

A new species of *Pradosia* (Sapotaceae) of south Andean of Ecuador**Una nueva especie de *Pradosia* (Sapotaceae) del sur andino de Ecuador****Walter A. Palacios¹**

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Artículo de investigación

ABSTRACT

A new species of *Pradosia* (Sapotaceae) is described and illustrated. The new species is characterized by its obovate leaves, with silvery malpighiaceus trichomes on the lower surface; corolla 5-lobed, tube 0.8–1 mm long, lobes 1.6–1.9 mm long, oblong, recurved; five stamens fixed to the top of tube, filaments 3.4–3.6 mm long. The species grows in semideciduous forests, in a small area in the Andes of southern Loja, Ecuador, border with Perú. Locally it is known as luzumbe, and the gelatinous pulp of the fruits is edible.

Keywords: aureae, malpighiaceus trichomes, exert stamens, Loja.

RESUMEN

Se describe e ilustra una nueva especie de *Pradosia* (Sapotaceae). La nueva especie se caracteriza por sus hojas obovadas, con tricomas plateados malpigiáceos por el envés; corola de 5 lóbulos, tubo de 0.8–1 mm de largo, lóbulos de 1.6–1.9 mm de largo, oblongos, recurvados; cinco estambres fijados a la par-

te superior del tubo, filamentos de 3.4 a 3.6 mm de largo. La especie crece en bosques semidecuidos, en una pequeña zona de los Andes del sur de Loja, Ecuador, frontera con Perú. Localmente se le conoce como luzumbe, y la pulpa gelatinosa de los frutos es comestible.

Palabras clave: aureae, tricomas malpigiáceos, estambres exertos, Loja.

INTRODUCTION

Pradosia Liais (1982) is a genus of medium to large trees; leaves alternate, sub verticillate, verticillate, or opposite leaves; venation eucamptodromous or eucampto-broquidodromous (Terra-A *et al* 2016); flowers on the twigs, less frequently axillary, 5-merous, bisexual; corolla rotate or shortly tubular, with lobes widely spreading; stamens 5, fixed at top of corolla tube or on the base of lobes; filaments strongly narrowed bellow insertion of anther; ovary (4–)5 locular; fruit drupaceous; seed solitary, with smooth and shining testa (Terra-A *et al* 2016, Pennington 1990] and plano-convex cotyledons, an exerted radicle below the cotyledons, and

the absence of endosperm (Terra-A *et al* 2016). Is distributed throughout Central and South America (Pennington 1990, Terra-A *et al* 2016, Terra-A *et al* 2016.), although with greater concentration in the second region (Terra-A *et al* 2016).

The genus is a monophyletic group (Terra-A *et al* 2015, but possibly nested within the large Neotropical genus *Pouteria* (Faria *et al* 2017); includes 24 species (Pennington 2017, Terra-A *et al* 2013, Terra-A. *et al.*, 2016, Terra *et al* 2018), of which only two are known for Ecuador.

MATERIALS AND METHODS

In this study, the herbarium specimens deposited in QCA, MO and QCNE were examined. The Tropicos® (2020) and Jstor (JSTOR 2020) databases were consulted for publications on new species from the Neotropics in recent years, nomenclature of species, and images of types.

For the delimitation of the new species, the criteria (ecology, species geographical distribution, and morphology) used by (Terra-A *et al* 2016) were considered, except the phylogenetic relationships.

RESULTS

Pradosia aureae W. Palacios, *sp. nov.* (Figure 1, 2)

TYPE: ECUADOR. Loja: Macará, Sabiango, Achima Chico, 4°20'S, 79°50'W, 1230 m, fl, W. Palacios, O. Palacios y A. Cuenca 18289 (holotype QCNE 243158!).

