

DISTRIBUTION & HABITAT. Luzon (Camarines Norte Prov.); in lowland dipterocarp forest; c. 100–200 m. Endemic.

LUZON. Camarines Norte Prov., Bicol National Park, *Fernando* 496 (LBC), 504 (K, LBC), 558 (holotype LBC; isotypes BH, K, PNH), 823 (LBC), & 857 (K, LBC), *Hernaez* 3586 (CAHP).

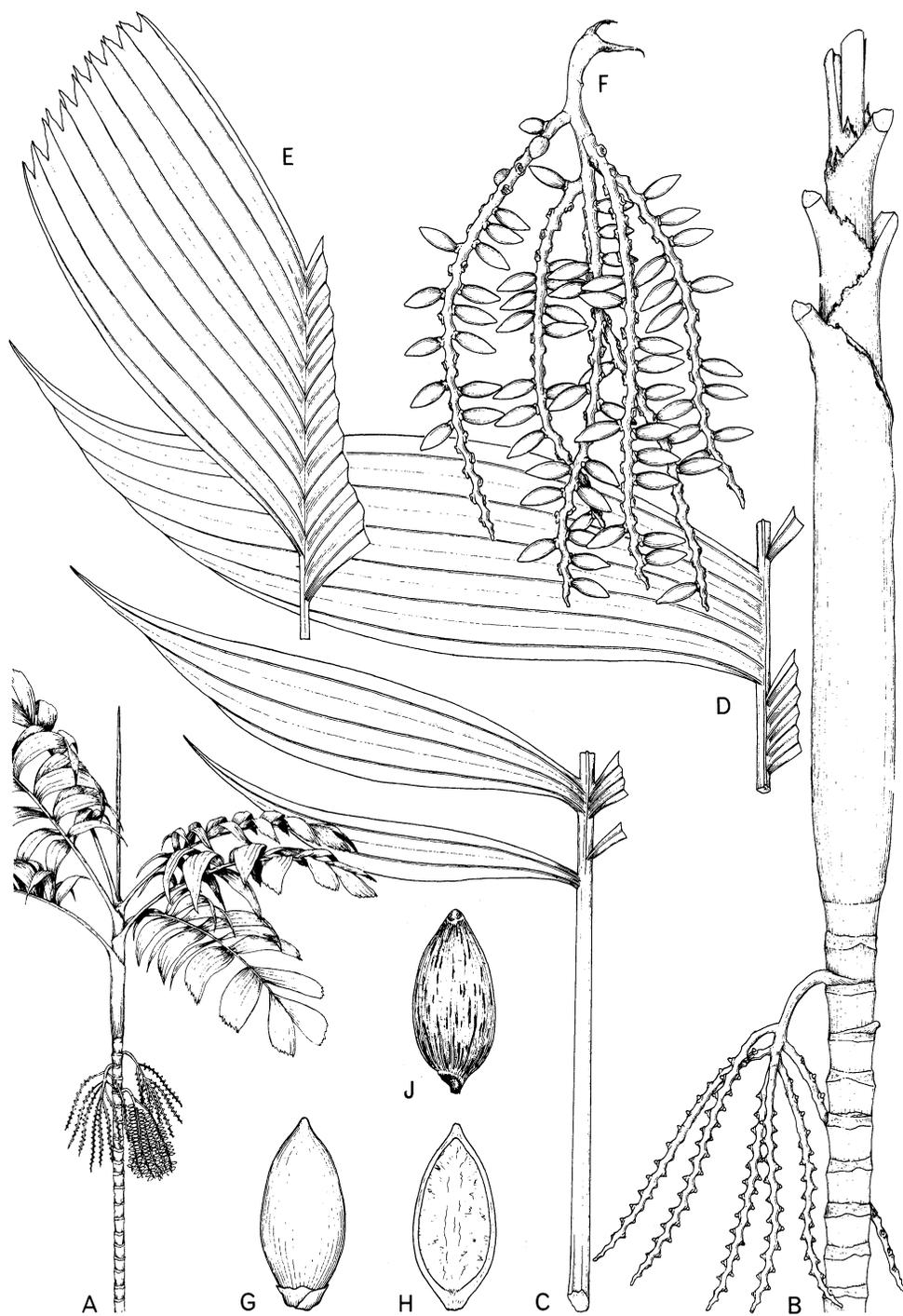
This species is similar to *Pinanga philippinensis* in general features but it is distinguishable in its solitary habit, the leaflets distinctly glaucous on the undersurface and the mature ripe fruits ovoid-globose or sphaeroidal.

