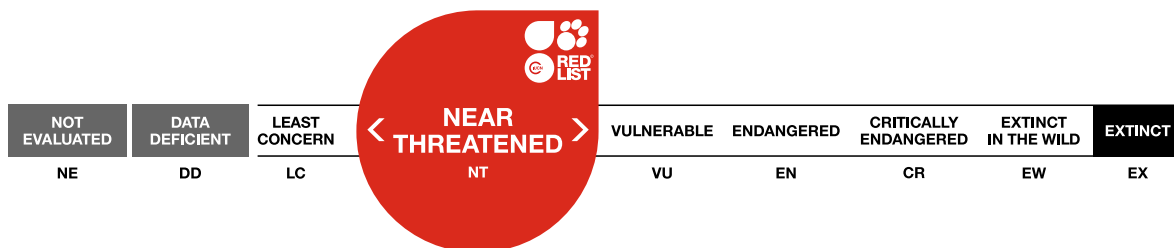


Sphaerophoria nigra

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



View on www.iucnredlist.org

Citation: Nunes, R., Ssymank, A. & Borges, P.A.V. 2021. *Sphaerophoria nigra*. *The IUCN Red List of Threatened Species* 2021: e.T124922581A124930811. <https://dx.doi.org/10.2305/IUCN.UK.2021-1.RLTS.T124922581A124930811.en>

Copyright: © 2021 International Union for Conservation of Nature and Natural Resources

Reproduction of this publication for educational or other non-commercial purposes is authorized without prior written permission from the copyright holder provided the source is fully acknowledged.

Reproduction of this publication for resale, reposting or other commercial purposes is prohibited without prior written permission from the copyright holder. For further details see [Terms of Use](#).

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](#).

If you see any errors or have any questions or suggestions on what is shown in this document, please provide us with [feedback](#) so that we can correct or extend the information provided.

Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Diptera	Syrphidae

Scientific Name: *Sphaerophoria nigra* Frey, 1945

Identification Information:

Sphaerophoria nigra is unique within the genus *Sphaerophoria* with a completely black thorax and abdomen with the exception of the yellow scutellum. Males can also be distinguished from rare other melanistic specimens of *Sphaerophoria* with the male genitalia figured in Vockeroth (1971)

Assessment Information

Red List Category & Criteria: Near Threatened B1b(iii)+2b(iii) [ver 3.1](#)

Year Published: 2021

Date Assessed: March 29, 2018

Justification:

Sphaerophoria nigra is an endemic species from the Azores (Portugal), with historical and recent records in Flores, Faial, Pico, S. Jorge, Terceira and S. Miguel islands. It is apparently widespread through natural and man-made/disturbed habitats, and occurs in areas that are currently Nature Reserves. This species has an extent of occurrence of 22,957 km², although the area of occupancy is small (152 km²). It is possible that this species has declined in the past as a result of human activity, even if apparently adapted to artificial habitats and also associated with introduced vegetation. The present situation of this species needs to be assessed and further research is needed into its population, distribution, threats, ecology and life history; and conservation of native habitats could potentially aid this species conservation. Overall, precautionarily, this species is assessed as Near Threatened.

