The IUCN Red List of Threatened Species™
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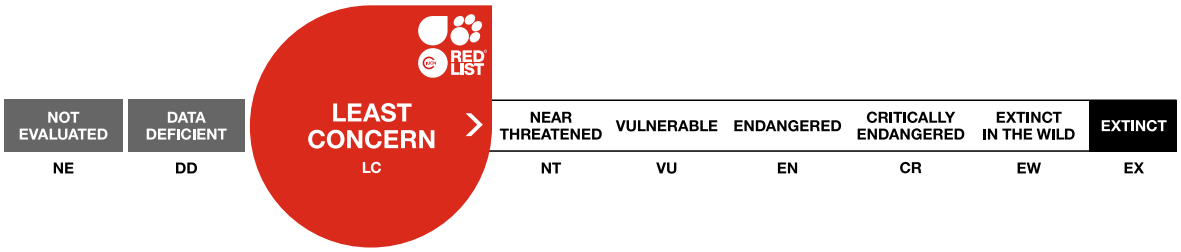
IUCN 2021: T124926337A124930826
Scope(s): Global
Language: English

Tipula macaronesica

Assessment by: Nunes, R. & Borges, P.A.V.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Diptera	Tipulidae

Scientific Name: *Tipula macaronesica* Savchenko, 1961

Assessment Information

Red List Category & Criteria: Least Concern ver 3.1

Year Published: 2021

Date Assessed: March 29, 2018

Justification:

Tipula macaronesica is an endemic fly species of the Azores (Portugal), present on Corvo, Faial, Pico, Graciosa, S. Jorge, Terceira, S. Miguel and Santa Maria islands. This species has a large Extent of Occurrence (34,620 km^2), and potentially a small Area of Occupancy (120 km^2), but this is likely an underestimate. This species seems to be widespread in a variety of native and disturbed habitats, likely occurring in sixteen Natural Forest Reserves. It is possible that this species has declined in the past as a result of human activity and of invasive plant species that change the soil characteristics and humidity. Based on Ferreira *et al.* (2016) the habitat will probably decline as a consequence of climate change (increasing number of droughts). The present situation of this species needs to be further assessed and further research is needed into its population, distribution, threats, ecology and life history; while conservation/restoration of native forests, as well as invasive species control could potentially aid this species' conservation. However, even though there is a paucity of recent data regarding this species' population, distribution, threats and ecology, this species is unlikely to warrant listing as threatened under any criterion, and so it is listed as Least Concern.

Geographic Range

Range Description:

Tipula macaronesica is an Azorean-endemic crane fly species present on the islands of Corvo, Faial, Pico, Graciosa, S. Jorge, Terceira, S. Miguel and Santa Maria (Azores, Portugal) (Borges *et al.* 2010). It occurs in native and disturbed habitats. Within these islands, according to Borges *et al.* (2010) it is known from all sixteen Natural Forest Reserves: Caldeira do Faial and Cabeço do Fogo (Faial); Mistério da Prainha, Caveiro and Caiado (Pico); Pico Pinheiro and Topo (S. Jorge); Biscoito da Ferraria, Pico Galhardo, Caldeira Guilherme Moniz, Caldeira Sta. Bárbara e Mistérios Negros and Terra Brava (Terceira); Atalhada, Graminhais and Pico da Vara (S. Miguel) and Pico Alto (Sta. Maria). The Extent of Occurrence (EOO) is ca. 34,620 km^2 and the minimum estimated Area of Occupancy (AOO) is ca 120 km^2.

Country Occurrence:

Native, Extant (resident): Portugal (Azores)

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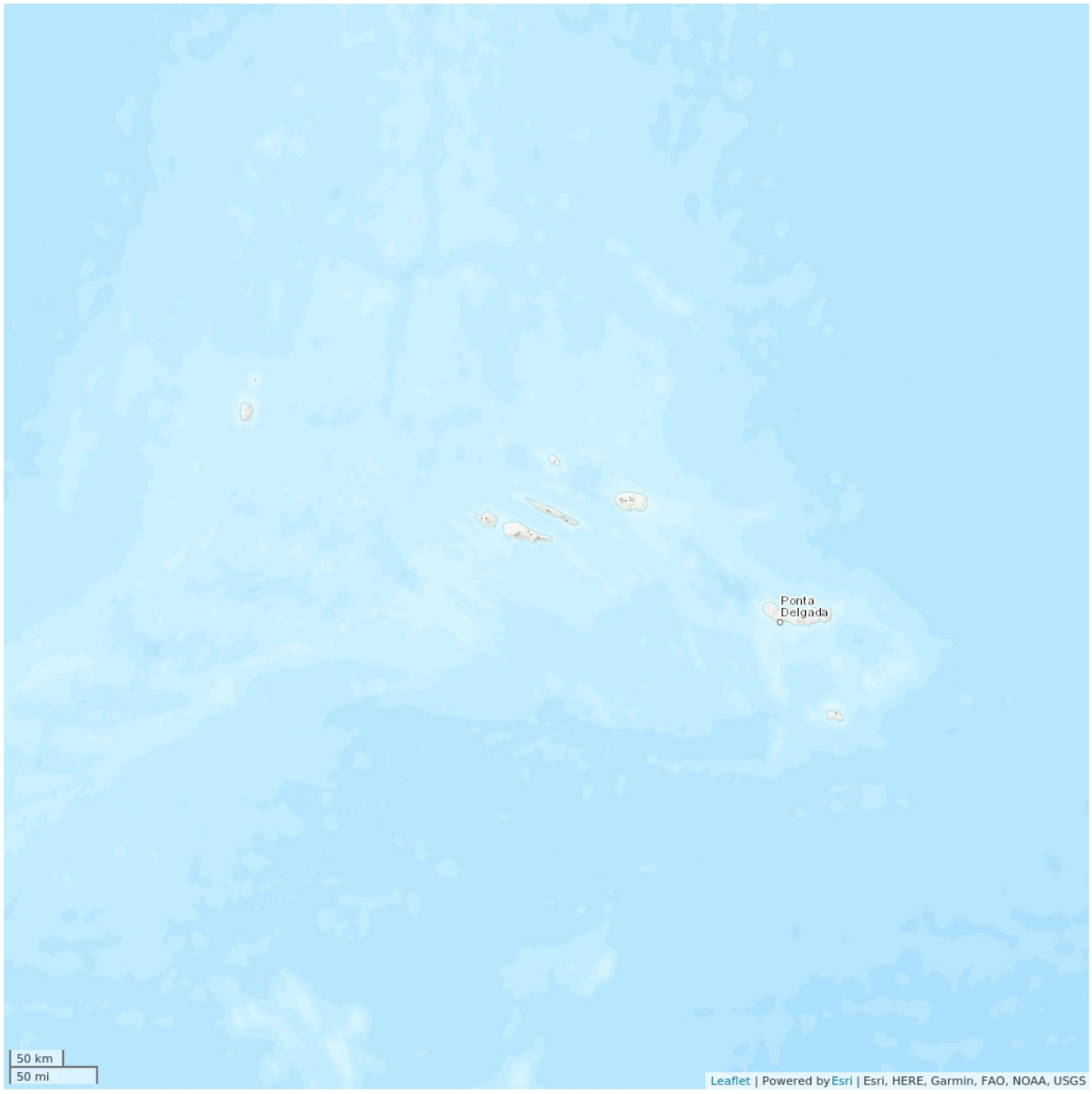
Distribution Map



