



Solanaceae family in Mexico



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Abstract

Background: Knowledge on Mexican Solanaceae is uneven. Several areas are well collected and have been floristically treated in recent times, but others have been neglected and are poorly represented in herbaria.

Question: Which species of Solanaceae grow in Mexico and which is their state distribution.

Study site: Mexico from 2009 to 2011.

Methods: We reviewed family literature as well as Mexican and North American herbaria. We analyzed species distribution for each state, and endemism for the country and MegaMexico.

Results: We found three subfamilies (Cestroideae, Juanulloideae and Solanoideae), 34 genera, 381 species, and 18 varieties. We include state distributions and endemism for the country, as well as for MegaMexico 1, in which the natural limits of the Sonoran, Chihuahuan, and Tamaulipean deserts are included, and MegaMexico 2 which includes Central America up to northern Nicaragua. There are no endemic genera to Mexico, but *Nectouxia*, *Datura* and *Chamaesaracha* are endemic to MegaMexico 1, and *Plowmania*, *Tzeltalia*, *Capsicophysalis* and *Schraderanthus* are endemic to MegaMexico2. Three genera, *Brugmansia*, *Petunia* and *Nicandra* are introduced and have naturalized species. *Solanum* has the highest number of species (130), then *Physalis* with 65, and *Cestrum* 42. Mexico harbors all the species of *Datura* and *Tzeltalia*, 80 % of *Chamaesaracha* and 77 % of *Physalis*. As to state richness, Oaxaca has 172 species, Chiapas 167, Jalisco 148, and Veracruz 145. The states with less species are Tlaxcala with 16, Campeche with 19, and Colima with 27.

Conclusions: Mexico is an important center of diversity and endemism of Solanaceae. One hundred thirty five species are endemic to Mexico, with eight varieties. MegaMexico 1 has 30 endemic species with two varieties, and MegaMexico 2 has 57 endemic species. Endemism figures will probably vary once nomenclatural problems of under collected taxa are resolved.

Key words: distribution, endemism, checklist

La familia Solanaceae en México

Resumen

Antecedentes: El conocimiento de las solanáceas en México es muy desigual, ya que hay zonas con tratamientos recientes y bien colectadas, mientras que otras se encuentran sub representadas en las colecciones.

Pregunta: Cuáles son las especies de solanáceas que crecen en México y cuál es su distribución estatal. Cuáles especies son endémicas al país y a MegaMéxico.

Sitio de estudio: México entre 2009 y 2011.

Métodos: Se hizo un análisis de la literatura de Solanaceae en el país y se revisaron herbarios nacionales y de los Estados Unidos. Analizamos la distribución de las especies en los estados, así como el endemismo a México, MegaMéxico 1 y MegaMéxico 2.

Resultados: Encontramos tres subfamilias (Cestroideae, Juanulloideae y Solanoideae), 34 géneros, 381 especies y 18 variedades. No hay géneros endémicos a México, pero *Nectouxia*, *Datura* y *Chamaesaracha* son endémicos a MegaMexico 1, y *Plowmania*, *Tzeltalia*, *Capsicophysalis* y *Schraderanthus* son endémicos a MegaMexico2. Tres géneros, *Brugmansia*, *Petunia* y *Nicandra* son introducidos con especies naturalizadas. El género con más especies es *Solanum* (130), después *Physalis* (65) y *Cestrum* (42). De *Datura* y *Tzeltalia*, México alberga el 100% de las especies, de *Chamaesaracha* el 80% y de *Physalis* el 77%. Los estados más diversos son Oaxaca con 172 especies, Chiapas con 167, Jalisco con 148 y Veracruz con 145, mientras que los más pobres son Tlaxcala con 16, Campeche con 19 y Colima con 27. Las especies endémicas al país son 135 con 8 variedades. MegaMéxico 1 tiene 30 especies y 2 variedades endémicas. MegaMéxico 2 tiene 57 especies endémicas. La proporción de endemismos posiblemente cambiará cuando se aclare la nomenclatura de grupos escasamente colectados y poco estudiados taxonómicamente.

Conclusión: México es un importante centro de diversificación y endemismo de las Solanaceae. Hay 135 especies endémicas a México, con ocho variedades. MegaMéxico 1 tiene 30 especies endémicas con dos variedades, y MegaMéxico 2 tiene 57 especies endémicas. Los números del endemismo seguramente variarán una vez que haya suficientes colectas para resolver taxa nomenclaturalmente problemáticos.

Palabras clave: distribución, endemismo, listado

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Solanaceae Juss. is a monophyletic group if Nolanaceae and Goetzaceae are included (Olmstead *et al.* 2008). The family includes important agricultural plants, such as the potatoe (*Solanum tuberosum* L.), chili (*Capsicum* spp.), tomatoes (*Solanum lycopersicum* L.), and tomatillos or ground cherries (*Physalis philadelphica* Lam.). Tobacco (*Nicotiana tabacum* L.) is a common drug. Other species are toxic, as *Datura stramonium* L. and *Nierembergia linariifolia* Graham, or medicinal as *Atropa belladonna* L. Others are ornamental as *Petunia hybrida* Vilm., or *Brunfelsia undulata* Sw. (known locally as galán de noche, dama de noche) and *Cestrum nocturnum* L. (huele de noche).

Solanaceae comprises 96 genera and 23,000 species (Hunziker 2001). *Solanum* and *Lycium* have a wide geographical distribution. *Lycianthes* is an American-Asian genus. *Datura* and *Chamaesaracha* are from North America. *Hunzikeria*, *Acnistus*, and *Capsicum* are from North, Central, and South America. *Solandra*, *Witheringia*, *Browallia*, and *Jaltomata* are from America and the West Indies. Some genera have disjunct distributions, as *Bouchetia*, *Grabowskia*, *Nierembergia*, and *Petunia*. Mexico harbors an important number of species and has been considered a diversity center for the family. Other diversification centers are Central and South America, the rest of North America, Australia, and the Himalayas. Genera with wide distributions, cultivated species, and over 300 years of plant dispersion by humans have complicated the family nomenclature.

Floristic studies of the Solanaceae in Mexico are very uneven. Some areas have complete inventories as Veracruz, where Nee (1986, 1993) found 21 genera and 138 species. Valley of Mexico has 13 genera and 59 species (Calderón de Rzedowski & Rzedowski 2001). Mesoamerica has 33 genera and 308 species (Knapp *et al.* 2005), Oaxaca 19 genera and 165 species (Rodríguez 2004), Jalisco 20 genera and 138 species (Cuevas-Arias *et al.* 2008) and Aguascalientes with 12 genera and 55 species (Sierra-Muñoz *et al.* 2015). The rest of the country either lacks floristic works, or the inventories are old or incomplete.

Uneven knowledge of the Solanaceae in the country, as well as the lack of a sound nomenclature hinders richness and endemism analyses, thus complicating conservation policies.

The aims of our work were to provide a current Solanaceae list for Mexico, under Hunziker's (2001) classification system and to offer species distribution data.

Materials and methods

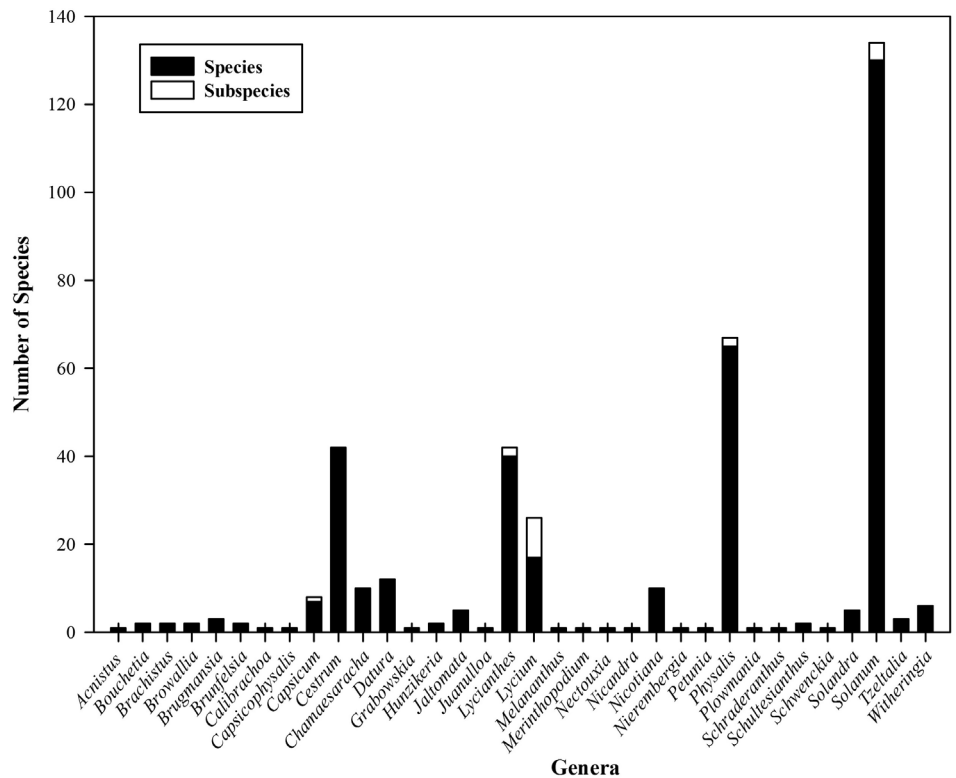
We reviewed family literature including monographs, floristic lists, floras, species original descriptions, thesis, typification literature, nomenclatural synopsis, and phylogenies. The complete list of references is available from Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO), or from the authors. With that information and our experience, we validated the correct name for the species and formed the Solanaceae list. We visited MEXU, XAL, MO, IBUG, IEB, SD and QMEX (acronyms according to Thiers, continuously updated) to review the specimens and obtain their distribution. The list up to 2011 including synonyms is available at <<http://www.conabio.gob.mx/institucion/proyectos/resultados/InfHS004.pdf>> (consulted in feb 2017).