Geographic Range

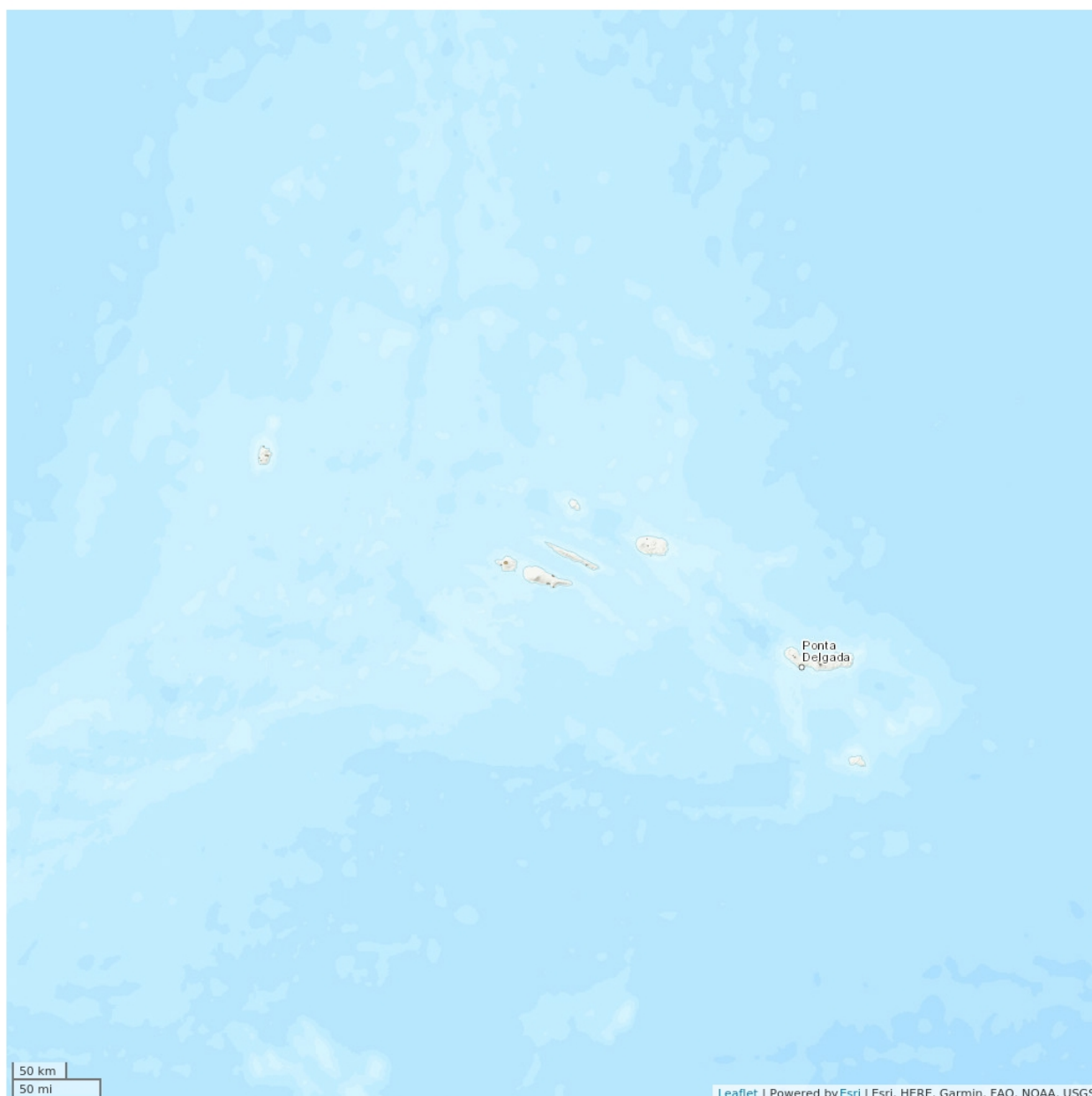
Range Description:

Sphaerophoria nigra is a hoverfly species, described from the islands of Flores, Faial, Pico, S. Jorge, Terceira and S. Miguel (Azores, Portugal) (Frey 1945, Borges *et al.* 2010). It is known from several distinct habitats, some degraded, but also from areas that are Nature Reserves (Caldeira do Faial - Faial and Pico da Vara - S. Miguel). Based on the old historical data and more recent records, the extent of occurrence (EOO) is ca. 22,957 km² and the estimated area of occupancy (AOO) is ca. 152 km².

Country Occurrence:

Native, Extant (resident): Portugal (Azores)

Distribution Map

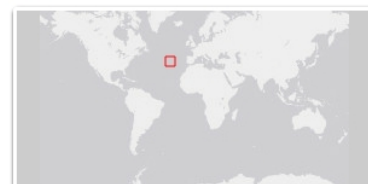


Legend

■ 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. Nevertheless, this species is relatively widespread through the archipelago, in a wide variety of habitats, which might be assumed as an indicator of a stable population. However, some fluctuations can be assumed in aphidophagous species with a wide range of suitable habitats.

Current Population Trend: Stable

Habitat and Ecology (see Appendix for additional information)

The ecology and traits of this species are unknown. Larvae are presumably aphidophagous and, according to the wide habitat spectrum and altitudinal range on the Azores, no specialisation is expected on one or only a few aphid species. Most adults are very active fliers and often visit flowers, feeding on nectar and pollen (McAlpine 1987), and are also important pollinators. Other species of the genus *Sphaerophora* are usually associated with grasslands, woodlands or marshes. Several specimens of this species were collected in shady forest areas, or in association with flowers of *Euphorbia stygiana* and *Hydrangea macrophylla*. It was also reported from higher altitude areas in Pico Mountain (Pico).

Systems: Terrestrial

Use and Trade (see Appendix for additional information)

The species is not utilised.

