

PETITION TO LIST THE
Caribbean Mayten (*Maytenus cymosa*)
UNDER THE U.S. ENDANGERED SPECIES ACT



Photograph: © Pedro Acevedo-Rodriguez, courtesy of Smithsonian Institution.

**Petition Submitted to the U.S. Secretary of Interior
Acting through the U.S. Fish and Wildlife Service**

Petitioner:

WildEarth Guardians
1536 Wynkoop Street, Suite 301
Denver, Colorado 80202
303.573.4898

September 28, 2011



PETITIONER

WildEarth Guardians is a nonprofit environmental advocacy organization that works to protect wildlife, wild places and wild waters. The organization has more than 12,000 members and supporters and maintains offices in New Mexico, Colorado and Arizona. WildEarth Guardians has an active endangered species program that works to protect imperiled species and their habitat throughout the United States and its territories.

THE ENDANGERED SPECIES ACT AND IMPLEMENTING REGULATIONS

The Endangered Species Act of 1973 (ESA) protects plants and animals that are listed by the federal government as “endangered” or “threatened” (16 U.S.C. § 1531 et seq.). Any interested person may submit a written petition to the Secretary of the Interior requesting him to list a species as “endangered” or “threatened” under the ESA (50 C.F.R. § 424.14(a)). An “endangered species” is “any species that is in danger of extinction throughout all or a significant portion of its range” (16 U.S.C. § 1532(6)). A “threatened species” is defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range” (16 U.S.C. § 1532(20)). “Species” includes subspecies and distinct population segments of sensitive taxa (16 U.S.C. § 1532(16)).

The ESA sets forth listing factors under which a species can qualify for protection (16 U.S.C. § 1533(a)(1)):

- A. The present or threatened destruction, modification, or curtailment of habitat or range;
- B. Overutilization for commercial, recreational, scientific, or educational purposes;
- C. Disease or predation;
- D. The inadequacy of existing regulatory mechanisms; or
- E. Other natural or manmade factors affecting its continued existence.

A taxon need only meet one of the listing criteria outlined in the ESA to qualify for federal listing.

CLASSIFICATION AND NOMENCLATURE

Common name. The common name for *Maytenus cymosa* (Krug and Urban 1904) is the “Caribbean mayten.”

Taxonomy. We provide the petitioned taxon’s scientific classification in Table 1.

Table 1. Taxonomy of the Caribbean Mayten (IUCN 2011).

Kingdom	Plantae
Phylum	Tracheophyta
Class	Magnoliopsida
Order	Celastrales
Family	Celastraceae
Genus	<i>Maytenus</i>
Species	<i>Maytenus cymosa</i>

SPECIES DESCRIPTION

The Caribbean mayten is a rare, flowering tree that occurs in dry, coastal woodland¹ in Puerto Rico, the U.S. Virgin Islands, and the British Virgin Islands (Oldfield et al. 1998; IUCN 2011; *see also* Gould et al. 2006: 567). The tree grows to 3-4 meters (Pollard and Clubbe 2003).

POPULATION, GEOGRAPHIC DISTRIBUTION

The largest known population of Caribbean mayten, approximately 100 trees, occurs on Gorda Peak in Gorda Peak National Park on Virgin Gorda in the British Virgin Islands (IUCN 2011; Oldfield 1999). Part of this population may have been affected by a fire that burned about 25 percent of the park in June 1997 (Oldfield 1999, *citing* Kraus 1998). A single tree was also recorded at Savannah Bay on Virgin Gorda (Oldfield 1999).

A population of about 52 trees was last reported in two sites in Puerto Rico (IUCN 2011). Single trees have also been found on St. Croix and St. Thomas in the U.S. Virgin Islands, although they may have been affected by Hurricane Hugo in 1989 (IUCN 2011).

CONSERVATION STATUS

The International Union for the Conservation of Nature (IUCN) designated the Caribbean mayten as “endangered” in 1998 (IUCN 2011), probably due to its limited numbers. Oldfield et al. (1998) included the species on a list of the world’s threatened trees (an IUCN compilation). The U.S. Fish and Wildlife Service previously listed the species as a category ‘2’ candidate species for listing under the ESA (58 Fed. Reg. 51144, 50 Fed. Reg. 39526).

