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Source: Systematic Botany, 47(3) : 861-868

Published By: The American Society of Plant Taxonomists

URL: <https://doi.org/10.1600/036364422X16573019348391>

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Ormosia corcovada, a New Papilionoid Legume from the Bajo Cauca Region of Northeastern Colombia

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Communicating Editor: Ricardo Pacifico

Abstract—The new species *Ormosia corcovada* (Fabaceae, Papilionoideae, Ormosieae) from the lower Cauca River basin in NW Colombia is described and illustrated, and its taxonomic affinities are discussed. Specimens of *Ormosia corcovada* are usually confused with *Ormosia holerythra*. Both species belong to *Ormosia* section *Unicolores* but are geographically and morphologically distinct, especially with respect to leaflet shape and number of secondary veins.

Keywords—Endemism, Fabaceae, Leguminosae, lower Cauca River basin, Nechí river, San Lucas mountain range, taxonomy, tropical humid forest.

Resumen—Se describe *Ormosia corcovada* (Fabaceae, Papilionoideae, Ormosieae), una nueva especie de la región del Bajo Cauca, NO de Colombia. La nueva especie se ilustra y se discuten sus relaciones taxonómicas. Los especímenes de *Ormosia corcovada* son usualmente determinados como *Ormosia holerythra* Ducke. Ambas especies pertenecen a *Ormosia* sección *Unicolores*, pero su distribución geográfica y morfología, principalmente de folíolos y número de nervaduras secundarias, son diferentes.

Palabras-clave—Bosque húmedo tropical, cuenca baja del Río Cauca, endemismo, Fabaceae, Leguminosae, Río Nechí, Serranía de San Lucas, taxonomía.

In addition to being home of the Andean Páramos, the world's biome with the fastest evolving plant radiations (Madriñán et al. 2013), Colombia, in the NW corner of South America, is also well known to harbor extraordinary species diversity and endemism across the dry forests (DRYFLOR 2016) and particularly in the rain forests of the Amazon basin (Cardoso et al. 2017) and the global biodiversity hotspot of the Chocó (Sarkar et al. 2009). For example, just in the Department of Antioquia, there are about 8300 species of vascular plants, representing 30.7% of the 27,000 estimated species known to occur in the country (Idárraga-Piedrahíta et al. 2011; Bernal et al. 2019).

Despite great advances in taxonomic studies in Colombia, where many new species have been recently described, including species of the diverse legume family (Castellanos et al. 2015; Torke et al. 2015; Contreras-Ortiz et al. 2018; Cruz et al. 2018), many genera are still poorly studied. This is the case of the species-rich papilionoid legume genus *Ormosia* Jacks., which comprises about 130 species of shrubs and small to large trees, and has a disjunct distribution in the Neotropics, eastern Asia, and northeastern Australia (Rudd 1965; Pennington et al. 2005; Torke et al. 2022). Despite its broad geographic range and morphological heterogeneity (Rudd 1965), *Ormosia* has been recovered as monophyletic in all higher-level molecular phylogenies of the Papilionoideae (Cardoso et al. 2012, 2013) and in a densely sampled study focused on the genus (Torke et al. 2022). The genus is phylogenetically closely related to the predominantly Amazonian genera *Clathrotropis* (Benth.) Harms, *Panurea* Spruce ex Benth. & Hook.f., and *Spirotropis* Tul., as part

of the circumscribed monophyletic tribe Ormosieae (Cardoso et al. 2013). These relationships have also been confirmed by a recent plastid phylogenomic analysis of the Papilionoideae (Choi et al. 2022).

Twenty-one species of *Ormosia* are known from Colombia (Ruíz et al. 2015), an increase of eight species since Rudd's (1965) revision. During a revision of the Colombian species of *Ormosia*, we have found many herbarium specimens unnamed to species, particularly from the Andean region (Herrera-Palma pers. obs.). Among these materials, we identified a new species from the departments of Antioquia, Córdoba, and Bolívar, which is here described and illustrated. This new species clearly presents the set of features that morphologically characterizes *Ormosia* sect. *Unicolores* Amsl. (Rudd 1965), such as the red-colored monochromatic seeds, and leaflets with few, widely spaced, brochidodromous and arcuate secondary veins. Interestingly, among the few most recently described new species of *Ormosia*, since the taxonomic revision by Rudd (1965), two of them (*Ormosia limae* D.B.O.S. Cardoso & L.P. Queiroz and *Ormosia intermedia* N. Zamora) belong to *Ormosia* sect. *Unicolores* (Zamora 2006; Cardoso and Queiroz 2010).

