

CANDIDATE ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: Cordia rupicola

COMMON NAME: no common name

LEAD REGION: 4

INFORMATION CURRENT AS OF: February 2003

STATUS/ACTION (Check all that apply):

New candidate

Continuing candidate

Non-petitioned

Petitioned - Date petition received: ____

90-day positive - FR date: ____

12-month warranted but precluded - FR date: ____

Is the petition requesting a reclassification of a listed species?

Listing priority change

Former LP: ____

New LP: ____

Latest date species first became a Candidate: _____

Candidate removal: Former LP: ____ (Check only one reason)

A - Taxon more abundant or widespread than previously believed or not subject to a degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

F - Range is no longer a U.S. territory.

M - Taxon mistakenly included in past notice of review.

N - Taxon may not meet the Act's definition of *Species*.@

X - Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Plant - Boraginaceae

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Puerto Rico, Anegada (British Virgin Islands).

CURRENT STATES/COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE: Puerto Rico, Anegada (British Virgin Islands).

LEAD REGION CONTACT (Name, phone number): Rick Gooch, 404/679-7124

LEAD FIELD OFFICE CONTACT (Office, name, phone number): Boquerón, Puerto Rico Field Office, Jorge Saliva, 787/851-7297

BIOLOGICAL INFORMATION (Describe habitat, historic vs. current range, historic vs. current population estimates (# populations, #individuals/population), etc.):

Cordia is a genus of about 250 or more species of trees and shrubs of tropical and subtropical regions. Liogier and Martorell (1982) recognize seventeen species for Puerto Rico. Fifteen

species are considered to be native to Puerto Rico, and the remaining two are introduced. Cordia rupicola was previously thought to be endemic to Puerto Rico but has recently (1987) been reported from the island of Anegada in the British Virgin Islands. The species was first discovered by the German botanical collector Paul Sintenis in 1886 at Los Indios, located between Barinas and Guayanilla, Puerto Rico. It was later found in Guánica, Puerto Rico, in 1887, and again in 1943 and 1959 (Proctor 1991).

Cordia rupicola is a small shrub reaching about 1.5 to 5 meters (4.9 to 16.4 feet) in height. Leaves are ovate to elliptic, 2 to 9 centimeters (cm) (0.8 to 3.5 inches) long and chartaceous. The upper leaf surface is rigidly scabrous, beneath puberulous and the strigose petioles are from 2 to 10 millimeters (0.1 to 0.4 inches) long. Flowers are in solitary globular heads about 1 cm (0.4 inches) in diameter and up to 20 flowered. The corolla is white, 7 mm (0.3 inches) long, and the fruit is a red one-seeded drupe about 4 to 5 mm (0.2 inches) long (Proctor 1991).

Surveys conducted in 1991 did not find the species at the historical locations in Guánica and Guayanilla (Proctor 1991). At that time, the only known location in Anegada. Nevertheless, surveys conducted in 1995 located the species in the area of Peñuelas, an area to the east of Guayanilla, at a site called El Peñón. Approximately 15 plants of C. rupicola have been located at this site. Some plants were observed with fruit in January. Other rare and endangered plants, Eugenia woodburyana (listed as endangered), Myrtus bellonis, Passiflora bilobata, and Nashia inaguensis, are also known from that site (Breckon and Kolterman 1996).

The Peñuelas site is located within the subtropical dry forest life zone overlying a limestone substrate. The hills are wooded with a low dense brush, 2 to 3 meters (6.5 to 9.8 feet) in height, with only a few scattered trees that reach 4 to 5 meters (13.1 to 16.4 feet) tall. The area appears to have been cut over recently at the time of the surveys. These scattered trees include Bourreria succulenta var. succulenta (palo de vaca), Bucida buceras (úcar), and Bursera simaruba (almácigo). The shrub layer is dominated by Croton humilis, Eupatorium sinuatum, Lantana reticulata (cariacillo), and Turnera diffusa. Average rainfall received in this dry life zone is less than 66 cm (25.7 inches) a year. The site is privately owned, and the area is part of a residential development (Breckon and Kolterman 1996).

