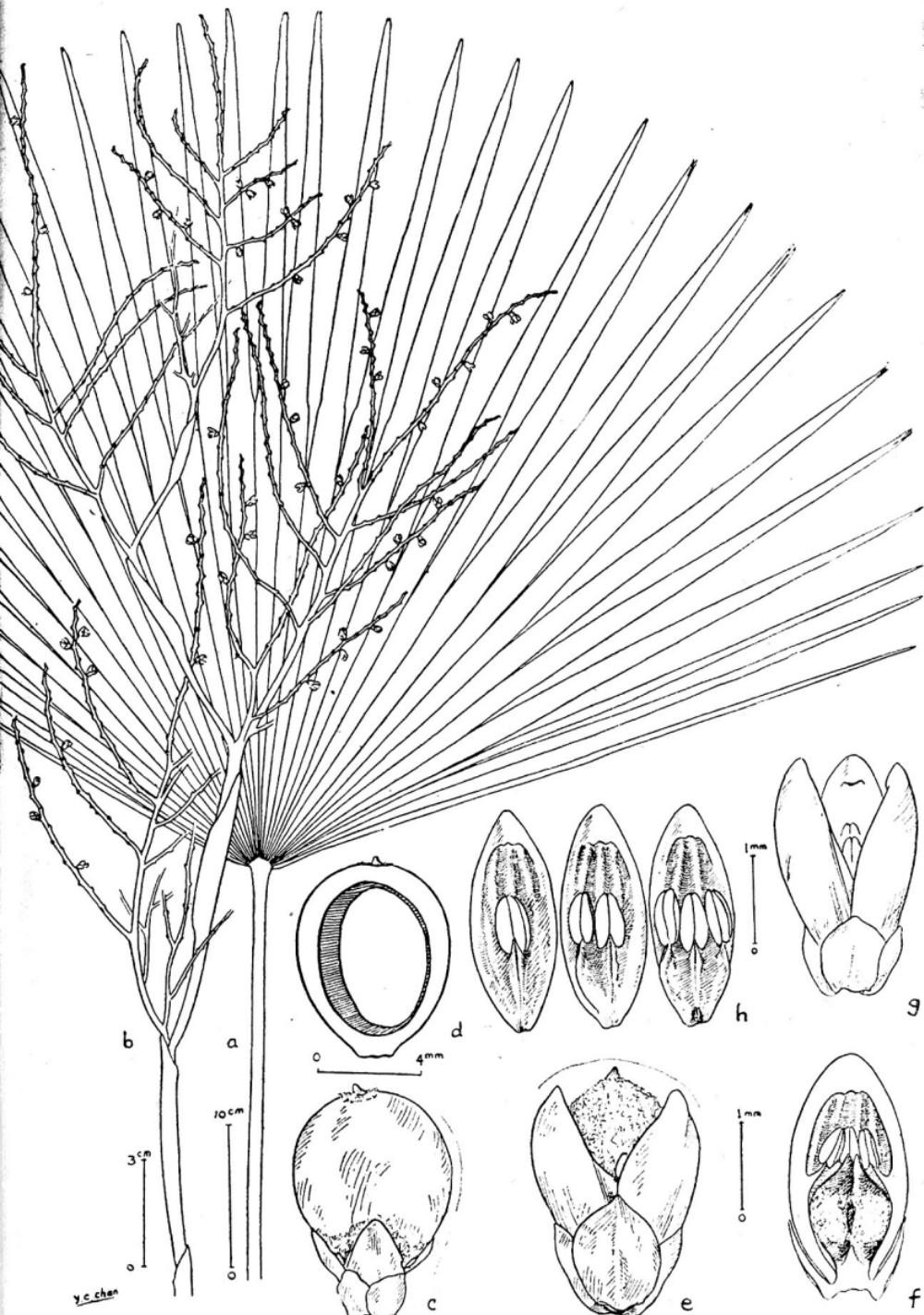


Fig. 2. *Maxburretia rupicola* (Apotypus: NUR 34370).

a. Foliolum cum parte petioli superiore. b. Pars spadicis feminei. c. Fructus juvenilis. d. Fructus verticaliter discessus ut albumen integumentumque apparent. e. Flos femineus post anthesin. f. Flos verticaliter discissus. g. Alabastrum. h. Petala cum staminibus.