Species distribution information at the state level was completed with recent floristic lists. Lists prior to 2000 were not used because of nomenclatural problems. Subfamily and genera circumscriptions are according to Hunziker (2001). We do not include subgenera or sections here, but the complete nomenclature data base is available from CONABIO. For discrepancies among different classification systems we followed Hunziker (2001). Exceptions are the Mexican genera *Calibrachoa* and *Tzeltalia*, which Hunziker (2001) left as synonyms of *Petunia* and *Physalis*, respectively, but Olmstead *et al.* (2008) and Whitson & Manos (2005) recognize. Based on molecular data (such as Bohs & Olmstead 1997), *Lycopersicon* and *Cyphomandra* were included in *Solanum*, although Hunziker (2001) treated them separately. Finally, we accepted *Capsicophysalis* and *Schraderanthus*, described after Hunziker's (2001) work.

Results

The list we present (Table 1), has the species described so far excluding synonyms. We found three subfamilies of Solanaceae that group 34 genera, 381 species, and 18 varieties (Figure 1).

Figure 1. Species number per genus of Mexican Solanaceae.

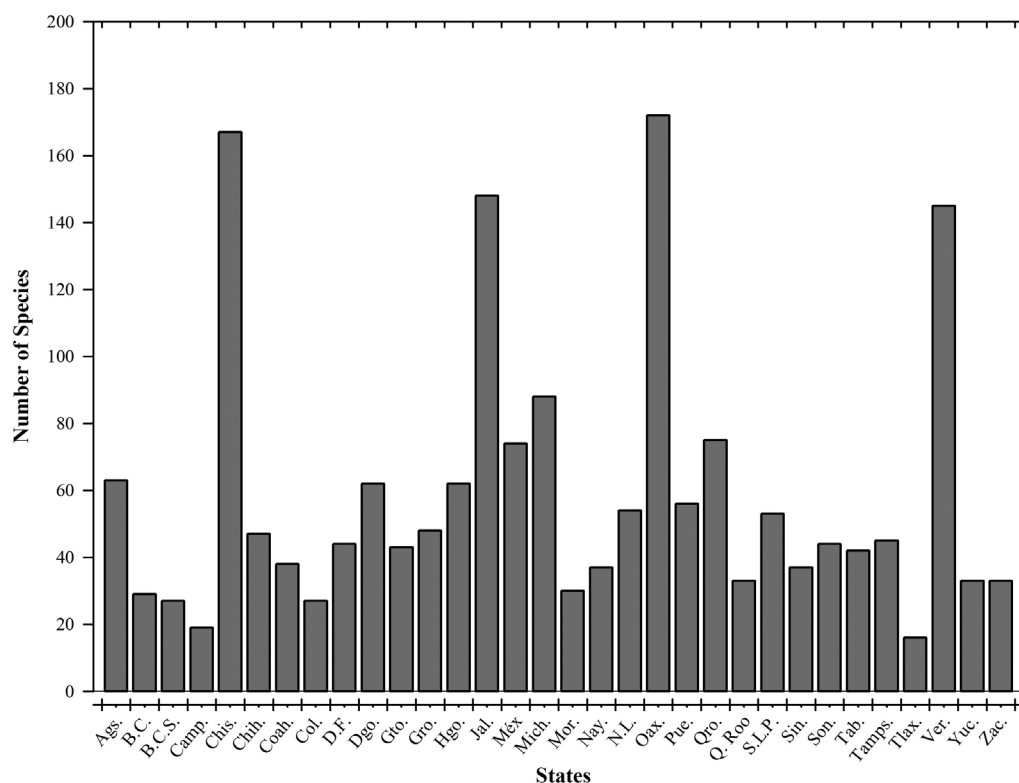


Genera with the highest number of species were *Solanum* with 130, *Physalis* with 65, *Cestrum* with 42, and *Lycianthes* with 40. The rest of the genera have 17 species or less (Figure 1). From the genera present in the list, *Brugmansia* is introduced from South America and is cultivated for its showy flowers known as “floripondio”. *Petunia* is also introduced and easily cultivated, and *Petunia hybrida* is the species with the widest distribution in the country, along with “chile” (*Capsicum annum*). Finally, *Nicandra physalodes*, native from Peru (Hunziker 2001) is currently naturalized in 10 states. The rest of the genera are native, although some of the species are introduced, either as food, like the potato (*Solanum tuberosum*), or as weeds as *Nicotiana glauca* Graham (“tabaquillo”, “alamillo”). No genera are endemic to Mexico, but *Nectouxia* (monotypic), grows from southern Texas to Puebla, *Datura* and *Chamaesaracha* grow from southern United States to Mexico and thus the three genera are MegaMexico 1 (*sensu* Rzedowski 1993) endemics, although several *Datura* species have become naturalized in Asia, South America and Africa. Other genera have endemic distributions to Mexico and northern Central America (MegaMexico 2, *sensu* Rzedowski 1993), as *Tzeltalia*, *Capsicophyalis* (monotypic), *Schradleranthus* (monotypic), and *Plowmania* (monotypic) (Hunziker 2001).

Mexico is an important diversification center for several genera. For *Datura* and *Tzeltalia*, Mexico harbors 100 % of the species, 80 % of *Chamaesaracha*, 77 % of *Physalis* and 50 % of *Solanandra* (Bernardello & Hunziker 1987). Some genera are underrepresented in Mexican collections. Nee (1993) estimated that 150 species of *Solanum* grew in Mexico, but we only found 130 species with four varieties.

As to species distribution in the country, states with the highest number of species are Oaxaca with 173, Chiapas with 167, Jalisco with 148, and Veracruz with 145 (Figure 2). The states with less species were Tlaxcala with 16, Campeche with 19, and Colima with 27. As to elevation, Mexican Solanaceae grow from sea level to over 4,000 m (*Solanum verrucosum* Schltdl., Spooner *et al.* 2004). Species grow in a wide variety of vegetation types, as halophytes in sand dunes and mangroves, palm strands, tropical deciduous forest, thorn forest, xerophytic scrub, pine-oak forest, mesophytic forest, and grassland (Nee 1986 1993, Spooner *et al.* 2004, Knapp *et al.* 2006, Cuevas-Arias *et al.* 2008, Sierra-Muñoz *et al.* 2015). Some species are closely related to water, such as *Nierembergia angustifolia* Kunth (García-Rubio *et al.* 2004), *Datura*

Figure 2. Species number of Mexican Solanaceae per state.



ceratocaula Jacq., and *Physalis sulphurea* (Fernald) Waterf., all of which grow in water-logged soils. Another species that grows near wetlands, but with brackish waters is *Solanum tampicense* Dunal, a mangrove weed. *Physalis minuta* Griggs also grows on salty soils near mangroves or coastal line vegetation on the Pacific slope. *Nicotiana glauca*, *Datura innoxia* Mill., and *Datura stramonium* L. have been collected almost through the country and are common in disturbed areas.

Genera distribution in Mexico is far from homogeneous. *Lycianthes* has the highest species diversity in Chiapas (25), Oaxaca (19), Veracruz (13), and Jalisco (11), as expected for a neotropical genus, since Mexico and Central America are the areas with the highest number of species (Hunziker 2001). *Chamaesaracha*, excluding *Chamaesaracha rzedowskiana*, is a genus with arid affinities, and the states with highest number of species are Coahuila (8), Nuevo León (8) and Chihuahua (6). Aguascalientes is the southernmost limit for the genus. *Lycium* also has an affinity for dry climates, and has the highest number of species in the northern portion of the country. *Cestrum* is best represented, as to species diversity and endemism, in the mountains. Two important areas are the Transmexican Volcanic Belt, and the mountains of Chiapas (Nee 2001). *Physalis* has the highest number of species in the central portion of the country, especially along the Transmexican Volcanic Belt and Jalisco (Vargas-Ponce *et al.* 2003).

One hundred thirty-five species with eight varieties (Table 1) are endemic to Mexico. In *Physalis*, 37 out of 66 species are endemic, and *P. angustior* Waterf., *P. tehuacanensis* Waterf., *P. hunzikeriana* M. Martínez are microendemic and rare, known only from the type and a few more collections. *Cestrum* has 18 endemic species, and sect. *Habrothamnus*, with diurnal flowers, is endemic to Mexico and Guatemala (D'Arcy 1999). Other genera with endemism to the country are *Solanum*, with 45 species and one variety, *Lycianthes* with 10 species and 2 varieties, *Datura* with five species, *Jaltomata* with 3 and *Lycium* with 5 species and 5 varieties. In addition to the geographic limits of the country, 30 species and 5 varieties are endemic to MegaMexico 1, and 57 to MegaMexico 2. The endemic element of Chiapas and Guatemala is very important in Mesoamerica. Knapp *et al.* (2006) point out that out of 98 species endemic to Mesoamerica, 45 are restricted to Chiapas and Guatemala.