MATERIALS AND METHODS

The description of the new species and morphological comparison with its closely related species were based mainly on the revision of specimens deposited at the herbaria HUA, JAUM, MEDEL, MO, and UDBC (acronyms according to Thiers 2021), and newly field-collected specimens

in the municipality of El Bagre, Antioquia, where photographs of the species in situ were taken. The flowers were re-hydrated from herbarium specimens with warm water, dissected, observed and photographed using a Zeiss AJ450 stereo-microscope, and measured using the software ImageJ (Schneider et al. 2012). We followed IUCN criteria (IUCN 2012) as well as an analysis of distribution range using the R package 'ConR' (Dauby et al. 2017) to assess the conservation status of the new species.

The distribution map was produced from geographical coordinates obtained from herbarium records from HUA, JAUM, MEDEL, MO and herbarium records that are publicly available in the Global Biodiversity Information Facility (GBIF, www.gbif.org). The R package 'rgbif' (Chamberlain et al. 2020) was used to retrieve the ~10,500 GBIF records for all species of *Ormosia*, from which we then filtered just the data for *O. holerythra* Ducke and *O. macrocalyx* Ducke, the most closely related taxa of the new species. Data cleaning involved first standardizing the collector name (tagged in GBIF as "recordedBy") and associated number ("recordNumber"), by using the still under development R package cleanHerb (Cardoso unpubl. data). The cleanHerb functions automatically clean the "recordedBy" column in the database by keeping just a uniformly formatted name of the principal collector. Then, we were able to exclude all duplicates from among the different herbaria by readily identifying those records with the same principal collector and associated number, so as to keep just a single record for each collection. Records without any geographical coordinates or collector names were also excluded, as well as any georeferenced records of old, historical collections collected before 1950, which are often associated with erroneous or coarse coordinates as the result of automatic assignment of state or country centroids. The R package 'CoordinateCleaner' (Zizka et al. 2019) was then used for further cleaning of the database (e.g. removal of coordinates in the sea; country and province centroids; country capitals or urban areas). Then we plotted the map using the software ArcGIS 10.5 (<https://www.arcgis.com/features/index.html>).

TAXONOMIC TREATMENT

Ormosia corcovada Herrera-Palma, C.H.Stirt. & D.B.O.S. Cardoso, sp. nov. TYPE: COLOMBIA. Antioquia: Cauca, along road to Nechí, 24 km from Cauca to Planeta Rica road, Hacienda Costarica, 08°04'N, 75°05'W, 60 m elev., 21 Mar 1987 (fl), J. Zarucchi, J. Betancur, B. Echeverry & F.J. Roldán 4866 (holotype: HUA!; isotype: MO!).

Ormosia corcovada morphologically resembles *O. holerythra* based on the long-petiolate (4–4.5 cm) and 7–9-foliolate leaves, relatively small flowers (5–9 mm long), and monochromic orange-red seeds. It differs mostly in its tree habit, from 6–30 m tall (vs. shrub or small tree to 5 m), glabrous branchlets (vs. fulvous pubescent), leaflets with only 3–4 pairs of secondary veins and a long-attenuate apex (vs. 5–6 pairs of secondary veins and bluntly acuminate apex), smaller, 7–9 mm long flowers (vs. 10 mm or more) with deep violet petals (vs. dark reddish-purple petals), and the smaller, 2.7–3.5 cm long fruits (vs. 4–6.5 cm long).

