

Checklist of *Solanum* of north-central Peru, a hotspot of biological diversity.

Lista de especies de *Solanum* del norte-centro del Perú, una zona de alta diversidad biológica.

Stephen R. Stern, Eric J. Tepe, and Lynn A. Bohs

Department of Biology, University of Utah, 257 South 1400 East, Salt Lake City, Utah 84112 USA

Abstract:

The north-central area of Peru is one of the most biodiverse regions of the Neotropics. The low mountain ranges that make up this area create a mosaic of habitats which, combined with the convergence of species from the Northern and Southern Andes, as well as from the Pacific and Amazonian regions creates a hotspot for biodiversity. We present a checklist of the genus *Solanum* (Solanaceae) of North-Central Peru with a key to the major sections of the genus. This checklist serves to demonstrate the species richness of *Solanum* in the area, as well as an aid to identification. In total 133 species of *Solanum* in 20 clades are listed, with 25 species endemic to the area.

Resumen

La zona norte-centro del Perú es una de las regiones con más biodiversidad del neotrópico. Las montañas bajas que componen esta región crean un mosaico de hábitats que, combinados con la convergencia de especies de los Andes del norte y del sur, además de especies de las zonas del Pacífico y Amazonas, forman un centro de biodiversidad. Aquí presentamos una lista del género *Solanum* (Solanaceae) de la región norte-centro del Perú con una clave de identificación para las secciones más importantes del género. Esta lista documenta la riqueza de especies de la región y sirve de ayuda con la identificación de *Solanum*. En total, la lista contiene 133 especies de *Solanum* que pertenecen a 20 clados del género; 25 de las especies son endémicas de la región.

Introduction

The genus *Solanum* (Solanaceae) is one of the 10 largest genera of flowering plants and is thought to contain approximately 1400 species (Frodin, 2004; Bohs, 2005). This «giant genus» has been problematical for botanists because of the difficulty for one researcher to study the whole, or even a large part, of the genus. A NSF funded Planetary Biodiversity Inventory (PBI) project is currently producing a worldwide taxonomic monograph of the genus *Solanum* organized in a phylogenetic framework. Part of the project is the creation of the website «Solanaceae Source» (<http://www.nhm.ac.uk/research-curation/projects/solanaceaesource/>) that acts as a repository for information on the Solanaceae family. This includes information on databased specimens, nomenclature, species descriptions, and images. The PBI: *Solanum* project is also focused on fieldwork to collect and better understand species' distributions and habitats.

In this context, a collecting trip to the north-central Peru departments of Amazonas, Cajamarca, La Libertad and San Martín was organized. These departments comprise a large part of the Amotape-Huancabamba Zone, an area recognized for its high biodiversity and endemism (Young and Reynel, 1997; Weigend 2002), and contain a majority of the *Solanum* species known from northern Peru. The peak of endemism for selected groups within *Solanum* is in the Amotape-Huancabamba Zone and adjacent southwestern Ecuador (Knapp, 2002a), and *Solanum* is a key component of the flora of the Amotape-Huancabamba Zone in terms of both biodiversity and economic uses. *Solanum* contains both economically useful and detrimental species, ranging from crops like the potato (*S. tuberosum*), tomato (*S. lycopersicum*), naranjilla (*S. quitoense*), tomate de árbol (*S. betaceum*) and the pepino (*Solanum muricatum*) to pestiferous

weeds that can be noxious to livestock and, due to their weedy and often spiny habits, can impede agriculture.

Fieldwork in Northern Peru was carried out by S.R.S. and E.J.T. in collaboration with Segundo Leiva and Mario Zapata of HAO in Trujillo, Peru. The result of these collections and of previous *Solanum* data compiled on the Solanaceae Source website and the Virtual Herbarium at the New York Botanic Garden (<http://sciweb.nybg.org/Science2/VirtualHerbarium.asp>), is a checklist of species of Amazonas, Cajamarca, and San Martín departments of Peru.