Table 1. List and distribution of Mexican Solanaceae. MM1: MegaMexico 1, MM2: MegaMexico 2, E: Endemic to the geographical limits of the country. I: introduced.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Browallia americana</i> L.	Cestroideae	Chis., Mich., Pue., Ver.	
<i>Browallia eludens</i> Van Devender & P.D.Jenkins	Cestroideae	Son.	MM1
<i>Cestrum alternifolium</i> (Jacq.) O.E.Schulz	Cestroideae	Camp., Chis., D.F., Gro., Jal., Méx., Mich., Oax., Q. Roo, Yuc.	
<i>Cestrum aurantiacum</i> Lindl.	Cestroideae	Chis., Gro., Hgo., Jal., Mich., Mor., Oax., Qro., Sin., Ver	
<i>Cestrum benthamii</i> Miers	Cestroideae	Hgo., Méx., Mich., Oax., Pue., Ver.	
<i>Cestrum diurnum</i> L.	Cestroideae	Camp., Chis., Jal., Oax., Q. Roo, Sin., Yuc.	
<i>Cestrum dumetorum</i> Schltdl.	Cestroideae	Chis., Gto., Hgo., Jal., Mor., Nay., N.L., Oax., Pue., Qro., Q. Roo, S. L. P., Tamps., Ver., Yuc.	
<i>Cestrum elegans</i> (Brongn. ex Neumann) Schltdl.	Cestroideae	Chis., D.F., Hgo., Oax., Pue., Tamps., Ver.	E
<i>Cestrum elegantissimum</i> C.V.Morton	Cestroideae	Chis., Oax.	MM2
<i>Cestrum endlicheri</i> Miers	Cestroideae	Ver.	E
<i>Cestrum fasciculatum</i> (Schltdl.) Miers	Cestroideae	Hgo., Méx., Mich., N.L., Oax., Pue., Qro., Tamps., Tlax., Ver.	E
<i>Cestrum flavesces</i> Greenm.	Cestroideae	Chis., Gro., Mich., Mor., N.L., Qro.	E
<i>Cestrum flavinervium</i> Francey	Cestroideae	Gro., Mich.	E
<i>Cestrum formosum</i> C.V.Morton	Cestroideae	Chis.	MM2
<i>Cestrum fraternum</i> C.V.Morton	Cestroideae	Chis.	MM2
<i>Cestrum fulvesces</i> Fernald	Cestroideae	Gto., Hgo., Jal., Méx., Mich., N.L., Oax., Pue., Tamps.	E
<i>Cestrum galeottianum</i> Francey	Cestroideae	Oax.	
<i>Cestrum glanduliferum</i> Kerber ex Francey	Cestroideae	Chis., Col., Gto., Gro., Jal., Méx., Mich., Oax., Pue., Ver.	
<i>Cestrum guatemalense</i> Francey	Cestroideae	Chis., Son.	MM2
<i>Cestrum laurifolium</i> L' Hér.	Cestroideae	Col., Gro., Mich., Ver.	
<i>Cestrum laxum</i> Benth.	Cestroideae	Chis., D.F., Gto., Gro., Hgo., Jal., Méx., Mich., Mor., N.L., Oax., Pue., Qro., S.L.P., Tamps., Tlax., Ver.	E
<i>Cestrum luteoviresces</i> Francey	Cestroideae	Chis., Hgo., Oax., Ver.	MM2
<i>Cestrum megalophyllum</i> Dunal	Cestroideae	Chis., Oax., Tab., Ver.	
<i>Cestrum miradoreense</i> Francey	Cestroideae	Jal., Mich., Oax., Ver.	E
<i>Cestrum mortonianum</i> J. L. Gentry	Cestroideae	Chis.	MM2
<i>Cestrum nitidum</i> M. Martens & Galeotti	Cestroideae	Chis., D.F., Gto., Gro., Jal., Méx., Mich., Mor., Oax., Pue., Qro., Tab.	E
<i>Cestrum nocturnum</i> L.	Cestroideae	B. C., Camp., Chis., Col., Dgo., Gro., Hgo., Jal., Méx., Mor., Nay., Oax., Pue., Qro., Q. Roo, S.L.P., Tab., Tamps., Ver., Yuc.	
<i>Cestrum oblongifolium</i> Schltdl.	Cestroideae	Coah., D.F., Gto., Gro., Hgo., Jal., Méx., Mich., Mor., N.L., Oax., Pue., Qro., S.L.P., Tamps., Tlax., Ver.	E
<i>Cestrum pacayense</i> Francey	Cestroideae	Chis.	MM2
<i>Cestrum pacificum</i> Brandegee	Cestroideae	Coah.	E
<i>Cestrum pallidissimum</i> Francey	Cestroideae	Described from Mexico, without collections in reviewed herbaria	E
<i>Cestrum porphyreum</i> Dunal	Cestroideae	Jal.	
<i>Cestrum racemosum</i> Ruiz & Pav.	Cestroideae	Chis., Hgo., Oax., Pue., Qro., Sin., Tab., Ver., Yuc.	
<i>Cestrum regelii</i> Planch.	Cestroideae	Chis., Yuc.	
<i>Cestrum roseum</i> Kunth	Cestroideae	D.F., Gto., Hgo., Méx., Mich., Oax., Pue., Qro., S.L.P., Ver., Yuc.	E

Table 1. Continuation.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Cestrum scandens</i> Vahl.	Cestroideae	Chis., Jal., Méx., Mich., Mor., Oax., Q. Roo, Tab., Ver.	
<i>Cestrum schiedeii</i> Francey	Cestroideae	Described from Mexico, without collections in reviewed herbaria	E
<i>Cestrum schlechtendalii</i> G. Don	Cestroideae	Chis., Gro., Oax., Ver.	
<i>Cestrum skutchii</i> C. V. Morton	Cestroideae	Chis.	MM2
<i>Cestrum sotonunnezii</i> Mont.-Castro	Cestroideae	Gro., Mich.	E
<i>Cestrum subcordatum</i> Francey	Cestroideae	Described from Mexico, without collections in reviewed herbaria	E
<i>Cestrum thrysoideum</i> Kunth	Cestroideae	D.F., Gto., Gro., Jal., Méx., Mich., Mor., Nay., Pue., Qro., S.L.P., Sin., Son., Tlax., Zac.	E
<i>Cestrum tomentosum</i> L.f.	Cestroideae	Ags., B.C.S., Chis., Chih., Coah., Dgo., Gto., Gro., Jal., Méx., Mich., Mor., Nay., Oax., Pue., Sin., Son., Tamps., Ver., Zac.	
<i>Cestrum uhdei</i> Dammer ex Francey	Cestroideae	Mich., Gto.	E
<i>Brunfelsia americana</i> L.	Cestroideae	Yuc.	
<i>Brunfelsia nitida</i> Benth.	Cestroideae	Chis., Tab., Ver., Yuc.	
<i>Bouchetia arniatera</i> B. L. Rob.	Cestroideae	Ags., Coah., D.F., Gto., Jal., Méx., N.L., Oax., S.L.P., Zac.	E
<i>Bouchetia erecta</i> DC. ex Dunal	Cestroideae	Ags., Chis., Chih., Coah., D.F., Gto., Hgo., Jal., Méx., Mich., N.L., Oax., Pue., Qro., S.L.P.	MM2
<i>Calibrachoa parviflora</i> (Jussieu) D'Arcy	Cestroideae	Ags., B.C., B.C.S., Chih., Coah., D.F., Dgo., Gto., Gro., Hgo., Jal., Mich., N.L., Pue., Qro., S.L.P., Sin., Son., Tamps., Zac.	
<i>Hunzikeria coulteri</i> (A. Gray) D'Arcy	Cestroideae	Gto., Qro.	E
<i>Hunzikeria texana</i> (Torr.) D'Arcy	Cestroideae	N.L., S.L.P., Tamps.	MM1
<i>Nicotiana attenuata</i> Torr. ex S. Watson	Cestroideae	B. C.	
<i>Nicotiana clevelandii</i> A. Gray	Cestroideae	B.C., B.C.S., Son.	MM1
<i>Nicotiana glauca</i> Graham	Cestroideae	Ags., B.C., B. C. S., Camp., Chis., Chih., Col., Dgo., Gro., Jal., Mich., Nay., N.L., Oax., Pue., Qro., Q. Roo, Sin., Son., Tab., Tamps., Ver., Yuc.	
<i>Nicotiana obtusifolia</i> M. Martens & Galeotti	Cestroideae	Ags., B.C., B.C.S., Qro., Son.	
<i>Nicotiana palmeri</i> A. Gray	Cestroideae	Son.	MM1
<i>Nicotiana plumbaginifolia</i> Viv.	Cestroideae	Ags., Chis., Gro., Jal., Qro., Son., Tamps., Ver.	
<i>Nicotiana repanda</i> Willd. ex Lehm.	Cestroideae	N.L., Qro., S.L.P., Tamps.	MM1
<i>Nicotiana rustica</i> L.	Cestroideae	Yuc.	
<i>Nicotiana stocktonii</i> Brandege	Cestroideae	B.C.S., Col.	E
<i>Nicotiana tabacum</i> L.	Cestroideae	Ags., Chis., Jal., Oax., Qro., Q. Roo, Ver., Yuc.	
<i>Nierembergia angustifolia</i> Kunth	Cestroideae	Ags., Dgo., Gto., Hgo., Jal., Méx., Mich., S.L.P.	E
<i>Petunia hybrida</i> E.Vilm.	Cestroideae	Todos	I
<i>Plowmania nyctaginoides</i> (Standl.) Hunz. & Subils.	Cestroideae	Chis.	MM2
<i>Melananthus guatemalensis</i> Soler.	Cestroideae	Chis., Oax.	
<i>Schwenckia americana</i> L.	Cestroideae	Camp., Chis., Gro., Q. Roo, Tab., Yuc.	
<i>Juanulloa mexicana</i> (Schltdl.) Miers	Juanulloideae	Chis., Dgo., Gro., Jal., Oax., Tab., Ver.	
<i>Merinthopodium neuranthum</i> Donn.Sm.	Juanulloideae	Chis.	
<i>Schultesianthus leucanthus</i> (Donn.Sm.) Hunz.	Juanulloideae	Chis.	
<i>Schultesianthus uniflorus</i> (Lundell) S. Knapp	Juanulloideae	Chis.	MM2
<i>Brugmansia suaveolens</i> (Willd.) Bercht. & J.Presl	Solanoideae	Chis., Jal., Ver., Yuc.	I
<i>Brugmansia versicolor</i> Lagerh.	Solanoideae	Chis.	I
<i>Brugmansia candida</i> Pers.	Solanoideae	Chis., Jal.	I
<i>Datura arenicola</i> Gentry ex Bye & Luna	Solanoideae	B. C. S.	E