Tree 6–30 m tall; DBH up to 40 cm; bark smooth and gray-whitish to brownish; young branchlets glabrous. **Stipules** caducous, not seen. **Leaves** 7–9-foliolate; rachis 10–12 cm long, including a 5 mm long pulvinus and a distinct, 4–4.5 cm long, terete, glabrous petiole; stipels absent; pulvinules 6–7 mm long, terete, rugulate; leaflets 5.3–7.0 × 1.7–2.8 cm, the terminal slightly longer, lower leaflets smaller, elliptic, base acute to obtuse, apex long-attenuate, the acumen 15–20 mm long, margins straight, never revolute, nitid above, glabrous on both surfaces, the primary vein impressed above, well raised below, principal secondary veins alternate to opposite, in 3–4 pairs, irregularly spaced, more or less brochidodromous, slightly raised abaxially, 14–15 mm apart, divergent angle 30°–45° from the midvein, incurving near the margin joining the superadjacent secondary, intersecondary veins absent, tertiary veins

reticulate, scarcely visible below. **Inflorescences** 12–15 cm long, paniculate, compact, terminal, or axillary but always at the end on terminal shoots, 25–35 flowers per short shoot, erect; bracts small, to 2 mm long, subulate, pubescent, apex acuminate; pedicel 2–3 mm long, pubescent, bearing two minute bracteoles, attached near the apex of the pedicel. **Flowers** (5–)7–9 mm long, bilaterally symmetric, strongly papilionate; calyx 6–7 × 5–6 mm, with a 1 mm long hypanthium, lobes 2–4 mm long, pale yellowish green, pubescent externally, densely marginally ciliate, the trichomes 0.5 mm long, white to golden colored, adpressed, the adaxial pair of teeth fused for half their length, broadly triangular with a broad sinus, other teeth narrower; petals deep violet, free, glabrous, clawed at the base, the standard 3.2–5.2 × 4–4.3 mm, suborbicular, appendages absent, base truncate, apex emarginate, claw up to 0.9–2 mm long, the wings ca. 3.5 × 1.6 mm, oblong, sculpturing absent, claw 0.9–2 mm long, keel petals ca. 3.4 × 1.5, oblong, completely free but overlapping, basally auriculate, claw ca. 0.9 mm long; stamens 10, unequal in size, the longest 3.9–5.3 mm long, the shortest 2.2–2.9 mm long, glabrous, apically curved, free, anthers 0.6–1 × 0.4–0.6 mm, dorsifixed, elliptic to oblong in outline; gynoecium ca. 0.8 mm long, the ovary ca. 1.8 × 0.9 mm, oblong, upper margin convex, the lower straight, laterally compressed, sparsely pubescent, borne on a short stipe, style 2.6–3.3 mm long, recurved at apex, stigma bilobed. **Pods** 2.7–3.5 × 2–2.4 × 1.2 cm, black, dehiscent, valves open and separate to the base, woody, ca. 1 mm thick, 1(–2)-seeded; when 1-seeded strongly hunch-backed in outline, with convex upper and lower margins; when 2-seeded trapezoid, strongly constricted between seeds, apically deflexed, sharply caudate, the acumen 2–3 mm long. **Seeds** ca. 11 × 10 mm, monochromic, bright orange-red, elliptic to oblong in outline, sometimes slightly compressed, hilum 2–2.5 × 1.5 mm, circular to oblong in outline, terminal. Figures 1, 2.