Checklists have many uses from aiding in identification to giving valuable information on the species richness and endemism of a given area. In light of the increased rate of tropical forest destruction, possibly the most important role of checklists is to clarify the diversity within a given region so that conservation priorities can be established. It is our hope that this checklist can help clarify the incredible diversity of *Solanum* in Northern Peru and act as a working list to aid in further study of *Solanum* in this area. The checklist comprises 133 species in 20 clades of *Solanum*, following the clade designations by Weese and Bohs (2007) and Levin *et al.* (2006). In an effort to further aid in identification, a key to the clades of *Solanum* is included.

Geography:

The northern Andes of Peru are characterized by heterogeneity of topography, vegetation, and geological origins. Much of the region's heterogeneity is due to the Huancabamba Depression, the system of low mountain ranges, reaching 3500 m in elevation, and basins, typically ranging between 1000-2000 m, caused by the transection of the area by the Río Chamaya/ Río Marañón river system. This area, also called the Amotape-Huancabamba Zone, has been variously named and defined (Luteyn and Churchill, 2000; Berry, 1982; Weigend, 2002). We follow the definition of Berry (1982) and Weigend (2002). These authors delimit the Amotape-Huancabamba Zone as the interruption of the Andes by the Río Chamaya/ Río Marañón systems, corresponding to approximately 3° 15' S to 7° 40' S and 76° 30' W to 80° 00' W. This roughly corresponds to limits defined by a line running from the Río Chicama at the city of Trujillo (Peru, Department of La

Libertad) to the highlands of Conchucos (Peru, Department Ancash) to the south, Tayabamba (Peru, Department of La Libertad) to the east, the drainages of the Río Jubones (Ecuador, Province of El Oro) and Río Zamora (Ecuador, Province of Zamora) to the north, and the westernmost slope of the Andes to the west.

The Amotape-Huancabamba Zone has a complex topography that creates a mosaic of isolated basins and habitat fragments that promote speciation (Panero, 1992; Weigend, 2002). Tectonically, the Amotape-Huancabamba zone is the convergence between the geologically distinct Northern Andes, where the major orogenic events occurred at the end of the Pliocene until the Pleistocene, and the Central Andes, where the rise occurred in the Miocene (Gregory-Wodzicki, 2000). Because of its position between the Northern and Central Andes and its function as a corridor between the Amazon and Pacific, the Amotape-Huancabamba Zone is a center of diversity for many taxa in the Andes (Berry, 1982; Weigend, 2002). The area's low ranges serve as an important north-south barrier to high elevation Andean flora and fauna; however, mid-elevation taxa with both northern and southern distributions have radiated and diversified in this area, leading to high biodiversity. Because this area is one of the lowest points in the Andes, it is also an important east-west corridor between the Amazonian and Pacific lowlands (Duellman, 1979; Weigend, 2002). The transition between these adjacent zones, combined with the heterogeneous terrain and equatorial position give this region a mixture of species from each zone as well as endemic species, forming an exceedingly rich flora. In some groups, the diversity in this region is six to eight times higher than in the Northern and Central Andes (Weigend, 2004).

In this study we have focused on the genus *Solanum* of Amazonas, Cajamarca, and western San Martín Departments, which make up most of the area of the Amotape-Huancabamba Zone in Peru. These departments also have the vast majority of *Solanum* species of Northern Peru with 127 species in these 3 provinces alone. Species from higher elevations of La Libertad and Piura departments, which also make up parts of the Amotape-Huancabamba Zone in Peru, are included yet do not make up a significant portion of the checklist.

