

# Correction to “New species of *Protium* sect. *Tetragastris* from the Andes, the Brazilian Cerrado, and Amazonia. Studies in Neotropical Burseraceae XXVIII”

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Errors were made in the ordering and indenting of couplets in the identification key that appears on pages 291 and 292. The corrected key is as follows:

## Key to the Species of *Protium* sect. *Tetragastris*

1. Leaflet base obtuse to slightly cordate; flowers 2.4–2.6 mm long; calyx and corolla with dense ascending to appressed hairs to 0.25 mm long; fruit 9–10 mm long, the surface pubescent; coastal dunes of Brazil’s Atlantic Forest Complex . . . . . *P. occhionii*
1. Leaflet base acute to decurrent; flowers 3.3–6.7 mm long; calyx and corolla with malpighiaceus and/or flexuous hairs (*P. yanachgae* corolla with appressed hairs 0.2–0.5 mm long); fruit 14–42 mm long, the surface (sub)glabrous; Neotropics.
  2. Leaves 1–2-jugate, leaflet apex rounded to slightly retuse or very broadly short-acuminate, the acumen (when present) to 3 mm long, leaflet margin revolute; moist forests of southern Bahia and Pernambuco, Brazil. . . . . *P. catuaba*
  2. Leaves 2–5-jugate; leaflet apex acuminate or less often obtuse, the acumen 0–19 mm long, leaflet margin flat [in *P. breviacuminata* sometimes revolute but fruit green (vs. turning red in *P. catuaba*); Neotropics.
  3. Leaflet apex obtuse to very broadly short-acuminate; calyx 20–28% the length of the flower; mature fruit green and 14–16 mm long. . . . . *P. breviacuminatum*
  3. Leaflet apex variously shaped; calyx 29–67% the length of the flower (when 16–28%, the leaflet apex narrowly acuminate); mature fruit red, red to pink or purple (if green 20–42 mm long) and 15–42 mm long (if 14–16 mm long maturing red).
  4. Petiole canaliculate, leaflet apex caudate; calyx lobes (0.7–)1.3–1.7 mm long; fruit 38–42 mm long; Chocó biogeographical region . . . . . *P. varians*
  4. Petiole semi-terete or, if canaliculate, only at base; leaflet apex rounded to acuminate, calyx lobes 0–1.3 mm long; fruit 9–35 mm long; elsewhere in Neotropics.
    5. Inflorescence axes and calyx with appressed golden hairs 0.2–0.5 mm long (but inflorescences glabrescent); flowers 5.6–6.7 mm long; submontane forests of Pasco, Peru . . . . . *P. yanachgae*
    5. Inflorescence, calyx, and corolla with malpighiaceus and/or flexuous hairs or glabrous; flowers 3–5.3 mm long [5.5–6.4 mm long in Central Brazilian Cerrado populations of *P. altissimum* but then inflorescence bracts 0.4–1 mm long and fruit apex broadly short-acuminate to obtuse or rounded (vs. bracts 1.5–4.5 mm long and fruit apex narrowly acuminate in *P. yanachgae*)]; Neotropical lowlands except montane *P. mucronatum* in N Venezuela and N Colombia.
    6. Inflorescence axes glabrous (bracts often ciliate); calyx lobes reduced to an apiculum, corolla glabrous abaxially; Guianas, Venezuela (Bolívar) and Brazil (Amapá, Roraima). . . . . *P. surinamense* (syn.: *Tetragastris hostmannii* (Engl.) Kuntze)
    6. Inflorescence axes variously pubescent; calyx lobes 0.4–1.3 mm long [in *P. mucronatum* sometimes reduced to an apiculum but then the flower 3.3–4(–5) mm long and fruit 25–35

