

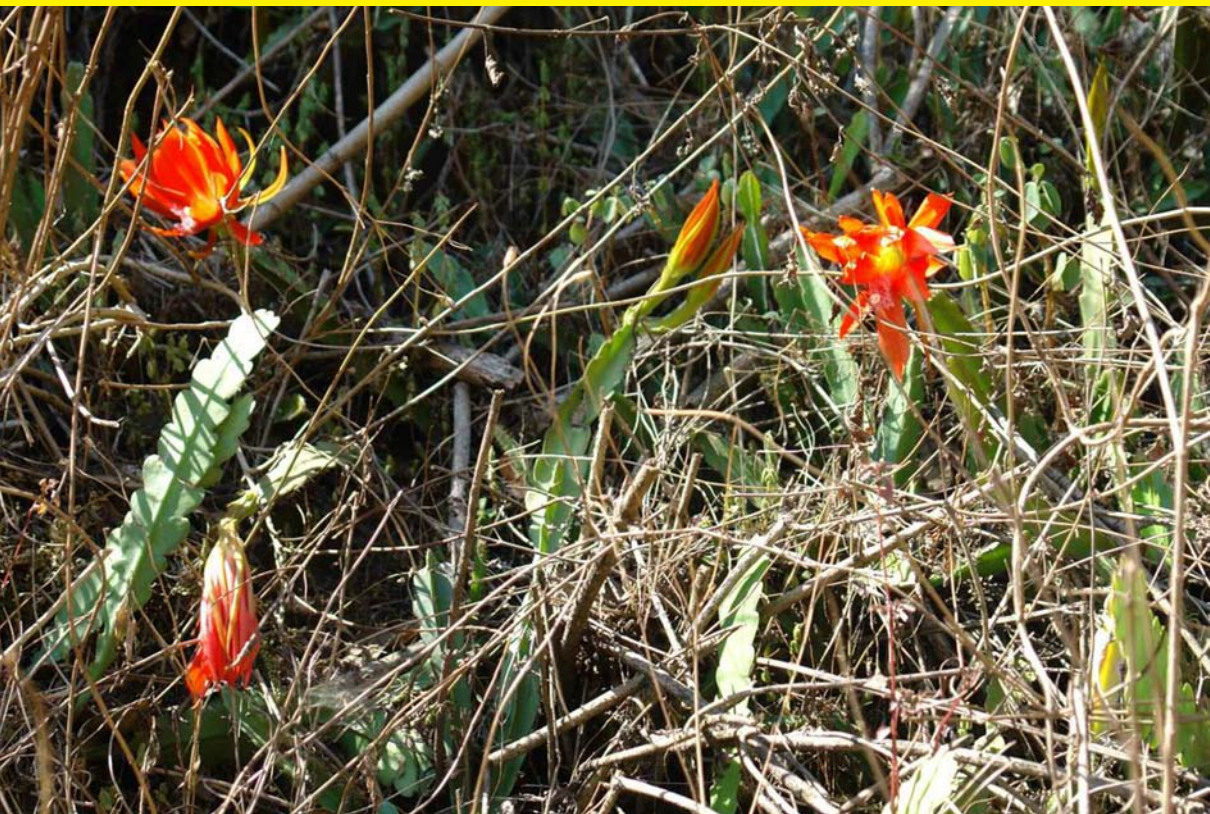
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Adios Nopalea, Welwitschia mirabilis in culture, Disocactus lodei sp. nova...



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Disocactus lodei a new Cactaceae from Guatemala

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Disocactus lodei is described here, a new Cactus from Guatemala, subgenus *Ackermannia*, and is compared with *Disocactus speciosus* (*ssp. aurantiacus*, *cinnabarinus* and *speciosus*), differing by its short erect or ascending stems, sharply crenulate and flowers 18-21 cm long, with an orange colour.