Paratypes—Colombia. —ANTIOQUIA: Mpio. Anorí, Vereda Tenche, 07°15'00"N, 74°58'00"W, 450 m elev., 13 Jan 2002 (fr), *D. Tubercuila* 1704 (JAUM); Corregimiento de Liberia, sector Usurá, 07°21'40.06"N, 75°01'53.69"W, 444 m elev., 23 Oct 2010 (st), *A. Taborda* 242 (HUA); Mpio. Cáceres, Corregimiento El Tigre, Vereda Tamaná, hacia alto el Cigarrillo (Reserva natural regional Refugio Bajo Cauca Nechí), 07°26'00"N, 75°11'00"W, 430 m elev., 23 Feb 1997 (fr), *J.G. Ramírez* 6042 (JAUM); Mpio. Cauca, along road to Nechí 24 km from Cauca-Planeta Rica Road, hacienda Costa Rica, 08°04'00"N, 75°05'00"W, 61 m elev., 25 Nov 1986 (fr), *J. Zarucchi* 4280 (HUA, MO); Along road to Nechí, 24 km from Cauca to Planeta Rica road, Hacienda Costarica, 08°04'N, 75°05'W, 60 m elev., 21 Mar 1987 (fl), *J. Zarucchi et al.* 4897 (HUA, MO); Along road to Nechí, 32 km E from Cauca - Planeta Rica road, roadside and large pool in small stream just N of road, 08°02'00"N, 75°05'00"W, 60 m elev., 9 Oct 1987 (fr), *A. Brant* 1213 (HUA); Carretera entre Cauca y Nechí, 8.5 km de Cauca por la Troncal Norte, 08°02'15.10"N, 75°10'38.07"W, 80 m elev., 17 Aug 1986 (fr), *L. Albert* 7037 (HUA, MEDEL, UDBC); Vereda La Ilusión, hacienda Costa Rica, 08°01'25.11"N, 75°05'24.32"W, 80 m elev., 12 Sept 1986 (fr), *N. Contreras* 25 (HUA); Hacienda Costa Rica, 07°50'14.20"N, 75°00'57.63"W, 70 m elev., 7 Sept 2000 (fr), *R. Fomnegrá* 7238 (HUA); Mpio. El bagre, Vereda Sabalito, río Nechí, inmediaciones a terrenos de explotación de Mineros S.A., 07°52'58.96"N, 74°46'58.97"W, 60 m elev., 1 Mar 2015 (fr), *M. Montoya* 3196 (HUA); Astilleros y zonas cercanas a minería de oro, 07°51'47"N, 74°46'48"W, 50 m elev., 2 Mar 2015 (fr), *J.P. Tobón* 1171 (JAUM). Depto Bolívar: Mpio. San Jacinto del Cauca, Vda El Catorce, sector Bocamina, 08°08'00"N, 74°45'00"W, 84 m elev., 21 Jan 2016 (fr), *D.A. Zapata* 1643 (JAUM). —CÓRDOBA: Ayapel, Border with dpto Antioquia municipio Cauca; along road to Nechí, 9.3 km from Cauca - Planeta Rica Road, 08°05'00"N, 75°12'00"W, 70 m elev., 26 Nov 1986 (fr), *J. Zarucchi* 4282 (HUA).

Distribution and Habitat—All known collections of *Ormosia corcovada* come from the lower Cauca River basin, NW Colombia (Fig. 3), a physiographic area within the Nechí Refuge (Haffer 1982). Renowned for its high endemism in NW



FIG. 1. *Ormosia corcovada*. A. Branchlet with leaf and inflorescences ($\times 1/2$). B. A detached 9-foliolate leaf ($\times 1/2$). C. Terminal leaflet ($\times 1$) and detail showing its glabrous abaxial surface. D. Side and apical views of a floral bud ($\times 6$). E. Bract and bracteole ($\times 6$). F. Side view of flower ($\times 4$). G. Calyx opened out, showing inner surface ($\times 6$). H. Standard petal ($\times 6$). I. Position of wing relative to the keel ($\times 6$). J. Wing petal ($\times 6$). K. Keel petal ($\times 6$). L. Section through flower with petals and calyx removed showing free stamens and gynoecium ($\times 10$). M. Stamens ($\times 6$). N. Detail of the apex of a stamen to show the dorsally fixed anther ($\times 12$). O. Gynoecium and ovules ($\times 8$). P. Detail of lateral, bilobed stigma ($\times 20$). Q. Single-seeded pod ($\times 1$). R. Seed ($\times 1$). S. Seed with coat removed ($\times 2$). (A–P from J. Zarucchi et al. 4866; Q–S from J. Zarucchi et al. 4897). Drawn by Angela J. Beaumont.



FIG. 2. *Ormosia corcovada*. A. Habitat in a border of a forest fragment. B. Disturbed forest in an open pasture with a mature individual tree. C. Bark. D. Leaves and the sharply acuminate leaflets. E–F. Pods. G. Open pod and seeds. H. Flower. I. Inflorescence. Photos by Maribel Herrera-Palma (A, C, G); Fernando Giraldo (B); Ricardo Callejas (D, E, F); and Andrés Cuadros (H, I).