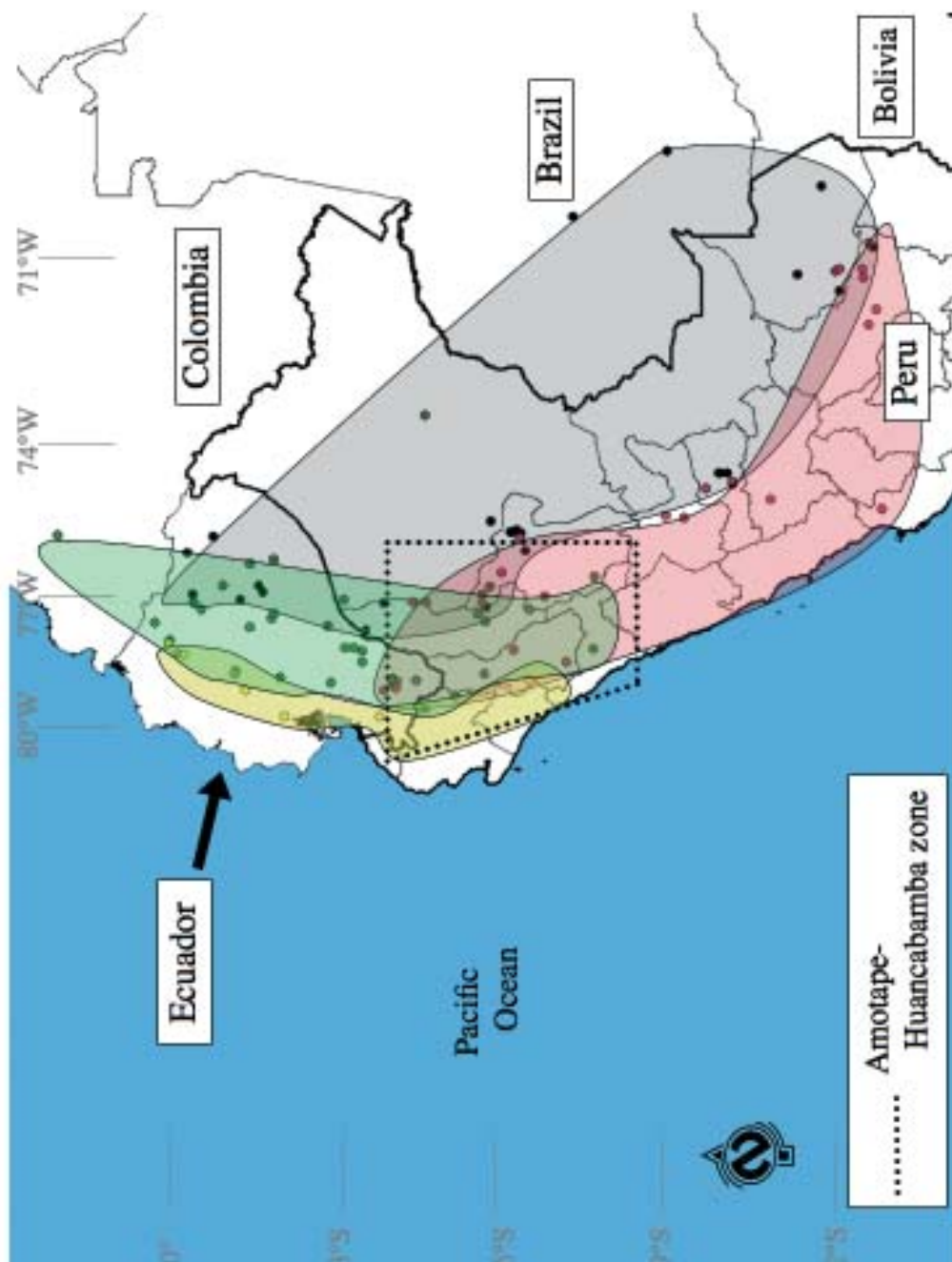


Figure 1. Distributions of species within *Solanum* section *Geminata* illustrate the increase in biodiversity in the Amotape-Huancabamba Zone, outlined by the dashed line, based on convergence of distributional ranges. *Solanum oblongifolium*, *S. bellum*, *S. abitaguense* and *S. barbulatum*, (green) are northern Andean species that reach their southern limits in the Amotape-Huancabamba Zone. *Solanum acuminatum*, *S. amnicola*, *S. maturecalvans* and *S. lindenii*, (red) are southern Andean species that reach their northern limits in the Amotape-Huancabamba Zone. *Solanum anisophyllum*, *S. robustifrons*, and *S. monadelphum*, (black) are Amazonian species that reach into San Martín and Amazonas departments. *Solanum cucullatum*, (yellow), is a Pacific lowland species whose range extends into Cajamarca Department. This convergence of taxa from different geographic regions and their overlap in the Amotape-Huancabamba Zone make it a hotspot for biodiversity and an exceedingly rich area for *Solanum* species.

