

Tinea poecilella

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Citation: Vieira, V. & Borges, P.A.V. 2017. *Tinea poecilella*. *The IUCN Red List of Threatened Species 2017*: e.T97239786A99166959. <http://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T97239786A99166959.en>

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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Lepidoptera	Tineidae

Taxon Name: *Tinea poecilella* Rebel, 1940

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: Critically Endangered B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v) [ver 3.1](#)

Year Published: 2017

Date Assessed: March 25, 2017

Justification:

Tinea poecilella is an endemic species from Furnas, S. Miguel island (Azores, Portugal) (Rebel 1940, Borges *et al.* 2010). It has a very small extent of occurrence (EOO = 8 km²) and area of occupancy (AOO = 8 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 change in the last 60 years and recent spread of invasive species. Main recent past and ongoing threats is the invasive plant *Hedychium gardnerianum* that is changing the habitat. Based on Ferreira *et al.* (2016) the habitat will further decline as a consequence of climate change (increasing number of droughts). Based upon the small geographic range of the species with only one location and continuing decline of its habitat area and quality, it is assessed as Critically Endangered.

Geographic Range

Range Description:

Tinea poecilella is a single island endemic species from S. Miguel island (Azores, Portugal) (Rebel 1940, Borges *et al.* 2010), known only from Furnas. The extent of occurrence (EOO) is 8 km² and the maximum estimated area of occupancy (AOO) is 8 km².

Country Occurrence:

Native: Portugal (Azores)

Distribution Map

Tinea poecilella



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

Like other species of the genera, possibly it occurs in houses, outbuildings, granaries and bird nests throughout Furnas, S. Miguel island. However, this species has not been registered by local taxonomists in recent years.

Current Population Trend: Unknown

Habitat and Ecology (see Appendix for additional information)

This species occurs probably in the historical location (Furnas, S. Miguel island). Like other species of the genera, possibly it occurs in houses, outbuildings, granaries and bird nests. A female was recorded in May (Rebel 1940). Altitudinal range: 200-400 m Asl.

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 (Triantis *et al.* 2010). In the last 50 years additional major land-use changes occurred in the historical location, and the spread of invasive species is a major threat namely *Hedychium gardnerianum*. These changes are decreasing the relative cover of endemic plants and changing the soil cover (decreasing the cover of bryophytes and ferns). Residential development can also be a problem for this species. 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. Further 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.

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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?
1. Forest -> 1.4. Forest - Temperate	Resident	Suitable	Yes
14. Artificial/Terrestrial -> 14.5. Artificial/Terrestrial - Urban Areas	Resident	Suitable	No

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		
1. Residential & commercial development -> 1.3. Tourism & recreation areas	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		
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 (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: 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
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): 8
Continuing decline in area of occupancy (AOO): Yes

Distribution
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km ²): 8
Continuing decline in extent of occurrence (EOO): Yes
Extreme fluctuations in extent of occurrence (EOO): Unknown
Number of Locations: 1
Continuing decline in number of locations: Yes
Extreme fluctuations in the number of locations: Unknown
Lower elevation limit (m): 200
Upper elevation limit (m): 400
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): 1
Movement patterns: Not a Migrant

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