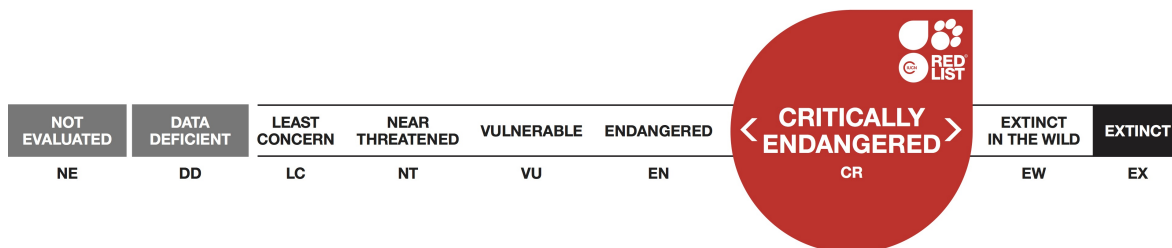


Athous pomboi, Click beetle

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



View on www.iucnredlist.org

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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Coleoptera	Elateridae

Taxon Name: *Athous pomboi* Platia & Borges, 2002

Synonym(s):

- *Athous obsoletus*

Common Name(s):

- English: Click beetle, Wireworm

Taxonomic Source(s):

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

Assessment Information

Red List Category & Criteria: Critically Endangered B1ab(i,ii,iii,iv,v) [ver 3.1](#)

Year Published: 2018

Date Assessed: January 9, 2017

Justification:

Athous pomboi is a single island endemic species restricted to Sta. Maria (Azores, Portugal). It has a small extent of occurrence (EOO = 40 km²) and small area of occupancy (AOO = 40 km²). The species is very rare and known from only a very small native forest fragment (0.09 km²) and some highly disturbed patches dominated by exotic plants. In the past, the species has probably strongly declined due to changes in habitat size and quality. The main current threats to this species are the spread of invasive plants, agriculture activities, *Cryptomeria japonica* pulp plantations management and habitat degradation in the unique site of native forest. 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). Based upon the small extent of occurrence and associated decline in extent of occurrence, area of occupancy and habitat quality it is assessed as Critically Endangered.

Geographic Range

Range Description:

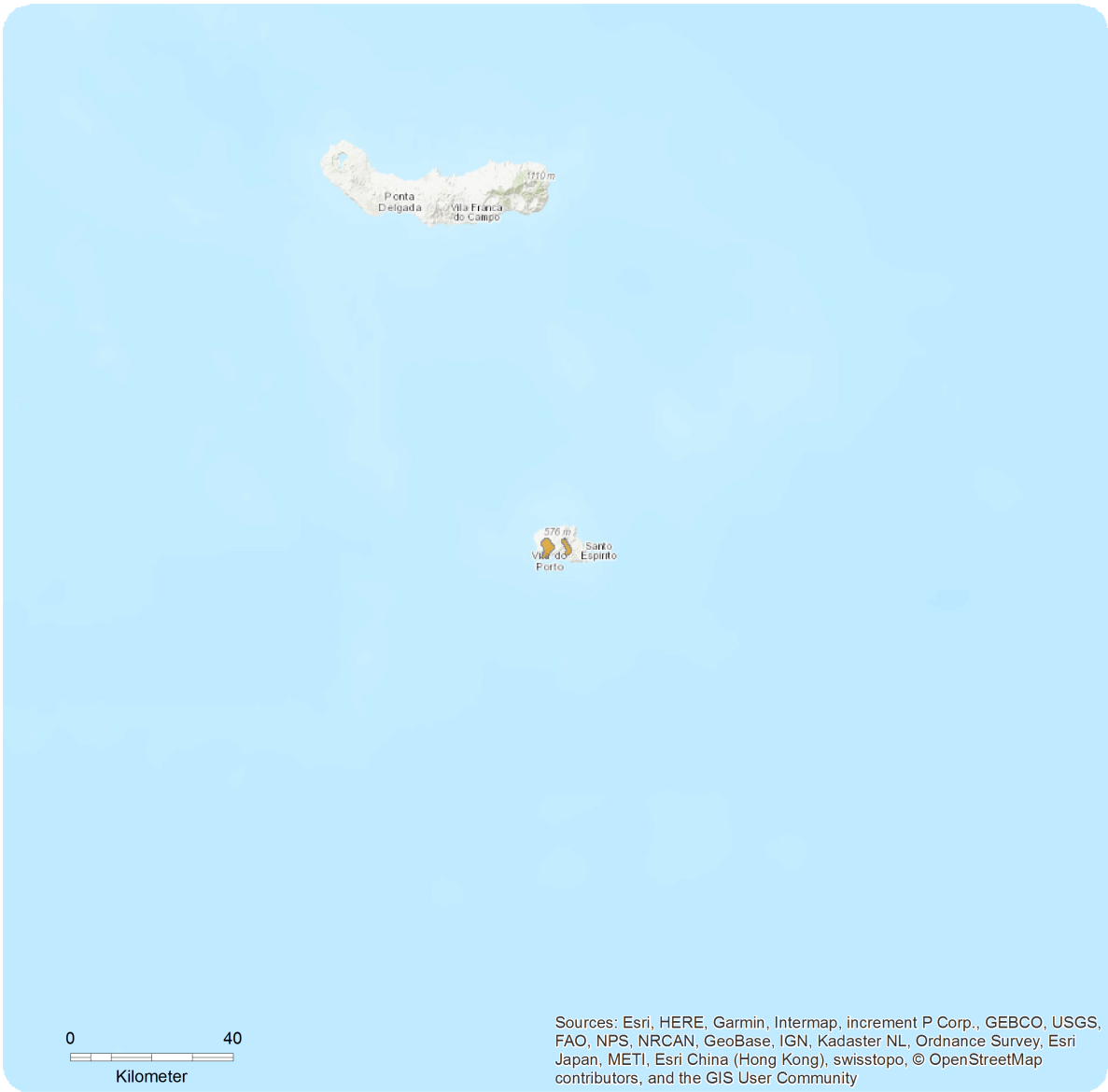
Athous pomboi is a single island endemic species restricted to Sta. Maria (Azores, Portugal) (Borges *et al.* 2010), known from Natural Forest Reserve of Pico Alto. The extent of occurrence (EOO) is 40 km² and the maximum estimated area of occupancy (AOO) is 40 km².