Examples from *Solanum*

Solanum is an important component of various habitats from roadsides to cleared forests and cultivated fields to primary forests. One of the most striking aspects of the Amotape-Huancabamba Zone, and a reason for the incredible diversity of its flora, is the diversity of habitats in the area. The basins separated by mountain ranges create a mosaic of small habitat fragments that is conducive to speciation (Weigend 2002). This speciation is especially evident in taxa that can maintain viable populations in small habitats, such as herbaceous plant species. The trailing herbs of *Solanum* section *Pterioidea* are an excellent example of this phenomenon. Of the 10 species in this section, eight occur in the Amotape-Huancabamba Zone with two species endemic to the zone, *S. chamaepolybotryon* and *S. angustialatum* (Knapp and Helgason, 1997). Due to the diminutive habit and confined habitats of species of section *Pterioidea*, it is almost certain that there are additional undescribed *Pterioidea* species in the area. The restricted habitats that occur in the Amotape-Huancabamba Zone are responsible for much of the endemism found in the area. There are at least 25 *Solanum* species endemic to the Zone (Tab.1), 13 of which are narrow endemics (found in only a single department) and 12 that occur in multiple departments but are still endemic to the Amotape-Huancabamba Zone.

The diversity of the Amotape-Huancabamba Zone is also due to the overlap of geographic regions. Taxa with northern distributions often have a southern limit within the Zone and species with a southern distribution often have a northern limit in the zone. Similarly, many of Amazonian taxa have a western limit in the adds to the remarkable biodiversity of the Zone (Fig. 1). These distribution patterns are illustrated in species from *Solanum* section *Geminata* (Knapp, 2002b). *Solanum oblongifolium*, *S. bellum*, *S. abitagense* and *S. barbulatorum* are northern species that reach their southern limits within the Amotape-Huancabamba Zone. *Solanum acuminatum*, *S. amnicola*, *S. maturecalvans* and *S. lindenii* are southern species that reach their northern limits in the Amotape-Huancabamba Zone. *Solanum anisophyllum*, *S. robustifrons*, and *S. monadelphum* are Amazonian species that reach into San Martín and

Amazonas departments and *S. cucullatum* is a Pacific lowland species whose range extends into Cajamarca Department (Fig. 1). The overlap of taxa from different geographic regions, along with the highly dissected habitat that favors local speciation, make the Amotape-Huancabamba Zone a hotspot for biodiversity and an exceedingly rich area for *Solanum* species.

Checklist

The following checklist of *Solanum* species in the Amotape-Huancabamba Zone focuses on Amazonas, Cajamarca, and San Martín Departments of Peru. These departments cover the majority of the Amotape-Huancabamba Zone in Peru. Species that occur within the Amotape-Huancabamba Zone in the departments of La Libertad, Piura, and Tumbes are included in the list, while those species that occur in these departments but outside of the Amotape-Huancabamba Zone are excluded. Species that are endemic to a single department of the Amotape-Huancabamba Zone are noted, as are species endemic to the Amotape-Huancabamba Zone. The checklist was compiled using specimens databased in the Solanaceae Source and Virtual Herbarium at New York Botanic Gardens websites. The clade designation follows clades recognized by Weese and Bohs (2007) and Levin et al. (2006).

A Key to the Clades of *Solanum* in the Amotape-Huancabamba Zone

Below is a key to the clades of *Solanum* recognized by Weese and Bohs (2007), Levin et al (2006), and Peralta et al (2008) with species represented in the Amotape-Huancabamba Zone. Many of these clades conform to named sections of the genus *Solanum*.