Keywords: *Disocactus*, Cactaceae, Guatemala, Central America

Disocactus Lindley (Cactaceae) is a genus of epiphytic or epilithic plants, with setose or absent spines, rarely subcoriaceous, irregularly branched; flowers are generally diurnal, solitary and of a magnificent colour, tubular or funnel-shaped, rarely salverform, 3-20 cm long, with stamens united or in two series, with bacciform fruits, spiny, with a white pulp. (Bravo 1978, Hunt 2006, Véliz 2008).

This genus has a restricted distribution in Mexico and in Central America and we know of 11 species and 8 subspecies (Hunt 2006). In Guatemala, the species of *Disocactus* (*D. biformis*, *D. eichlamii*, *D. macranthus*, *D. quetzaltecus* and both subspecies of *D. speciosus*, *ssp. cinnabarinus* and *ssp. speciosus*) are generally distributed in a mesophilous forest, from 1800 up to 2700 metres above sea level, in a volcanic chain (Véliz 2008). During the botanical expeditions of the project FONACON 02-2007, patronized by the National Fund for the Conservation of Nature-FONACON of Guatemala, a new population of the genus *Disocactus* was collected and documented, which differs from those already known and is hereby described below.

Disocactus lodei Véliz, L. Velásquez & R. Puente Sp. nov.

TYPE: Guatemala, department Quetzaltenango, Zunil. municipality. Grows on volcanic rocks with *Tillandsia tecpanensis* and *Epiphyllum crenatum*. 14°47' Lat. N.; 91°28' Long. W. 2060 m. alt. (Fl.) in April 10th, 2008. M. Véliz MV 20100 with L. Velásquez.

Holotype. BIGU. **Isotypes:** BIGU, MEXU. (see figures 1-2)

