

## *Minicia floresensis*

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## Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Arachnida	Araneae	Linyphiidae

**Scientific Name:** *Minicia floresensis* 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).

## Assessment Information

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

**Year Published:** 2021

**Date Assessed:** October 14, 2017

### Justification:

*Minicia floresensis* is an endemic money spider species occurring on five islands of the Azorean archipelago (Azores, Portugal) (Flores, Pico, S. Jorge, Terceira and S. Miguel) (Borges *et al.* 2010). It has an Extent of Occurrence (EOO) of ca. 20,000-20,598 km<sup>2</sup> and a small Area of Occupancy (AOO) of 152-224 km<sup>2</sup>. The species is only abundant in very pristine sites (e.g. sites with a high habitat quality index *sensu* Gaspar *et al.* 2011) and is rare in most sites. Currently an invasive plant, *Hedychium gardnerianum*, is impacting some of the areas where this species occurs, decreasing the quality of the habitat. Based on Ferreira *et al.* (2016) the habitat will further decline as a consequence of climate change. Based upon the inferred decline in AOO, the decline in the quality and structure of habitat in some islands and number of locations the species is assessed as Vulnerable (VU). We suggest as future measures of conservation: (1) regular monitoring of the species; and (2) control of invasive species namely *Hedychium gardnerianum*.

## Geographic Range

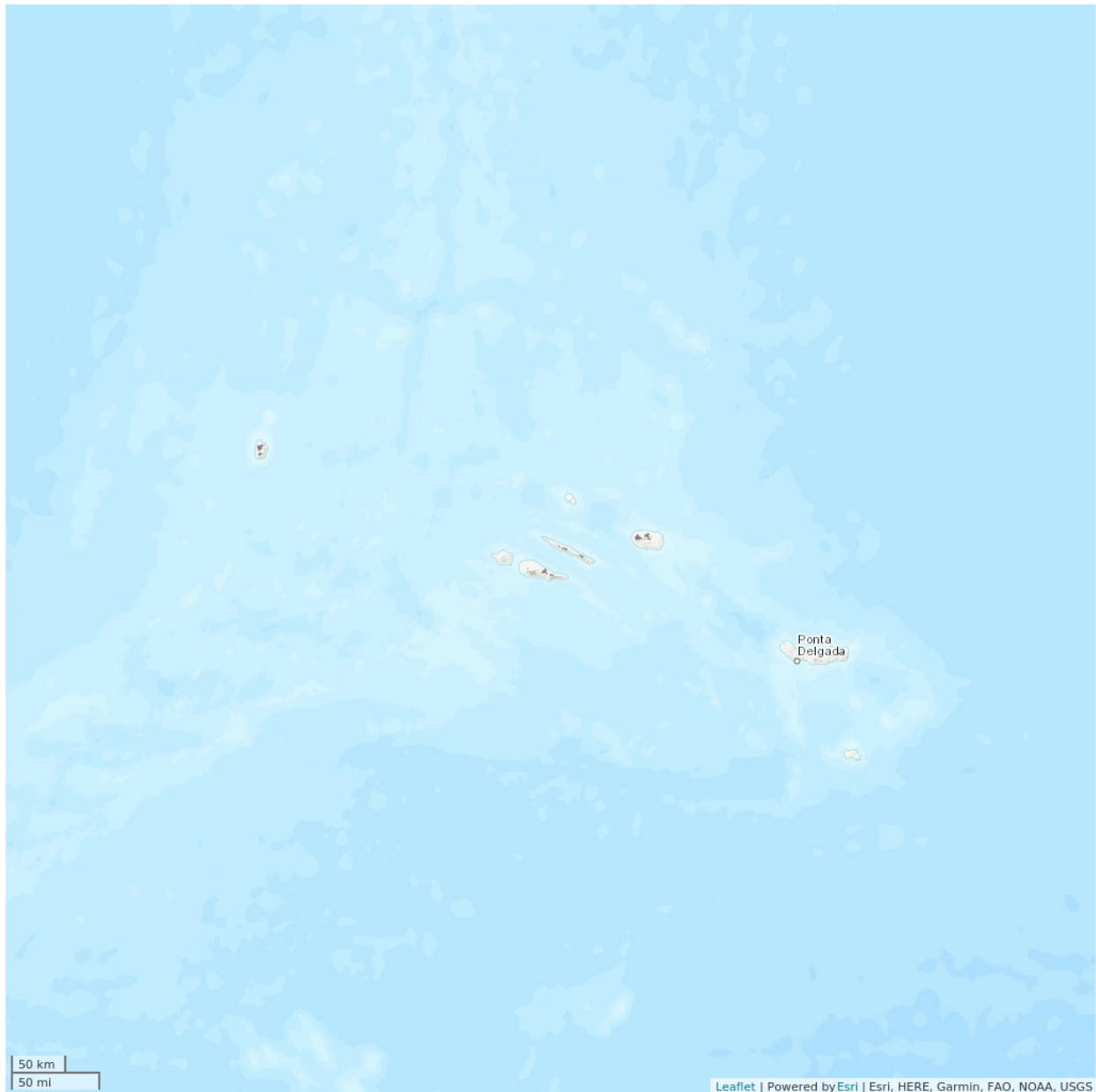
### Range Description:

*Minicia floresensis* is an endemic money spider species occurring on five islands of the Azorean archipelago (Azores, Portugal) (Flores, Pico, S. Jorge, Terceira and S. Miguel) (Borges *et al.* 2010). Within these five islands it is known from thirteen Natural Forest Reserves: Caldeiras Funda e Rasa and Morro Alto e Pico da Sé (Natural Park of Flores); 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 Sta. Bárbara e Mistérios Negros and Terra Brava (Natural Park of Terceira); Graminhais and Pico da Vara (Natural Park of S. Miguel). The Extent of Occurrence (EOO) is ca. 20,000-20,598 km<sup>2</sup> and the estimated Area of Occupancy (AOO) is 152-224 km<sup>2</sup>.

### Country Occurrence:

**Native, Extant (resident):** Portugal (Azores)

# Distribution Map

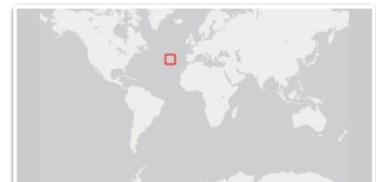


## Legend

- 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.



## Population

The species is only abundant in very pristine sites (e.g. sites with a high habitat quality index *sensu* Gaspar *et al.* 2011) and is rare in most sites. Despite the fact that *Minicia floresensis* has been recorded between 340 and 1,092 m elevation, the species is particularly abundant only between 700 and 1,092 m. Many of the known sites are currently being invaded by invasive plants (e.g. *Hedychium gardnerianum*), and a continuing decline in the number of mature individuals is inferred from monitoring schemes (Borges *et al.* 2016) and from the ongoing habitat degradation.

**Current Population Trend:** Decreasing

## Habitat and Ecology (see Appendix for additional information)

Despite the fact that this species has been recorded between 340 and 1,092 m elevation, *Minicia floresensis* is particularly abundant only between 700 and 1,092 m in very pristine sites (see Gaspar *et al.* 2011). This species builds its typical sheet-webs in association with herbaceous vegetation and is particularly abundant in *Calluna vulgaris*. It is frequent in open spaces in forest, high elevation small patches of natural grasslands and bogs.

**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). Currently, the rapid advance and expansion of invasive plants species is the major threat (particularly *Hedychium gardnerianum*), which is changing the structure of the forest and natural grasslands and the cover of bryophytes and ferns in the soil, which will impact the species' habitat quality. Ongoing soil erosion due to trampling by dairy cattle (cattle are entering the native areas in Flores and S. Jorge island without control by the Conservation Managers) is also occurring. 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 several regionally protected areas (Natural Parks of Flores, Pico, São Jorge, Terceira and S. Miguel). Degraded areas, degraded due to invasive plant species, should be restored and a strategy needs to be developed to address the current threats posed by invasive species and trampling by dairy cattle, as well the future threat of climate change. Formal education and awareness are needed to allow future investments in restored habitats invaded by invasive plants and to ensure better management of cows. Additionally, further research is needed into its ecology and life history in order to find additional specimens in other areas of native habitats and obtain adequate information on population size, distribution and trends. An area-based management plan is also necessary for the most disturbed sites including invertebrate monitoring to contribute to a potential 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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## External Resources

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# 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	Yes
4. Grassland -> 4.4. Grassland - Temperate	Resident	Suitable	Yes
5. Wetlands (inland) -> 5.4. Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands	Resident	Suitable	Yes

## Threats

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

Threat	Timing	Scope	Severity	Impact Score
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 -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 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%)	Very rapid declines	High impact: 8
	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 -> 11.1. Habitat shifting & alteration	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		
11. Climate change & severe weather -> 11.2. Droughts	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		

## Conservation Actions in Place

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

<b>Conservation Action in Place</b>
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: 91-100
Occurs in at least one protected area: Yes

## Conservation Actions Needed

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

<b>Conservation Action Needed</b>
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>)

<b>Research Needed</b>
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

<b>Distribution</b>
Estimated area of occupancy (AOO) (km <sup>2</sup> ): 152-224
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): No
Estimated extent of occurrence (EOO) (km <sup>2</sup> ): 20000-20598
Continuing decline in extent of occurrence (EOO): Yes
Extreme fluctuations in extent of occurrence (EOO): No
Number of Locations: 8
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
<b>Population</b>
Continuing decline of mature individuals: Yes
Population severely fragmented: No
<b>Habitats and Ecology</b>
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 1

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