- 1. Plants with spines and tapered anthers.....2
 - 1'. Plants without spines, anthers oblong.....9
- Spiny Solanums
- 2. Plants without stellate hairs; vines; fruits 3-5 cm in diameter; leaves often pinnately lobed to pinnately compoundWendlandii/Nemorensis
 - 2'. Plants with stellate hairs; herbs, shrubs, vines, trees; fruits various; leaves various (subgenus *Leptostemonum*).....3

- | | |
|---|---|
| 3. Adaxial surface of leaves with exclusively simple hairs..... | 13. Plants trailing and rooting at the nodes... |
|Acanthophora |Anarrichomenum |
| 3' Adaxial surface with stellate hairs.....4 | 13'. Plants upright to trailing but not rooting at nodes... |
| 4. Plants large trees; flowers >3.5 cm in diameter; fruits |14 |
| >3.5 cm in diameter.....Crinitum | 14. Plants with «bayonet» hairs (unbranched 2-celled |
| 4'. Plants herbs to small trees,; fruits typically <3.5 cm in | hairs with a large proximal cell and reduced distal |
| diameter; flowers typically <3.5 cm in diameter.....5 | cell); pedicels articulated at the base..... |
| 5. Fruits with stellate and/or glandular hairs.....6 | Basartharum |
| 5' Fruits glabrous.....7 | 14'. Plants lacking «bayonet hairs»; pedicels articulated |
| 6. Inflorescences short, unbranched; shrubs to small | much above the base..... 15 |
| trees..... Lasiocarpa | 15. Plants with tubers..... Petota |
| 6'. Inflorescences elongated, branched; erect to scandent | 15'. Plants without tubers..... 16 |
| shrubs..... Erythrotrichum | 16. Anthers with a sterile apical appendage, connivent, |
| 7. Vines or scandent shrubs; inflorescences unbranched; | dehiscent by longitudinal introrse slits... |
| spines strictly recurved; petals strap-shaped with |Lycopersicon |
| very little interpetalar tissue..... Micracantha | 16'. Anthers lacking a sterile apical appendage, free, |
| 7'. Erect to scandent shrubs or small trees; inflorescence | dehiscent by apical pores that elongate into |
| branched; spines typically straight but occasionally | longitudinal slits with age..... Juglandifolia |
| recurved; petals triangular with abundant | 17. Pedicels arising in sleeves or on raised platforms; |
| interpetalar tissue.....Torva | petioles often twining..... Dulcamara |
| Non-Spiny Solanums | 17'. Pedicels scars flush with the inflorescence axis, not |
| 9. Plants with stellate or lepidote hairs; inflorescences | in sleeves or on platforms; petioles not twining.....18 |
| terminal; leaves always simple and entire... | 18. Herbs to small shrubs; inflorescences exclusively |
| Brevantherum | extra-axillary; fruits exclusively round; stone cells |
| 9'. Plants lacking stellate or lepidote pubescence; | present in fruits..... Solanum |
| inflorescences axillary, lateral, or leaf-opposed; leaves | 18'. Vines to herbs, often rooting at nodes; inflorescences |
| various.....10 | axillary or extra-axillary; fruits round, flattened, or |
| 10. Shrubs to trees; leaf bases cordate; anthers with | conical; stone cells absent in fruits..... Pterodea/ |
| enlarged connectives..... Cyphomandra | Herpystichum |
| 10'. Herbs to trees; leaves various; anthers lacking | |
| enlarged connectives.....11 | |
| 11. Shrubs to trees; leaves simple and entire; inflorescence | |
| leaf-opposed; fruits green to yellow at maturity... | |
| Geminata | |
| 11'. Herbs to shrubs; leaves various; inflorescence axillary | |
| or extra-axillary; fruits various 12 | |
| 12. Plants with leaflike appendages at base of petiole | |
| («pseudostipules»).....13 | |
| 12'. Plants lacking leaflike appendages at base of petiole... | |
|15 | |

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Table 1. Checklist of the genus *Solanum* in the Amotape-Huancabamba Zone in Peru. Species are arranged alphabetically by clade following Weese and Bohs (2007) and Levin et al. (2006). The departments in which the species occur are listed. The focus of the checklist is on AM= Amazonas, CAJ= Cajamarca, and SM= San Martín but species found in LIB= La Libertad, PIR= Piura and TUM= Tumbes Departments that occur in the Amotape-Huancabamba Zone are also included. Species endemic to a single department within the Zone are denoted with * and those more widely endemic to the entire Amotape-Huancabamba Zone are indicated with #.

