

Studies on the flora of northern South America—IX¹

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MISCELLANEOUS NEW SPECIES FROM BRITISH GUIANA

Tetrapodenia n. gen. Malpighiaceae; arborescent, the young branches strongly flattened; stipules axillary, connate, erect; leaves opposite, petiolate, coriaceous, entire; flowers in minutely bracted, terminal racemes, on jointed pedicels; bracteoles 2, the lower glandular; calyx 10-glandular; petals 5, clawed, four essentially alike, the fifth much smaller, its blade bearing two pairs of latero-basal, stipitate, reniform glands; stamens 10, the five opposite the sepals the longer; filaments short, glabrous, somewhat triangular-dilated and barely connate at base; anthers elongate, the stout, simple, semicylindric or triangular-prismatic connectives truncate to broadly rounded at the apex; pollen-sacs 4, elongate, strictly parallel in the longer stamens, slightly divergent distally in two pairs in the shorter; ovary depressed-hemispheric, 3-celled, glabrous; styles 3, glabrous, bent near the tip at right angles and gradually tapering distally to the obliquely truncate terminal stigma; fruit indehiscent, 1-celled and 1-seeded by abortion, subellipsoid, the exocarp thick and woody, the endocarp chartaceous; seed ellipsoid, the small cotyledon partly enclosed by the large.

The name is combined from τέτρα, πούς, and ἄθην, referring to the four stalked glands on the fifth petal.

Tetrapodenia glandifera n. sp. Tree 4–6 m. high; young branches strongly compressed, glabrous, later becoming terete and roughened by elongate lenticels; stipules triangular-subulate, erect, stiff, 6–8 mm. long, densely pubescent above; petioles 10–15 mm. long, glabrous, flattened or barely channeled above; leaf-blades stiff, coriaceous, dull green, elliptic-oblong, 10–17 cm. long, 4.5–8.5 cm. wide, abruptly acute or subacuminate, entire, broadly cuneate to obtuse or rounded at base, glabrous above, glabrous beneath (except under strong lens minutely lepidote) and biglandular at the base; veins and veinlets prominent on both sides, conspicuously reticulate; racemes single or in threes, terminating the branches, the axis somewhat flattened and minutely puberulent, the bracts broadly ovate-triangular, 1–2 mm. long; pedicels 7–8 mm. long, glabrous, jointed in the middle, bearing on the lower segment two broadly ovate, amplexicaul bracteoles 1.5 mm. long, the lower of which bears a conspicuous gland; calyx-glands 10, cuneate-obovate, adnate to

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the summit of the pedicel; sepals triangular, acute or barely retuse, exceeding the glands by 1.3 mm.; petals dimorphic, clawed, the four larger with semiorbicular, subentire blade, cleft at base to the insertion of the claw, the fifth much smaller, obovate-oblong, with stout fleshy claw, the basal pair of glands 0.6 mm. in diameter, on stipes 0.5 mm. long, the distal pair half as large, on stipes one third as long; filaments flat, glabrous, 3 or 2 mm. long, dilated and barely connate at base; anthers stout 2-2.5 mm. long in bud, the simple connective somewhat surpassing the narrowly linear pollen-sacs; fruit smooth, 20-25 mm. long by 12-15 mm. in diameter, rounded at base, subacuminate to the blunt apex which is marked by 6 faint radial furrows.

Type, *La Cruz 3515*, collected at Amakura, Northwest District, British Guiana, 23-30 March 1923, and deposited in the herbarium of the New York Botanical Garden. *La Cruz 2176*, from the upper Mazaruni River, collected the preceding autumn, agrees with the type in all vegetative characters, except some small differences in texture due to age, and exhibits mature fruit and old flowers from which the petals have fallen. *La Cruz 2869*, with mature fruit, and *2043*, sterile, both from the Mazaruni region, differ from the first two in their larger, proportionately narrower, and more sharply acute leaves which are distinctly shining above. The fruit is precisely the same. The specific description is drawn entirely from the type, except that the length of the filaments is measured from the withered flowers of *2176*. Duplicates of all four numbers are to be found in the leading American herbaria.

Tetrapodenia is obviously closely related to *Glandonia* and *Burdachia*, two genera of the northern Amazonian forests which are still poorly known and have probably not been collected in recent years. The former is monotypic, but both flowers and fruit are known and were carefully described by Grisebach in the *Flora Brasiliensis*. The latter contains two species, but the flowers of only one are known. *Tetrapodenia* differs from *Glandonia* in its hirsute stipules, the glands on the lower surface of the leaf, the differentiated fifth petal, the unappendaged anther-sacs, the shape of the fruit, and the presence of two cotyledons. From *Burdachia prismatocarpa*, it is distinguished by the glabrous, depressed-hemispheric ovary, the simple blunt connectives, the character of the fifth petal, and the shape of the fruit. From *Burdachia sphaerocarpa*, the flowers of which are not known, it differs in its glabrous stipules and the shape of the fruit.

Tetrapodenia glandifera is represented in the herbarium of the Royal Botanic Garden at Kew by two collections by Jenman, 3779 and 6413.

Combretum brunnescens n. sp. Shrubby vine, climbing 6 m.; stems glabrous, strongly furrowed and flattened above, becoming terete and barely striate in age, the upper internodes 5 cm. long; petioles stout, dark brown, 6–10 mm. long, angular, glabrous; leaf-blades coriaceous, olive-brown when dried, broadly elliptic-obovate, 70–85 mm. long, 43–58 mm. wide, obtuse to subrotund at base, entire, broadly rounded above and minutely apiculate, shining above, glabrous on both sides; lateral veins 5 or 6 pairs, lightly impressed above, prominent beneath, ascending at an angle of 60° and nearly straight, the veinlets obscure; panicles freely branched, terminal and from the upper axils, 10 cm. long; spikes spreading, 5–6 cm. long, the rachis strongly angled, glabrous; bracts subulate, puberulent, 0.5–1.1 mm. long; ovary sessile, linear-oblong, 1.1–1.3 mm. long, 0.4 mm. in diameter, obtusely 4-angled, glabrous or minutely villous; calyx campanulate, glabrous, conspicuously but minutely red-dotted, 1.7 mm. long, including the broadly triangular, acute teeth 0.4–0.5 mm. long, glabrous within; petals white, transversely elliptic, 1.4 mm. wide, 0.8 mm. long, glabrous, with a short claw 0.1 mm. long; stamens 8, inserted near the bottom of the calyx, the filaments white, glabrous, subulate, 4 mm. long, somewhat incurved at three-fourths of their length, the anthers obcordate, 0.4 mm. long and wide; disk a minute glabrous ring at the bottom of the calyx; style straight, white, subulate, 2.8 mm. long.

Type, *La Cruz* 3566, collected along the Amakura River, Northwest District, British Guiana, lat. about 8° 10' N., long. about 60° W., 23–30 March 1923, and deposited in the herbarium of the New York Botanical Garden.

The type of *Combretum brunnescens* has been chosen arbitrarily from several specimens in the herbarium of the New York Botanical Garden, all collected in the same general region. Duplicates of most of them have been distributed to the larger American herbaria. These are *La Cruz* 1094 and 1141 from the Pomeroon District, 3425, 3585, and 3713 from the Northwest District, 1947 from near Bartica, 4258 from Kamakusa, upper Mazaruni River, and 4460 from Kaieteur Falls, Potaro River. All but the last two of these are in flower and differ from the type only in minor details. In two from the Pomeroon District the largest leaves are only 6 cm. long; in all except 1947 and 3425 the leaves are more shining above; in 1141, 1947, 3585, and 3713 the terminal apiculum of the leaf is more developed and