Diagnosis

Pradosia aureae is like *P. montana* Penn. Can be recognized by the silvery malpighiaceus trichomes on the underside (vs. stalked 2-branched in the shape of a capital Y pale brown trichomes), the flowers sessile (vs. pedicels 2–3 cm long), the corolla lobes recurved (vs. corolla lobes spreading), the stamens of 3.3–3.5 mm long (vs. stamens of 2.5 mm long) and an ellipsoid and glabrous fruit with apex acute (vs. broadly ellipsoid and densely short-pubescent fruit with apex rounded), respectively.

Tree, up 18 m tall; bark smooth or in irregularly plates, inside pinkish with white latex pouring in slow drops. Twigs cylindrical, brown. Buds short pubescent with dense malpighiaceus trichomes. Leaves spirally arranged or sub opposite, 3–10 long × 2–5 cm wide, obovate or obovate-oblong, sub coriaceous, upper surface glabrous, lower surface with dense silver malpighiaceus trichomes; apex obtuse or short acuminate; base obtuse; venation eucamptodromous; midrib sunken on the upper surface (in drying specimens); secondary veins 8–10 pairs, slightly arcuate, flat on the upper surface, little prominent on the lower surface; tertiaries veins little visible, higher-order venation areolate; petiole 0.6–1.2 cm long, flat on the upper, cylindrical in inferior half. Flowers ramiflorous or axillary, sessile, in groups of (1–)2–5, 5-merous, bisexual; sepals 1.1–1.3 mm long, glabrous, green, the two outer widely ovate, the third more or less intermediate and ovate, and the two internal closely ovate; corolla lobed, short tube

0,8–1 mm long, lobes 1.6–1.9 mm long, oblong, recurved, green, apex obtuse; stamens 5, fixed to the top of tube, filaments 3.3–3.5 mm long, erect, flat, strongly narrowed below insertion of anther, cream; anthers 1 mm long, glabrous. Ovary 5-locular, narrowly ovoid, with brown malpighiaceus trichomes; style and stigma glabrous. Fruit (young seen) drupaceous, narrowly ellipsoidal, glabrous, smooth. Vernacular name: *luzumbe*.

Additional specimens examined

ECUADOR. Loja: Macará, Sabiango, 4°20'09S 79°50'23W, 78°40'W, young ft., *Palacios 18208* (MO!, QCNE!). Tambo Negro, Curichanga-Algodonal, 1100 m, 4°20'S, 79°51'W, IX-1994, st., *den Eynden 131* (LOJA!, QCNE!).

Taxonomic relationship

In disposition, shape and size of the leaves, *P. aureae*, is like *P. montana* Penn. (Pennington 1990), but it differs in the indumentum of the leaves, size of the flowers (specially of the stamens), and shape and indumentum of the fruits. The first has lower surface leaves with malpighiaceus trichomes, exerted filaments of 3.3–3.5 mm long, slightly ellipsoid, and glabrous fruits (only young see); while the second is densely short brown-pubescent (trichomes two-branched, shape of a capital Y) on lower surface, has filaments ca. 2 mm long and fruit broadly ellipsoid, with apex rounded, smooth or slightly verruculose near the apex, densely-pubescent (Pennington 1990).

According to the key for the genus of

Terra-A. *et al.* (2016), *P. aureae* is in the group of species with upper leaf surface with a sunken midvein, lower leaf surface densely tomentulose, and corolla <5 mm long, close to *P. montana*; however, there is no coincidence in the type of indumentum of the leaves and fruits.

Distribution

This species has been registered in the inter-Andean flanks of the south of Loja (Ecuador), on the border with Peru, between 1100 and 1400 m, in semideciduous forests. It grows together with *Juglans neotropica* Diels, *Cupania cinerea* Poepp., *Triplaris cumingiana* Fisch. & C.A. Mey., *Quararibea caldasiana* Fern. Alonso y *Erythrina velutina* Willd.

Field characteristics

It is a tree that reaches 20 m in height and 60 cm in DBH, with a wide crown, with branches that project to the ground in open places. The bark in young trees is smooth and with vertical streaks, while in adult trees it is presented in rectangular and exfoliating plates; the inner bark is pink with vertical white stripes, and it spills drops of white latex. The species loses all or part of its foliage in the dry season, and flowering occurs immediately after the foliation is over.