*Pinanga glaucifolia* is the second species of *Pinanga*, after *P. bicolorana* Fernando, recently discovered from the now rapidly diminishing Bicol National Park. Both species are greatly endangered due to habitat destruction in the area caused by uncontrolled illegal logging, timber poaching, charcoal making and slash-and-burn farming.

***Pinanga sierramadreana* Fernando sp. nov.** *P. isabelense* Becc. habitu, magnitudine et characteribus infructescentiarum fructuumque similis sed indumento squamoso vaginis foliorum cinereo-brunneo, foliolis brevioribus subtus subglaucis in siccitate brunneolis differt. Typus: Luzon, Quezon Prov., Nakar, Sierra Madre Mountains, Sitio Sablang, *Fernando* 521 (holotypus LBC; isotypus K).

Solitary slender unarmed pleoanthic monoecious undergrowth palm, to 5 m tall. Stem to 2.5 cm diam.; internodes 2.5–8 cm long. Crownshaft elongate, cylindrical, slightly swollen, to 34 cm long. Leaves to 5 in crown; sheath to 27 cm long, greyish-green, covered with greyish-brown scaly indumentum; leaf without sheath to 90 cm long; petiole c. 16–35 × 0.7 cm, flattened or only slightly channelled adaxially, convex abaxially, covered with indumentum as the sheath; rachis angular, bifacial adaxially and nearly glabrous, obtusely rounded abaxially and covered with brown scaly indumentum. Leaflets 6–10 on each side of the rachis, unequal, ± sigmoidal, inequidistant, c. 2.5–7.5 cm apart, the costae above sharply elevated, slightly glaucescent below when fresh, but drying brownish, ramentae present along the main costae below; basal leaflets 1–2-costate, c. 10–16 × 0.8–1.7 cm; middle leaflets 1–6-costate, c. 17–25 × 1.3–7 cm; apical leaflets 6–9-costate, c. 14 × 8 cm, joined at the base to 10 cm along the rachis, ± cuneiform, the tips incised to as many lobes as there are costae, the lobes to 2 cm long and further incised at their tips to 8 mm deep. Inflorescence infrafoliar, pendulous; prophyll not known; peduncle c. 3–5 × 0.5 cm, flattened; main axis to 4.5 cm long, tapering distally; rachillae often 6–8, rarely to 11, borne 0.7–2 cm apart, each c. 11–19 cm long, flattened and ± straight, to 2 mm wide, 1 mm thick when dry; the subtending bract very narrowly annulate, shortly apiculate at middle part to 0.5 mm; peduncle and rachillae purplish-red when young. Staminate and pistillate flowers not known.

FIG. 3. *Pinanga sierramadreana*. **A** habit × ¼; **B** stem with crownshaft and inflorescence × ½; **C** basal portion of leaf with petiole and first leaflets × ½; **D** mid-portion of leaf × ½; **E** apical portion of leaf × ½; **F** infructescence × ½; **G** fruit × 2; **H** vertical section of fruit × 2; **J** seed × 2½. All from *Fernando* 521. Drawn by E. A. Lapitan.