Checklist of North Central Peru

Genus	species	Authority	Section or Clade	Zone
<i>Solanum</i>	<i>acerifolium</i>	Dunal	Acanthophora	CAJ
<i>Solanum</i>	<i>capsicoides</i>	All.	Acanthophora	CAJ, SM
<i>Solanum</i>	<i>mammosum</i>	L.	Acanthophora	LIB, SM
<i>Solanum</i>	<i>sisymbriifolium</i>	Lam.	Acanthophora	AM, CAJ, SM
<i>Solanum</i>	<i>tenuispinum</i>	Rusby	Acanthophora	CAJ
<i>Solanum</i>	<i>brevifolium</i>	Dunal	Anarrichomenum	CAJ
<i>Solanum</i>	<i>chachapoyasense</i>	Bitter	Anarrichomenum	AM*
<i>Solanum</i>	<i>chimboraesense</i>	Bitter & Sodiro	Anarrichomenum	CAJ*
<i>Solanum</i>	<i>oxycoccooides</i>	Bitter	Anarrichomenum	CAJ
<i>Solanum</i>	<i>basendopogon</i>	Bitter	Basarthrum	AM, CAJ, LIB
<i>Solanum</i>	<i>caripense</i>	Dunal	Basarthrum	CAJ, LIB, PIU, TUM
<i>Solanum</i>	<i>filiforme</i>	Ruiz & Pav.	Basarthrum	AM, CAJ
<i>Solanum</i>	<i>suaveolens</i>	Kunth. & C.D. Bouché	Basarthrum	CAJ, LIB, SM
<i>Solanum</i>	<i>appressum</i>	K.E. Roe	Brevantherum	AM, CAJ, SM
<i>Solanum</i>	<i>argenteum</i>	Dunal	Brevantherum	AM
<i>Solanum</i>	<i>distichophyllum</i>	Sendtn.	Brevantherum	SM

