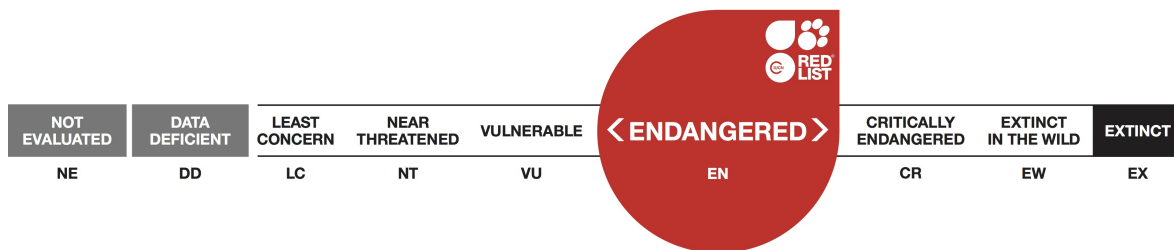


Euconnus azoricus, Ant-like stone beetle

Assessment by: Borges, P.A.V. & Lamelas-López, L.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Coleoptera	Staphylinidae

Taxon Name: *Euconnus azoricus* Franz, 1969

Common Name(s):

- English: Ant-like stone beetle

Taxonomic Source(s):

2016. The Azorean Biodiversity Portal. Available at: <http://azoresbioportal.uac.pt/>.

Assessment Information

Red List Category & Criteria: Endangered B2ab(i,ii,iii,iv,v) [ver 3.1](#)

Year Published: 2018

Date Assessed: January 23, 2017

Justification:

Euconnus azoricus is an endemic species from Terceira, São Miguel and Pico islands (Azores, Portugal) (Borges *et al.* 2010; plus unpublished data), known from Monte Brasil in Terceira, Furnas in São Miguel and Pico Redondo in Pico Island. It has a large extent of occurrence (EOO = ca 7,000 km²) and very small area of occupancy (AOO = 44 km²). There is a continuing decline in the EOO, AOO, extent and quality of habitat as well as the number of mature individuals as a result of major land-use changes in the last 50 years and the recent spread of invasive plants (*Pittosporum undulatum* and *Hedychium gardnerianum*). Therefore, we suggest as future measures of conservation: (1) regular monitoring of the species; and (2) reforestation of areas with native trees. Based upon the heavily fragmented populations and continuing decline of its habitat area and quality, it is assessed as Endangered.

Geographic Range

Range Description:

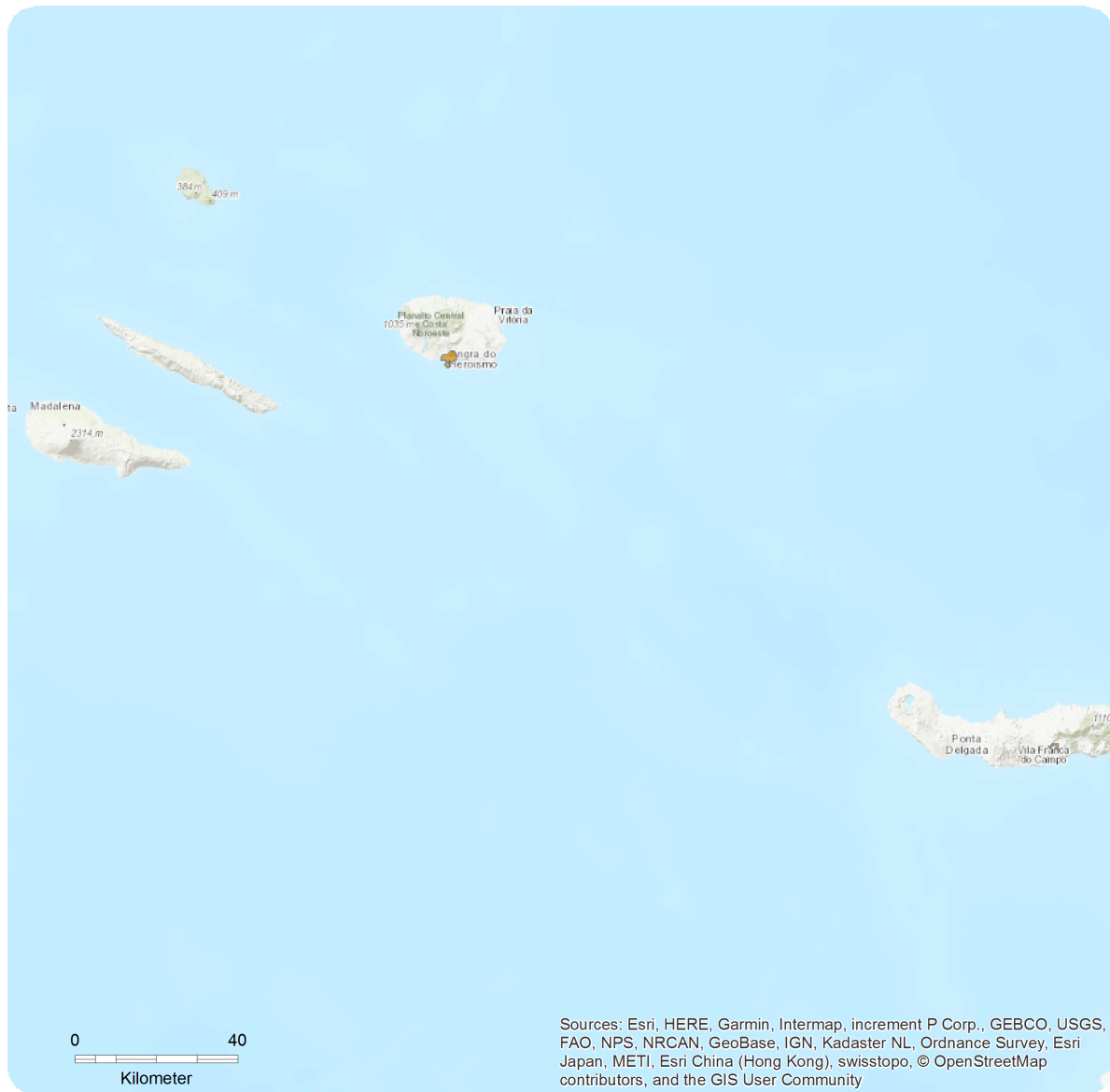
Euconnus azoricus is an endemic species from Terceira, Pico and São Miguel (Azores, Portugal) (Borges *et al.* 2010 and unpublished data), known from Monte Brasil (Terceira), Furnas (São Miguel) and Pico Redondo (Pico). The extent of occurrence (EOO) is ca 7,000 km² and the maximum estimated area of occupancy (AOO) is 44 km².