Country Occurrence:

Native: Portugal (Azores)

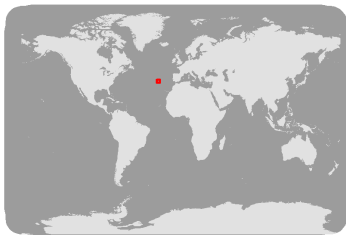
Distribution Map

Athous pomboi



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 very rare in all known locations in Sta. Maria island. A continuing decline in the number of mature individuals is inferred due to small patches and the expansion of invasive plants. This species is assessed here as severely fragmented as it is distributed in small isolated patches in Sta. Maria island. At least 50% of its population can be found in subpopulations/in habitat patches that are 1) smaller than would be required to support a viable population, and 2) separated from other habitat patches by a large distance. In fact, the species occurs in natural forest fragments that are isolated in a sea of pastures and *Cryptomeria japonica* plantations. Most of the locations will be under severe threat in the next 10 years due to the aggressive spread of the invasive plants *Hedychium gardnerianum* and *Pittosporum undulatum*.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

The species occurs in native forests, *Cryptomeria japonica* plantations and *Acacia* spp. exotic forests in S. Maria (Azores), with a range between 100 and 550 m Asl. Adults and larvae are herbivores and feed on plant tissues, being active during the night. Adults are particularly active in summer.

Systems: Terrestrial

Use and Trade

This 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, Terzopoulou et al. 2015). One of the most important ongoing threats to this species is the spread of invasive plants (*Hedychium gardnerianum*), agriculture activities, *Cryptomeria japonica* pulp plantations management and habitat degradation in the unique site of native forest. 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 main native habitat is in a regionally protected area (Natural Park of Santa Maria). Further spread of invasive plants needs to be stopped in order to avoid any future declines of the species. Degraded habitats should be restored and a strategy needs to be developed to address the future threat by climate change. A habitat management plan is needed and anticipated to be developed during the coming years. Further research is needed into its ecology and life history in order to find extant specimens in additional fragments of exotic forest in S. Maria and obtain information on population size, distribution and trends. It is also necessary an 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. 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. & Amorim, I.R.

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
3. Shrubland -> 3.4. Shrubland - Temperate	Resident	Marginal	-
14. Artificial/Terrestrial -> 14.3. Artificial/Terrestrial - Plantations	Resident	Marginal	-
0. Root -> 16. Introduced vegetation	-	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%)	Very rapid declines	Medium impact: 7
	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		
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 -> 8.2. Problematic native species/diseases -> 8.2.2. Named species (Hedychium gardnerianum)	Ongoing	Minority (50%)	Causing/could cause fluctuations	Low impact: 5
	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 Land/Water Protection and Management
Conservation sites identified: Yes, over part of range

Conservation Actions in Place
Occur in at least one PA: Yes
In-Place Education
Subject to recent education and awareness programmes: Yes

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): 40
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km ²): 40
Continuing decline in extent of occurrence (EOO): Yes
Extreme fluctuations in extent of occurrence (EOO): Unknown

Distribution
Number of Locations: 4
Continuing decline in number of locations: Yes
Extreme fluctuations in the number of locations: Unknown
Lower elevation limit (m): 100
Upper elevation limit (m): 550
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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