(§ LIVISTONELLA); Ridl., Fl. Malay Pen. V (1925) 23 p.p.; Becc. in Calc. Annals XIII (1933) 105 t. 53 (§ LIVISTONELLA); Henderson in Journ. Roy. Asiat. Soc. Malayan Br. XVII (1939) 85 p.p. (ex altera parte = *Liberbaileya lankawiensis*).

Planta nana, vel acaulescens, solitaria (semper?), dioecia. *Petiolum* metralis, semiteres, inermis, postice convexo planus, untrinsecus angulatus, apice in costas fere aequicrassas in lamina percurrentes, basi vagina fibrosa, brunneo-nigrescente, liguliforme, 10–20 cm. longa, caulem amplectante, in senectute in fibras persistentes soluta. *Lamina frondis* 50–60 cm. longa, flabelliformis, $\frac{1}{3}$ -orbicularis, subitus albescens, basi cuneata, apice in lacinias acutas 12–18 cm. longas, aut 30–35 unicostulatas 2 cm. latas, apice bifidas, aut pauciores, latiores, 2–4 costulatas, apice tot fidas quot costulas. *Spadix* unisexualis, 45–60 cm. longus, masculus femineo longior, in 4–6 inforenticias partiales, pubescentes, masculas femineis ramosiores, divisus. *Spathae* brunneae, glabrae, valde striatae, acutae, vel acuminatae, interdum bifidae. *Flores* solitarii, rarissime 2–3 glomerati, spiraliter dispositi; masculi circa 2.5 mm. longi, lineares vel obovato-oblongi, 0.8–1 mm. crassi; feminei ovato-oblongi paulo minores masculis. *Calyx* circa 0.8 mm. longus; sepala imbricata, ovata, acuta, rugosa. *Corolla* calyce triplo longior; petala striata, imbricata. *Stamina* 6, petalis paulo breviora, epipetala, filamentis subulatis, antheris cordatis. *Staminodia* petalis valde minora, 6. *Carpella* 3, valde ventricosa, fusiformia, dense sericea, 1–3 fertilia, singula in stylum conicum liberum glabrum subito contracta; stigmate punctiforme. *Carpellodia* minuta, glabra. *Fructus* juvenilis tantum visus, glaber, erectus, obovato-oblongus; semine erecto; albumine aequabile; intrusione integumentali breve; embryone non viso; vestigio stylare apicale vel paulo excentrico.

MALAY PENINSULA: *Selangor* (Gua Batu, Ridley 8285, Lectotypus); Batu Takun prope Kanching (Nur, 34370, Apotypus).

RIDLEY notes that this produces a stem about 3 ft. high and 6 inches through; but NUR informs me that he found it always stemless and solitary. The situation of NUR's collection was steep, exposed limestone rocks where the vegetation usually makes a poor growth.

The basynym, *L. rupicola*, was based on two specimens, one collected at Gua Batu by RIDLEY and the other in the Langkawi Islands by CURTIS. As the two specimens represent two distinct species, and as the Gua Batu one appears to have been the principal basis of the description given by RIDLEY, I have typified the species on the last named specimen, making the other specimen the paratype of *Liberbaileya lankawiensis*.

The leaf in RIDLEY 8285 contains 2-4 costulate segments; and since this was unusual in the genus *Livistona* except in juvenile stages, BECCARI employed the character to create the section *LIVISTONELLA* under *Livistona*. But the many stages represented in NUR's collection lead me to conclude that the degree of leaf division in RIDLEY 8285 represents that of young plants.

There are no flowers in the lectotype preserved in Singapore, a reason why BECCARI failed to discover the erroneous generic identity made of the specimen by RIDLEY. However NUR 34370 has supplied the important diagnostic characters lacking in RIDLEY 8285, for which reason NUR's specimen has been called here the Apotype of the species (for the definitions of the nomenclature of types, see FURTADO in Gard. Bull. Straits Settl. IX, 1937, pp. 285-309).