Threats (see Appendix for additional information)

A lack of information regarding the present distribution and ecology of this species, precludes a complete assessment of potential threats. Nevertheless, from the ecology of the Syrphidae family and known habitat preferences, it is likely that this species has probably declined in the past due to changes in habitat size and quality, mostly due to human action. On the other hand it seems adapted to some disturbed habitats and is associated with both endemic and introduced flowering plant species; although pesticides and herbicides will most likely have an impact on this species. Based on Ferreira *et al.* (2016) the habitat will likely further decline as a consequence of climate change (increasing number of droughts and habitat shifting and alteration).

Conservation Actions (see Appendix for additional information)

Historically at least, this species was present in areas that are currently included in the Natural Parks of Flores, Faial, Terceira and S. Miguel, disturbed or otherwise.; but the species is not protected by regional law. A habitat management plan is needed and one is anticipated to be developed during the coming years. Further research is also needed into this species population, distribution, threats, ecology and life history, and degraded habitats could also be restored. Additionally, a strategy needs to be developed to address the future threat by climate change.

Credits

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

Reviewer(s): Russell, N.

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. and Vieira, V. 2010. *A list of the terrestrial and marine biota from the Azores*. Príncipe, 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(3-4): 603-615.

Frey, R. 1945. Tiergeographische Studien über die Dipterenfauna der Azores. I. Verzeichnis der bisher von den Azoren bekannten Dipteren. Iter entomologicum et botanicum ad insulas Madeirum et Azores anno 1938 a Richard Frey, Ragnar Storå et Carl Cedercreutz factum. Societas Scientiarum Fennica. *Commentatione biologicae* 8(10): 1-114.

IUCN. 2021. The IUCN Red List of Threatened Species. Version 2021-1. Available at: www.iucnredlist.org. (Accessed: 25 March 2021).

McAlpine, J.F., Peterson, B.V., Shewell, G.E., Teskey, H.J., Vockeroth, J.R. and Wood, D.M. 1987. *Manual of Nearctic Diptera Volume 2*. Research Branch. Agriculture Canada, Ottawa.

Rojo, S., Isidrio, P.M., Perez-Bañón, C. and Marcos-García, M.A. 1997. Revision of the hoverflies (Diptera: Syrphidae) from the Azores archipelago with notes on Macaronesian syrphid fauna. *Arquipélago, Bulletin of the University of the Azores, Life and Marine Sciences* 15: 65-82.

Speight, M.C.D. 2018. *Species accounts of European Syrphidae, Syrph the Net: The Database of European Syrphidae (Diptera)*. Dublin.

Vockeroth, J.R. 1971. The identity of some holarctic and old world species of Sphaerophoria (Diptera: Syrphidae). *Canadian Entomologist* 103: 1627-1634.

Citation

Nunes, R., Szymank, A. & Borges, P.A.V. 2021. *Sphaerophoria nigra*. *The IUCN Red List of Threatened Species* 2021: e.T124922581A124930811. <https://dx.doi.org/10.2305/IUCN.UK.2021-1.RLTS.T124922581A124930811.en>

Disclaimer

To make use of this information, please check the [Terms of Use](#).

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	Yes
5. Wetlands (inland) -> 5.4. Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands	Resident	Suitable	Yes
5. Wetlands (inland) -> 5.5. Wetlands (inland) - Permanent Freshwater Lakes (over 8ha)	Resident	Suitable	-
14. Artificial/Terrestrial -> 14.2. Artificial/Terrestrial - Pastureland	Resident	Marginal	-
14. Artificial/Terrestrial -> 14.3. Artificial/Terrestrial - Plantations	Resident	Marginal	-
14. Artificial/Terrestrial -> 14.4. Artificial/Terrestrial - Rural Gardens	Resident	Suitable	-

Threats

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

Threat	Timing	Scope	Severity	Impact Score
9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.3. Herbicides and pesticides	Ongoing	Unknown	Slow, significant declines	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality		
11. Climate change & severe weather -> 11.1. Habitat shifting & alteration	Future	Unknown	Slow, significant declines	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality		
11. Climate change & severe weather -> 11.2. Droughts	Future	Unknown	Slow, significant declines	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality		

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: No

Conservation Action in Place
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
4. Education & awareness -> 4.3. Awareness & communications
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
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): 152
Continuing decline in area of occupancy (AOO): No
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km ²): 22957
Continuing decline in extent of occurrence (EOO): No
Extreme fluctuations in extent of occurrence (EOO): No
Continuing decline in number of locations: No
Extreme fluctuations in the number of locations: No

Distribution
Lower elevation limit (m): 50
Upper elevation limit (m): 1,000
Population
Continuing decline of mature individuals: Unknown
Extreme fluctuations: No
Population severely fragmented: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Unknown

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](#).