**Croton maasii** *(Euphorbiaceae)*, a new species from the western Amazon region

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Key words
Amazon  
Brazil  
Croton  
Euphorbiaceae  
Peru  
taxonomy  
tropical South America

Abstract  
*Croton maasii*, a new species from South America, is described and illustrated. The species is only known from terra firme forests of the extreme western Amazonian region, in W Brazil and adjacent E Peru. *Croton maasii* resembles *C. pachypodus*, a more abundant and widely distributed species in the Neotropics, but differs from it in its much smaller fruits, foliage colour, less dense leaf indumentum, and a more even position of the petiolar glands.

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INTRODUCTION

Recent and ongoing taxonomic and molecular phylogenetic studies on the genus *Croton* (Berry et al. 2005, Van Ee et al. 2008, 2011, Riina et al. 2009, 2010) have revealed many undescribed *Croton* species from South America and other regions. *Croton* is usually regarded as a predominant floristic element of dry habitats, however, it is also well represented in moist forests habitats of the Andes, Amazonia, and Mata Atlantica regions in South America. In this paper we describe a new species occurring in western Amazonia, which appears to be rare based on the few collections known to date, but it is distinct from any known species in the genus. This new finding adds to a series of recently described species from the Amazon region (Secco 2004, Secco et al. 2005, Riina & Berry 2010, Secco & Berry 2010). Based on morphological similarities we suggest that *Croton maasii* belongs to the clade of *C. pachypodus* G.L. Webster (the Sampatik clade sensu Riina et al. 2009). Van Ee et al. (2011) are formally describing this clade as a new section that includes *C. diassii* Pires ex Secco & P.E.Berry, C. jorgei J.Murillo (1999), *C. megistocarpus* J.A.González & Poveda (2003), *C. pachypodus*, and the new *C. diasii* (Webster - the Sampatik clade sensu C. pachypodus, 2004, Riina et al. 2009). Van Ee et al. (2011) are formally describing this clade as a new section that includes *C. diassii* Pires ex Secco & P.E.Berry, C. jorgei J.Murillo (1999), *C. megistocarpus* J.A.González & Poveda (2003), *C. pachypodus*, and the new species described below.

**Croton maasii** Riina & P.E.Berry, sp. nov. — Fig. 1a, 2a, b


Etymology. The epithet honours the collector of the type specimen, Paul J.M. Maas, an authority on several tropical families like Annonaceae, Canaceae, and Gentianaceae.

Monoecious trees 5–6 m tall; young branches with a dense, light yellowish indumentum of lepidote trichomes. *Stipules* linear-lanceolate, 2–3 mm long, sometimes slightly branching with a glandular tip. Leaves alternate, the blades elliptic, 7–15 by 2.5–6.5 cm, apex acute, sometimes slightly acuminate, base acute, rarely rounded, margin entire or more or less sinuous, with sessile discoid glands on each sinus, mature blades glabrescent with a few scattered lepidote trichomes; venation pinnate, secondary veins 7–10, primary and secondary veins raised on both surfaces; petiolar glands patelliform, inconspicuous, sessile, epipetiolar, adaxial, sometimes difficult to see because of the dense lepidote indumentum, on the same plane; petioles 0.7–1.6 cm long, deeply canaliculate on the adaxial side, densely lepidote. *Inflorescences* terminal and axillary, erect, 10–20 cm long, rachis angular, densely lepidote; bracts triangular lanceolate, 0.9–1.3 by 0.3–0.5 mm. *Staminate flowers* (in bud) lepidote, receptacle pilose, stamens 9. *Pistillate flowers* with a thick pedicle 4–9 by 1.8–2 mm; sepal 5, valvate, triangular, acute, 1.9–2 by 1.5–1.6 mm, externally densely lepidote, internally glabrous; petals lacking or reduced to a filament with an apical gland; ovary densely golden-lepidote, styles bifid, glabrous. *Capsules* globose, 1–1.3 cm long; columnella 1.1 cm long; seeds obovoid; 1–1.2 by 0.6–0.7 cm, mottled with grey spots on a brown background, rounded dorsally, ridged ventrally along the central axis; caruncle ovoid, 2 by 1.8 mm.

Distribution & Habitat — The species is known from extreme western Amazonian Brazil (Acre) and adjacent Peru (Loreto), where it grows in terra firme forest at low elevations, 120–130 m.


Note — *Croton maasii* is similar to *C. pachypodus* (Webster & Huft 1988) and *C. diassii* (Secco et al. 2001), which belong to an early diverging clade in the *Croton* phylogeny (Van Ee et al. 2008, Riina et al. 2009). *Croton maasii*, *C. pachypodus* (Fig. 1b, 2c–f), and *C. diassii* have similar lepidote indumentum with a glabrous adaxial leaf surface, two epipetiolar glands in the adaxial position (sometimes visible from the abaxial side), linear-lanceolate stipules with tiny branches and glandular tips,
thick pedicels (pistillate flowers), and bifid styles. The new species differs from both *C. pachypodus* and *C. diasii* in several morphological features (see Table 1). It should be noted that *C. pachypodus* was erroneously described as having 4-fid styles (Webster & Huft 1988), but it was later confirmed, after examination of the holotype and numerous collections, that it has 2-fid styles instead. Numerous specimens of *C. pachypodus* from South America have been erroneously determined in many herbaria as *C. tessmannii* Mansf. (Fig. 1c), which belongs to a different lineage of *Croton*, namely *C. sect. Cuneati* Riina & P.E.Berry, and is characterized by a different suite of morphological features (Riina et al. 2010).

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Table 1  Main morphological differences between C. maasii, C. pachypodus, and C. diasii.

<table>
<thead>
<tr>
<th></th>
<th>C. maasii</th>
<th>C. pachypodus</th>
<th>C. diasii</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foliage colour (herbarium specimens)</td>
<td>Light yellow-brown</td>
<td>Dark brown-grey or dark green</td>
<td>Dark brown</td>
</tr>
<tr>
<td>Indumentum on abaxial side of mature leaves</td>
<td>Glabrescent with a few scattered lepidote trichomes</td>
<td>Evenly sparse lepidote trichomes</td>
<td>Evenly sparse lepidote trichomes</td>
</tr>
<tr>
<td>Position of petiolar glands</td>
<td>Evenly situated on petiole</td>
<td>Obliquely situated on petiole</td>
<td>Obliquely situated on petiole</td>
</tr>
<tr>
<td>Petiolar glands</td>
<td>Inconspicuous and sessile</td>
<td>Conspicuous, sessile or shortly stipitate</td>
<td>Conspicuous, sessile or shortly stipitate</td>
</tr>
<tr>
<td>Marginal discoid sessile glands</td>
<td>Present</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>Fruit length</td>
<td>1–1.3 cm</td>
<td>2.5–3.7 (dry) 4–4.8 (fresh)</td>
<td>1.5–1.7 cm*</td>
</tr>
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* Since seeds are not known (not seen in the original description of C. diasii) we suspect that fruits may be bigger when mature.

REFERENCES


