

Harmusch

WILDLIFE STUDY AND CONSERVATION ASSOCIATION

*Institutional dossier — Research, conservation and outreach for
endangered wildlife in arid and desert regions.*

Who we are

Harmusch is a non-profit scientific association registered in the National Register of Associations (No. 605582), founded in 2010 by a group of field zoologists and naturalists. The name "Harmusch" is the Hassaniya word for Cuvier's gazelle.

11

RESEARCHERS

24

PUBLICATIONS

11

PROJECTS

15+

YEARS OF ACTIVITY

Objectives

- ▶ Conserve wildlife and their habitats
- ▶ Conduct scientific studies to support conservation strategies
- ▶ Disseminate acquired knowledge to raise public awareness

Team

José María Gil Sánchez

President and founding member

Mammalian carnivores, Bonelli's eagle, native crayfish

Antonio Javier Rodríguez Siles

Vice-president and founding member

Iberian lynx, species reintroduction, natural area management

Ángel V. Arredondo Acero

Founding member

Biodiversity conservation, environmental management, Natura 2000, fauna and habitat monitoring

Inmaculada Cancio Guillén

Founding member

Biodiversity conservation, environmental management, Natura 2000, fauna and habitat monitoring

F. Javier Herrera Sánchez

Founding member

Large raptors, Spanish imperial eagle, Montagu's harrier

J.M. Valderrama

Researcher and science communicator

Desertification, science communication

Gerardo Valenzuela Serrano

Founding member

Iberian lynx, carnivores, raptors

Joaquín Pérez

Founding member

Iberian lynx, Spanish imperial eagle, wildlife tracking

Begoña Álvarez Cabello

Founding member

Rural development and natural heritage, GIS, environmental awareness

Miguel Ángel Díaz Portero

Founding member

Iberian lynx, black vulture, birds

Juan Manuel Sáez Muñoz

Founding member

Iberian lynx, Doñana population, nature documentaries

Projects and areas of action

Our focus is on the northern quadrant of the Atlantic Sahara, but we have led or participated in projects on five continents.

Geographic areas

Atlantic Sahara (Morocco)

Long-term research on Saharan wildlife: carnivores, ungulates and small mammals

Iberian Peninsula

Conservation of wildcat, Iberian lynx, rufous-tailed scrub robin, otter and raptors

Middle Atlas (Morocco)

Caracal surveys and carnivore community studies

Senegal (Niokolo Koba)

Assessment of large carnivores and ungulates in the National Park

India, Argentina, Colombia

Occasional international expeditions and collaborations

Research projects

Cheetah Morocco

COMPLETED

Large carnivores Senegal

COMPLETED

Rufous-tailed scrub robin

ONGOING

Otters in Ciudad Real

COMPLETED

Barbary macaque and Golden eagle

STARTED

Atlantic Sahara Wildlife

ONGOING

Wildcat in Spain

ONGOING

Caracal in the Moroccan Atlas

ONGOING

Trophic cascades in Guarrizas

ONGOING

Cliff-nesting raptors in Morocco

COMPLETED

Himalayan Lynx

COMPLETED

Focus species

Cuvier's gazelle

Gazella cuvieri

European wildcat

Felis silvestris

Iberian lynx

Lynx pardinus

North African caracal

Caracal caracal algira

Sand cat

Felis margarita

Honey badger

Mellivora capensis

Rufous-tailed scrub robin

Cercotrichas galactotes

Saharan aoudad

Ammotragus lervia

Otter

Lutra lutra

Striped hyena

Hyaena hyaena

Scientific publications

24 publications in international impact journals, IUCN assessments and monographs.

2026

Sarabia, C., Gil-Sánchez, J.M., Herrera-Sánchez, F.J., Rodríguez-Siles, J., Díaz-Portero, M.Á., Arredondo, Á., ... & Leonard, J.A.

