



1. *Nenga grandiflora*, habit, G. Blumut, Johore, May 1968. Photo by J. Dransfield.



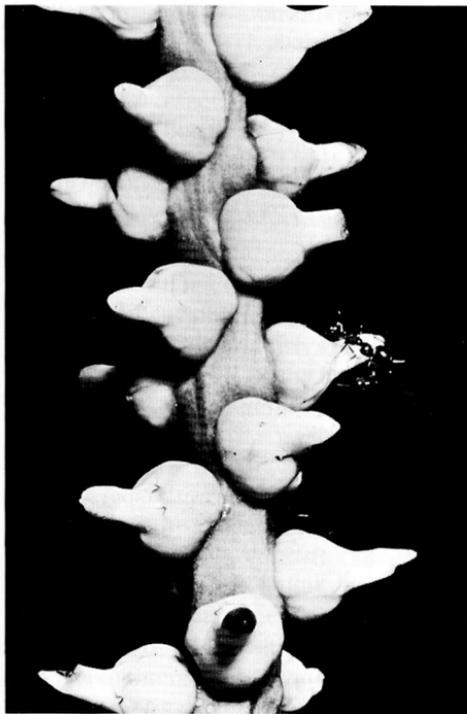
2. *Nenga grandiflora*, staminate and pistillate flowers in bud, G. Panti, Johore, June 1977. Photo by J. Dransfield.

Furtado SFN 33048 (BH, K, L), G. Hang, 760 m alt., fl., *Furtado SFN 35024* (BH); Perak: Maxwell's Hill, 1,000–1,300 m alt., fl. and fr., *Scortechini 547a* (Lectotype FI), fl. and fr., *Scortechini 302b* (Paratype FI), ca. 975 m alt., fr., *Burkill & Haniff 12790* (K), Gopeng, fl. and fr., *Dr. King's Coll. 4775* (BM, K), G. Batu Putih, ca. 1035 m alt., fl. and fr., *Wray 930* (K), G. Kerbau, ca. 1,050 m alt., fr., *Robinson s.n.* (K), G. Bintang Hijau, fl., *Dransfield 5386* (K), Semangko, fr., *Ridley 14715* (BM); Pahang: Bentong, ca. 580 m alt., fl., *Furtado SFN 33110* (K); Kemaman: Ulu Bendong, ca. 150 m alt., fl., *Corner SFN 30065* (K); Selangor: G. Bunga Buah, ca. 850 m alt., fl. and fr., *Whitmore FRI 0322* (BH, L), Ulu Langat, Menuang Gasing, fl., *Kloss s.n.* (K); Negri Sembilan: G. Tampin, fl., *Ridley s.n.* (K), ca. 400 m alt., fl., *Burkill SFN 2849* (K).

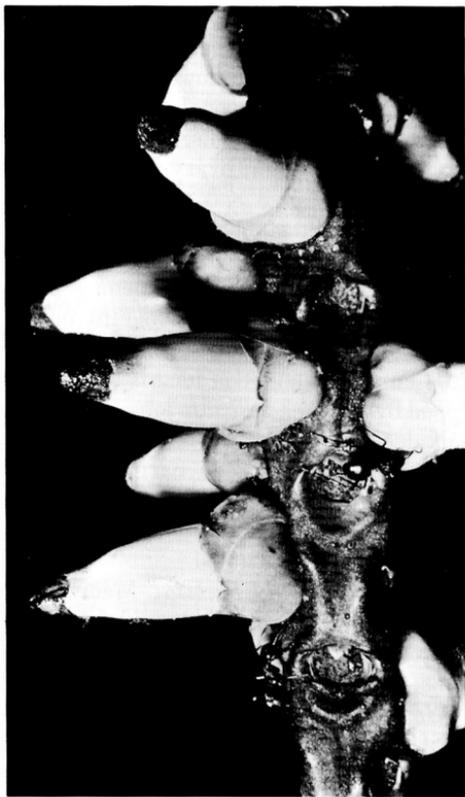
Notes. This species is apparently a strictly solitary palm, although it has

sometimes been erroneously reported as occurring in clumps. *Nenga macrocarpa* is easily distinguished by its staminate flowers with equal or subequal perianth parts, and its large ellipsoid fruits which are prominently beaked and tipped by a distinct 3-lobed stigma.

4. *Nenga grandiflora* E. Fernando, **sp. nov.**; *N. macrocarpa* affinis, sed floribus masculis majoribus, fructu ovoideo, obclavato vel obpyriformi, valde longirostrato, inflorescentia duas rachillas semper ferenti differt. Typus: Malay Peninsula, Johore, Kota Tinggi, Panti East, 400 m alt., fl. et fr.,



3. *Nenga grandiflora*, details of pistillate flowers at anthesis with ant collecting nectar, G. Pantl, Johore. June 1977. Photo by J. Dransfield.



4. *Nenga grandiflora*, young fruit, G. Pantl, Johore, June 1977. Photo by J. Dransfield.

Dransfield & Fong 5048 (Holotypus K; Isotypi KEP, L).