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<i>Solanum hazenii</i>	Britton	Brevantherum	PIU, SM
<i>Solanum lepidotum</i>	Dunal	Brevantherum	AM, SM
<i>Solanum riparium</i>	Pers	Brevantherum	AM, CAJ, SM
<i>Solanum schlechtendalianum</i>	Walp.	Brevantherum	AM, CAJ
<i>Solanum selachophyllum</i>	Bitter	Brevantherum	CAJ, SM
<i>Solanum trachycyphum</i>	Bitter	Brevantherum	CAJ, SM
<i>Solanum verecundum</i>	M. Nee	Brevantherum	CAJ
<i>Solanum acanthodes</i>	Hook.f	Crinitum	AM, CAJ
<i>Solanum altissimum</i>	Benitez	Crinitum	AM
<i>Solanum grandiflorum</i>	Bitter	Crinitum	SM
<i>Solanum hispidum</i>	Pers	Crinitum	PIU (high elev)
<i>Solanum kioniotrichum</i>	Bitter ex J.F. Macbr.	Crinitum	AM
<i>Solanum sycophanta</i>	Dunal	Crinitum	AM, SM
<i>Solanum amotapense</i>	Svenson	Cyphomandra	CAJ#
<i>Solanum betaceum</i>	Cav.	Cyphomandra	AM (cultivated)
<i>Solanum circinatum</i>	Bohs	Cyphomandra	CAJ
<i>Solanum endopogon</i>	(Bitter) Bohs	Cyphomandra	AM, SM
<i>Solanum hutchisonii</i>	(J.F. Macbr.) Bohs	Cyphomandra	AM, CAJ#
<i>Solanum obliquum</i>	Ruiz & Pav.	Cyphomandra	SM
<i>Solanum occultum</i>	Bohs	Cyphomandra	AM, CAJ, SM
<i>Solanum oxyphyllum</i>	C.V. Morton	Cyphomandra	SM
<i>Solanum pendulum</i>	Ruiz & Pav.	Cyphomandra	AM, CAJ, SM
<i>Solanum tenuisetosum</i>	(Bitter) Bohs	Cyphomandra	AM, SM
<i>Solanum cutervanum</i>	Zahibr.	Dulcamara	AM, CAJ#
<i>Solanum leiophyllum</i>	Benth.	Dulcamara	CAJ
<i>Solanum leptocaulon</i>	Van Huerck & Mull Arg.	Dulcamara	SM
<i>Solanum nitidum</i>	Pav. ex Dunal	Dulcamara	LIB (high elev)
<i>Solanum pensile</i>	Sendtn.	Dulcamara	AM, SM
<i>Solanum stenophyllum</i>	Dunal	Dulcamara	CAJ
<i>Solanum talarense</i>	Svenson	Erythrotrichum	CAJ, PIU#
<i>Solanum abitaguense</i>	S. Knapp	Geminata	AM, CAJ, SM
<i>Solanum acuminatum</i>	Ruiz & Pav.	Geminata	SM
<i>Solanum amnicola</i>	S. Knapp	Geminata	AM
<i>Solanum anisophyllum</i>	Van Huerck & Mull Arg.	Geminata	AM, SM
<i>Solanum aphyodendron</i>	S. Knapp	Geminata	AM, CAJ
<i>Solanum arboreum</i>	Dunal	Geminata	AM, SM
<i>Solanum barbulatum</i>	Zahlbr.	Geminata	AM, CAJ, LIB, PIU, SM
<i>Solanum bellum</i>	S. Knapp	Geminata	SM
<i>Solanum clivorum</i>	S. Knapp	Geminata	CAJ*
<i>Solanum confine</i>	Dunal	Geminata	SM
<i>Solanum cruciferum</i>	Bitter	Geminata	CAJ#
<i>Solanum cucullatum</i>	S. Knapp	Geminata	AM, CAJ
<i>Solanum goniocaulon</i>	S. Knapp	Geminata	CAJ, SM#
<i>Solanum habrocaulon</i>	S. Knapp	Geminata	AM*
<i>Solanum laevigatum</i>	Dunal	Geminata	AM
<i>Solanum leptopodium</i>	Van Huerck & Mull Arg.	Geminata	SM
<i>Solanum leucocarpon</i>	Dunal	Geminata	AM, SM
<i>Solanum lindenii</i>	Rusby	Geminata	SM
<i>Solanum malletii</i>	S.Knapp	Geminata	AM
<i>Solanum maturecalvans</i>	Bitter	Geminata	CAJ, LIB, PIU, SM
<i>Solanum monadelphum</i>	Van Huerck & Mull Arg.	Geminata	SM
<i>Solanum nudum</i>	Dunal	Geminata	SM
<i>Solanum nutans</i>	Ruiz & Pav.	Geminata	AM, CAJ, SM
<i>Solanum oblongifolium</i>	Dunal	Geminata	AM, CAJ, PIU
<i>Solanum oblongum</i>	Ruiz & Pav.	Geminata	SM
<i>Solanum oppositifolium</i>	Ruiz & Pav.	Geminata	AM, SM
<i>Solanum plowmanii</i>	S. Knapp	Geminata	AM, CAJ, PIU, TUM#
<i>Solanum robustifrons</i>	Bitter	Geminata	AM, SM
<i>Solanum sessile</i>	Ruiz & Pav.	Geminata	AM, SM
<i>Solanum smithii</i>	S. Knapp	Geminata	CAJ#
<i>Solanum xanthophaeum</i>	Bitter	Geminata	SM#
<i>Solanum youngii</i>	S. Knapp	Geminata	CAJ, SM#
<i>Solanum evolvulifolium</i>	Greemn.	Herpystichum	AM