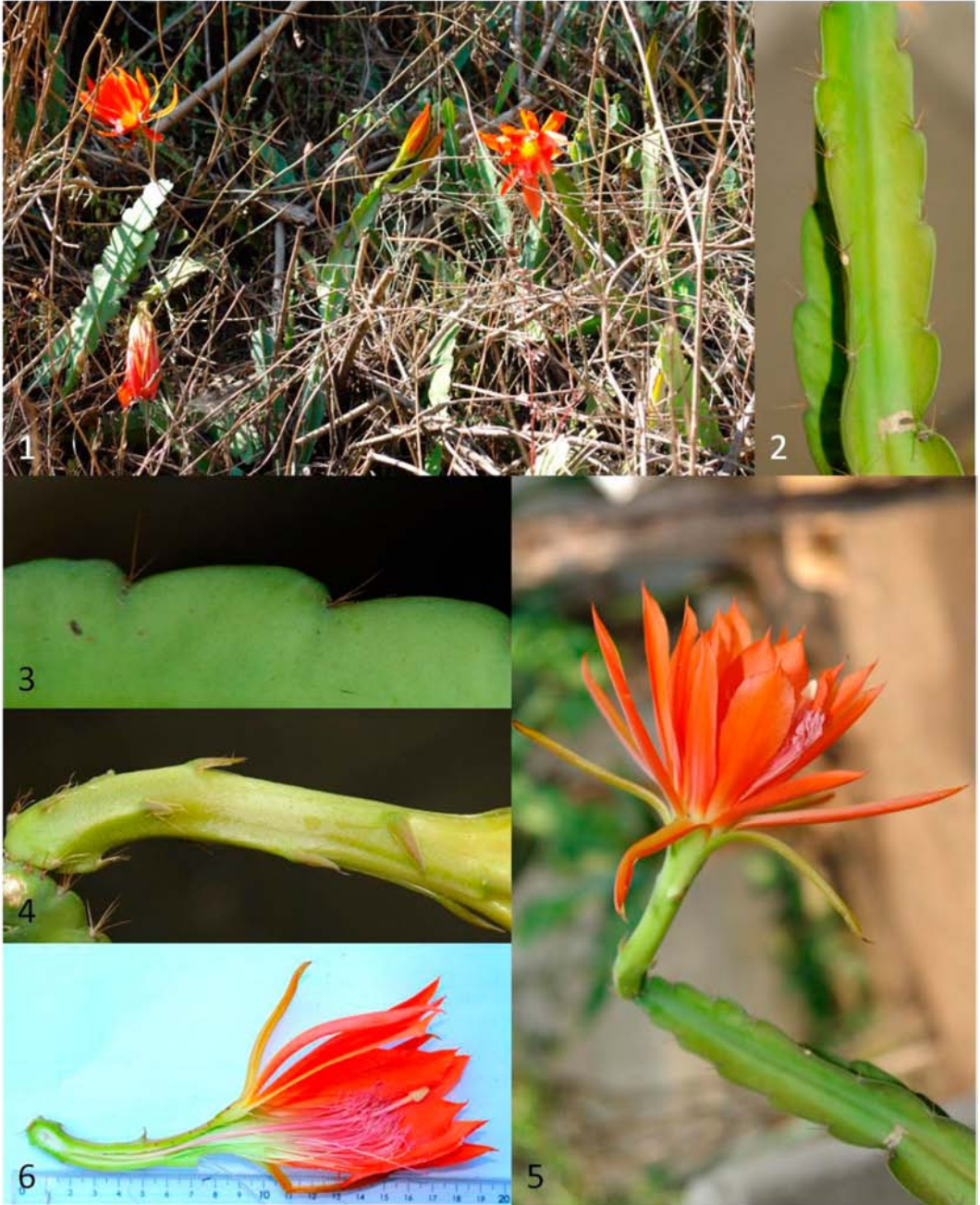


Figure 1 *Disocactus lodei* Véliz, L. Vélasquez & R. Puente.

1, habit; 2, three-angled stem; 3. Section of the crenulate stem, showing the spines of areoles; 4. Tube of the flower with presence of scales and soft spines in podaria; 5, branch and flower; 6, section of a flower with the ovary, the nectariferous chamber, tepals, stamens, stigma with the ascending and initially connate stems of the styles.



Figure 2. Holotype of *Disocactus lodei* Véliz, L. Vélasquez & R. Puente.
(Véliz MV 20100, BIGU 42261)

Disocacto specioso similis sed caulibus erectis vel ascendentibus, 30-40 mm latis, conspicue crenatis, floribus 18-21 cm longis, 14-17 cm latis, pericarpello + hypanthio 15-17 cm longo, squamis podariorum lanceolatis, 5-9 mm longis, 3-4 mm latis, tepalis 20-22 mm latis, aurantiacis recedit.

Epilithic plant, about 40-70 cm, with erect or ascending branches, three-angled, rarely flat, 3-4 cm wide, of a green to yellowish green colour, angles 1 cm wide at the base and 15-22 cm high, with sharply crenulate edge; areoles ovate, ca. 3 mm in diameter, whitish, tomentose, separated between them by 2-3 cm; 8-17 spines, setose to slightly subcoriaceous, 9-11 mm long, of brown colour; Flowers diurnal, funnel-shaped 17-20 cm long, 20-23 cm wide, increasing at the end of branches, remaining open for 2 days, slightly perfumed; podaria with flexible spines and lanceolate scales; scales 5-9 mm long and 3-4 mm wide at the base, pericarpel 15-17 mm long, the thickness of the pericarpel 4-5 mm, thickness of the column 3-4 mm; receptacular tube 5 cm long, nectariferous chamber streaked, 4 cm long, yellowish, outer tepals elliptic, with orangey - yellowish colour, fleshy, fluted, 6-7 cm long, 6-7 mm wide, glabrous, to the pointed tip; orangy inner tepals, oblanceolate, fleshy, tip mucronate, carinate, 7.5-9 cm long, 20-22 mm wide, spread; inserted stamens, those of the base, 9 cm long, apical 4-6 cm long, with strands of white and pale lilac colour; anthers 2.5-3 mm; style white - pale lilac, 14-17 cm long, ca. 2 mm wide; lobes of the stigma 8-10, erect, connate at the beginning, then free, 1 cm long; fruit unknown.

