

Rarity and Endemism in *Coutaportla*: Taxonomic Perspective (Chiococceae, Rubiaceae)

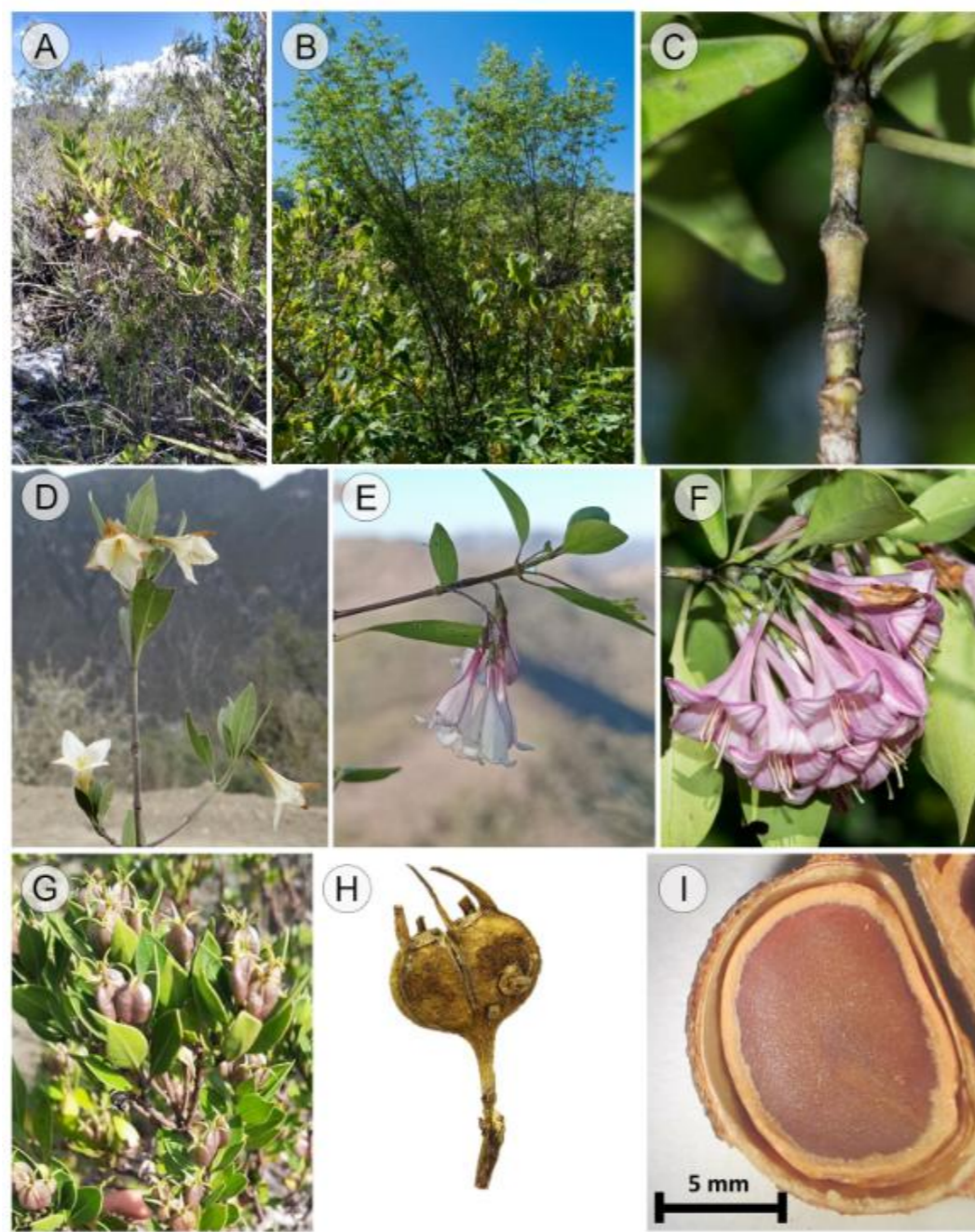
Alejandro Torres-Montúfar

Department of Biological Sciences, FESC-UNAM, Faculty of Higher Studies Cuautitlan, National Autonomous University of Mexico, Cuautitlan 54714, Mexico