Phenology

The flowering period has been recorded principally between October and December.

State of conservation

The species has been recorded only in

a small area. The forests there are very fragmented by agriculture and livestock, so the populations of this and other species (e.g., *Amyris karlita* W. Palacios) (Palacios 2015), only recorded on the site, are in great danger. According to the known area of occupation, it is determined that *P. aureae* is in the Critically Endangered category CR B2ab (ii, iv) (IUCN 2012).

Etymology

The name of the new species refers of Aurea Cuenca, my mother, who participated in the collection of the type specimen and offered information on the consumption of the fruits.

Local uses

The gelatinous and sweet pulp that surrounds the seed is edible. The fruits become violet when ripe.

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Conflict of interest

The author declares that he has no conflicts of interest in relation to this publication.

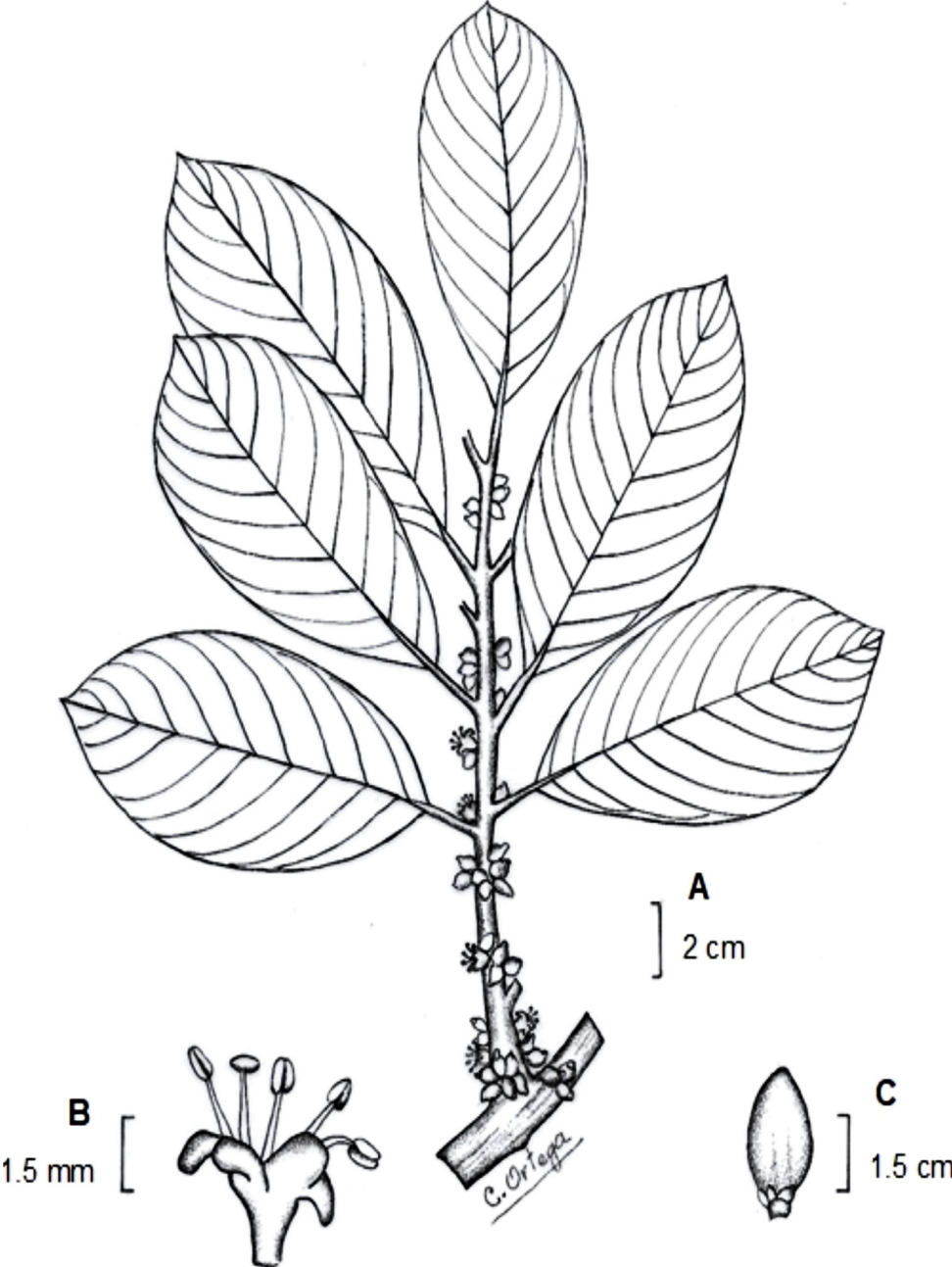


Figure 1. *Pradosia aureae* W. Palacios: A. twig; B. flower; C. young fruit. Drawing from the type collection Palacios et al. 18289

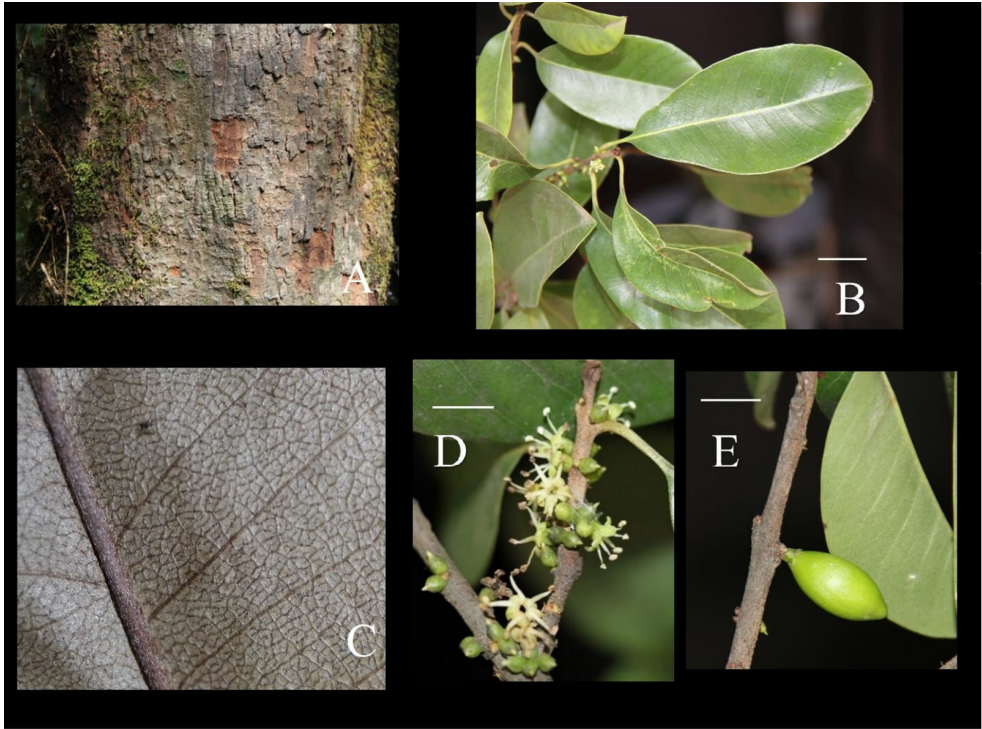


Figure. 2. *Pradosia aureae* W. Palacios: A. Bark; B. Twigs (bar = 2 cm); C. lower surface of dry specimen (taken with Canon EOS 60D 50 mm macro); D. Inflorescence (bar = 0.5 cm); E. Young fruits (bar = 1 cm). Images from type collection Palacios *et al.*, 18289.