Habitat and phenology: grows on basalt cliffs, inside misty forests of the volcanic chain parallel to the Pacific Ocean. Blooms from April until June.

Etymology: species dedicated to Joël Lodé (1952-), French naturalist and lover of Cactaceae and succulents of the world.

Paratypes: GUATEMALA, Quetzaltenango, municipio Zunil. 2060 m. 14°47'N; 91°28' W. 17th april, 2008. M. Véliz MV 20152 with L. Velásquez; Sacatepéquez, Ciudad Vieja. 12th june, 2009. M. Véliz MV 20772 (cultivated).

Taxonomic discussion:

Disocactus lodei Véliz, L. Vélasquez & R. Puente, presents a pericarpel with scales, evident spines, flowers 8-20 cm long, stems 3 to 7 angles, flowers of a red or orangey colour, is placed in the subgenus *Ackermannia*, having affinity to the three subspecies of *Disocactus speciosus*, but differing from them by the following aspects: *D. lodei* presents erect or ascending stems, 40-70 cm high, 30-40 mm wide, clearly crenulate, flowers are 18-21 cm long, of 14-17 cm wide, the pericarpel 15-17 cm long, the podaria with lanceolate scales 5-9 mm long, 3 to 4 mm wide and tepals are orangey, 20-22 mm wide. It could become confused with *Disocactus speciosus* ssp *aurantiacus*, a native of Nicaragua which presents orangey flowers, but they are 10-15 cm long, stems are hanging and are up to 3 m long, flattened, 3-10 mm wide and the pericarpel 5.5-7 cm long. With *Disocactus speciosus* ssp

speciosus and *D. speciosus* spp *cinnabarinus*, found in Guatemala, both share the same altitudinal level of 2000-2800m in the volcanic chain, generally they are epiphytic, their flowers are 11-17 cm long, the pericarpel 6-9 cm long and the tepals are of a scarlet red colour tinged with purple, in general term, the flowers of *D. lodei* are bigger, orangey, the edges of the stem sharply crenulate and the pericarpel is longer so that separate this species from the others (see table 1)

Text: Mario Esteban Véliz Pérez, Luis Eduardo Velásquez Méndez & Raúl Puente

Photos: Mario Esteban Véliz Pérez

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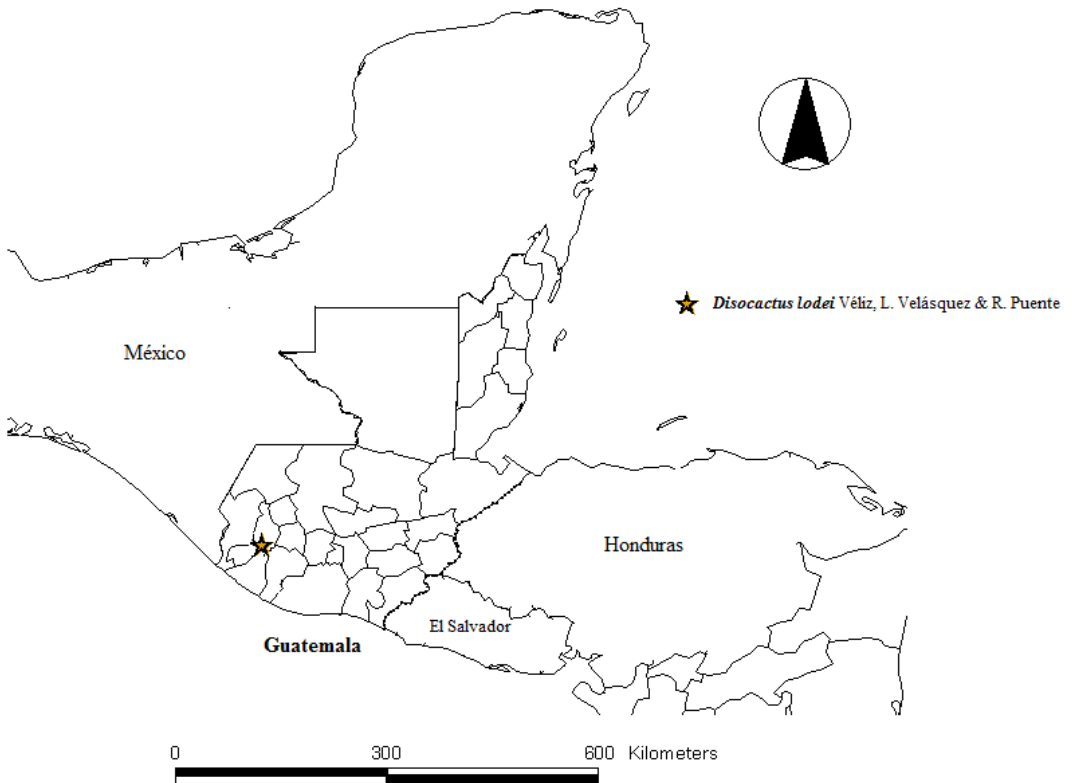


