Genista maderensis

LC

Taxonomic Authority: (Webb & Berthel.) Lowe

☑ Global Assessment ☐ Regional Assessment Region: Global ☐ Endemic to region

Synonyms		Common Names	
Cytisus maderensis	(Webb & Berthel.) Masf.	PIORNO	Portuguese
Genista canariensis	Buch non L.		
Genista paivae	Lowe		
Teline paivae	Lowe Gibbs & Dingwall		

Upper Level Taxonomy

Kingdom: PLANTAE Phylum: TRACHEOPHYTA

Class: MAGNOLIOPSIDA Order: FABALES

Family: LEGUMINOSAE

Lower Level Taxonomy

Rank: Infra- rank name: ☐ Plant Hybrid

Subpopulation: Authority:

The plants of the Madeiran interior were considered different than the coastal ones, identified as Teline paivae (Lowe) Gibbs & Dingwall, but do not seem worthy of separation, since the plants occupying the northern coastal trip from Seixal eastwards to Sao Jorge constitute a range of intermediates (Cannon and Turland 1994). Due to the discrepancy on the taxonomy, for this assessment it has been followed Lewis, et al. (eds.), 2005, Legumes of the World, where Genista is the genus name.

General Information

Distribution

Species endemic to Madeira, has also been reported from Deserta Grande (small island next to Madeira).

Range Size

Area of Occupancy:

Extent of Occurrence: 670

Map Status:

Elevation

Upper limit: 1500

Lower limit: 100

Depth

Upper limit:

Lower limit:

Depth Zones

☐ Shallow photic ☐ Bathyl ☐ Hadal

☐ Photic ☐ Abyssal

Biogeographic Realm

☐ Afrotropical

☐ Antarctic

☐ Australasian

☐ Neotropical

☐ Oceanian

☑ Palearctic

☐ Indomalayan

☐ Nearctic

Population

The population size of the species is not known.

Total Population Size

Minimum Population Size: Maximum Population Size:

Habitat and Ecology

Genista maderensis has been described as a shrub to small tree, reaching 6m in height that occurs in Laurisilva, rocky woody ravines and maritime clliffs.

System		Movement pattern		Crop Wild Relative
☑ Terrestrial	☐ Freshwater	☐ Nomadic	☐ Congregatory/Dispersive	☐ Is the species a wild relative of a crop?
	☐ Marine	☐ Migratory	☐ Altitudinally migrant	

Growth From	Definition
Shrub - size unkno	Perennial shrub (any size), also termed a Phanerophyte if >1m or a Chamaephyte if <1m
Tree - small	Small tree, also termed a Phanerophyte (>1m)

Threats

G. maderensis is not known to be specifically threatened or in decline. However, Madeira's native vegetation is currently threatened by invasive species, mismanagement of pastures and grazing, and tourism development. A recent threat to the laurisilva is the black rat (Rattus rattus), a voracious species adapted to climb trees and feed on wild fruits. The species has been also reported from the coastal areas of Deserta Grande, uninhabited island next to Madeira where the introduction of mammals such as rabbits and goats led to the severe regression of its endemic flora and to heavy erosion along all coastlines. Although the rabbits have now been eradicated, the goats haven't been removed (Bell 2001).

	Past	Present	Future
1 Habitat Loss/Degradation (human induced)	☑	☑	☑
1.1 Agriculture	☑	☑	☑
1.1.5 Abandonment	☑	☑	☑
1.3 Extraction	☑	☐	☐
1.3.3 Wood	☑	☐	☐
1.3.3.2 Selective logging	☑	☐	☐
1.4 Infrastructure development	☑	☑	☑
1.4.2 Human settlement	☑	☑	☑
1.4.3 Tourism/recreation	☑	☑	☑
1.5 Invasive alien species (directly impacting habitat)	☑	☑	☑
2 Invasive alien species (directly affecting the species)	☑	☑	☑
2.2 Predators	☑	☑	☑

Conservation Measures

G. maderensis has been reported from within protected areas across its range such as Parque Natural do Ribeiro Frio and Laurisilva of Madeira, World Heritage Site. It is known to occur in three Botanical Gardens. Seeds have yet to be collected as an ex situ conservation effort (e.g. Millennium Seed Bank Project). In 1995 a conservation project was approved in Deserta Grande called Restoration measures for the terrestrial habitat of Deserta Grande (LIFE95 NAT/P/000125). In October 1997 it was confirmed that all rabbits had been removed from Deserta Grande. However, the other problem species, goat, was not eliminated. It will be necessary to remove all the goats if the eradication of rabbits is to show lasting benefits. (Bell 2001). The removal of browsing animals often opens the way for weeds to become established before the indigenous vegetation gets firmly re-established and this will need to be monitored closely (Bell 2001).

