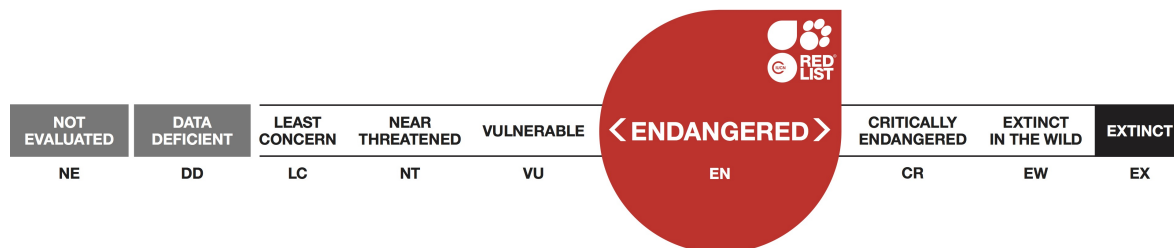


Eudarcia atlantica, Moth

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



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Lepidoptera	Tineidae

Taxon Name: *Eudarcia atlantica* Henderickx, 1995

Common Name(s):

- English: Moth

Taxonomic Source(s):

De Jong, Y., Verbeek, M., Michelsen, V., Bjørn, P.P., Los, W., Steeman, F., Bailly, N., Basire, C., Chylarecki, P., Stloukal, E., Hagedorn, G., Wetzell, F.T., Glöckler, F., Kroupa, A., Korb, G., Hoffmann, A., Häuser, C., Kohlbecker, A., Müller, A., Güntsch, A., Stoev, P. and Penev, L. 2014. Fauna Europaea – all European animal species on the web. *Biodiversity Data Journal* 2: e4034. DOI: 10.3897/BDJ.2.e4034.

Assessment Information

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

Year Published: 2018

Date Assessed: March 24, 2017

Justification:

Eudarcia atlantica is an endemic species present in Faial, Terceira and S. Miguel islands (Azores, Portugal) (Borges *et al.* 2010). It has a relatively small area of occupancy (AOO = 36 km²) and a large extent of occurrence (EOO = ca 7,600 km²). The species is widespread and often found on walls and rocks in the coastal habitats with green algae, which grow along with lichens on shaded rocks. Based on Ferreira *et al.* (2016) the habitat will decline as a consequence of climate change (increasing number of droughts). Based on its small AOO, small number of locations and a continuing decline in AOO and EOO this species is assessed as Endangered.

Geographic Range

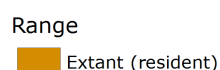
Range Description:

Eudarcia atlantica is an endemic species present in Faial, Terceira and S. Miguel islands (Azores, Portugal) (Borges *et al.* 2010), known from from costal rocks. Only known from one Natural Forest Reserve at Caldeira do Faial (Faial). The extent of occurrence (EOO) is ca 7,600 km² and the maximum estimated area of occupancy (AOO) is 36 km².

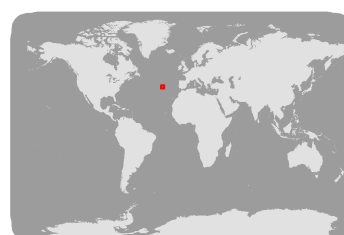
Country Occurrence:

Native: Portugal (Azores)

Eudarcia atlantica



NE DD LC NT VU **< EN >** CR EW EX
ENDANGERED



Population

The species is widespread and often found on walls and rocks in the coastal habitats with green algae, which grow along with lichens on shaded rocks (Henderickx 1995). It presents a stable population.

Current Population Trend: Stable

Habitat and Ecology (see Appendix for additional information)

Eudarcia atlantica occurs in three Azorean islands (Faial, Terceira and S. Miguel). The larvae live in a portable case that is covered with sand and soil particles, and feed on green algae which grow along with lichens on black lava rocks; larval cases are often found on walls and rocks in the coastal area (Henderickx 1995). Since only females were found, the possibility of parthenogeny was considered by Henderickx 1995. According to this author, larvae and pupae were collected in July, imagoes were obtained in August-September. From larvae collected in April in S. Miguel adults emerged in May and June (O. Karsholt, unpubl.). Altitudinal range: 10-200 m.