Table 1. Continuation.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Datura ceratocaula</i> Ortega	Solanoideae	Ags., D.F., Dgo., Gto., Hgo., Jal., Méx., Mich., Qro.	E
<i>Datura discolor</i> Bernh.	Solanoideae	B.C., B.C.S., Chih., Dgo., Gto., Gro., Jal., Nay., Oax., Qro., Sin., Son., Tamps., Ver.	MM1
<i>Datura innoxia</i> Mill.	Solanoideae	Ags., B.C., B.C.S., Camp., Chis., Chih., Coah., Col., Dgo., Gto., Gro., Jal., Mich., Mor., Nay., Oax., Pue., Q. Roo, Sin., Tamps., Ver., Yuc., Zac.	
<i>Datura kymatocarpa</i> A.S. Barclay	Solanoideae	Col., Gro., Jal., Mich.	E
<i>Datura lanosa</i> Bye	Solanoideae	Chih., Dgo., Nay., Sin., Son.	E
<i>Datura metel</i> L.	Solanoideae	Chis., Oax., Q. Roo, Yuc.	
<i>Datura pruinosa</i> Greenm.	Solanoideae	Oax., Pue.	
<i>Datura quercifolia</i> Kunth	Solanoideae	Ags., Chih., Dgo., Hgo., Jal., N.L., Qro., Son., Zac.	MM1
<i>Datura reburra</i> A.S. Barclay	Solanoideae	Sin.	E
<i>Datura stramonium</i> L.	Solanoideae	Ags., Chis., Chih., Coah., Col., D.F., Dgo., Gto., Hgo., Jal., Méx., Mich., Mor., Nay., N.L., Oax., Pue., S.L.P., Son., Tab., Tamps., Tlax., Ver., Yuc., Zac.	
<i>Datura wrightii</i> Regel	Solanoideae	B.C., Chih., Coah., Dgo., Son., Tamps.	
<i>Grabowskia boerhaviifolia</i> Schltldl.	Solanoideae	Mich., Pue.	
<i>Lycium andersonii</i> A.Gray	Solanoideae	B.C., B.C.S., Son.	
<i>Lycium andersonii</i> A. Gray var. <i>deserticola</i> (C. L. Hitchc.) Jeps.	Solanoideae	B.C., B.C.S., Son.	
<i>Lycium andersonii</i> A. Gray var. <i>pubescens</i> S.Watson	Solanoideae	B.C., B.C.S., Son., Sin.	E
<i>Lycium andersonii</i> A. Gray var. <i>wrightii</i> A. Gray	Solanoideae	B. C., B. C. S., Son., Sin.	MM1
<i>Lycium arochae</i> F. Chiang, T. Wendt & E.J. Lott	Solanoideae	Coah.	E
<i>Lycium berlandieri</i> Dunal	Solanoideae	B.C.S., Chih., Coah., Dgo., Hgo., N.L., S.L.P., Sin., Son., Tamps., Zac.	MM1
<i>Lycium brevipes</i> var. <i>brevipes</i> Benth.	Solanoideae	B.C., B. C. S., Son.	
<i>Lycium californicum</i> Nutt. ex A. Gray	Solanoideae	B.C., B.C.S., Coah., S.L.P., Sin., Son., Zac.	MM1
<i>Lycium californicum</i> Nutt. var. <i>carinatum</i> (S. Watson) Felger.	Solanoideae	Son.	E
<i>Lycium carolinianum</i> Walter	Solanoideae	B. C. S., Jal., Méx., Mich., Nay., Oax., S.L.P., Sin., Tamps., Ver.	
<i>Lycium carolinianum</i> Walter var. <i>quadrifidum</i> (Dunal) C.L. Hitchc.	Solanoideae	B.C.S., Col., Jal., Méx., Mich., Nay., N.L., Oax., Sin., Tamps., Ver.	
<i>Lycium densifolium</i> Wiggins	Solanoideae	B. C.	E
<i>Lycium exsertum</i> A. Gray	Solanoideae	B. C., B.C.S., Sin., Son.	MM1
<i>Lycium fremontii</i> A. Gray	Solanoideae	B.C., B.C.S., Son.	MM1
<i>Lycium fremontii</i> A. Gray var. <i>congestum</i> C.L. Hitchc.	Solanoideae	B.C., B.C.S.	E
<i>Lycium isthmense</i> F. Chiang	Solanoideae	Oax.	E
<i>Lycium leiospermum</i> I.M. Johnst.	Solanoideae	S.L.P., Coah., Zac.	E
<i>Lycium macrodon</i> A. Gray	Solanoideae	Son.	MM1
<i>Lycium macrodon</i> A. Gray var. <i>dispermum</i> (Wiggins) F. Chiang	Solanoideae	B.C., B.C.S.	E
<i>Lycium megacarpum</i> Wiggins	Solanoideae	B.C., B.C.S.	E
<i>Lycium parishii</i> A. Gray	Solanoideae	B.C., Coah., N.L., S.L.P., Son.	MM1
<i>Lycium parishii</i> A. Gray var. <i>modestum</i> (I.M. Johnst.) F. Chiang	Solanoideae	B.C., Coah., N.L., S.L.P., Son.	E
<i>Lycium puberulum</i> A. Gray	Solanoideae	Chih., Coah., Dgo.	MM1
<i>Lycium puberulum</i> A. Gray var. <i>berberidoides</i> (Correll) F. Chiang	Solanoideae	Chih., Coah., Dgo.	
<i>Lycium torreyi</i> A. Gray	Solanoideae	B.C.S., Chih.	
<i>Nicandra physalodes</i> (L.) Gaertn.	Solanoideae	Ags., Chis., Jal., Méx., Mich., Mor., Nay., Oax., Sin., Ver.	

Table 1. Continuation.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Solandra brevicealyx</i> Standl.	Solanoideae	Hgo., Tamps.	E
<i>Solandra guerrensis</i> Martínez	Solanoideae	Gro.	E
<i>Solandra guttata</i> D. Don	Solanoideae	Dgo., Gro., Hgo., Méx., Mor., N.L., Oax., Ver., Zac.	E
<i>Solandra maxima</i> (Sessé & Moc.) P.S. Green	Solanoideae	Gro., Jal., Méx., Mich., Mor., Oax., Pue., Tab., Ver.	
<i>Solandra nizandensis</i> Matuda	Solanoideae	Chis., Mich., Oax.	MM2
<i>Acnistus arborescens</i> (L.) Schldtl.	Solanoideae	Chis.	
<i>Brachistus nelsonii</i> (Fernald) D'Arcy, J.L. Gentry & Averett	Solanoideae	Camp., Chis., Oax., Tab., Ver.	
<i>Brachistus stramonifolius</i> (Kunth) Miers	Solanoideae	Chis., Chih., Col., Dgo., Gro., Jal., Mich., Oax., Son., Tab.	
<i>Capsicophysalis potosina</i> (B. L. Rob. & Greenm.) Averett & M. Martínez	Solanoideae	Chis., Gro., Jal., Oax., S.L.P., Tamps.	MM2
<i>Capsicum annuum</i> var. <i>annuum</i> L.	Solanoideae	B.C., B.C.S., Camp., Chis., Jal., Oax., Pue., Q. Roo, Ver., Yuc.	
<i>Capsicum annuum</i> L. var. <i>aviculare</i> (Dierb.) D'Arcy & Eshbaugh	Solanoideae	Chis., Chih., Jal., N.L., Oax., Qro., S.L.P., Tamps., Ver.	
<i>Capsicum baccatum</i> L.	Solanoideae	BC., Q. Roo, Son.	
<i>Capsicum chinense</i> Jacq.	Solanoideae	Yuc.	
<i>Capsicum frutescens</i> L.	Solanoideae	Chis., Chih., Oax., Q. Roo, Sin., Tamps., Ver., Yuc.	
<i>Capsicum lanceolatum</i> (Greenm. ex Donn. Sm.) C. V. Morton & Standl.	Solanoideae	Chis., Oax., Ver.	
<i>Capsicum pubescens</i> Ruiz & Pav.	Solanoideae	Chis., Ver.	
<i>Capsicum rhomboideum</i> (Humb., Bonpl. & Kunth) Kuntze	Solanoideae	Chis., Dgo., Hgo., Jal., N.L., Oax., Pue. Qro., S. L.P., Tab., Ver.	
<i>Chamaesaracha conoides</i> (Moric. ex Dunal) Britton	Solanoideae	Chih., Coah., N.L.	
<i>Chamaesaracha coronopus</i> (Dunal) A. Gray	Solanoideae	Ags., B.C.S., Chih., Coah., Dgo., N.L., S.L.P., Son., Tamps., Zac.	MM1
<i>Chamaesaracha crenata</i> Rydb.	Solanoideae	Coah., N.L.	MM1
<i>Chamaesaracha edwardsiana</i> Averett	Solanoideae	Coah., N.L.	
<i>Chamaesaracha geohintonii</i> Averett & B.L. Turner	Solanoideae	N.L.	E
<i>Chamaesaracha pallida</i> Averett	Solanoideae	Chih., Coah., Dgo., N.L., Tamps., Zac.	MM1
<i>Chamaesaracha rzedowskiana</i> Hunz.	Solanoideae	Qro., S.L.P.	E
<i>Chamaesaracha sordida</i> (Dunal) A. Gray	Solanoideae	Chih., Coah., N.L., Son.	
<i>Chamaesaracha texensis</i> Henrickson	Solanoideae	Chih., Coah., Dgo., N.L.	MM1
<i>Chamaesaracha villosa</i> Rydb.	Solanoideae	Chih., Coah., Dgo.	MM1
<i>Jaltomata bohiana</i> Mione & D.M. Spooner	Solanoideae	Méx.	E
<i>Jaltomata chihuahuensis</i> (Bitter) Mione & Bye	Solanoideae	Chih., Dgo., Jal.	E
<i>Jaltomata grandiflora</i> (B.L. Rob. & Greenm.) D'Arcy, Mione & Tilton Davis	Solanoideae	Mich.	E
<i>Jaltomata procumbens</i> (Cav.) J.L. Gentry	Solanoideae	Ags., B.C.S., Col., Chis., D.F., Dgo., Hgo., Jal., Méx., Mich., N.L., Oax., Pue., Qro., Sin., Ver.	
<i>Jaltomata repandidentata</i> (Dunal) Hunz.	Solanoideae	Chis., Méx., Nay., Oax., Tab., Ver.	
<i>Lycianthes acapulcensis</i> (Baill.) D'Arcy	Solanoideae	Chis., Col., Gro., Jal., Méx., Mich., Mor., Oax., Pue.	
<i>Lycianthes amatitlanensis</i> Bitter	Solanoideae	Chis., Tab.	
<i>Lycianthes anomala</i> Bitter	Solanoideae	Oax., Ver.	
<i>Lycianthes armentalis</i> J.L. Gentry	Solanoideae	Camp., Chis., Q. Roo, Ver., Yuc.	MM2
<i>Lycianthes arrazolensis</i> (J.M. Coult. & Donn. Sm.) Bitter	Solanoideae	Chis., Yuc.	
<i>Lycianthes barbatula</i> Standl. & Steyerl.	Solanoideae	Chis., Oax.	MM2
<i>Lycianthes ceratocalycia</i> Bitter	Solanoideae	Chis., Oax.	MM2
<i>Lycianthes chiapensis</i> (Brandeggee) Standl.	Solanoideae	Chis., Ver.	MM2
<i>Lycianthes ciliolata</i> (M. Martens & Galeotti) Bitter	Solanoideae	Chis., Jal., Oax., Qro., S.L.P.	MM2