Country Occurrence:

Native: Portugal (Azores)

Distribution Map

Euconnus azoricus



Range

Extant (resident)

Compiled by:

Paulo Borges



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



Population

The species is only known from three isolated subpopulations, one in Terceira island (Monte Brasil), one in Furnas (São Miguel) and a recent finding in Pico Redondo (Pico Island). A continuing decline in the number of mature individuals is inferred from historical habitat modification. This species can be on the edge of extinction at Terceira island due to major historical changes in its type locality.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

This species occurs in a forest patch with native and exotic vegetation in Terceira island (Monte Brasil), in the highly modified area of Furnas (São Miguel) dominated by *Cryptomeria japonica* plantations and in a fragment of native forest dominated by *Juniperus brevifolia* mixed with planted *Pinus* sp. in Pico Redondo at Pico island. Altitudinal range is between 20 and 800 m. It is a nocturnal predator that lives under bark of native trees and in the soil.

Systems: Terrestrial

Use and Trade

The species is not utilised.

Threats (see Appendix for additional information)

In the past, the species has probably strongly declined due to changes in habitat size and quality (Triantis *et al.* 2010). In the last 50 years the invasive plant *Pittosporum undulatum* spread in the area of Monte Brasil with the major decrease of native trees and shrubs. In Pico island the plantation of *Pinus* sp. mixed within native vegetation may become a problem for the adequate persistence of native plants. In Furnas, spread of *Hedychium gardnerianum* is destroying the habitat, since is changing the habitat structure, namely decreasing the cover of bryophytes and ferns in the soil and promoting the spread of other plants. Based on Ferreira *et al.* (2016) the habitat will further decline as a consequence of climate change (increasing number of droughts and habitat shifting & alteration).

Conservation Actions (see Appendix for additional information)

The species is not protected by regional law. Its habitat is in regionally protected areas (Natural Parks of Pico, Terceira, S. Miguel). Degraded habitats should be restored and a strategy needs to be developed to address the current threat by invasive plants (*Pittosporum undulatum* and *Hedychium gardnerianum*). Further research is needed into its ecology and life history in order to find extant specimens. It is also necessary a area-based management plan and a monitoring plan for the invertebrate community in the habitat in order to contribute to perform a species potential recovery plan. A monitoring every ten years using the BALA protocol will inform about habitat quality (see e.g. Gaspar *et al.* 2011).

Credits

Assessor(s): Borges, P.A.V. & Lamelas-López, L.

Reviewer(s): Danielczak, A.

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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?
1. Forest -> 1.4. Forest - Temperate	Resident	Suitable	Yes
14. Artificial/Terrestrial -> 14.3. Artificial/Terrestrial - Plantations	Resident	Suitable	Yes
0. Root -> 16. Introduced vegetation	Resident	Marginal	-

Threats

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

Threat	Timing	Scope	Severity	Impact Score
10. Geological events -> 10.1. Volcanoes	Future	Whole (>90%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 2. Species Stresses -> 2.1. Species mortality		
11. Climate change & severe weather -> 11.1. Habitat shifting & alteration	Future	Whole (>90%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
11. Climate change & severe weather -> 11.2. Droughts	Ongoing	Whole (>90%)	Slow, significant declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality		
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.1. Small-holder plantations	Ongoing	Minority (50%)	Causing/could cause fluctuations	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.2. Named species (Pittosporum undulatum)	Ongoing	-	-	-
8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.2. Named species (Hedychium gardnerianum)	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		

Conservation Actions in Place

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

Conservation Actions in Place
In-Place Research, Monitoring and Planning
Systematic monitoring scheme: Yes
In-Place Land/Water Protection and Management
Conservation sites identified: Yes, over part of range
Occur in at least one PA: Yes
Percentage of population protected by PAs (0-100): 81-90

Conservation Actions Needed

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

Conservation Actions Needed
2. Land/water management -> 2.1. Site/area management
2. Land/water management -> 2.2. Invasive/problematic species control
2. Land/water management -> 2.3. Habitat & natural process restoration
4. Education & awareness -> 4.1. Formal education
4. Education & awareness -> 4.3. Awareness & communications
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.3. Sub-national level

Research Needed

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

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
2. Conservation Planning -> 2.2. Area-based Management Plan
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km ²): 44

Distribution
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km ²): 7000
Continuing decline in extent of occurrence (EOO): Yes
Extreme fluctuations in extent of occurrence (EOO): Unknown
Number of Locations: 3
Continuing decline in number of locations: Yes
Extreme fluctuations in the number of locations: Unknown
Lower elevation limit (m): 20
Upper elevation limit (m): 800
Population
Continuing decline of mature individuals: Yes
Population severely fragmented: Yes
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 1
Movement patterns: Not a Migrant

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