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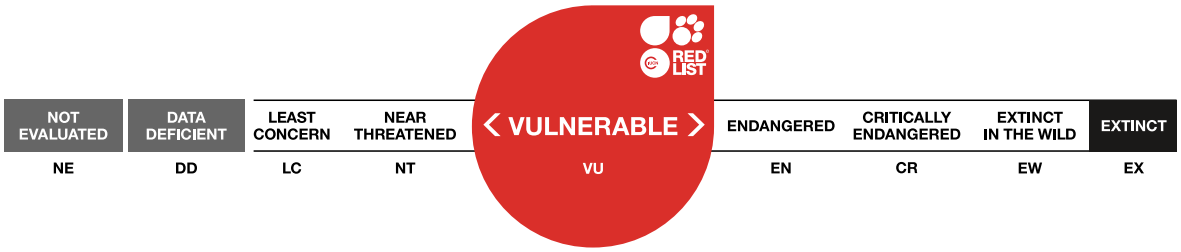
Acorigone acoreensis

Assessment by: Borges, P.A.V. & Cardoso, P.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Arachnida	Araneae	Linyphiidae

Scientific Name: *Acorigone acoreensis* (Wunderlich, 1992)

Synonym(s):

- *Diplocentria acoreensis* Wunderlich, 1992

Taxonomic Source(s):

Platnick, N.I. 2014. The World Spider Catalog, Version 14.5. P. Merrett & H.D. Cameron (eds). American Museum of Natural History. Available at: http://research.amnh.org/iz/spiders/catalog/index.html. (Accessed: 31 March 2014).
Borges, P.A.V. and Wunderlich, J. 2008. Spider biodiversity patterns and their conservation in the Azorean archipelago, with descriptions of new species. *Systematics and Biodiversity* 6(2): 249-282.

Assessment Information

Red List Category & Criteria: Vulnerable B2ab(ii,iii,iv,v) ver 3.1

Year Published: 2021

Date Assessed: September 5, 2017

Justification:

Acorigone acoreensis is a money spider occurring on seven islands of the Azorean archipelago (Azores, Portugal) (only absent in Corvo and Graciosa) (Borges *et al.* 2010). It has a relatively large Extent of Occurrence (EOO = 37,399 km²) and a small Area of Occupancy (AOO = 140-256 km²). This species occurs mainly in Azorean pristine native forest at high elevation sites with forests densely covered by mosses and ferns. Ongoing threats, such as from invasive plant species, are considered to be causing ongoing declines, and so the species is assessed as Vulnerable (VU).

Geographic Range

Range Description:

Acorigone acoreensis is a money spider species occurring on seven islands of the Azorean archipelago (Azores, Portugal) (only absent in Corvo and Graciosa) (Borges *et al*. 2010). Within these seven islands it is known from sixteen Natural Forest Reserves: Caldeiras Funda e Rasa and Morro Alto e Pico da Sé (Natural Park of Flores); Caldeira do Faial (Natural Park of Faial); Mistério da Prainha, Caveiro and Caiado (Natural Park of Pico); Pico Pinheiro and Topo (Natural Park of S. Jorge); Biscoito da Ferraria, Pico Galhardo, Caldeira Guilherme Moniz, Caldeira Sta. Bárbara e Mistérios Negros and Terra Brava (Natural Park of Terceira); Graminhais and Pico da Vara (Natural Park of S. Miguel) and Pico Alto (Natural Park of S. Maria). The Extent of Occurrence (EOO) is 37,399 km^2 and the estimated Area of Occupancy (AOO) is 140-256 km^2.