Table 1. Continuation.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Lycianthes connata</i> J.L. Gentry	Solanoideae	Chis., Oax.	MM2
<i>Lycianthes cuchumatensis</i> J.L. Gentry	Solanoideae	Chis.	MM2
<i>Lycianthes dejecta</i> Bitter	Solanoideae	Ags., D.F., Gto., Hgo., Jal., Méx., N.L., Pue., Qro., S.L.P.	E
<i>Lycianthes geminiflora</i> Bitter	Solanoideae	Chis., Oax.	MM2
<i>Lycianthes gorgonea</i> Bitter	Solanoideae	Chis., Oax., Ver.	MM2
<i>Lycianthes heteroclita</i> Bitter	Solanoideae	Chis., Jal., Oax., Ver.	
<i>Lycianthes hintonii</i> E. Dean	Solanoideae	N.L.	E
<i>Lycianthes hypoleuca</i> Standl.	Solanoideae	Chis., Q. Roo	MM2
<i>Lycianthes jalicensis</i> E. Dean	Solanoideae	Jal.	E
<i>Lycianthes lenta</i> (Cav.) Bitter	Solanoideae	Chis., Jal., Oax., Ver.	
<i>Lycianthes limitanea</i> (Standl.) J.L. Gentry	Solanoideae	Chis.	MM2
<i>Lycianthes manantlanensis</i> A. Rodr. & O. Vargas	Solanoideae	Jal., Oax.	E
<i>Lycianthes moziniana</i> (Dunal) Bitter	Solanoideae	Ags., Chis., D.F., Hgo., Jal., Méx., Mich., Mor., Nay., Oax., Pue., Qro., S.L.P., Tlax., Ver.	
<i>Lycianthes moziniana</i> (Dunal) Bitter var. <i>margaretiana</i> E. Dean	Solanoideae	N.L., S.L.P.	E
<i>Lycianthes moziniana</i> (Dunal) Bitter var. <i>oaxacana</i> E. Dean	Solanoideae	Oax.	E
<i>Lycianthes nitida</i> Bitter	Solanoideae	Chis., Ver.	
<i>Lycianthes ocellata</i> (Donn. Sm.) C.V. Morton & Standl.	Solanoideae	Chis.	MM2
<i>Lycianthes orogenes</i> Standl. & Steyerl.	Solanoideae	Chis.	MM2
<i>Lycianthes peduncularis</i> Bitter	Solanoideae	Gto., Hgo., Méx., Oax., Pue., Qro.	E
<i>Lycianthes pilifera</i> Bitter	Solanoideae	Oax.	E
<i>Lycianthes pilosissima</i> Bitter	Solanoideae	Chis., Oax., Ver.	
<i>Lycianthes pringlei</i> Bitter	Solanoideae	Gro., Jal., Méx., Mich.	E
<i>Lycianthes purpusii</i> Bitter	Solanoideae	Chis., N.L., Tab., Ver.	
<i>Lycianthes quichensis</i> Bitter	Solanoideae	Chis., Oax.	MM2
<i>Lycianthes rantonnetii</i> (Carrière) Bitter	Solanoideae	Jal.	I
<i>Lycianthes rzedowskii</i> E. Dean	Solanoideae	Méx., Mich., Mor.	E
<i>Lycianthes sideroxyloides</i> Bitter	Solanoideae	Q. Roo	
<i>Lycianthes starbuckii</i> E. Dean	Solanoideae	Méx.	E
<i>Lycianthes stephanocalyx</i> Bitter	Solanoideae	Chis., Oax., S.L.P., Ver.	MM2
<i>Lycianthes surotatensis</i> Gentry	Solanoideae	Jal., Nay., Sin.	E
<i>Lycianthes symphyandra</i> Bitter	Solanoideae	Ver.	
<i>Lycianthes synanthera</i> Bitter	Solanoideae	Chis., Oax.	
<i>Lycianthes tricolor</i> Bitter	Solanoideae	Chis.	
<i>Nectouxia formosa</i> Kunth	Solanoideae	Chih., Jal., Méx., Mich., N.L., Oax., Pue., Zac.	MM1
<i>Physalis acutifolia</i> (Miers) Sandwith	Solanoideae	Ags., B.C., Chih., Col., Jal., Mich., Nay., Sin., Son., Zac.	
<i>Physalis aggregata</i> Waterf.	Solanoideae	Jal., Oax.	E
<i>Physalis ampla</i> Waterf.	Solanoideae	Chih., Gto., Jal., Nay., Oax., Qro., Sin.	E
<i>Physalis angulata</i> L.	Solanoideae	Ags., B. C., Camp., Chis., Chih., Col., Dgo., Gto., Jal., Méx., Mich., Nay., Qro., S.L.P., Sin., Tab., Ver., Yuc., Zac.	
<i>Physalis angustior</i> Waterf.	Solanoideae	Mor.	E
<i>Physalis angustiphylla</i> Waterf.	Solanoideae	Chis., Gto., Jal., Mich.	MM2
<i>Physalis campanula</i> Standl. & Steyerl.	Solanoideae	Chis., Hgo., Oax., Ver.	MM2
<i>Physalis campechiana</i> L.	Solanoideae	Camp., Chis., Oax., Q. Roo, Tab., Tamps., Ver., Yuc.	MM2
<i>Physalis caudella</i> Standl.	Solanoideae	Chih.	E
<i>Physalis chenopodiifolia</i> Lam.	Solanoideae	Ags., Chih., Coah., D.F., Dgo., Gto., Gro., Hgo., Jal., Méx., Mich., Mor., N.L., Pue., Qro., S.L.P., Tamps., Tlax., Zac.	E

Table 1. Continuation.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Physalis cinerascens</i> (Dunal) Hitchc.	Solanoideae	Ags., Chis., Chih., Col., D.F., Gto., Hgo., Jal., Méx., Mich., N.L., Oax., Pue., Qro., S.L.P., Tamps., Ver., Yuc., Zac.	MM1
<i>Physalis cinerascens</i> (Dunal) Hitchc. var. <i>spathulifolia</i> (Torr.) J.R. Sullivan	Solanoideae	Tamps.	MM1
<i>Physalis constricta</i> Waterf.	Solanoideae	Oax.	E
<i>Physalis cordata</i> Mill.	Solanoideae	Camp., Chis., Col., Dgo., Gro., Jal., Nay., Oax., Sin., Ver., Yuc.	
<i>Physalis coztomatl</i> Moc. & Sessé ex Dunal	Solanoideae	Chis., D.F., Gro., Hgo., Jal., Méx., Mich., Mor., Oax., Pue., Qro., Ver.	E
<i>Physalis crassifolia</i> Benth.	Solanoideae	B. C., B.C.S.	
<i>Physalis fendleri</i> A. Gray	Solanoideae	Hgo., Son.	
<i>Physalis glabra</i> Benth.	Solanoideae	B. C.	
<i>Physalis glutinosa</i> Schldtl.	Solanoideae	Ags., Chih., Dgo., Gto., Hgo., Jal., N.L., S.L.P., Zac.	E
<i>Physalis gracilis</i> Miers	Solanoideae	Camp., Chis., D.F., Hgo., Jal., Mor., N.L., Nay., Oax., Pue., Qro., Tab., Ver.	
<i>Physalis greenmanii</i> Waterf.	Solanoideae	Ver.	E
<i>Physalis hastatula</i> Waterf.	Solanoideae	Ags., Gto., Jal., Zac.	E
<i>Physalis hederifolia</i> A. Gray	Solanoideae	Ags., Chih., Coah., Dgo., N.L., Oax., S.L.P., Son., Tamps., Zac.	
<i>Physalis hintonii</i> Waterf.	Solanoideae	Méx., Mich., Ver.	E
<i>Physalis hunzikeriana</i> M. Martínez	Solanoideae	N.L.	E
<i>Physalis ignota</i> Britton	Solanoideae	Chis.	
<i>Physalis ixocarpa</i> Brot. ex Hornem.	Solanoideae	Chis., Tab.	
<i>Physalis lagascae</i> Roem. & Schult.	Solanoideae	Ags., Camp., Chis., Chih., Col., Dgo., Gto., Gro., Jal., Méx., Mich., Mor., Nay., N.L., Oax., Pue., Qro., Q. Roo, Sin., Tab., Ver., Yuc.	
<i>Physalis lassa</i> Standl. & Steyerf.	Solanoideae	Chis.	MM2
<i>Physalis latecorollata</i> Waterf.	Solanoideae	Oax.	E
<i>Physalis latiphysa</i> Waterf.	Solanoideae	Gto., Méx., Son.	E
<i>Physalis leptophylla</i> B. L. Rob. & Greenm.	Solanoideae	Col., Dgo., Gro., Jal., Méx., Mich., Nay., Oax., Sin., Son.	
<i>Physalis lignescens</i> Waterf.	Solanoideae	Jal.	E
<i>Physalis lobata</i> Torr.	Solanoideae	Chih., Coah., N.L., Tamps.	MM2
<i>Physalis longiloba</i> O. Vargas, M. Martínez & Dávila	Solanoideae	Jal., Gto.	E
<i>Physalis longipedicellata</i> Waterf.	Solanoideae	Jal.	E
<i>Physalis mcvaughii</i> Waterf.	Solanoideae	Jal.	E
<i>Physalis melanocystis</i> Bitter	Solanoideae	Chis., Col., Gro., Hgo., Jal., Oax., Qro., S.L.P., Tab., Tamps., Ver., Yuc., Zac.	MM2
<i>Physalis microcarpa</i> Urb. & Ekman	Solanoideae	Chih., Chis., Jal., Méx.	
<i>Physalis microphysa</i> A. Gray	Solanoideae	Chih., Coah., N.L., S.L.P., Tamps.	E
<i>Physalis minimaculata</i> Waterf.	Solanoideae	Mich.	E
<i>Physalis minuta</i> Griggs	Solanoideae	Chis., Col., Jal., Mich., Nay.	
<i>Physalis muelleri</i> Waterf.	Solanoideae	N.L.	E
<i>Physalis nicandroides</i> Schldtl.	Solanoideae	Ags., Chis., Col., Dgo., Gto., Gro., Hgo., Jal., Mich., Mor., Nay., Oax., Pue., S.L.P., Sin., Ver., Yuc.	
<i>Physalis orizabae</i> Dunal	Solanoideae	Ags., D.F., Dgo., Gto., Hgo., Jal., Méx., Mich., Mor., Nay., N.L., Oax., Pue., Qro., Ver., Zac.	E
<i>Physalis parvianthera</i> Waterf.	Solanoideae	Mor.	E
<i>Physalis patula</i> Mill.	Solanoideae	Ags., Chih., D.F., Dgo., Gto., Hgo., Jal., Méx., Oax., Pue., Qro., Tlax., Ver.	E
<i>Physalis pennellii</i> Waterf.	Solanoideae	Gto., S.L.P.	E