Colombia, the region includes the upper river basins of the rivers Sinú and San Jorge (Córdoba department), the lower Cauca river basin (Antioquia department) and its tributary Nechí river. The Nechí refuge has as boundaries the mountain range known as Serranía de San Lucas, to the east, and

the Cauca river to the west. The humid forest in this area has floristic and faunal similarities with Chocó and upper Amazon (Hernández-Camacho et al. 1992). The Nechí refuge is included within the Biogeographical Magdalena province (Morrone 2014), which corresponds to a transitional ecotone

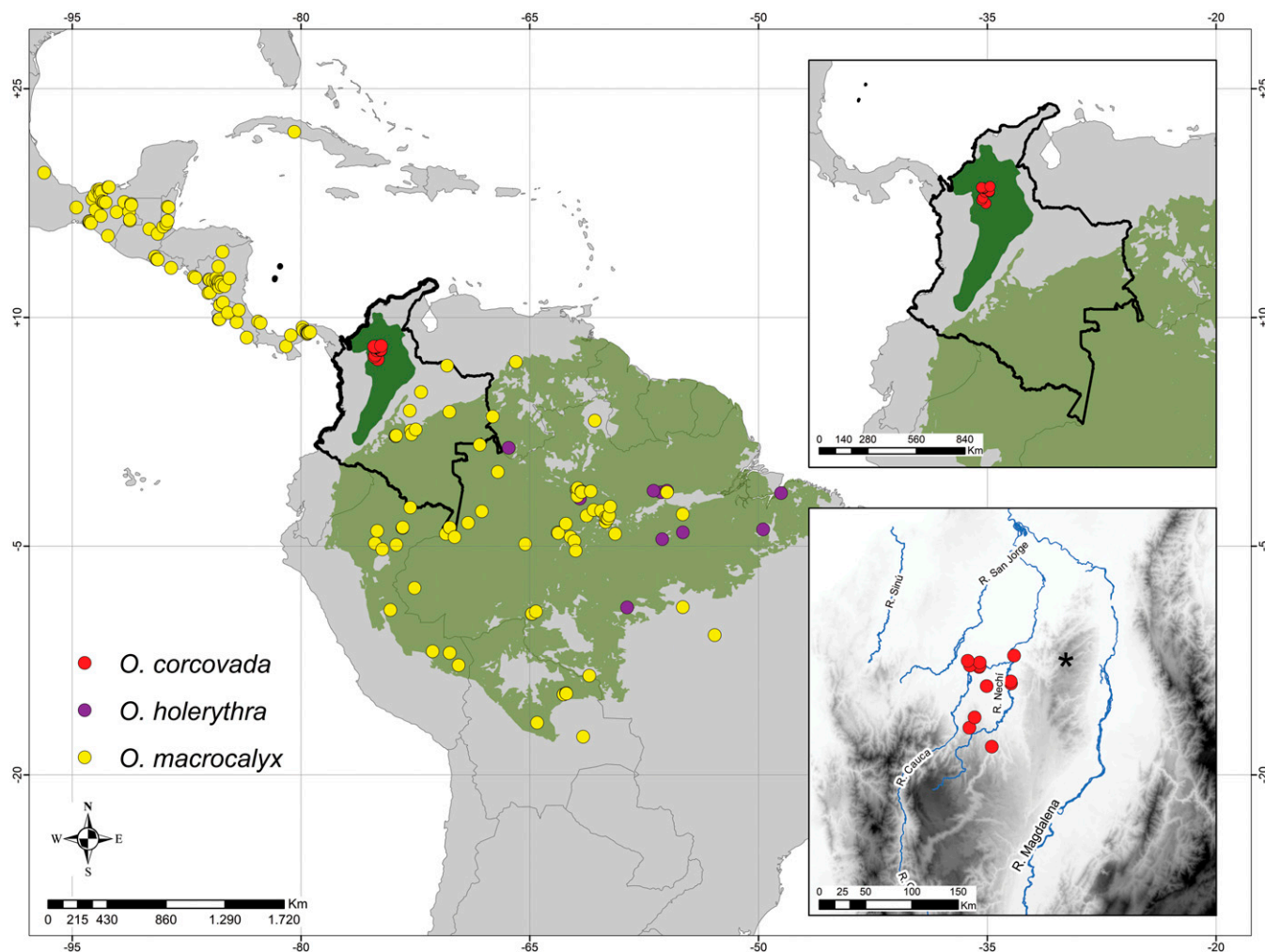


FIG. 3. Known geographic distribution of *Ormosia corcovada* in NW Colombia within the biogeographical province of Magdalena (dark olive green) (sensu Morrone 2014), as well as of the closely related species *O. macrocalyx* and *O. holerythra* from *Ormosia* sect. *Unicolores* (sensu Rudd 1965). The delimitation of the Amazonian lowland rain forest biome (sensu Cardoso et al. 2017) is highlighted in light olive green. The inset maps on the right show a more detailed distribution of *O. corcovada* along the rivers Cauca, Magdalena, and Nechí. The asterisk (*) is the San Lucas mountain range.

between the tropical humid and very humid forest life zones (Holdridge 1967).

The new species *O. corcovada* has been collected on the edges of primary forest, between 50 to 520 m of elevation, mainly in the foothills of the Serranía de San Lucas, on non-flooded terra-firme forests near the Nechí river (Idárraga-Piedrahíta et al. 2011). Mature tree individuals of *O. corcovada* thriving in forest fragments are quite rare, and when encountered they occur as forest emergents, and often co-occur with *Tapirira guianensis* Aubl. (Anacardiaceae), *Virola* spp. (Myristicaceae), *Xylopia aromatica* (Lam.) Mart. (Annonaceae), *Eschweilera* spp. (Lecythidaceae), *Lacmelia panamensis* (Woodson) Markgr. (Apocynaceae), as well as species of the tree fern *Cyathea*. *Ormosia corcovada* is also usually found in anthropically disturbed forests, especially in cattle pastures, where species such as *Bellucia grossularioides* (L.) Triana (Melastomataceae) and *Jacaranda copaia* (Aubl.) D. Don (Bignoniaceae) are common components of the secondary vegetation.