Systems: Terrestrial

Use and Trade

The species is not utilised.

Threats (see Appendix for additional information)

In the past, the species has probably declined due to changes in habitat size and quality, mostly the creation of pastures (Triantis et al., 2010). Currently invasive plants *Carpobrotus edulis* and *Hedychium gardnerianum* are changing some of the areas and decreasing the quality of the habitat. These changes are decreasing the relative cover of endemic plants and changing the soil cover (decreasing the cover of bryophytes and ferns). 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. Further research is needed to monitor the species and conservation measures to control the invasive *Hedychium gardnerianum* and *Carpobrotus edulis* should be implemented to improve habitat quality for this species. Additional research is needed into its ecology and life history in order to find extant specimens. Degraded habitats should be restored and a strategy needs to be developed to address the future threat by climate change. It is necessary a monitoring plan for the invertebrate community in the habitat in order to contribute to the conservation of this species. A habitat management plan is needed and anticipated to be developed during the coming years.

Credits

Assessor(s): Vieira, V. & Borges, P.A.V.

Reviewer(s): Danielczak, A.

Contributor(s): Nunes, R. & Lamelas-López, L.

Bibliography

Borges, P.A.V., Costa, A., Cunha, R., Gabriel, R., Gonçalves, V., Martins, A.F., Melo, I., Parente, M., Raposeiro, P., Rodrigues, P., Santos, R.S., Silva, L., Vieira, P. & Vieira, V. 2010. *A list of the terrestrial and marine biota from the Azores*. Princípiã, Cascais.

Ferreira, M.T., Cardoso, P., Borges, P.A.V., Gabriel, R., Azevedo, E.B., Reis, F., Araújo, M.B. and Elias, R.B. 2016. Effects of climate change on the distribution of indigenous species in oceanic islands (Azores). *Climate Change* 138: 603-615.

Henderickx, H. 1995. A new Eudarcia-species from Terceira (Azores): *Eudarcia atlantica* n. sp. (Lepidoptera: Tineidae). *Phegea* 23(2): 105-112.

IUCN. 2018. The IUCN Red List of Threatened Species. Version 2018-1. Available at: www.iucnredlist.org. (Accessed: 28 June 2018).

Triantis, K.A., Borges, P.A.V., Ladle, R.J., Hortal, J., Cardoso, P., Gaspar, C., Dinis, F., Mendonça, E., Silveira, L.M.A., Gabriel, R., Melo, C., Santos, A.M.C., Amorim, I.R., Ribeiro, S.P., Serrano, A.R.M., Quartau, J.A. and Whittaker, R.J. 2010. Extinction debt on oceanic islands. *Ecography* 33: 285-294.

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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?
0. Root -> 6. Rocky areas (eg. inland cliffs, mountain peaks)	Resident	Suitable	Yes
13. Marine Coastal/Supratidal -> 13.1. Marine Coastal/Supratidal - Sea Cliffs and Rocky Offshore Islands	Resident	Suitable	Yes

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		
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 -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	Minority (50%)	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		
8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.2. Named species (<i>Hedychium gardnerianum</i>)	Ongoing	Majority (50-90%)	Slow, significant 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 -> 8.2. Problematic native species/diseases -> 8.2.2. Named species (<i>Carpobrotus edulis</i>)	Ongoing	Minority (50%)	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 |
|---|

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: No
In-Place Land/Water Protection and Management
Occur in at least one PA: No
Percentage of population protected by PAs (0-100): 0

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
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km ²): 36
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km ²): 7600
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): 10
Upper elevation limit (m): 200
Population
Continuing decline of mature individuals: No
Population severely fragmented: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: No
Movement patterns: Not a Migrant

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