Table 1. Continuation.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Physalis philadelphica</i> Lam.	Solanoideae	Ags., B.C., Camp., Chis., Chih., Coah., Col., D.F., Dgo., Gto., Gro., Hgo., Jal., Méx., Mich., Mor., Nay., N.L., Oax., Pue., Qro., S.L.P., Sin., Son., Tab., Tamps., Tlax., Ver., Yuc., Zac.	
<i>Physalis philadelphica</i> var. <i>parviflora</i> Waterf.	Solanoideae	Nay.	
<i>Physalis philippensis</i> Fernald	Solanoideae	Oax.	E
<i>Physalis porrecta</i> Waterf.	Solanoideae	Chis.	
<i>Physalis pringlei</i> Greenm.	Solanoideae	D.F., Dgo., Oax.	E
<i>Physalis pruinosa</i> L.	Solanoideae	Ags., Chis., Chih., Gro., Jal., Méx., Nay., Oax., Sin., Son., Tamps., Ver., Yuc., Zac.	
<i>Physalis pubescens</i> L.	Solanoideae	Ags., B.C.S., Camp., Chis., Chih., Col., Dgo., Gro., Jal., Mich., Nay., N.L., Oax., Pue., Q. Roo, Sin., Son., Tab., Tamps., Ver., Yuc.	
<i>Physalis queretaroensis</i> M. Martínez & L. Hern.	Solanoideae	Qro., S.L.P.	E
<i>Physalis rydbergii</i> Fernald	Solanoideae	Sin.	E
<i>Physalis sancti-josephii</i> Dunal	Solanoideae	Jal., Nay., Qro., S.L.P.	E
<i>Physalis solanaceus</i> (Schltdl.) Axelius	Solanoideae	Ags., Chis., Chih., Coah., Dgo., Hgo., Jal., Méx., Mich., Nay., N.L., Oax., Pue., Qro., Tamps., Ver.	
<i>Physalis sordida</i> Fernald	Solanoideae	D.F., Dgo., Gto., Hgo., Jal., Méx., N.L., Oax., Pue., Qro., S.L.P., Tamps., Zac.	E
<i>Physalis subrepens</i> Waterf.	Solanoideae	Hgo., Jal., Mex., Ver.	E
<i>Physalis sulphurea</i> (Fernald) Waterf.	Solanoideae	D.F., Gto., Jal., Méx., Mich., Oax.	E
<i>Physalis tamayoi</i> O. Vargas, M. Martínez & Dávila	Solanoideae	Jal.	E
<i>Physalis tehuacanensis</i> Waterf.	Solanoideae	Pue.	E
<i>Physalis virginiana</i> Mill.	Solanoideae	Ags., Dgo., Gto., N.L., Qro., S.L.P.	
<i>Physalis volubilis</i> Waterf.	Solanoideae	Jal., Mich.	E
<i>Physalis waterfallii</i> O. Vargas, M. Martínez & Dávila	Solanoideae	Jal., Mich., Gto.	E
<i>Schraderanthus viscosus</i> (Schr.) Averett	Solanoideae	Chis., Oax., Ver.	MM2
<i>Solanum acerifolium</i> Humb. Bonpl. ex Dunal	Solanoideae	Chis., Oax., Ver.	
<i>Solanum aculeatissimum</i> Jacq.	Solanoideae	Chis.	
<i>Solanum aculeolatum</i> M. Martens & Galeotti	Solanoideae	Oax.	MM2
<i>Solanum agrimoniifolium</i> Rydb.	Solanoideae	Chis.	MM2
<i>Solanum aligerum</i> Schltdl.	Solanoideae	Chis., Jal., Méx., Oax., Ver.	
<i>Solanum americanum</i> Mill.	Solanoideae	Ags., Chis., D.F., Dgo., Jal., Mich., Oax., Q. Roo, Tamps., Ver.	
<i>Solanum angustifolium</i> Mill.	Solanoideae	Chis., Col., Gro., Méx., Mich., Mor., Dgo., Jal., Oax., Pue., Qro., Tamps., Ver., Yuc.	MM2
<i>Solanum aphyodendron</i> S. Knapp	Solanoideae	Chis., Jal., Oax., Ver.	
<i>Solanum appendiculatum</i> Humb. & Bonpl. ex Dunal	Solanoideae	Ags., Jal., Méx., Mich., Oax., Qro., Tamps., Ver.	MM2
<i>Solanum atitlanum</i> K.E. Roe	Solanoideae	Q. Roo	MM2
<i>Solanum aturense</i> Humb. & Bonpl. ex Dunal	Solanoideae	Oax., Ver.	
<i>Solanum axillifolium</i> K. E. Roe	Solanoideae	Oax.	E
<i>Solanum betaceum</i> Cav.	Solanoideae	Chis., Jal., Ver.	
<i>Solanum bicornis</i> Dunal	Solanoideae	Chis., Méx., Qro.	
<i>Solanum brevipedicellatum</i> K.E. Roe	Solanoideae	Chis., Jal.	
<i>Solanum bulbocastanum</i> Dunal	Solanoideae	Chis., D.F., Dgo., Gro., Jal., Mich., Mor., Nay., Oax., Ver.	
<i>Solanum campechiense</i> L.	Solanoideae	Chis., Jal., Oax., Tab., Ver.	
<i>Solanum candidum</i> Lindl.	Solanoideae	Chis., Jal., Mich., Oax., Ver.	
<i>Solanum capsicoides</i> All.	Solanoideae	Ver.	
<i>Solanum cardiophyllum</i> Lindl.	Solanoideae	Ags., Coah., D.F., Dgo., Gro., Hgo., Jal., Méx., Mich., Oax., Pue., Qro., Sin., Tlax., Zac.	E
<i>Solanum chiapasense</i> K.E. Roe	Solanoideae	Chis.	MM2
<i>Solanum chrysotrichum</i> Schltdl.	Solanoideae	Ags., Jal., Oax., Ver.	