INTRODUCTION & AIM

The Chiococceae tribe of Rubiaceae includes 29 genera and ca. 200 species, this tribe have an amphi-Pacific tropical disjunction, but are primarily distributed in the Neotropics, with a center of diversity in the Caribbean islands (Paudyal et al. 2018). One of the genus restricted to North to Central America is *Coutaportla*, which can be morphologically distinguished from other Chiococceae genera by the 4-merous flowers, dorsiventrally flattened capsular fruits with 2 to 5 seeds and variable placentation position, in contrast to the other genera in the tribe that have 5-merous flowers, capsular fruits, numerous ovules per locule and medial to apical placentation position (Aiello 1979, Ochoterena 2012).

The genus *Coutaportla* was described based on *Portlandia ghiesbreghtiana* in 1923 considering placentation and floral morphology (Urban 1923); it was a monotypic genus until *Portlandia guatemalensis* was also transferred to this genus by Lorence (1986), species that was segregated into the genus *Lorencea* (Borhidi 2018). However, molecular studies and morphological characteristics do not support this separation, and therefore the genus includes five species. The objective of this work is to present an updated treatment of *Coutaportla*, including recently described new species, identification keys, distribution maps by species, and taxonomic descriptions.



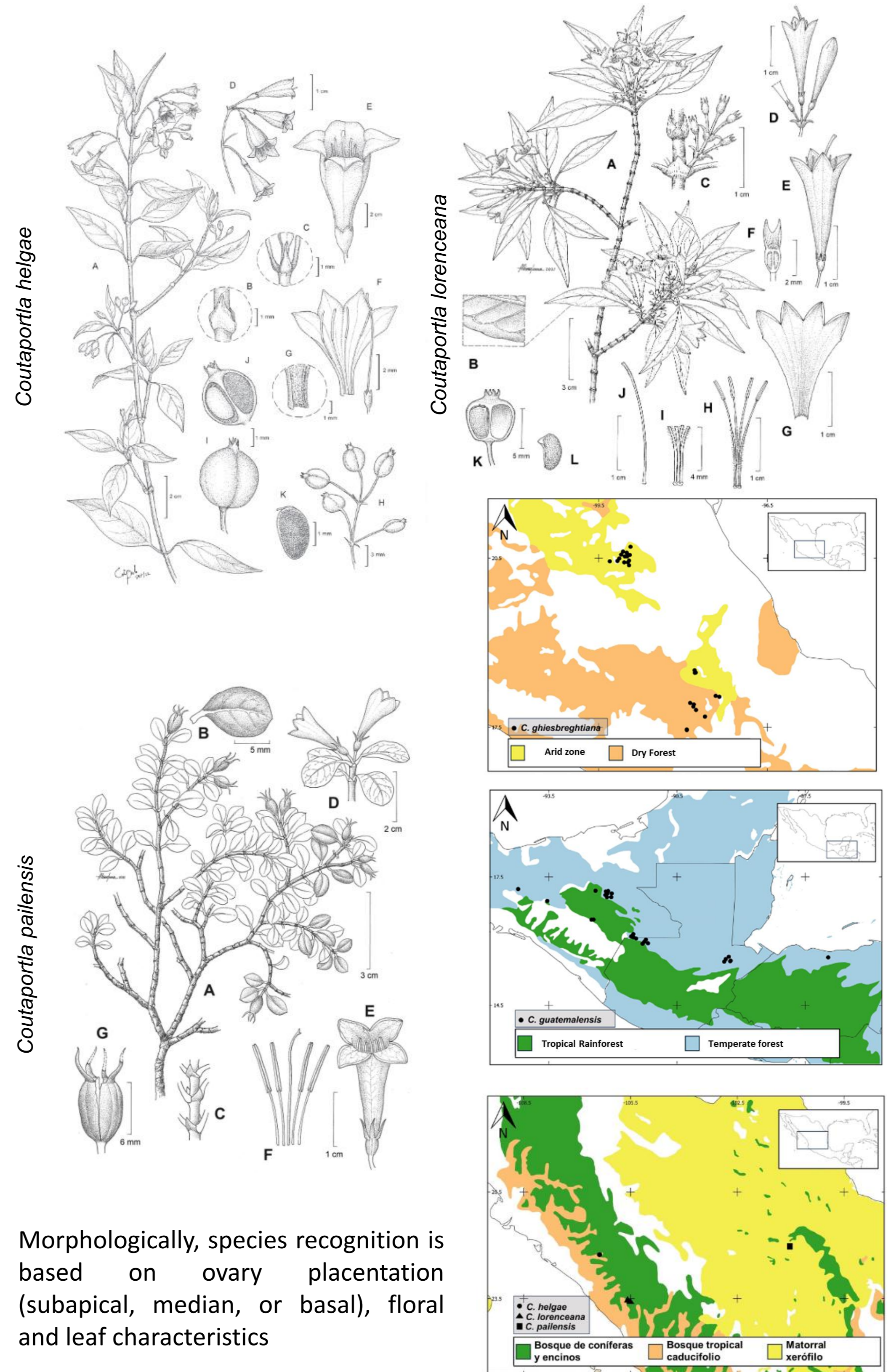
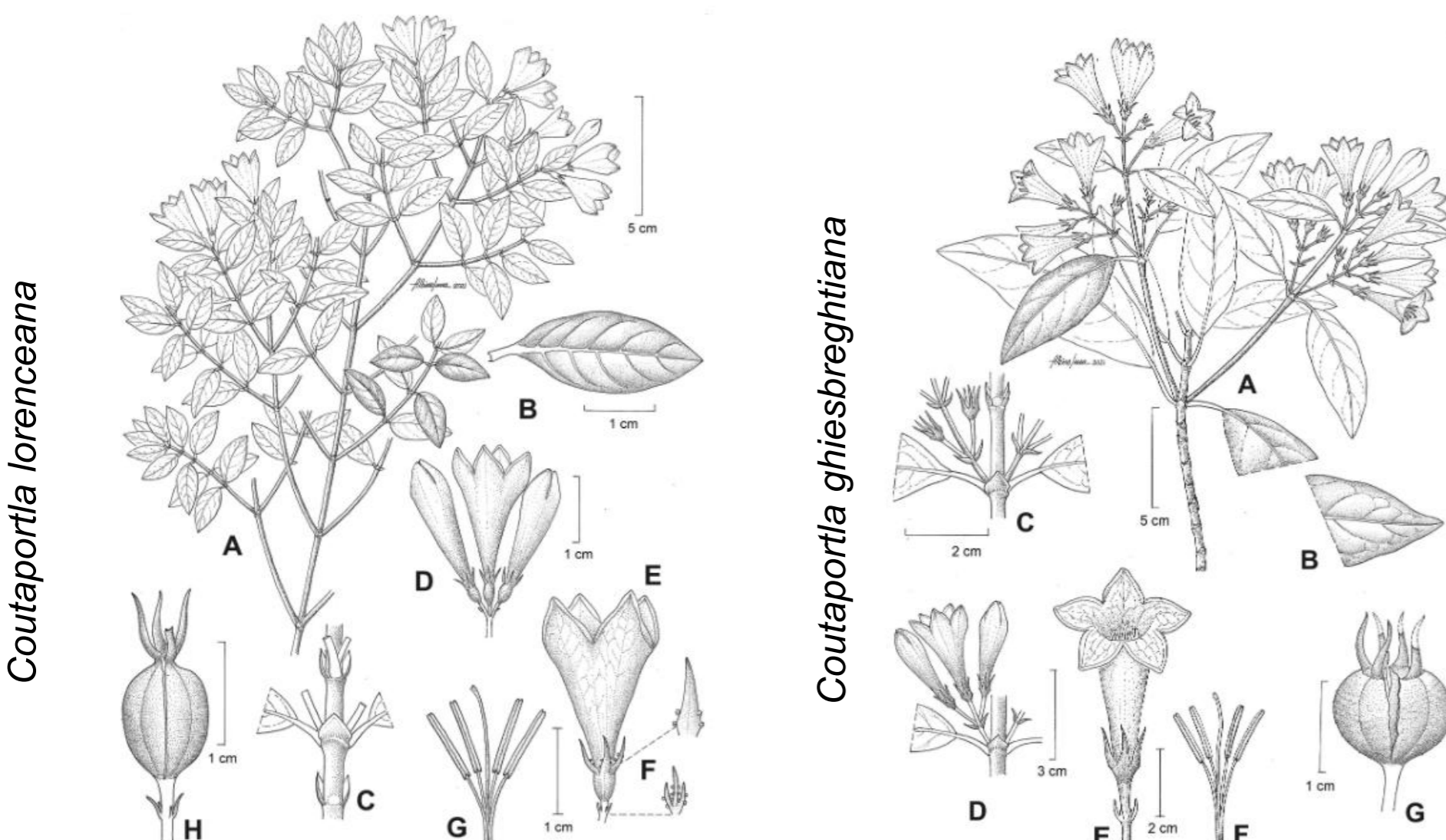
A. Life form and habitat of *C. ghiesbreghtiana*; B. life form and habitat of *C. lorenceana*; C. stipules of *C. lorenceana*; D. flowers of *C. ghiesbreghtiana*; E. flowers of *C. helgae*; F. flowers of *C. lorenceana*; G. fruits of *C. ghiesbreghtiana*; H. fruit of *C. guatemalensis*; I. seed of *C. guatemalensis*. Photographs by Manuel Gutiérrez (A), Arturo Castro (B–C, F), Alejandro Torres (D, G–I), Fernando Pío (E).

