

Distribution: as for subspecies *malaccensis*.

Collections examined: Keheding (1878) Klang (type) K (!) Fl (!). About 150 Malayan specimens from herbaria and about 30 of my own collection.

Sarawak: G. Mattang Dransfield 768.

Notes: Beccari (1886) distinguished *I. malaccensis* by the unbranched inflorescence. This is the first description which distinguishes a taxon with unbranched inflorescences from those with branched ones i.e. *I. wallichiana* and *I. geonomaeformis*. However the situation became confused when *I. geonomaeformis* was used by Ridley to describe the unbranched taxon, while *I. malaccensis* was reduced to the varietal level and was distinguished from the "typical" variety only by being more tomentose. The situation is further confused by Whitmore (1973) who mistakenly described *I. malaccensis* as "one of the branched forms".

In accordance with Griffith's original sense, *I. geonomaeformis* is treated as synonymous with *I. wallichiana* so that *I. malaccensis* is the correct name for the taxon with unbranched inflorescences. I have used it in a slightly wider sense by including plants which have both simple and bifurcating inflorescences on the same plant. A problem then arises about Ridley's *I. geonomaeformis* var *ramosa* which he described as having two or three branches. After consideration, I have reduced this to synonymy with var *malaccensis* as all the plants cited by Ridley have a southern distribution. However plants with one, two, three or four-branched inflorescences on the same plant are rare and form less than 2% of the populations I examined.

Var **humilis** Kiew var. nov.

Palma humilis solitaria saepe acaulescentia, vel caule breve 10 cm — 1 m alto, 2 cm crasso. Annuli aggregati ad 2.5 mm distantes. Plantae caulescentiae radicibus gralliformibus. Vagina folii ramis radicum gralli formium tecta. Folium indivisum 8–10 in corona. Lamina anguste — oblonga, base cuneate, apice rotundata, margine leviter serrato. Petiolus 30 cm longus. Lamina (46) 50 (55) cm longus, (13) 15 (20) cm latus, nervis lateralibus (21) 23 (26). Inflorescentia c. 42 cm longa, c. 17 cm florifera. Inflorescentia indumento aurantiaco tecta. Spatha exterior c. 10 cm longa, interior c. 20 cm longa, indumentum dense tecta. Foveae conspicuae, bracteolo magna.

Typus: *Corner 30095* Ulu Bendong, Malaya. Holotypus (SING).

Solitary, often acaulescent or with short trunk 10 cm to 1 m tall. Stem stout c. 2 cm thick. Annuli crowded, upto $\frac{1}{4}$ cm apart. In plants with a stem, stilt roots at stem base give rise above to a mat of thin branched roots covering the leaf sheaths. Leaf simple, 8–10 leaves in the crown. Lamina narrowly oblong, gradually cuneate at base, rounded above. Margin shallowly serrate. Petiole c. 30 cm long. Lamina (46) 50 (55) cm long and (13) 15 (20) cm wide. Lateral veins (21) 23 (26). Inflorescence c. 42 cm long, c. 17 cm bearing floral pits. Inflorescence covered by wiry ginger hairs. Outer spathe c. 10 cm long, inner c. 20 cm long. Spathes covered by a felt of fluff. Pits conspicuous with large covering bract.

Distribution: Malaya: Kemaman.

Collections examined: Ulu Bendong, *Corner 30095* SING (!); L (!); *Corner s.n.* BO (!), SING (!) BM (!); Ulu Ayam, *Corner 30258* SING (!); *30259* SING (!); *30260* SING (!); Bukit Kajang, *Corner s.n.* SING (!); *Kiew 4, 5, 8, 12, 13, 14, 15, 16.*

Notes: Var *humilis* is distinguished from the sporadic simple-leaved forms by the narrower leaf (fig. 7) and by the peculiar mass of branched roots at the base of the trunk. These arise from the stilt roots and are unusual in that they appear to be negatively geotropic, growing upwards and forming a network round the leaf sheaths where detritus collects and into which the roots appear to penetrate. Occasional pinnate forms are found in the local populations of var *humilis* which are both smaller in stature and in length of leaf than the average var *malaccensis* and possess the mat of roots covering the leaf sheaths characteristic of the Kemaman population.

This variety is the smallest palm in Malaya and rivals *I. palmuncula* var *palmuncula* in Sarawak. It is fertile when acaulescent and can have rounded leaves only about 5 cm in width and length and an unbranched inflorescence about 10 cm long. It is smaller than the early juvenile simple-leaved forms of the other taxa of this species.

Var *elatior* Kiew var. nov.

Caulis 50–350 cm altus, Folia indivisa (36) 57 (72) cm longa, (24) 30 (36) cm lata. Lamina fissura apicale profunda, (19 cm), base acute contracta (interdum parallelilatera). Nervi laterales (18) 29 (35) interdum glabri, saepe indumento aurantiaco longo. Inflorescentia 55–90 cm longa, indumento filimetallico simile tecta, floribus 25–45 cm tecta. Spatha exterior 14 cm longa, interior 28 cm.

Typus: *Holttum* 10299 Gunung Belulut, Malaya. Holotypus (SING).

Stem $\frac{1}{2}$ – $3\frac{1}{2}$ m tall. Leaves simple (36) 57 (72) cm long and (24) 30 (36) cm wide. Lamina with deep apical notch (19 cm), base tapering acutely (occasionally with parallel sides) towards the apex. Lateral veins (18) 29 (35), sometimes glabrous frequently with dense long ginger hairs beneath. Inflorescence 55–90 cm long, covered by wiry hairs, flowers covering 25–45 cm. Outer spathe 14 cm, inner spathe 28 cm.

Distribution: Malaya: G. Blulut, Johore.

Collections examined: Johore: North side G. Blulut, *Holttum* 10299 SING (!); Kluang Forest Reserve, Ng 98021 KEP (!), *Dransfield* 817 KEP (!), *Kochummen* 2841 KEP (!); *Whitmore* 3850 KEP (!) *Evans* 103, 107, 108, 109, 110 (!).

Notes: This variety grows in populations together with the pinnate variety var *malaccensis*, over which var *elatior* slightly predominates in number. The pinnate plants are indistinguishable from the general Malayan population of var *malaccensis*. Var *elatior* eventually grows much taller than these and has leaves differing in shape from the general populations' simple-leaved forms (fig. 7) by being abruptly cuneate at the base and having a particularly deep apical cleft.

The first reference to this variety is Dransfield (1969). He points out its similarity to the population of var *major* at Gunong Bubu in Perak; however they are distinct in inflorescence branching — var. *elatior* has a simple inflorescence and falls within the range of subsp. *malaccensis* while var *major* has a branched inflorescence and falls within the range of variation of subsp. *wallichiana*. Leaf size and shape also show differences (fig. 7).

Species Excludenda

Iguanura speranskyana Bois, J. Hort. Soc. France 665 (1899). Martelli, Nuovo Giornale Botanico Itali 42: 52 (1935).

There is no type specimen for this plant and the sole description is: "Palmier originaire du Brésil, à port de *Geonoma*, acaule, à feuilles rouges dans le jeune âge."