Table 1. Continuation.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Solanum citrinum</i> M. Nee	Solanoideae	Qro.	E
<i>Solanum circinatum</i> Bohs	Solanoideae	Oax.	
<i>Solanum citrullifolium</i> A. Braun var. <i>citrullifolium</i>	Solanoideae	Coah.	MM1
<i>Solanum citrullifolium</i> A. Braun var. <i>setigerum</i> Bartlett	Solanoideae	Chih.	MM1
<i>Solanum citrullifolium</i> A. Braun var. <i>knoblochii</i> Whalen	Solanoideae	Chih.	MM1
<i>Solanum clarum</i> Correll	Solanoideae	Chis.	MM2
<i>Solanum cobanense</i> J.L. Gentry	Solanoideae	Chis.	MM2
<i>Solanum cordovense</i> Sessé & Moc.	Solanoideae	Chis., Ver.	
<i>Solanum corymbosum</i> Jacq.	Solanoideae	Ags., D.F., Hgo., Jal., Méx., Pue., D.F., Jal., Oax., S.L.P., Ver.	
<i>Solanum dasyadenium</i> Bitter	Solanoideae	Ags., D.F., Jal., Oax., S.L.P., Ver.	E
<i>Solanum dasyanthum</i> Brandegees	Solanoideae	Oax.	MM2
<i>Solanum dasyneuron</i> S. Knapp	Solanoideae	Chis.	MM2
<i>Solanum davisense</i> Whalen	Solanoideae	Coah.	MM1
<i>Solanum deflexum</i> Greenm.	Solanoideae	Ags., B.C., B.C.S., Chis., Chih., Col., D.F., Gro., Méx., Mich., Mor., Nay., Oax., Qro., S.L.P., Sin., Son., Tams., Ver., Zac.	
<i>Solanum demissum</i> Lindl.	Solanoideae	Ags., D.F., Hgo., Méx., Oax., Pue., Tlax., Ver.	MM2
<i>Solanum dimidiatum</i> Raf.	Solanoideae	Tamps.	MM1
<i>Solanum diphyllum</i> L.	Solanoideae	Chis., Jal., Oax., Qro., Q. Roo, Tab., Ver.	MM2
<i>Solanum donianum</i> Walp.	Solanoideae	Camp., Q. Roo, Yuc.	
<i>Solanum douglasii</i> Dunal	Solanoideae	B.C., B.C.S., Dgo., Jal., Oax., Ver.	
<i>Solanum dulcamaroides</i> Dunal	Solanoideae	Ags., Chis., Jal., Mich., Oax., Qro., Ver.	E
<i>Solanum edinense</i> Berthault	Solanoideae	D.F., Gto., Hgo., Méx., Mich., Pue., Tlax., Ver.	
<i>Solanum edmundoi</i> Cuevas y N.M. Núñez	Solanoideae	Jal.	E
<i>Solanum ehrenbergii</i> (Bitter) Rydb.	Solanoideae	Ags., D.F., Gto., Hgo., Jal., Méx., Mich., Nay., Pue., Qro., S.L.P., Zac.	E
<i>Solanum elaeagnifolium</i> Cav.	Solanoideae	Ags., Chis., D.F., Dgo., Gto., Jal., Mich., Oax.	
<i>Solanum erianthum</i> D. Don	Solanoideae	Ags., Chis., Dgo., Jal., Oax., Qro., Q. Roo, Tab., Ver.	
<i>Solanum erythrorichum</i> Fernald	Solanoideae	Chis., Oax.	
<i>Solanum ferrugineum</i> Jacq.	Solanoideae	Ags., Col., Gro., Gto., Jal., Mich., Nay., Oax., Qro., Ver.	MM2
<i>Solanum fructo-tecto</i> Cav.	Solanoideae	D.F., Dgo., Gto., Hgo., Jal., Méx., Mich.	E
<i>Solanum gardneri</i> Sendtn.	Solanoideae	Oax.	
<i>Solanum glaucescens</i> Zucc.	Solanoideae	Chis., Oax., Tab.	E
<i>Solanum grayi</i> Rose var. <i>grayi</i>	Solanoideae	Chih., Sin., Son.	E
<i>Solanum grayi</i> Rose var. <i>grandiflorum</i> Whalen	Solanoideae	Ags., Col., Gro., Jal., Méx., Mich., Mor., Nay., Sin.	E
<i>Solanum guerreroense</i> Correll	Solanoideae	Gro., Jal.	E
<i>Solanum hazenii</i> Britton	Solanoideae	Jal., Oax., Qro.	E
<i>Solanum heterodoxum</i> Dunal var. <i>heterodoxum</i>	Solanoideae	Ags., D.F., Hgo., Méx., S.L.P., Ver.	E
<i>Solanum heterodoxum</i> Dunal var. <i>setigeroides</i> Whalen	Solanoideae	Chih.	MM1
<i>Solanum hintonii</i> Correll	Solanoideae	Col., Hgo., Méx.	E
<i>Solanum hindsianum</i> Benth.	Solanoideae	B.C., B.C.S., Son.	E
<i>Solanum hirtum</i> Vahl	Solanoideae	Chis., Oax., Qro., Q. Roo, Ver.	
<i>Solanum hjertingii</i> Hawkes	Solanoideae	Coah., N.L., S.L.P., Tamps.	E
<i>Solanum hougasii</i> Correll	Solanoideae	Col., Gro., Jal., Mich.	E
<i>Solanum houstonii</i> Dunal	Solanoideae	Ags., Chih., Col., Dgo., Gto., Jal., Oax., Pue., Qro., Son., Sin., Ver., Yuc., Zac.	
<i>Solanum ionidium</i> Bitter	Solanoideae	D.F., Gro., Oax., Pue, Ver.	E
<i>Solanum iopetalum</i> (Bitter) Hawkes	Solanoideae	Ags., D.F., Hgo., Jal., Méx., Oax., Sin., Ver.	E
<i>Solanum jamaicense</i> Mill.	Solanoideae	Chih., Oax., Tab., Ver.	
<i>Solanum jamesii</i> Torr.	Solanoideae	Ags., Chih., Qro., S.L.P., Son.	MM2
<i>Solanum johnstonii</i> Whalen	Solanoideae	Dgo., Jal.	E
<i>Solanum lanceifolium</i> Jacq.	Solanoideae	Chis., Q. Roo, S.L.P., Tab., Tamps., Ver.	

Table 1. Continuation.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Solanum lanceolatum</i> Cav.	Solanoideae	Jal., Méx., Oax., Ver.	
<i>Solanum laxum</i> Spreng.	Solanoideae	Oax.	
<i>Solanum lepidotum</i> Humb. & Bonpl. ex Dunal	Solanoideae	Oax., Ver.	
<i>Solanum lesteri</i> Hawkes & Hjert.	Solanoideae	Oax.	E
<i>Solanum leucandrum</i> Whalen	Solanoideae	Pue.	E
<i>Solanum lignescens</i> Fernald	Solanoideae	Chis., Jal.	MM2
<i>Solanum lumholtzianum</i> Bartlett	Solanoideae	Sin., Son.	MM1
<i>Solanum lycopersicum</i> L.	Solanoideae	Ags., Col., Dgo., Gto., Jal., Nay., Mich., Oax.	
<i>Solanum malacothrix</i> S. Knapp	Solanoideae	Gro.	E
<i>Solanum mammosum</i> L.	Solanoideae	Chis., Oax., Ver.	I
<i>Solanum marginatum</i> L.f.	Solanoideae	Hgo., Jal., Méx., Mich., Qro., Ver.	
<i>Solanum michoacanum</i> Rydb.	Solanoideae	Mich.	E
<i>Solanum mitlense</i> Dunal	Solanoideae	Chis., Méx., Oax.	E
<i>Solanum morelliforme</i> Bitter & Münch	Solanoideae	Chis., Hgo., Jal., Mich., Oax., Qro., Ver.	MM2
<i>Solanum muenscheri</i> Standl. & Steyerl.	Solanoideae	Chis.	MM2
<i>Solanum myriacanthum</i> Dunal	Solanoideae	Chis., Jal., Oax., Ver.	
<i>Solanum narcoticosmum</i> Bitter	Solanoideae	Chis.	MM2
<i>Solanum nigrescens</i> M. Martens & Galeotti	Solanoideae	Ags., Chis., Dgo., Jal., Méx., Mich., Oax., Qro., Ver.	
<i>Solanum nigricans</i> M. Martens & Galeotti	Solanoideae	Chis., Jal., Méx., Mich., Oax., Ver.	MM2
<i>Solanum nudum</i> Humb. & Bonpl. ex Dunal	Solanoideae	Chis., Mich., Oax., Qro., Q. Roo, Tab., Ver.	
<i>Solanum oxycarpum</i> Schiede ex Schltdl.	Solanoideae	Hgo., Oax., Ver.	E
<i>Solanum palmillae</i> Standl.	Solanoideae	Ver.	E
<i>Solanum pectinatum</i> Dunal	Solanoideae	Oax., Ver.	
<i>Solanum phaseoloides</i> Pol.	Solanoideae	Chis.	
<i>Solanum pinnatisectum</i> Dunal	Solanoideae	Mich., Qro., Gto., Jal.	E
<i>Solanum plumense</i> Fernald	Solanoideae	Gro., Oax.	E
<i>Solanum polyadenium</i> Greenm.	Solanoideae	Ags., Hgo., Jal., Méx., Mich., Oax., Qro., Ver.	E
<i>Solanum pseudocapsicum</i> L.	Solanoideae	Ags., Chis., D.F., Jal., Oax., Ver.	
<i>Solanum pubigerum</i> Dunal	Solanoideae	Chis., Col., D.F., Dgo., Gto., Gro., Hgo., Jal., Méx., Mich., Mor., Oax., Pue., Qro., S.L.P., Tamps., Tlax., Ver., Zac.	E
<i>Solanum pulverulentifolium</i> K. E. Roe	Solanoideae	Chis.	E
<i>Solanum refractum</i> Hook. & Arn.	Solanoideae	Jal., Mich., Nay., Gro., Oax., Sin.	E
<i>Solanum rojasianum</i> (Standl. & Steyerl.) Bohs	Solanoideae	Chis.	MM2
<i>Solanum rostratum</i> Dunal	Solanoideae	Ags., Chis., Dgo., Jal., Méx., Mich., Oax., Qro., Tab., Ver.	E
<i>Solanum rovirosanum</i> Donn. Sm.	Solanoideae	Chis., Oax., Tab., Ver.	
<i>Solanum rudepannum</i> Dunal	Solanoideae	Chis., Oax., Ver.	
<i>Solanum sambucinum</i> Rydb.	Solanoideae	Gto., Qro.	E
<i>Solanum schenckii</i> Bitter	Solanoideae	Qro., Oax., Pue., Ver.	E
<i>Solanum schlechtendalianum</i> Walp.	Solanoideae	Chis., Gro., Jal., Oax., Qro., Tab., Ver.	
<i>Solanum seaforthianum</i> Andrews	Solanoideae	Chis., Dgo., Jal., Oax., Tab., Ver.	
<i>Solanum sisymbriifolium</i> Lam.	Solanoideae	Jal.	
<i>Solanum skutchii</i> Correll	Solanoideae	Oax., Ver.	MM2
<i>Solanum sousae</i> S. Knapp	Solanoideae	Oax., Pue.	E
<i>Solanum stenophyllidium</i> Bitter	Solanoideae	Ags., Chih., Dgo., Jal., Méx., Mich., Nay., Son., Zac.	E
<i>Solanum stoloniferum</i> Schltdl.	Solanoideae	Ags., Coah., D.F., Dgo., Gto., Jal., Méx., Mich., Oax., Qro., S.L.P., Son., Tlax., Ver.	E
<i>Solanum suaveolens</i> Kunth & C.D. Bouché	Solanoideae	Chis., Ver.	
<i>Solanum subvelutinum</i> Rydb.	Solanoideae	Dgo.	E
<i>Solanum tacanense</i> Lundell	Solanoideae	Chis.	MM2
<i>Solanum tampicense</i> Dunal	Solanoideae	Chis., Jal., Oax., Ver.	
<i>Solanum tarnii</i> Hawkes & Hjert.	Solanoideae	Hgo., Qro., Ver.	
<i>Solanum tenuipes</i> Bartlett	Solanoideae	Coah., Chih., N.L., Dgo.	MM2

Table 1. Continuation.

