

New species of *Pinanga* (*Palmae*: *Arecoideae*) from Luzon Island, Philippines

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Summary. Four new species of *Pinanga* (*Palmae*: *Arecoideae*) from Luzon Island, Philippines are described, viz. *Pinanga egregia*, *P. glaucifolia*, *P. sierramadreana* and *P. sobolifera*.

In the Philippines' largest and main island of Luzon, 11 species of *Pinanga* have until now been recorded, representing about half of the total number of species so far known from the entire archipelago (Beccari 1919; Merrill 1922). Recent intensive and careful collecting, particularly on the southern end of the Sierra Madre Mountain Range and in the Bicol National Park, both areas on Luzon, have led to the discovery of at least five new species of *Pinanga*. One of these, a species with mottled leaves from the Bicol National Park, has already been described (Fernando 1988). The other four have been included in a recent checklist as unnamed species (Fernando 1990). They are here formally named and described. Although some of them have already been introduced into cultivation, their habitats are seriously endangered due to continuing forest destruction. The new species described here bring to 15 the total number of species of *Pinanga* now known from Luzon.

***Pinanga egregia* Fernando sp. nov.** *P. geonomiformi* Becc. magnitudine et caulibus gracilibus similis sed habitu solitario, inflorescentia saepe ramosa et fructibus late ovoideis distincta. Typus: Luzon, Quezon Prov., Real, Sierra Madre Mountains, Sitio Balete, *Fernando* 549 (holotypus LBC; isotypi BH, K, PNH).

Solitary slender unarmed pleoanthic monoecious undergrowth palm, to 2 m tall. Stem to 1.5 cm diam.; internodes 2–4 cm long. Crownshaft elongate, cylindrical, slightly swollen, to c. 20 cm long. Leaves to 7 in crown; sheath to c. 12.5 cm long, yellowish- or creamish-white with light green tinge, covered with brown scaly indumentum; leaf without sheath c. 58–65 cm long; petiole c. 13–22 × 0.5 cm, yellowish, flattened adaxially, convex abaxially, covered with indumentum as sheath; rachis angular, bifacial adaxially, obtusely rounded abaxially, covered with indumentum as sheath and petiole. Leaflets to 6 on each side of the rachis, unequal, ± sigmoidal, inequidistant, 1–9 cm apart, except those of the apical leaflet pair, long-acuminate to subfalcate, green above and with prominently elevated costae, paler underneath and generally glabrous, rarely with sparse ramentae along the costae; basal leaflets 1–4-costate, c.

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8.5–15 × 0.7–3 cm; middle leaflets 6–7-costate, c. 21–29 × 6–8 cm; apical leaflets 5–8-costate, c. 9–14 × 4–6 cm, joined to 9 cm at the base along the rachis, the apex incised to as many lobes as there are costae, the lobes to 1 cm long and further incised at their tips to 5 mm deep, resulting secondary lobes acute-acuminate. Inflorescence infrafoliar, pendulous; prophyll not known; peduncle c. 1.5–3 × 0.2–0.4 cm, flattened, glabrous, the inflorescence very rarely simple and unbranched; rachillae often 2–3, rarely 4 or more, each to 8–15 cm long, flattened, to 3 mm wide, 1.5 mm thick when dry, glabrous, drying finely striate, the subtending bract a narrow, low collar. Staminate and pistillate flowers not known. Infructescence pendulous. Fruiting perianth depressed-cupular, 2 mm high, 3 mm across, with a contracted mouth; the petals and sepals free and imbricate, subequal, glabrous; subtending bract a low, explanate, semi-annular collar to 0.5 mm high. Fruits distichous, 3–6 mm apart, pinkish, ripening red then purplish-black, broadly ovoid, c. 1.6 × 0.8 cm, shortly beaked; epicarp drying striate; mesocarp thinly fibrous; seed ovoid, c. 9 × 5 mm, acute at tip, caudiculate at base; endosperm ruminant; embryo basal. Eophyll bifid, to 6 cm long including petiole and sheath; leaf segments 3–4-costate, c. 4 × 1.5 cm, cucullate, acuminate at tips. (Fig. 1).

DISTRIBUTION & HABITAT. Luzon (Quezon Prov.) and Polillo; in dipterocarp forest; c. 500 m. Endemic.

LUZON. Quezon Prov., Real, Sierra Madre Mountains, Sitio Balete, *Fernando* 549 (holotype LBC; isotypes BH, K, PNH), & 851 (LBC), Sitio Daraitan, *Fernando* 629 (BH, LBC), & 631 (K, LBC), Marcon logging area, *Hernaez* 3567 (CAHP, LBC); POLILLO Is.: *Fernando* 612 (LBC).

Pinanga egregia is a remarkable palm for its elegant habit. It is similar to *P. geonomiformis* in size and in the very slender stems, but differs in its solitary habit, its often branched inflorescence, and the broadly ovoid fruits. The leafsheath is also generally yellowish- or creamish-white.

This species was discovered in an area adjacent to a slash-and-burn farm. It is seriously threatened due to continuing alteration of its habitat.

Pinanga glaucifolia *Fernando* sp. nov. *P. philippinensi* Becc. similis, sed habitu solitario, pagina inferiore foliorum distincte glauca, et fructibus maturitate globosis vel spheroidalibus differt. Typus: Luzon, Camarines Norte Prov., Bicol National Park, *Fernando* 558 (holotypus LBC; isotypi BH, K, PNH).

Solitary, slender to moderate, pleonanthic monoecious undergrowth palm, to 3 m tall. Stem to 6 cm diam.; internodes 3–7 cm long, the younger portions of the stem often covered with greyish-brown indumentum as the leaf sheath. Crownshaft elongate, cylindrical, slightly swollen, to 45 cm long. Leaves to 8 in crown; sheath to 30 cm long, densely covered with greyish-brown indumentum;

FIG. 1. *Pinanga egregia*. A habit × ½; B stem with crownshaft × ½; C whole leaf × ½; D infructescence × ½; E mature fruit × 1½; F vertical section of fruit × 1½; G seed × 2. All from *Fernando* 549. Drawn by F. B. Samiano.