THREATS (Describe threats in terms of the five factors in section 4 of the ESA providing specific, substantive information. If this is a removal of a species from candidate status or a change in listing priority, explain reasons for change.):

A. The present or threatened destruction, modification, or curtailment of its habitat or range.

The species is currently known from only one area in Puerto Rico. While it has been reported from Anegada, little is known about the species on that island. The known population in Puerto Rico is small and located on privately owned land that forms part of a residential development. Although lots are large in size, many of the surrounding lots have been completely cleared for house construction. While high voltage power lines that pass over the property may somewhat protect the area, concern has been expressed over the Puerto Rico Energy Authority's clearing of vegetation under such lines by cutting, burning, or the use of herbicides. This species' risk of extinction due to these factors is high.

B. Overutilization for commercial, recreational, scientific, or educational purposes.

The species is not known to be utilized for commercial, recreational, scientific or educational purposes.

C. Disease or predation.

Neither disease nor predation have been documented to be factors affecting this species.

D. The inadequacy of existing regulatory mechanisms.

The Commonwealth of Puerto Rico has adopted a regulation that recognizes and provides a protection for certain Commonwealth listed species. However, Cordia rupicola is not on this list. Federal listing under the Endangered Species Act would provide protection, and, by virtue of the existing cooperative agreement between the Service and the Commonwealth under section 6, would ensure the species= addition to the Commonwealth list.

E. Other natural or manmade factors affecting its continued existence.

One of the most important factors affecting the continued survival of this species is its limited distribution. It is currently known from only one site in Puerto Rico, on privately owned land. The site is located within the driest life zone on the island, and fires, both spontaneous and caused by man, are a frequent occurrence. In addition, damage from catastrophic events, such as hurricanes, could result in the loss of individuals. In 1998, hurricane Georges caused severe damage in this part of the island, and other major hurricanes in the future could alter the habitat for the species.

FOR RECYCLED PETITIONS:

- a. Is listing still warranted? ____
- b. To date, has publication of a proposal to list been precluded by other higher priority listing actions? ____
- c. Is a proposal to list the species as threatened or endangered in preparation? ____
- d. If the answer to c. above is no, provide an explanation of why the action is still precluded.

LAND OWNERSHIP (Estimate proportion Federal/state/local government/private, identify non-private owners): The only known population is located on privately owned land.

PRELISTING (Describe status of conservation agreements or other conservation activities): Studies of the species= distribution, abundance and reproductive biology by the University of Puerto Rico, Mayagüez Campus are ongoing.

REFERENCES (Identify primary sources of information (e.g., status reports, petitions, journal publications, unpublished data from species experts) using formal citation format):

- Breckon, G. J. and D. A. Kolterman. 1996. Cordia rupicola Urban. Final Report under Cooperative Agreement No. 1448-0004-94-9113 between the U.S. Fish and Wildlife Service and University of Puerto Rico, Mayaguez Campus. 6 pp.
- Liogier, H. A. and L. G. Martorell. 1982. Flora of Puerto Rico and Adjacent Islands: a systematic synopsis. Editorial de la Universidad de Puerto Rico, Rio Piedras, Puerto Rico. 342 pp.
- Proctor, G. 1991. Status survey of Cordia rupicola. In: Puerto Rican Plant Species of Special Concern: Status and Recommendations. Puerto Rico Department of Natural Resources, San Juan, Puerto Rico. 196 pp.

LISTING PRIORITY (place * after number)

THREAT

Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2*
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

Rationale for listing priority number:

Magnitude and Imminence: Although the two known populations of *Cordia rupicola* are found in protected lands within the Anegada National Park (British Virgin Islands) and the Guánica State Forest (Puerto Rico), the lack of adequate regulations to protect these species in these areas, the low number of individuals per population, the proposed development projects adjacent and within these lands (e.g., roads and trails through the forests), and feral grazing animals found in these forests (e.g., donkeys, goats, pigs), are high imminent threats that warrant a Listing Priority of 2 for this species.

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes to the candidate list, including listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all additions of species to the candidate list, annual retentions of candidates, removal of candidates, and listing priority changes.

Approve: Linda Kelsey March 14, 2003
Acting Regional Director, Fish and Wildlife Service Date

Concur: _____
Director, Fish and Wildlife Service Date

Do not concur: _____
Director, Fish and Wildlife Service Date

Director's Remarks:

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Date of annual review: February 2003

Conducted by: Jorge E. Saliva - Boquerón, Puerto Rico FO

Comments:

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