Taxon	Subfamily	Distribution in Mexico	Type of endemism
<i>Solanum torvum</i> Sw.	Solanoideae	Chis., Oax., Q. Roo, Tab., Ver.	
<i>Solanum tribulosum</i> S. Schauer	Solanoideae	Hgo., Pue., Qro., Ver	E
<i>Solanum tridynamum</i> Dunal	Solanoideae	Jal., Oax., Q. Roo, Ver.	E
<i>Solanum trifidum</i> Correll	Solanoideae	Ags., Jal., Mich.	E
<i>Solanum triquetrum</i> Cav.	Solanoideae	Coah., Dgo., Gto., Gro., Hgo., N.L., S.L.P., Tamps. Zac.	MM1
<i>Solanum trizygum</i> Bitter	Solanoideae	Chis., Gro., Oax.	
<i>Solanum tuberosum</i> L.	Solanoideae	Chih., Chis., Dgo., Gto., Jal., Méx., Oax., Pue., Qro., Sin., Son., Ver.	
<i>Solanum tuerckheimii</i> Greenm.	Solanoideae	Q. Roo, Ver.	
<i>Solanum umbellatum</i> Mill.	Solanoideae	Ags., Chis., Dgo., Jal., Mich., Oax., Tab., Ver.	
<i>Solanum umbelliferum</i> Eschsch.	Solanoideae	B.C.	
<i>Solanum vallis-mexici</i> Juz. ex Bukasov	Solanoideae	D.F.	E
<i>Solanum verrucosum</i> Schltdl.	Solanoideae	Coah., Hgo., Jal., Méx., Mich., N.L., Oax., Qro., S.L.P., Ver.	E
<i>Solanum volubile</i> Sw.	Solanoideae	Oax., Ver., Chis.	
<i>Solanum wendlandii</i> Hook.f.	Solanoideae	Chis., Jal., Oax., Ver.	
<i>Solanum wrightii</i> Benth.	Solanoideae	Jal., Oax., Ver.	
<i>Tzeltalia amphitricha</i> (Bitter) E. Estrada & M. Martínez	Solanoideae	Chis.	MM2
<i>Tzeltalia calidaria</i> (Standl. & Steyererm.) E. Estrada & M. Martínez	Solanoideae	Chis.	MM2
<i>Tzeltalia esenbeckii</i> M. Martínez & O. Vargas	Solanoideae	Chis, Oax.	E
<i>Witheringia coccoloboides</i> (Dammer) Hunz.	Solanoideae	Chis., Ver.	
<i>Witheringia cuneata</i> (Standl.) Hunz.	Solanoideae	Chis., Tab.	
<i>Witheringia meiantha</i> (Donn. Sm.) Hunz.	Solanoideae	Chis., Oax., Tab., Ver.	
<i>Witheringia mexicana</i> (B.L. Rob.) Hunz.	Solanoideae	Chis., Hgo., N.L., Oax., Qro., S.L.P., Tamps.	E
<i>Witheringia solanacea</i> L'Her.	Solanoideae	Chis., Oax., Tab.	
<i>Witheringia stellata</i> (Greenm.) Hunz.	Solanoideae	Chis., Hgo., Jal., Nay.	E

Discussion

Species estimates for the Valley of Mexico, Veracruz, Jalisco, Aguascalientes, and Bajío (Querétaro, Guanajuato, and northern Michoacán) are probably very close to the actual figures. However, other states seem to be underrepresented in the visited herbaria, as Campeche (with 18 species in Knapp *et al.* 2006 and 19 in our work), which was collected for the Flora Mesoamericana project. We consider that Campeche needs a higher collection effort for the Solanaceae, since Tabasco harbors 45 species, only 15 of which had already been listed by Knapp *et al.* (2006). Colima (with 27 species) and Baja California Sur (with 27) are probably also under collected, because the state area and orography make such low numbers unlikely. Tlaxcala is the state with less species, but its small size and high vegetation deterioration probably account for such a low number.

Solanum is the most species rich genus in Mexico (130 species), but the number is not high if the high number of species in the genus is considered. It is estimated in around 1,000 species (Nee 1999), 850 of which are American. Nee (1993) estimated that Mexico had probably around 150 species of *Solanum*, and therefore more collection is needed, a notion that seems reinforced by the high number of species known only from type material. Several species of *Cestrum* are also known only from the type. We included three *Cestrum* species (*C. pallidissimum* Francey, *C. schiedei* Francey, and *C. subcordatum* Francey) that were excluded by Nee (2001), and for which specimens are lacking in the reviewed herbaria. A much needed taxonomic revision of the genus, beyond the scopes of our work, might reduce the three species to synonymy. Finally, the presence of *Chamaesaracha edwardsiana* Averett in Mexico is taken from the genus revision (Averett 1973), which cited collections from Texas, Coahuila, Nuevo León, and San Luis Potosí. Turner (2015) considers that the Mexican specimens belong to *Chamaesaracha pallida* Averett, and *C. edwardsiana* as endemic to Texas. A better analysis of the vouchers is needed, since pubescens density, considered a diagnostic character for species delimitation, is highly variable.

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Literature cited

- Averett JE. 1973. Biosystematic study of *Chamaesaracha* (Solanaceae). *Rhodora* **75**:325-365.
- Bernardello LM, Hunziker AT. 1987. A synoptical revision of *Solandra* (Solanaceae). *Nordic Journal of Botany* **7**:639-652. DOI:10.1111/j.1756-1051.1987.tb02032.x/pdf
- Bohs L, Olmstead RG. 1997. Phylogenetic relationships in *Solanum* (Solanaceae) based on ndhF sequences. *Systematic Botany* **22**:5-17. DOI: 10.2307/2419674
- Calderón de Rzedowski GJ, Rzedowski J. 2001. *Flora fanerogámica del Valle de México*. Xalapa: Instituto de Ecología A.C. y Comisión Nacional para el Conocimiento y Uso de la Biodiversidad.
- Cuevas-Arias C, Vargas O, Rodríguez A. 2008. Solanaceae diversity in the state of Jalisco, Mexico. *Revista Mexicana de Biodiversidad* **79**:67-79.
- D'Arcy WG. 1999. Red-flowered *Cestrum* and red-loving hummingbirds. In: Nee M, Symon DDE, Lester RN, Jessop JP, eds. *Solanaceae IV: Advances in Biology and utilization*. Kew: Royal Botanic Gardens, 33-43.
- García-Rubio LA, Vargas O, Harker M. 2004. Nota sobre la presencia de *Nierembergia angustifolia* (Solanaceae) en Jalisco, México. *Acta Botanica Mexicana* **67**:43-48.
- Hunziker AT. 2001. *Genera Solanacearum. The genera of Solanaceae illustrated, arranged according to a new system*. Ruggell: Gantner.
- Knapp S, Stafford M, Sousa-Peña M, Martínez M. 2005. A preliminary names list of the Solanaceae of Mesoamerica. In: Keating RC, Hollowell VC, Croat TB, eds. *A festschrift for William G. D'Arcy: the legacy of a taxonomist*. St Louis: Missouri Botanical Garden Press, 71-116.
- Knapp S, Stafford M, Martínez M. 2006. A checklist of the Solanaceae of Guatemala. In: Cano EB, eds. *Biodiversidad de Guatemala, Vol. I*. Guatemala: Universidad del Valle de Guatemala, 259-282.
- Nee M. 1986. Solanaceae I. *Flora de Veracruz*, Fascículo **49**:1-191.
- Nee M. 1993. Solanaceae II. *Flora de Veracruz*, Fascículo **72**:1-158.
- Nee M. 1999. Synopsis of *Solanum* in the New World. In: Nee M, Symon DDE, Lester RN, Jessop JP, eds. *Solanaceae IV: Advances in Biology and utilization*. Kew: Royal Botanic Gardens, 285-333.
- Nee M. 2001. An overview of *Cestrum*. In: van den Berg RG, Barendse GWM, van der Weerden GM, Mariani C, eds. *Solanaceae V. Advances in taxonomy and utilization*. Nijmegen: Nijmegen University Press. 109-136.
- Olmstead R, Bohs L, Abdel HM, Santiago-Valentin E, Garcia VF, Collier SM. 2008. A molecular phylogeny of the Solanaceae. *Taxon* **57**: 1159-1181.
- Rodríguez A. 2004. Solanáceas. In: García-Mendoza AJ, Ordóñez MdeJ, Briones-Salas M. eds. *Biodiversidad de Oaxaca*. Distrito Federal: Instituto de Biología-UNAM, Fondo Oaxaqueño para la Conservación de la Naturaleza y World Wildlife Fund, 297-303.
- Rzedowski J. 1993. Diversity and origins of the Phanerogamic Flora of Mexico. In: Ramamoorthy TP, Bye R, Lot A, Fa J, eds. *Biological Diversity of Mexico, Origins and Distribution*. New York: Oxford University Press 129-144.
- Sierra-Muñoz J, Siqueiros-Delgado ME, Flores-Ancira E, Moreno-Rico O, Arredondo-Figueroa JL. 2015. Riqueza y distribución de la familia Solanaceae en el estado de Aguascalientes, México. *Botanical Sciences* **93**:97-117. DOI: <http://dx.doi.org/10.17129/botsci.63>
- Spooner DM, van den Berg R, Rodríguez A, Bamberg J, Hijmans RJ, Lara-Cabrera SI. 2004. *Systematic Botany Monographs 68: Wild potatoes (Solanum sect. Petota: Solanaceae) of North and Central America*. Ann Arbor: American Society of Plant Taxonomists.
- Thiers B. [continuously updated]. Index Herbariorum: A global directory of public herbaria and associated staff. New York Botanical Garden's Virtual Herbarium. <http://sweetgum.nybg.org/ih/> consulted October 10, 2015
- Turner BL. 2015. Taxonomy of *Chamaesaracha* (Solanaceae). *Phytologia* **97**:226-245.
- Vargas-Ponce O, Martínez M, Dávila-Aranda P. 2003. *La familia Solanaceae en Jalisco —El género Physalis—*. Guadalajara: Universidad de Guadalajara.
- Whitson M, Manos PS. 2005. Untangling *Physalis* (Solanaceae) from the Physaloids: a two-gene phylogeny of the Physalinae. *Systematic Botany* **30**:216-230. DOI: 10.1600/0363644053661841