Figure 3. Distribution of *Disocactus lodei* in Guatemala.

Morphological characters of *Disocactus lodei*
compared with subspecies of *D. speciosus*

Characters	<i>Disocactus speciosus</i> ssp. <i>speciosus</i>	<i>Disocactus speciosus</i> ssp. <i>cinnabarinus</i>	<i>Disocactus speciosus</i> ssp. <i>aurantiacus</i>	<i>Disocactus lodei</i>
Habit	Epiphytic	Epiphytic	Epiphytic	Epilithic
Stems	Ascendant, procumbent or pendant	Ascendant, procumbent or pendant	hanging, to 3 m long ascendant first, then pendant	Erect or ascendant, crenulate
Ribs	(2-)3-5(-7)	3-4 (2)	2-5 or flattened like a belt	3-4
Width of stems	25 mm	10-80 mm	3-10 mm	30-40 mm
Separation between areoles	1-3 cm	4 cm	<4 (-7) cm	2-3 cm
Spines	5-8 or more	15	(0-)3-6	8-17
Length of spines	<10(-15) mm	10-15 mm	4-9 mm, hairlike	9-11 mm
Flowers, length	11-17 cm	12-16 cm	10-15 cm	18-21 cm
Flowers, width	8-15 cm	4-8 cm	11 cm	14-17cm
Pericarpel + hypanthium	8 cm, spiny	6.0 -6.5 cm	5.5-7 cm x 1-1.5 cm	15-17cm
Tepals	Obtuse, red tinged purple, rarely white	6-9 cm long, 10-25 mm wide, scarlet red	6-8 cm long 15-20 mm wide +- orangey, magenta at the base	6-9 cm long, 20-22 mm wide, orangey
Style	-	-	9-13 cm long	14-17 cm long
Distribution	Mexico, Guatemala	Mexico (Chiapas), Guatemala	Nicaragua	Guatemala

BIBLIOGRAPHICAL REFERENCES:

- Arias Montes, S. y Véliz Pérez, M. E. (2006) *Diversidad y distribución de las Cactaceae en Guatemala*. Editor. E. Cano. Biodiversidad de Guatemala 1: 229-238.
- Bravo Hollis, H y Sánchez Mejorada, H. (1991). *Las Cactáceas de México*. Universidad Nacional Autónoma de México. III:1-643
- Hunt D, Taylor N. y C. Graham. (2006). *The New Cactus Lexicon*. Internacional Cactaceae Systematics Group. England.
- Standley, P. y Steyermark, J. (1962). *Flora of Guatemala*. Field Natural History Museum. Fieldiana Botany , 24 (VII)2:187-234
- Stevens, W. D., Ulloa, C., A. Pool, A., y Montiel, O. M. (2001). *Flora de Nicaragua* Publication: Monographs in Systematic Botany from the Missouri Botanical Garden 85: i—xlii, 1-2666
- Véliz Pérez, M. E. (2008). *Las Cactáceas de Guatemala*. FONACON/ONCA/USAC. 128 p.