

A New Species of Lecythidaceae, *Lecythis oldemani* sp. nov., from Amazonia

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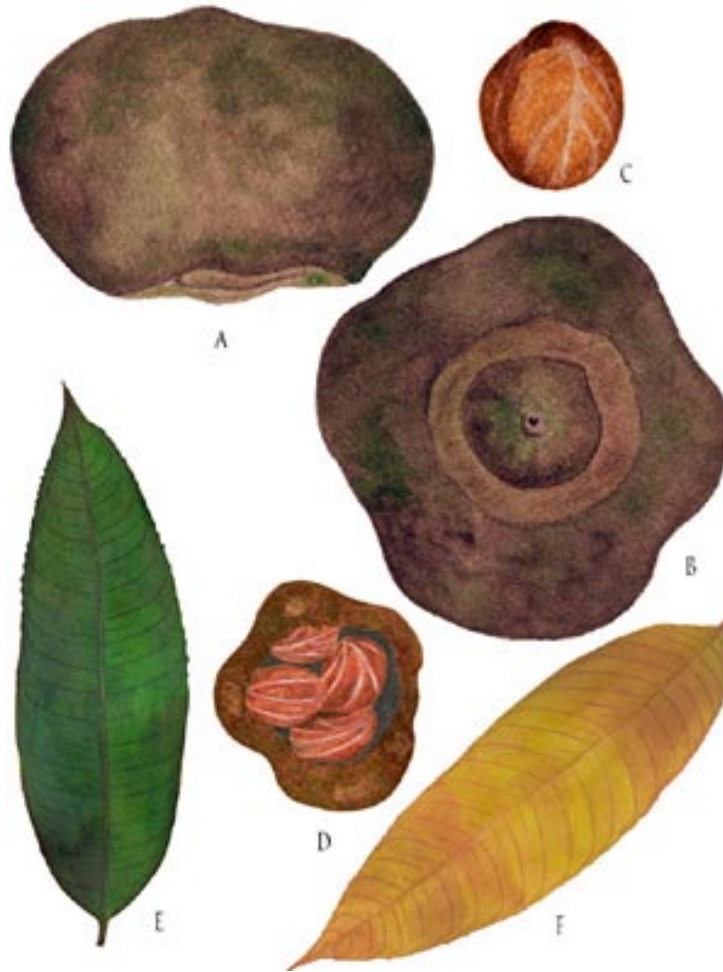


Fig. 1. *Lecythis oldemani* (Van Roosmalen L230). A. 4-Seeded fruit. B. 4-Seeded fruit seen from above. C. Seed. D. Fruit opened up by agouti showing 4 seeds without aril (x $_$). E. Fresh leaf (x $_$). F. Dry leaf (x $_$).

Lecythis oldemani Van Roosmalen, sp. nov. Type. Brazil. Amazonas: Nova Olinda, left bank of Rio Aripuanã, at edge of farmed terra preta do Índio, 25 Nov 1997 (fr), Van Roosmalen L230 (holotype, INPA); Van Roosmalen L357 (leaves of holotype tree L230 collected Nov 2002). Figs. 1-5.



Fig. 2. a. Base of medium-sized tree Van Roosmalen L360; b. trunk of large tree at breast height

Foliis magnis chartaceis, elliptico-oblongis, majoribus (28-32 x 7.7-8.7 cm), marginibus foliorum revolutis et serrulatis vel crenulatis, apice foliorum acuminatus (1.5-2 cm longi), venis lateralibus foliorum numerosis (24-30), petiolo 0.8-1 cm longo. Ovariis (1-)3-4-locularibus. Fructus sessilis, lignosus, pedicello brevi, 0-0.1 mm longi; fructibus magnis, globosus angulatus, 7 x 11 cm (operculo incluso), seminibus angulosis, albis, anarillatus.

Trees, to 35 m tall, without buttresses. Bark grayish-brown, with shallow vertical fissures, slash reddish-brown. Leaves chartaceous; leaf blades widest at the middle, narrowly elliptic or oblong, 28-31 x 7.7-8.7 cm, glabrous, with 24-30 pairs of lateral veins, margins revolute, serrulate or crenulate; apex acuminate over 1.5-2 cm; base acute, narrowly decurrent onto petiole; petiole 10-13 mm long, glabrous. Flowers not seen.

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woody, indehiscent, depressed globose, always wider than long, irregularly 3-4-lobed, 6-7.5 x 8.5-11.5 cm, the base truncate or the pedicel attachment prolonged into a woody knob 1.3 x 1.3 cm, the pericarp 7-8 mm thick, rough to warty, the calycine ring inserted at apex (distal end), prominent, 5.5-8.5 cm diam., with 5 persistent woody, irregularly thickened, downwardly oriented sepals situated at apex of fruit, opercular ring 3.7-5(-7) cm diam., supracalycine zone 0 cm, distance between line of opercular dehiscence and calycine ring (0.8-)1-2 cm; operculum umbonate (the umbo ca. 5 x 8 mm) or concave, circular, (3-)3.8 cm diam., sometimes elliptic, to 5 x 6.5 cm, the diameter always exceeding that of the opercular ring, not releasing when dry. Seeds (2-) 3-4, dry, plano-convex with 1-2 flat sides, 4 x 3.3 cm to 5 x 5.4 cm, reddish-brown, the major white veins connected at base by a reticulum of secondary veins, sometimes markedly raised above the surface of the testa; aril lacking.



Fig. 3. a. Bark of tree Van Roosmalen L360 partly removed; b. slash.

Notes: seeds very large; the pyxidia are indehiscent and fall to the ground with the seeds intact; the seeds can only escape after the pericarp has rotten away or scatter-hoarding rodents such as agoutis (*Dasyprocta* spp.) and acouchis (*Myoprocta* spp.) have gnawed an opening alongside and wider than the opercular ring; I have seen these scatter-hoarders carrying seeds of this species in their mouth, sometimes over considerable distances from the parent plant, and cache them at a depth of twice the longest diameter of the seed.

Distribution. A medium-sized to large tree of non-flooded terra firme rain forest known only from Central Amazonia along the banks of the lower Rio Aripuanã, State of Amazonas, Brazil. Mature fruits have been collected from Nov to Jan.



Fig. 4. a. Pyxidium of *Lecythis oldemani* opened up by an agouti; b. fruits of *Lecythis oldemani* attacked by terrestrial seed predators.

Specimens examined. BRAZIL. Amazonas: Left bank of Rio Aripuanã, Van Roosmalen L360, Lago Capimtuba, Novo Oriente, 05° 43' 4" S, 60° 17' 1" W, Capimtuba transect, km 2.15, Dec 17, 1999 (fr), mature fruits picked up from ground

Local names. Brazil: castanha rana, jarana-da-folha-grande.

I am pleased to dedicate this species to Prof. Dr. Ir. R.A.A. Oldeman with whom I have collaborated since 1980. Among many other issues, he particularly inspired me early on to focus fieldwork on the role vertebrates play as dispersers and predators of seeds and seedlings and their impact on the composition and structure of Neotropical rain forest.