Cephalocereus columna-trajani

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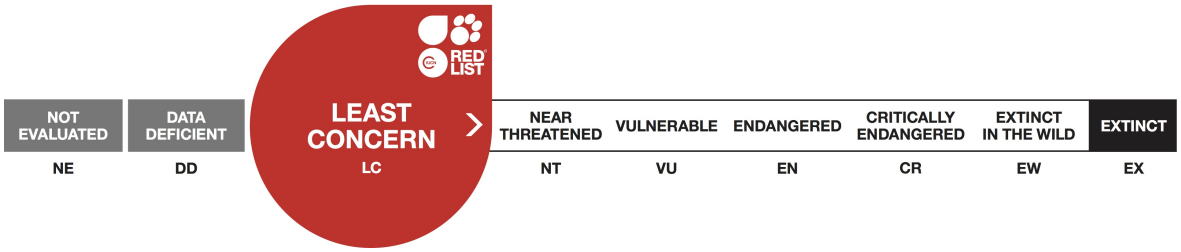
Cephalocereus columna-trajani

Assessment by: Arias, S., Hernández, C. & Zavala-Hurtado, A.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Plantae	Tracheophyta	Magnoliopsida	Caryophyllales	Cactaceae

Taxon Name: *Cephalocereus columna-trajani* (Karw. ex Pfeiff.) K.Schum.

Synonym(s):

- *Cereus columna-trajani*

Taxonomic Source(s):

Hunt, D., Taylor, N. and Charles, G. (compilers and editors). 2006. *The New Cactus Lexicon*. dh Books, Milborne Port, UK.

Taxonomic Notes:

This group of columnar cacti have a complicated taxonomy and further work is needed to better delimit the genus and the species.

Assessment Information

Red List Category & Criteria: Least Concern ver 3.1

Year Published: 2013

Date Assessed: April 29, 2009

Justification:

Within its restricted range *Cephalocereus columna-trajani* is abundant and there are no major threats. It is found in a protected area, hence is listed as Least Concern. However, attention is needed on the conservation status of the pollinating bats and the trend on the fragmentation of the habitat where the species occurs. Also, long term monitoring of population trends is needed.

Geographic Range

Range Description:

Cephalocereus columna-trajani is endemic to the Tehuacán-Cuicatlán-Zapotitlán Valley system and adjacent areas. It is the most emblematic species of the Tehuacán-Cuicatlán Biosphere Reserve. It occurs at elevations of 600-1,800 m.

Country Occurrence:

Native: Mexico (Oaxaca, Puebla)

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Population

Within its range the species is very abundant and the population is stable (A. Zavala-Hurtado pers. comm. 2009). There is very low genetic variation among subpopulations, however, some unique haplotypes occur in some subpopulations (A. Zavala-Hurtado pers. comm. 2009).

Current Population Trend: Stable

Habitat and Ecology (see Appendix for additional information)

Cephalocereus columna-trajani occurs in xerophyllous scrub and thorn scrub, it can grow on steep, rocky slopes (Pavón and Briones 2001). The species has been reported to flower and fruit before the rainy season, which occurs July-August (Pavón and Briones 2001), and also to flower from March to September (Zavala-Hurtado and Díaz-Solís 1995).

Cephalocereus columna-trajani is the major component of the 'cardonal-tetechera' vegetation association, and it is the dominant species of the 'cardonal' vegetation association (García-Suárez 2003; Jiménez-Sierra *et al*. 2007; Hernández *et al.* 2003). Cardones (*C. columna-trajani*) are widely used for support by epiphytes such as bromeliads (García-Suárez 2003).

It can be inferred that 88-123 years ago recruitment rates were high for this species, and that there might be a delay of *ca* 60 years after physical damage before the individual reproduces again (Zavala-Hurtado and Díaz-Solís 1995).

Systems: Terrestrial

Use and Trade (see Appendix for additional information)

The species is use for wood and juveniles as ornamental.

Threats (see Appendix for additional information)

Cephalocereus columna-trajani seems not to be threatened directly and occurs within a protected area. However, the pollinators (bats) are considered as a malign species in the area and are threatened. This could affect the species reproductive success in the long term. Habitat fragmentation can be a threat to the population in the near future (C. Hernández pers. comm. 2009).

Conservation Actions (see Appendix for additional information)

The species is distributed within the Tehuacán-Cuicatlán Biosphere Reserve. It is propagated locally in the Zapotitlán de las Salinas nursery, hence, there is no collection pressure on wild populations (C. Hernández pers. comm. 2009).

Credits

Assessor(s): Arias, S., Hernández, C. & Zavala-Hurtado, A.

Reviewer(s): Goettsch, B.K.

Facilitators(s) and Compiler(s): Goettsch, B.K.

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External Resources

For Images and External Links to Additional Information, please see the Red List website.

Appendix

Habitats
(http://www.iucnredlist.org/technical-documents/classification-schemes)

Habitat	Season	Suitability	Major Importance?
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry	-	Suitable	Yes

Use and Trade
(http://www.iucnredlist.org/technical-documents/classification-schemes)

End Use	Local	National	International
Fuels	Yes	No	No
Pets/display animals, horticulture	Yes	No	No

Threats
(http://www.iucnredlist.org/technical-documents/classification-schemes)

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Future	-	-	-
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.2. Unintentional effects (species is not the target)	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.3. Indirect species effects -> 2.3.4. Loss of pollinator		

Conservation Actions in Place
(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions in Place
In-Place Land/Water Protection and Management
Occur in at least one PA: Yes
In-Place Education
Included in international legislation: Yes
Subject to any international management/trade controls: Yes

Research Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Research Needed
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Estimated extent of occurrence (EOO) (km^2): 100-5000
Lower elevation limit (m): 600
Upper elevation limit (m): 1800
Population
Population severely fragmented: No

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