Informal Conservation Status—Since the first collection of *Ormosia corcovada* was made in Cauca (NE Antioquia), in 1987, we have found more records in herbaria and made new collections in nine different localities, all of which span an area of ca. 3700 km². Individual trees of *O. corcovada* are

locally common in severely fragmented and deforested areas that are seriously threatened by gold mining, cattle ranching, and rubber tree [*Hevea brasiliensis* (Willd. ex A. Juss.) Müll. Arg.] plantations. Based on the number of individuals, area of occupancy, number of localities, as well as an analysis of its distribution range using the R package ConR (Dauby et al. 2017), we hypothesize that if a formal assessment were performed, the conservation status of *O. corcovada* would probably be assessed as Near Threatened (NT) (IUCN 2012).

Phenology—Flowering specimens were collected in March, and fruiting specimens from March to April and August to November.

Etymology—The species epithet is derived from “corcovado,” meaning “hunchback” in Spanish, and it alludes to the hunchback shape of the 1-seeded pods.

Vernacular name—Peronillo, chocho.

Taxonomy—*Ormosia corcovada* clearly belongs in *Ormosia* sect. *Unicolores* (sensu Rudd 1965), a section which is characterized by the following combination of characters: shrubs or small trees with (1–)3–11-foliolate, coriaceous or subcoriaceous leaves, these usually glabrous at maturity, leaflets with five to nine pairs of brochidodromous arcuate secondary veins, dehiscent coriaceous or sub-woody fruits, and with

TABLE 1. Comparison between the new species *Ormosia corcovada* and the morphologically similar *O. holerythra* and *O. macrocalyx* from *Ormosia* sect. *Unicolores* (sensu Rudd 1965).