Solitary, robust palm. Stem ca. 2 m long, 8 cm diam.; internodes to 5 cm, brown. Crownshaft elongate, cylindrical, to 75 cm long, very swollen. Leaves 7–8 in crown, leaf sheath ca. 30–60 cm long, dull green to slightly purplish; petiole ca. 32–54 × 1.6 cm, slightly yellowish-orange, rachis angular, rather sharp along the edges. Leaflets to ca. 30 on each side of the rachis, drying light brown; basal leaflets 1–2 costate, ca. 25–42 × 0.8–1.2 cm, long-acuminate; middle leaflets 3–4 costate, ca. 40–82 × 5–6.5 cm, long-acuminate; terminal leaflet pair 3–6 costate, ca. 30–56 × 3–5.5 cm, acuminate or slightly toothed at tips, the pair sometimes joined to 10 cm at the base along

the rachis. Inflorescence infrafoliar, pendulous; prophyll ensiform or lanceolate, ca. 28 × 2.7 cm, drying brown, caducous; peduncle ca. 1.7–4 × 0.8–1.5 cm, flattened, glabrous; peduncular bract triangular, to ca. 5 mm long, 4 mm at the base, membranous; rachillae always 2, ca. 24–30 cm long, 7–10 mm thick near the base, glabrous, each rachilla subtended by a membranous, triangular bract to ca. 5 mm long. Staminate flower triangular, trigonous, asymmetric, slightly flexuous; sepals equal or subequal, subulate, acutely and dorsally carinate, flexuous, ca. 1.3–1.6 cm long, to 3 mm wide; petals elliptic or elliptic-lanceolate, acute to acuminate at tips, equal or slightly subequal to the sepals; filaments ca. 2–2.5 mm long;

anthers erect, linear, ca. 6–7 mm long, deeply sagittate at the base; pistillode conical, minute. Pistillate flower shorter than the staminate flower; sepals ca. 5–8 × 5–7 mm, petals as the sepals, slightly smaller, ca. 4–6 × 4–5 mm; ovary broadly ovoid or subglobose, to 3 × 3 mm; stigma distinctly 3-lobed; staminodes of 6 minute teeth. Infructescence pendulous, densely covered with fruits. Fruit ripening deep red then purplish-black, ovoid to obclavate or obpyriform, ca. 3.8–5.4 × 1.5–2.0 cm, prominently long-beaked and tipped by a stigma 5–7 mm long, the upper half deeply 3-lobed; epicarp drying with longitudinal ridges; seed narrowly ovoid, ca. 2.3 × 1.2 cm, acute to acuminate or shortly spinescent at tip; base truncate, slightly concave intruded.

Distribution and Habitat. Malay Peninsula (Johore); in dense humid forest on steep rocky hillslopes or river valley bottoms; ca. 180–500 m alt. Endemic.

Specimens Examined. MALAY PENINSULA: Johore: Kota Tinggi, Panti East, 400 m alt., fl. and fr., *Dransfield & Fong 5048* (Holotype K; Isotypes KEP, L), G. Blumut, below Camp 2, ca. 500 m alt., fr., *Dransfield 841* (K), Sungei Kayu, fr., *Corner & Furtado SFN 29482b* (K), Kluang, Lenggong Forest Reserve, ca. 180 m alt., fr., *Dransfield 810* (BH), Mersing Forest Reserve, fl. and fr., *Moore & Pennington 9061* (BH).

Notes. This species is very distinctive in its very large staminate flowers, the consistently 2-branched inflorescence, and the prominently long-beaked, ovoid to obclavate or obpyriform fruit tipped with a distinctly long, 3-lobed stigma. It is most closely related to *N. macrocarpa* in vegetative features, as well as in the staminate flowers with equal or subequal perianth parts. *N. macrocarpa* is, however, easily distinguished from *N. grandiflora* by its inflorescence with often 3–4 rachillae, the much smaller staminate flowers, and the more ellipsoid fruits. Figures 66

and 68a in Whitmore's 'Palms of Malaya' (1973: 80) labelled as *N. macrocarpa* belong to this new species.

5. **Nenga gajah** Dransf. in *Principes* 19: 27 (1975). Type: Sumatra, Bengkulu, Kepahiang, Cagar Alam, near Curup, *Dransfield 1234* (Holotype BO; Isotypes K, L).

Solitary, stem stout, stilt-rooted, to 2 m long, 15 cm diam.; internodes short, to 1 cm long, greyish-brown. Crownshaft not well-defined. Leaves 8–10 in crown, leaf sheath ca. 50–60 cm long, pale yellowish-green, not falling off but rotting on the stem; petiole ca. 50–75 × 2.5 cm, circular in cross-section, with sparse dark brown indumentum; rachis to 8 mm thick. Leaflets ca. 8–27 on each side of the rachis, drying dull greyish-brown; basal leaflet 1 costate, ca. 34 × 1 cm, long-acuminate; middle leaflets 3–6 costate, ca. 32 × 4.5–8.0 cm, long-acuminate; terminal leaflet pair 3–5 costate, to ca. 32 × 3–4 cm, acuminate or bifid to slightly toothed at tips, the pair joined to ca. 4 cm at the base along the rachis. Inflorescence interfoliar, erect; prophyll ensiform, ca. 25–35 × 4 cm, coriaceous or woody and fibrous, hard, covered with scurfy brown indumentum especially along the margins, long-persisting through anthesis; peduncle ca. 22–30 × 1 cm, flattened, covered with sparse brown hairs; peduncular bract triangular ca. 6 mm long, thick and stiff; rachillae 3–5, ca. 10–12 cm long, 5–8 mm thick, each rachilla subtended by a short, thick, stiff, triangular bract to 5 × 5 mm; the lower 2–4 rachillae all staminate, the terminal or apical rachilla staminate and pistillate, or rarely all staminate only. Staminate flowers arranged in 5–7 vertical rows, or in tight spirals, angular, oblong; sepals minute, triangular, oblong-ovate or broadly ovate, slightly concave, to 1 mm long, often shorter; petals oblong to slightly obovate, unequal, ca. 4.5–5 × 2–2.5 mm,