THREATS TO THE SPECIES

The Caribbean mayten meets at least one criteria for listing identified in ESA Section 4 (16 U.S.C. §1533(a)(1)).

¹ *Contra*, Pollard and Clubbe (2003: 16) indicate the species is associated with “moist forest[s].”

(Factor A) The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

The largest population of Caribbean mayten (~100 trees) occurs in a national park on Virgin Gorda in the British Virgin Islands (Oldfield 1999). Recorded populations in Puerto Rico and the U.S. Virgin Islands may occur on various land ownerships where they may be threatened by land use and habitat fragmentation.

(Factor D) The Inadequacy of Existing Regulatory Mechanisms

The British Virgin Islands has an environmental charter, finalized a Protected Areas System Plan (Gardner 2007), and promulgated environmental ordinances, including for national parks (Oldfield 1999). These policies and ordinances notwithstanding, habitat loss and degradation continues in the British Virgin Islands, as evinced by a presentation posted on the British Virgin Islands Ministry of Natural Resources and Labour, Department of Environment and Fisheries website (www.bvidef.org/main/images/downloads/env_deg.pdf). The Caribbean mayten may not be adequately protected on Virgin Gorda outside Gorda Peak National Park.

(Factor E) Other Natural or Manmade Factors Affecting its Continued Existence

The small number of Caribbean mayten trees remaining may have a negative effect on the species genetic diversity and render it vulnerable to stochastic events. “Population size matters; small populations are more likely to go extinct as a result of chance effects (known as the small population paradigm)” (Brook et al. 2008: 455, internal citation omitted). FWS has frequently recognized small population size as a threat to species’ persistence.²

The population of Caribbean mayten in Gorda Peak National Park on Virgin Gorda may have been affected by fire in 1997. The species may be vulnerable to future fires in that location.

Individual trees may have been affected by Hurricane Hugo. The species may have been affected by subsequent hurricanes and/or future hurricanes and weather events.

REQUESTED DESIGNATION

WildEarth Guardians respectfully requests the U.S. Fish and Wildlife Service to list the Caribbean mayten as “endangered” or “threatened” under the Endangered Species Act.

² See, for examples, candidate assessment forms for *Porzana tabuensis* (spotless crane, April 2010), *Eumops floridanus* (Florida bonneted bat, March 2010), *Vagrans egistina* (Mariana wandering butterfly, April 2010), *Gallinula storeri* (friendly ground-dove, March 2010), *Eremophila alpestris strigata* (streaked horned lark, April 2010), and *Hyla wrightorum* (Arizona treefrog, April 2010) (available at http://ecos.fws.gov/tess_public/pub/SpeciesReport.do?listingType=C&mapstatus=1).

We also request designation of critical habitat for the species, as appropriate, in Puerto Rico and on St. Croix and St. Thomas in the U.S. Virgin Islands.

REFERENCES#

#

50 Fed. Reg. 39526 (Sept. 27, 1985). Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species.

58 Fed. Reg. 51144 (Sept. 30, 1993). Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species.

Brook, B., N. Sodhi, C. Bradshaw. 2008. Synergies among extinction drivers under global change. *Trends in Ecology and Evolution* 23(8): 453-460.

IUCN (International Union for the Conservation of Nature). 2011. *Maytenus cymosa*. IUCN Red List of Threatened Species. Ver. 2011.1. www.iucnredlist.org. Viewed on Sept. 27, 2011.

Gardner, L. 2007. British Virgin Islands Protected Areas System Plan 2007-2017. British Virgin Islands. National Parks Trust. Tortola, BVI.

Gould, W.A., G. González, G. Carrero Rivera. 2006. Structure and composition of vegetation along an elevational gradient in Puerto Rico. *Journal of Vegetation Science* 17: 563-574.

Oldfield, S. (compiler). *BIODIVERSITY: THE UK OVERSEAS TERRITORIES*. D. Procter and L.V. Fleming (eds). Joint Nature Conservation Committee. Peterborough, United Kingdom.

Oldfield, S., C. Lusty, A. MacKinven (compilers). 1998. *The World List of Threatened Trees*. World Conservation Press. Cambridge, United Kingdom.

Pollard, B. J. and C. Clubbe. 2003. Status Report for the British Virgin Islands' Plant Species Red List. National Parks Trust, British Virgin Islands; Royal Botanic Gardens, Kew.