METHOD

A bibliographic review of taxonomic studies and protologues of *Coutaportla* was conducted. Herbarium specimens, including types, were examined, and online collections and specialized internet portals were consulted to update taxonomic information and generate distribution maps.

RESULTS & DISCUSSION

Coutaportla includes five species, all of them found in Mexico, with four being endemic and one also distributed in Central America, ranging from arid, temperate to tropical-humid. Three of these are only known from the type locality within the country.



Morphologically, species recognition is based on ovary placentation (subapical, median, or basal), floral and leaf characteristics

Character	<i>C. lorenceana</i>	<i>C. ghiesbreghtiana</i>	<i>C. guatemalensis</i>	<i>C. helgae</i>	<i>C. pailensis</i>
Habit	Trees	Shrubs or small trees	Trees	Shrubs	Shrubs
Leaf shape	Elliptic to elliptic-lanceolate	Elliptic to ovate-elliptic	Obovate-elliptic to elliptic	Ovate-lanceolate	Orbicular
Leaf size (cm)	1.3–5.8 × 0.8–1.4	1.7–4.5 × 0.8–2	11–22 × 3–9	2–5.2 × 1–2.5	0.4–1.2 × 0.3–0.9
Apex	Acuminate	Acute to subacute	Acuminate	Acuminate	Mucronate
Number of secondary veins	4–6	4–5 or inconspicuous	7–10	5–6	Inconspicuous
Type of inflorescence	Simple or compound dichasia	Simple dichasia or solitary flowers	Compound dichasia	Simple or compound dichasia	Simple dichasia or solitary flowers
Position of inflorescence	Axillary, rarely terminal	Axillary	Axillary, rarely terminal	Axillary and terminal	Terminal
Number of floral parts	4(5)	4	5(4)	4(5)	4(5)
Corolla color	Purple	White	White	White, with purple base and folds	Pink
Corolla tube length (cm)	1.7–2.5	2.2–2.5	3–4	0.9–1.3	2–3.4
Placentation	Subapical	Median	Basal	Subapical	Median
Fruit size (mm)	4–5 × 4–5	7–10 × 6–7	10–14 × 12–16	2.6–3.9 × 2.8–3.9	8–10 × 4–5
Seed size (mm)	3 × 1.2	3 × 2	6–8 × 6–8	2.5 × 1.4–1.5	3–4 × 2–2.5