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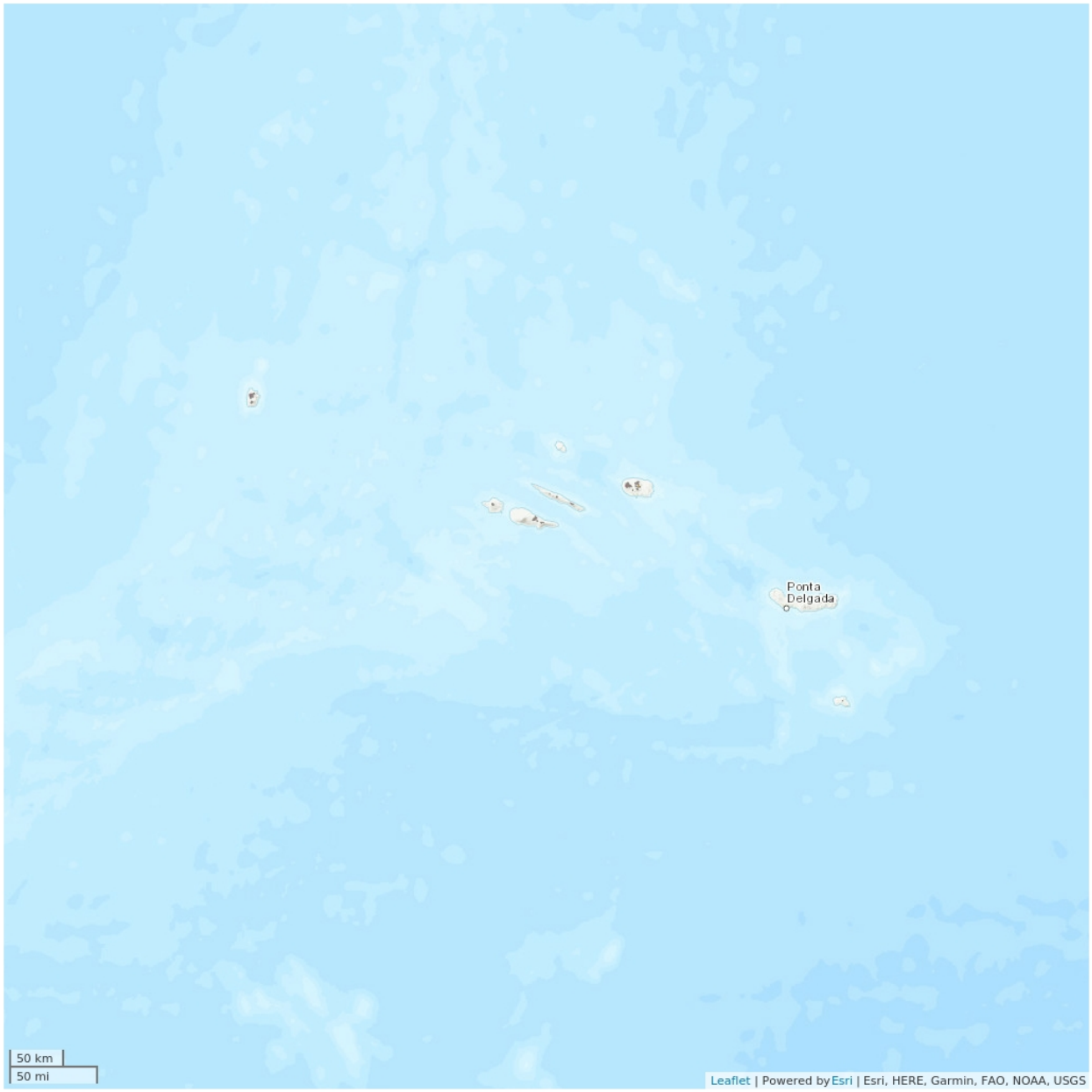
Country Occurrence:

Native, Extant (resident): Portugal (Azores)

Distribution Map



Legend

EXTANT (RESIDENT)

POSSIBLY EXTANT (RESIDENT)

Compiled by:

Azorean Biodiversity Group 2018

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

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Population

This can be considered one of the most abundant endemic Azorean spider species, but it is most abundant in native forest. Due to the ongoing spread of invasive plants, which are changing the structure of the habitat to be unsuitable for this species, there is an inferred decline in mature individuals.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