- mm long (vs. flower 4.6–5 mm long and fruit 18–22 mm long in *P. surinamense*); corolla variously pubescent abaxially; Greater Antilles, Central America, and northern South America.
7. Inflorescence axes with dense ascending flexuous hairs to 0.4 mm long (but subglabrescent); flowers 4-merous; calyx glabrous; pistillate inflorescences and infructescences usually pedunculate, the peduncle 4–14 cm long; fruit base not (sub)stipitate; restricted to northern Venezuela and Santa Marta in Colombia ..... ***P. mucronatum***
7. Inflorescence axes and calyx with bristles, malpighiaceous hairs, snail-shaped glands, and/or flexuous hairs to 0.2 mm long; flowers 5-merous (in *P. balsamiferum* 4-merous but then inflorescence axes without long flexuous hairs and fruit maturing green); pistillate inflorescences and infructescences not notably pedunculate; fruit base (sub)stipitate; Greater Antilles, Central America and northern South America.
8. Leaflets glossy on adaxial side; inflorescence bracteoles and bracts not semi-clasping; calyx lobes 0.1–0.7 mm long; Central America, northern South America, and the Greater Antilles.
9. Lateral leaflets (oblong-)ovate or less often elliptic; peduncle 2.5–13.5 cm long; inflorescence bract apex acute; flowers 3–4 mm long; calyx in staminate flowers 1.3–2 mm long, (36–)40–60% the length of the flower; ovary glabrous; mature fruit green externally; Hispaniola and Puerto Rico ..... ***P. balsamiferum***
9. Lateral leaflets (oblong-)elliptic; peduncle 0–3(–5) cm long; inflorescence bract apex usually slightly acuminate; flowers (3.7–)4–5.3 mm long; calyx in staminate flowers 0.7–1.3(–1.5) mm long, 16–28% the length of the flower; ovary with scattered malpighiaceous hairs to 0.35 mm long; mature fruit red externally; Central America and northern South America ..... ***P. stevensonii***
8. Leaflets usually dull on both sides; inflorescence bracteoles and usually bracts semi-clasping at base; calyx lobes 0.4–1.5(–1.8) mm long; Cerrado Biome of Brazil and Bolivia, Amazonia, and the Guianas.
10. Leaves 3–6-jugate; leaflet apex narrowly acuminate; leaflet secondary vein framework simple-brochidodromous, looping at margin; inflorescence bracts coriaceous; calyx lobes acuminate; corolla apiculum 1–1.2 mm long, corolla adaxial surface papillate and with sparse to scattered, flexuous or descending hairs 0.15–0.25 mm long; stamens usually sparsely pubescent abaxially; fruiting pedicel 1.5–2.1 mm long; southwestern and southern Amazonia ..... ***P. acrense***
10. Leaves (0–)2–4-jugate; leaflet apex usually broadly acuminate; leaflet secondary vein framework weakly festooned-brochidodromous; inflorescence bracts coriaceous to chartaceous; calyx lobes acute; corolla apiculum 0.6–1 mm long, corolla adaxial surface usually glabrous; stamens usually glabrous abaxially; fruiting pedicel 2.1–2.5(–3.2) mm long; Cerrado of Brazil and Bolivia, central & eastern Amazonia, and the Guianas.
11. Basal leaflets usually with asymmetric basal insertion; leaflet secondary vein spacing often markedly irregular; inflorescence axis pubescence including malpighiaceous hairs and often flexuous hairs, the bracts chartaceous to coriaceous; flower length (dry) 4–5 mm; calyx 40–56% the length of the flower; calyx pubescence usually dense; corolla 3.7–4.2 mm long, the lobes 1.1–1.7 mm long, the inflexed apiculum 0.75–1 mm long, corolla lobe adaxial surface usually with scattered fine ascending to appressed hairs 0.2–0.3 mm long; anthers 0.9–1.1 mm long, ovary glabrous or pubescent; fruit apex obtuse to rounded; central & eastern Amazonia and the Guianas ..... ***P. altissimum***
11. Basal leaflets usually with symmetric basal insertion; leaflet secondary vein spacing somewhat irregular; inflorescence axis pubescence including malpighiaceous hairs and bristles, the bracts chartaceous; flower length (dry) 5.4–6.4 mm; calyx (31–)36–44(–46)% the length of the flower; calyx pubescence usually sparse to scattered; corolla 5.2–6 mm long, the lobes (1.6–)1.8–2.4 mm long, the inflexed apiculum 0.6–0.7 mm long, corolla lobe adaxial surface usually glabrous; anthers 1.4–1.5(–2) mm long; ovary glabrous; fruit apex slightly acuminate, rarely rounded; Cerrado Biome of Brazil and Bolivia. .... ***P. cerradicola***