	<i>O. corcovada</i>	<i>O. holerythra</i>	<i>O. macrocalyx</i>
Leaflet number	7–9	5–11	7–11
Leaflet size (cm)	5.3–7.0 × 1.7–2.8	3.5–14 × 2.5–5	6–19 × 3–9
Leaflet shape	Elliptic	Ovate to elliptic-oblong	Ovate to ovate-oblong
Leaflet apex	Long acuminate, the acumen 8–20 mm long	Bluntly acuminate, the acumen 10–20 mm long	Obtuse to short acuminate
Leaflet base	Acute to rounded	Rounded, usually oblique or subcordate	Rounded to subcordate
Number of secondary veins (pairs)	3–4	5–6	5–8
Stipules	Caducous (not seen)	Caducous, linear-deltoid, 1.5–2 mm long	Caducous, linear, ca. 5 mm long
Flower length (mm)	7–9	10–13	18–25
Petal color	Deep violet	Dark reddish-purple	Lilac to dark purple
Fruit size (cm)	2.7–3.5 × 2–2.4	4–6.6 × 2.5–3.6	3–10 × 2–3.5
Seeds (mm)	ca. 11 × 10	12–14 × 10–12	10–13 × 10
Distribution range	Lower Cauca River basin (endemic)	Widespread in the Amazon	Southern Mexico to Amazon basin

monochromatic red, orange-red or rarely black seeds (as in *O. flava*). However, *O. corcovada* is unusual among all species of *Ormosia* sect. *Unicolores* because of its leaflets with only three or four pairs of secondary veins.

Ormosia corcovada most closely resembles *O. holerythra* morphologically, based on the long petiolate and few-foliolate leaves, the relatively small flowers, and the monochromatic orange-red seeds. However, *O. corcovada* is readily differentiated by its habit, a tree six to 20 m tall (vs. shrub to small tree up to five m tall in *O. holerythra*), long attenuate leaflets (vs. bluntly acuminate), smaller, seven to nine mm long flowers with deep violet petals (vs. flowers \geq 10 mm long and with dark reddish-purple petals).

Among the nine species currently accepted in *Ormosia* sect. *Unicolores*, *Ormosia corcovada* and *O. macrocalyx* are the only species occurring in Colombia and across NW South America (Fig. 3). The new species *O. corcovada* is distinguished from *O. macrocalyx* by its much smaller, seven to nine mm long flowers (vs. 18–25 mm long) and 5.3–7 cm long leaflets with an acute to rounded base (vs. leaflets 6–19 cm long and basally rounded to cordate). Further differences between *O. corcovada* and closely related species can be found in Table 1. Because an identification key to all species of *Ormosia* sect. *Unicolores* was published more than ten years ago (Cardoso and Queiroz 2010), here we also provide a new key to the section, which includes *O. corcovada*.

KEY TO THE SPECIES OF *ORMOSIA* SECTION *UNICOLORES*

1. Petals yellow to green-yellowish; seeds black. 2
 2. Branches and twigs ferruginous pubescent; leaves 5–11-foliolate; pods slightly constricted between the seeds (Surinam and Amazon basin of N and NE Brazil). *O. flava* (Ducke) Rudd
 2. Branches and twigs glabrous; leaves (1–)3–5(–7)-foliolate; pods strongly swollen around seeds and strongly constricted between them (NE Costa Rica). *O. intermedia* N.Zamora
1. Petals lilac to dark reddish purple; seeds light red to scarlet. 3
 3. Pods 1–2 cm broad. 4
 4. Leaves 7–11-foliolate, leaflets weakly acuminate, the acumen less than 10 mm long, obtuse or rounded at the base; flowers ca. 6 mm long, calyx ca. 4 mm long; seeds 7–9 × 6–8 × ca. 6 mm, the hilum ca. 1.2 × 0.8 mm (French Guiana and Surinam). *O. melanocarpa* Kleinh.
 4. Leaves (1–)3–5-foliolate, leaflets strongly acuminate, the acumen 6–20 mm long; sharply acute at the base, flowers 15–20 mm long, calyx 8–12 mm long; seeds 7–10 × 10–14 × 6–9 mm, the hilum 2–3 × 1–1.5 mm (western Brazil; eastern Peru). *O. grandiflora* (Tul.) Rudd
 3. Pods 2–4 cm broad 5
 5. Flowers 18–25 mm long, calyx 10–15 mm long; pod surface glabrate but retaining considerable fine pubescence at maturity (southern Mexico to Brazil) *O. macrocalyx* Ducke
 5. Flowers less than 18 mm long, calyx usually less than 10 mm long; pod surface glabrous at maturity. 6
 6. Pod valves woody and carnosose, usually wrinkled on dried herbarium specimens, 3–4 mm thick, never with twisting dehiscence (Northeastern Brazil) *O. bahiensis* Monach.
 6. Pod valves coriaceous to woody, smooth on dried herbarium specimens, 1–3 mm thick, sometimes with twisting dehiscence 7
 7. Branchlets, leaf stalks, inflorescence axes, and calyces densely tomentose, with flexuous, erect hairs; leaflets pilose on both surfaces, more densely so on the veins, slightly asymmetric at the base; flowers 6–8 mm long; pods inertly dehiscent, valves 2–3 mm thick, strongly coriaceous or woody (southern Bahia) *O. limae* D.B.O.S.Cardoso & L.P.Queiroz
 7. Branchlets, leaf stalks, inflorescence axes, and calyces glabrous, or sparsely to densely pubescent with straight, sub-appressed hairs; leaflets glabrous to shortly puberulent on both surfaces, usually symmetric at the base; flowers \geq 10 mm long; pods with twisting dehiscence, valves 0.5–2 mm thick, slightly coriaceous, but never woody . . . 8