	In Place	Needed
3 Research actions	☐	☑
3.2 Population numbers and range	☐	☑
3.4 Habitat status	☐	☑
3.5 Threats	☐	☑

3.8 Conservation measures	☐	☑
3.9 Trends/Monitoring	☐	☑
4 Habitat and site-based actions	☑	☑
4.2 Restoration	☑	☑
4.4 Protected areas	☑	☐
5 Species-based actions	☐	☑
5.7 Ex situ conservation actions	☐	☑
5.7.2 Genome resource bank	☐	☑

Countries of Occurrence

	PRESENCE							ORIGIN				
	Year Round	Breeding Season only	Non-breeding season only	Passage migrant	Possibly extinct	Extinct	Presence uncertain	Native	Introduced	Re-Introduced	Vagrant	Origin uncertain
Portugal	☑	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐
Madeira	☑	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐

General Habitats	Score	Description	Major Importance
1 Forest	1	Suitable	Unset
1.4 Forest - Temperate	1	Suitable	Unset
6 Rocky areas (eg. inland cliffs, mountain peaks)	1	Suitable	Unset
13 Marine Coastal/Supratidal	1	Suitable	Unset
13.1 Marine Coastal/Supratidal - Sea Cliffs and Rocky Offshore Islands	1	Suitable	Unset

Species Utilisation

☐ Species is not utilised at all

Purpose / Type of Use	Subsistence	National	International
17. Unknown	☑	☑	☑

Trend in the level of wild offtake/harvest in relation to total wild population numbers over the last five years: Unknown

Trend in the amount of offtake/harvest produced through domestication/cultivation over the last five years: Unknown

CITES status: Not listed

IUCN Red Listing

Red List Assessment: (using 2001 IUCN system) Least Concern (LC)

Red List Criteria:

Date Last Seen (only for EX, EW or Possibly EX species):

Is the species Possibly Extinct? ☐ Possibly Extinct Candidate? ☐

Rationale for the Red List Assessment

Although the range is restricted and there is no information about the population trend, it is known to occur in protected areas and is believed to be stable at present. G. maderensis is therefore rated as Least Concern. There are however threats to the habitat such as urbanization and tourism in Madeira and grazing from goats in Deserta Grande. Further monitoring of how these threats might be affecting this species is recommended.

Reason(s) for Change in Red List Category from the Previous Assessment:

- ☐ Genuine Change
  - ☐ Genuine (recent)
  - ☐ Genuine (since first assessment)
- ☐ Nongenuine Change
  - ☐ New information
  - ☐ Knowledge of Criteria
  - ☐ Incorrect data used previously
  - ☐ Taxonomy
  - ☐ Criteria Revisio
  - ☐ Other
- ☐ No Change
  - ☐ Same category and criteria
  - ☐ Same category but change in criteria

Current Population Trend: Stable

Date of Assessment: 21/12/2010

Name(s) of the Assessor(s): Lopez, L.

Evaluator(s):

Notes:

% population decline in the past:

Time period over which the past decline has been measured for applying Criterion A or C1 (in years or generations):

% population decline in the future:

Time period over which the future decline has been measured for applying Criterion A or C1 (in years or generations):

Number of Locations:

Severely Fragmented:

Number of Mature Individuals:

Bibliography

Bell, B.D., 2001, Removal of rabbits from Deserta Grande Island, Madeira Archipelago, Life and Marine Sciences, 115-117, ,

Cannon, M.J. and Turland, N.J., 1994, Teline, Flora of Madeira, J.R. Press and M.J. Short, , HMSO, London

Costa Neves, H., 1999, Restoration measures for the terrestrial habitat of Deserta Grande, , ,

Jardim, R. and Francisco, D., 2000, Flora endemica da Madeira, , Muchia Publicacoes,

Polhill, R.M. and Van Wyk, B-E., 2005, Genistae, Legumes of the World, G.P. Lewis, B. Schrire, B. Mackinder and M. Lock, 283-297, Royal Botanical Gardens, Kew, London

USDA, ARS, National Genetic Resources Program, 2010, Germplasm Resources Information Network - (GRIN)16 June, , National Germplasm Resources Laboratory, Beltsville, Maryland,