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<i>Solanum juglandifolium</i>	Dunal	Juglandifolia	AM
<i>Solanum ochranthum</i>	Dunal	Juglandifolia	AM, CAJ, PIU
<i>Solanum candidum</i>	Lindl.	Lasiocarpa	AM, CAJ
<i>Solanum quitoense</i>	Lam.	Lasiocarpa	AM, CAJ
<i>Solanum sessiliflorum</i>	Dunal	Lasiocarpa	AM, SM
<i>Solanum stramonifolium</i>	Jacq.	Lasiocarpa	AM
<i>Solanum vestissimum</i>	Dunal	Lasiocarpa	AM
<i>Solanum arcanum</i>	Peralta	Lycopersicon	AM, CAJ, LIB, PIU#
<i>Solanum habrochaites</i>	S. Knapp & D. Spooner	Lycopersicon	CAJ, LIB, PIU, TUM
<i>Solanum neorickii</i>	Spooner	Lycopersicon	AM, CAJ
<i>Solanum pennellii</i>	Correll	Lycopersicon	CAJ, LIB, PIU
<i>Solanum pimpinellifolium</i>	L.	Lycopersicon	CAJ, LIB, PIU, TUM
<i>Solanum jamaicense</i>	Mill	Micracantha	CAJ
<i>Solanum leucopogon</i>	Huber	Micracantha	AM, CAJ, SM
<i>Solanum barbeyanum</i>	Huber	Nemorensis	AM, CAJ
<i>Solanum nemorensis</i>	Dunal	Nemorensis	AM, CAJ, SM
<i>Solanum cajamarquense</i>	Ochoa	Petota	CAJ*
<i>Solanum chomatophilum</i>	Bitter	Petota	CAJ
<i>Solanum contumazaense</i>	Ochoa	Petota	CAJ*
<i>Solanum guzmanguense</i>	Whalen & Sagást.	Petota	CAJ*
<i>Solanum hypacrarthrum</i>	Bitter	Petota	CAJ*
<i>Solanum jalcae</i>	Ochoa	Petota	LIB* (high elev)
<i>Solanum lopezcamarenae</i>	Ochoa	Petota	CAJ*
<i>Solanum raquialatum</i>	Ochoa	Petota	PIU (mid elev)#
<i>Solanum tuberosum</i>	L.	Petota	CAJ
<i>Solanum anceps</i>	Ruiz & Pav.	Pteroidea	AM, CAJ, SM
<i>Solanum angustialatum</i>	Bitter	Pteroidea	SM*
<i>Solanum chamaepolybotryon</i>	Bitter	Pteroidea	SM*
<i>Solanum conicum</i>	Ruiz & Pav.	Pteroidea	AM, SM
<i>Solanum incurvum</i>	Ruiz & Pav.	Pteroidea	SM
<i>Solanum mite</i>	Ruiz & Pav.	Pteroidea	AM, SM
<i>Solanum ternatum</i>	Ruiz & Pav.	Pteroidea	AM, CAJ, SM
<i>Solanum trizygum</i>	Bitter	Pteroidea	AM
<i>Solanum uleanum</i>	Bitter	Pteroidea	AM, SM
<i>Solanum aloysiifolium</i>	Dunal	Solanum	CAJ
<i>Solanum americanum</i>	Mill	Solanum	AM, CAJ, LIB, PIU, SM
<i>Solanum arequipense</i>	Bitter	Solanum	LIB (high elev)
<i>Solanum corymbosum</i>	Jacq.	Solanum	AM, CAJ, LIB, PIU
<i>Solanum interandinum</i>	Bitter	Solanum	AM, CAJ, LIB, PIU
<i>Solanum nigrescens</i>	M.Martens & Galeotti	Solanum	CAJ
<i>Solanum pentlandii</i>	Dunal	Solanum	CAJ
<i>Solanum zahlbruckneri</i>	Bitter	Solanum	CAJ*
<i>Solanum albidum</i>	Dunal	Torva	AM, CAJ, LIB, PIU, SM
<i>Solanum asperolanatum</i>	Ruiz & Pav.	Torva	AM, CAJ
<i>Solanum bonariense</i>	L.	Torva	SM
<i>Solanum caricaefolium</i>	Rusby	Torva	SM
<i>Solanum glutinosum</i>	Dunal	Torva	LIB (high elev)
<i>Solanum ovalifolium</i>	Dunal	Torva	AM, CAJ, SM
<i>Solanum saponaceum</i>	Dunal	Torva	AM, CAJ, LIB
<i>Solanum subinerme</i>	Jacq.	Torva	SM
<i>Solanum morellifolium</i>	Bohs	unclear	AM
<i>Solanum radicans</i>	L.f.	unclear	AM, CAJ
<i>Solanum pachyandrum</i>	Bitter	Wendlandii	CAJ
<i>Solanum wendlandii</i>	Hook.f	Wendlandii	AM (cultivated)