Legend

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

No current population size estimates exist for this species. According to Borges *et al.* (2010) this species is relatively widespread through the archipelago, in a wide variety of habitats, which might be assumed as and indicator of a stable population.

Current Population Trend: Stable

Habitat and Ecology (see Appendix for additional information)

The ecology and traits of this species are poorly known. Tipulid larvae are present in many kinds of freshwater, semiaquatic or moist terrestrial habitats (mosses, leaf litter, humus rich soil, decaying organic matter, and so forth) (McAlpine *et al.* 1981). Larvae can be phytophagous, saprophagous (playing an important role in the soil ecosystem) or predatory. Adults of most tipulid flies have short life-spans and do not feed. The larvae of other species of the genus *Tipula* (*T. paludosa* and *T. oleracea*) can be considered agricultural pests, feeding on the roots of economically important crop species or lawns and ornamental plants. This species seems to be present in a wide variety of native and disturbed habitats.

Systems: Terrestrial, Freshwater (=Inland waters)

Threats (see Appendix for additional information)

A lack of information regarding the present status of this species precludes a complete assessment of potential threats. Nevertheless, from the ecology of the Tipulidae family and known habitat preferences, it is assumed that this species has probably declined due to changes in habitat size and quality, mostly due to human action. Currently, invasive plants like *Pittosporum undulatum* 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 and moisture (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 and alteration)

Conservation Actions (see Appendix for additional information)

The species is not protected by regional law, but its habitat includes regionally protected areas (Natural Parks of Corvo, Faial, Graciosa, Pico, S. Jorge, Terceira, S. Miguel and Sta. Maria). Degraded habitats outside protected areas should be restored and a strategy needs to be developed to address the future threat from climate change. Also, the present situation of this species needs to be further assessed and further research is needed into its population, distribution, threats, ecology and life history.

Credits

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

Reviewer(s): Russell, N.

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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?
5. Wetlands (inland) -> 5.4. Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands	Resident	Suitable	Yes
5. Wetlands (inland) -> 5.7. Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)	Resident	Suitable	Yes
5. Wetlands (inland) -> 5.8. Wetlands (inland) - Seasonal/Intermittent Freshwater Marshes/Pools (under 8ha)	Resident	Suitable	Yes

Threats

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

Threat	Timing	Scope	Severity	Impact Score
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%)	Slow, significant declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		
8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.2. Named species (Pittosporum undulatum)	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		
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 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		
11. Climate change & severe weather -> 11.2. Droughts	Future	Majority (50-90%)	Slow, significant declines	Low impact: 4
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		

Conservation Actions in Place

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

Conservation Action in Place
In-place research and monitoring

Conservation Action in Place
Action Recovery Plan: No
Systematic monitoring scheme: No
In-place land/water protection
Occurs in at least one protected area: Yes

Conservation Actions Needed

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

Conservation Action Needed
2. Land/water management -> 2.1. Site/area management
2. Land/water management -> 2.3. Habitat & natural process restoration
5. Law & policy -> 5.1. Legislation -> 5.1.3. 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
1. Research -> 1.5. Threats
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km^2): 120
Continuing decline in area of occupancy (AOO): Unknown
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km^2): 34620
Continuing decline in extent of occurrence (EOO): Unknown
Extreme fluctuations in extent of occurrence (EOO): Unknown
Extreme fluctuations in the number of locations: Unknown
Lower elevation limit (m): 10

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Distribution
Upper elevation limit (m): 1,000
Population
Continuing decline of mature individuals: Unknown
Extreme fluctuations: Unknown
Population severely fragmented: Unknown

The IUCN Red List Partnership

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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.