8. Leaves strongly acuminate, acumen (5–)10–20 mm long, base acute to obtuse, rounded to subcordate, secondary veins raised abaxially; calyces 6–7 mm long (Amazon basin and NW Colombia) 9
9. Leaves 7–9-foliolate, leaflets elliptic, base acute to obtuse, with 3–4 pairs of secondary veins; calyces pubescent; pods 2.7–3.5 cm long (NW Colombia) *Ormosia corcovada* Herrera-Palma, C.H.Stirt. & D.B.O.S.Cardoso
9. Leaves 5–11-foliolate, leaflets ovate to elliptic-oblong, base rounded or subcordate, with 5–6 pairs of secondary veins; calyces puberulent; pods 4–6.6 cm long (Amazon Basin, Brazil) *O. holerythra* Ducke
8. Leaflets acute to shortly acuminate, acumen less than 5 mm long, base acute to rounded, secondary veins not raised abaxially; calyces 7–10 mm long (Atlantic Coastal Forest of Bahia and Espírito Santo, Brazil) *O. nitida* Vogel

ACKNOWLEDGMENTS

This paper is part of the first author's M.Sc. thesis developed at the Posgrado de Biología, Facultad de Ciencias Exactas y Naturales, Universidad de Antioquia. We would like to thank The Royal Botanic Gardens, Kew for permission to reproduce the plate of *Ormosia corcovada* prepared by Angela Beaumont; and Gwilym Lewis, Tania Moura, and an anonymous reviewer for critically reading the manuscript. MHP and RCP would like to thank Minerios S.A. company for allowing field collecting on their properties, Paula Lalinde, Andrés Felipe Cuadros, and Jhon Jairo Colorado (SAG) who kindly provided information about habitat and photos of plants in situ, specially of the flowers of *O. corcovada*, Fernando Giraldo for his help in the field, Sebastián Peña for preparing the maps, Steven Murillo for his help in assessing the IUCN conservation status, and the staff of the herbaria HUA, JAUM, and MEDEL for allowing us access to their collections. CHS would like to thank the B. A. Krukoff Legume Fund for early funding that laid the groundwork for this study. DBOSC also thanks the grants from CNPq (Research Productivity Fellowship no. 308244/2018-4; Universal no. 422325/2018-0) and FAPESB (Universal no. APP0037/2016) for the financial support to his research on legume systematics.

AUTHOR CONTRIBUTIONS

MHP, CHS, and DBOSC designed the study. DBOSC and RCP supervised the study. MHP, LKRB, and RCP collected specimens in the field. MHP, LKRB, and CHS revised herbarium specimens. MHP, DBOSC, and CHS prepared morphological descriptions, figures, and wrote the draft of the manuscript. All authors revised and approved the manuscript.

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