The species occurs mainly in native forests, building their sheet weaver webs in the canopies of endemic trees. This is a generalist predator that is also frequently found on the trunks of trees associated with mosses and lichens, together with another small generalist beetle predator, the endemic rove beetle, *Atheta dryochares* (Coleoptera, Staphylinidae). It is active during the night and based on long-term data with SLAM traps (Borges *et al.* 2017) it occurs in all seasons, but with adults being dominant in summer and early autumn. The species tends to be more abundant at high elevation sites with pristine forests densely covered by mosses and ferns.

Systems: Terrestrial

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). However, the species seems to have survived in the remaining native forests of the Azores, mostly in high elevation pristine forests. The current main threats are from *Cryptomeria japonica* wood and pulp plantations (mostly in S. Maria island), and the spread of invasive plant species, namely *Hedychium gardnerianum* and *Pittosporum undulatum*, on most islands, and *Clethra arboreal* in S. Miguel, which are changing the structure of the forest and the cover of bryophytes and ferns, with impacts on web construction. Based on Ferreira *et al*. (2016) the habitat will further decline as a consequence of climate change (increasing number of droughts, and habitat shifting and alteration).

Conservation Actions (see Appendix for additional information)

The species is not protected by regional law, but its habitat is in regionally protected areas (Natural Parks of Faial, Flores, Pico, S. Jorge, Terceira, S. Miguel and S. Maria). Degraded habitats in some islands, degraded due to invasive plant species, should be restored (e.g. S. Maria) and a strategy needs to be developed to address the current threat posed by invasive species on all islands, and the future threat from climate change. A habitat management plan is needed and one is anticipated to be developed during the coming years. Formal education and awareness are needed to allow future investments in restored habitats invaded by invasive plants; while further research is needed into its ecology and life history in order to obtain adequate information on population size, distribution and trends. It is also necessary an area-based management plan for some disturbed sites and a monitoring plan for the wider invertebrate community in its habitat in order to contribute to a potential future species recovery plan. Monitoring every ten years using the BALA protocol will inform about habitat quality (see e.g. Gaspar *et al*. 2011).

Credits

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Authority/Authorities: IUCN SSC Spider and Scorpion Specialist Group

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Disclaimer

External Resources

For Supplementary Material, and 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	Suitable	No

Threats

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

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.1. Small-holder plantations	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 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 (Clethra arborea)	Ongoing	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 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	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 2. Species Stresses -> 2.1. Species mortality		
8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.2. Named species (Hedychium gardnerianum)	Ongoing	Whole (>90%)	Slow, significant declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
11. Climate change & severe weather -> 11.1. Habitat shifting & alteration	Future	Whole (>90%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		

		2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
11. Climate change & severe weather -> 11.2. Droughts	Future	Whole (>90%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		

Conservation Actions in Place

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

Conservation Action in Place
In-place research and monitoring
Action Recovery Plan: No
Systematic monitoring scheme: Yes
In-place land/water protection
Conservation sites identified: Yes, over entire range
Percentage of population protected by PAs: 81-90
Area based regional management plan: No
Occurs in at least one protected area: Yes
Invasive species control or prevention: Yes

Conservation Actions Needed

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

Conservation Action Needed
1. Land/water protection -> 1.1. Site/area protection
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)

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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) (km²): 140-256
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km²): 37399
Continuing decline in extent of occurrence (EOO): No
Extreme fluctuations in extent of occurrence (EOO): No
Number of Locations: 10
Continuing decline in number of locations: Yes
Extreme fluctuations in the number of locations: No
Lower elevation limit (m): 340
Upper elevation limit (m): 1,092
Population
Continuing decline of mature individuals: Yes
Population severely fragmented: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 0.5

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The IUCN Red List Partnership

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.