Infructescence pendulous. Fruiting perianth depressed-cupular, 2 mm high, 3 mm across, with a flat base and contracted mouth, the sepals and petals free and imbricate, subequal, glabrous, glossy when dry; the subtending bract a very low explanate, semi-annular collar. Fruit distichous, c. 8–13 mm apart, green ripening red then purplish-black, fusiform-ellipsoid or ovoid, c.  $1.2 \times 0.6$  cm, shortly beaked; epicarp drying light brown and finely striate; mesocarp thinly fibrous; seed ovoid, c.  $1.0 \times 0.5$  cm, acute at tip, caudiculate at base; endosperm ruminant; embryo basal. (Fig. 3).

DISTRIBUTION & HABITAT. Luzon (Nueva Vizcaya and Quezon Provs.); in dipterocarp forest; c. 800 m. Endemic.

LUZON. Nueva Vizcaya Prov., Mt Caraballo, *Vidal* 3951 (K); Quezon Prov., Nakar, Sierra Madre Mountains, Sitio Sablang, *Fernando* 521 (holotype LBC; isotype K), 526 (LBC), 705 & 707 (K, LBC), Sitio Kabanbanan, *Fernando* 767 (BH, K, LBC), & 860 (K, LBC).

This species resembles *P. isabelensis* in growth habit and size and in general features of the infructescence and fruits, but differs in the glaucescent greyish-brown scaly indumentum of the leafsheath and in the leaflets much shorter, glaucescent on the undersurface and drying light brown.

A sheet at PNH (*Gutierrez* 61–289) collected from Sancad, Palanan in nearby Isabela Province probably also belongs here.

***Pinanga sobolifera*** *Fernando* sp. nov. *P. heterophylla* Becc. habitu caespitoso, magnitudine et floribus fructibusque spiraliter dispositis similis sed caudicibus stolonibus instructis, rachillis inflorescentiae numerosioribus (8–11), semine basi caudiculato et foliolis magis regulatim dispositis differt. Typus: Luzon, Quezon Prov., Nakar, Sierra Madre Mountains, Sitio Sablang, *Fernando* 518 (holotypus LBC; isotypi K, PNH).

Clustering slender unarmed pleonanthic monoecious undergrowth palm, to 2 m tall. Stem to 2.5 cm diam., internodes to 5–10 cm long; runner shoots or stolons produced at base of stem. Crownshaft elongate, cylindrical, slightly swollen, to 35 cm long. Leaves to 5 in crown; leaf sheath c. 30 cm long; leaf without sheath to 1.1 m long; petiole c.  $8 \times 0.8$  cm, channelled adaxially, rounded abaxially. Leaflets 10–13 on each side of the rachis, regularly arranged to 6–7 cm apart; basal leaflets 1–2-costate, c.  $24 \times 1.5$  cm, sigmoidal, the apex long-acuminate; middle leaflets 2-costate, c.  $45\text{--}55 \times 2.7$  cm,  $\pm$  straight, lanceolate, the apex long-acuminate; terminal leaflets to 8-costate, c.  $34 \times 5.7$  cm, joined at the base to 18 cm along the rachis. Inflorescence infrafoliar, pendulous; prophyll elliptic-ensiform, 2-keeled, c.  $10 \times 4.5$  cm; peduncle  $2.7 \times 0.5$  cm, flattened, greenish when fresh; rachillae 8–11, borne 1 cm apart,

FIG. 4. *Pinanga sobolifera*. A stem with crownshaft and inflorescence  $\times \frac{1}{3}$ ; B basal portion of leaf with petiole and first leaflets  $\times \frac{3}{4}$ ; C mid-portion of leaf  $\times \frac{1}{2}$ ; D apical portion of leaf  $\times \frac{1}{2}$ ; E rachilla  $\times \frac{1}{2}$ ; F staminate flower with one petal removed  $\times 5$ ; G pistillate flower  $\times 5$ ; H fruit  $\times 2$ ; J seed  $\times 2$ ; K vertical section of seed  $\times 2$ ; L stolon  $\times \frac{1}{3}$ . A–E and H–L from *Fernando* 518, F–G from *Fernando* 709. Drawn by F. B. Samiano.