Partitioning of the trophic niche in a carnivore community of a hyperarid environment, the Sahara desert

Journal of Arid Environments

2026

Herrera-Sánchez, F.J., Abáigar, T., Rodríguez-Siles, J., Sáez, J.M., Lahlafi, T., Arredondo, Á., ... & Gil-Sánchez, J.M.

Survival strategies in the Sahara: understanding the daily activity patterns of ungulates in hyperarid regions

Journal of Zoology

2026

Gil-Sánchez, J.M., Cancio, I., Pérez, J., Rodríguez-Siles, J., Herrera-Sánchez, F.J., Arredondo, A., ... & Virgós, E.

Seed dispersal by carnivores in a hyper-arid habitat: insights from the Sahara Desert

Journal of Arid Environments

2025

Gil-Sánchez, J.M. et al.

The surprising and stealthy fauna of the desert

In press

2025

Gil-Sánchez, J.M. et al.

Conserving Iberian lynxes: lessons from habitat models in new reintroduction areas

In press

2025

Gil-Sánchez, J.M. et al.

Hyaena hyaena (IUCN Red List assessment)

In press

2025

Gil-Sánchez, J.M. et al.

Gazella cuvieri (IUCN Red List assessment)

In press

2025

Gil-Sánchez, J.M. et al.

Trophic niche partitioning in a carnivore community of a hyper-arid environment, the Sahara Desert

In press

2023

Burgos, T. et al.

Top-down and bottom-up effects modulate species co-existence in a context of top predator restoration

Scientific Reports

2023

Gil-Sánchez, J.M. et al.

Feeding ecology of the Cuvier's gazelle in the Sahara Desert

Animals

2023

Gil-Sánchez, J.M. et al.

Applications of non-intrusive methods to study the sand cat: a field study in the Sahara Desert

European Journal of Wildlife Research

2023

Bertos, E. et al.

2022

Gerngross, P. et al.

Felis silvestris (IUCN Red List assessment)*IUCN Red List of Threatened Species***2021**

Gil-Sánchez, J.M. et al.

Spatio-temporal ecology of a carnivore community in the Middle Atlas, NW Morocco*Zoology***2021**

Cassinello, J. et al.

Ammotragus lervia (IUCN Red List assessment)*IUCN Red List of Threatened Species***2020**

Herrera-Sánchez, F.J. et al.

Identifying priority conservation areas in a Saharan environment by highlighting the endangered Cuvier's gazelle as a flagship species*Scientific Reports***2020**

Gil-Sánchez, J.M. et al.

Feeding specialization of honey badgers in the Sahara Desert: A trial of life in a hard environment*Diversity***2020**

IUCN-Med, DEF & Gil-Sánchez, J.M. et al.

First national survey of diurnal cliff-nesting raptors in Morocco — 2019 Results*IUCN-Mediterranean / Morocco Forestry Department***2019**

Gil-Sánchez, J.M. et al.

Fragmentation and low density as major conservation challenges for the southernmost populations of the European wildcat*PLoS ONE***2018**

Burgos, T. et al.

Prey density determines the faecal-marking behaviour of a solitary predator, the Iberian lynx*Ethology Ecology & Evolution***2018**

Gil-Sánchez, J.M.

The crisis of mammalogical research in remote regions*Galemys***2016**

Herrera-Sánchez, F.J. et al.

Zoological expedition and survey of the Saharan aoudad in Djebel Ouarkiz and Aydar Mountains*Go-South Bulletin***2016**

Gil-Sánchez, J.M. et al.

Evaluating methods for surveying the Endangered Cuvier's gazelle in arid landscapes*Oryx***2015**

Gil-Sánchez, J.M. et al.

Strong spatial segregation between wildcats and domestic cats may explain low hybridization rates on the Iberian Peninsula

Collaborator network

Harmusch works with 15 research and conservation institutions in Spain, Morocco and internationally.

Spain

- ♦ Arid Zones Experimental Station (EEZA-CSIC)
- ♦ Rey Juan Carlos University (Dr. Emilio Virgós)
- ♦ Doñana Biological Station (EBD-CSIC)
- ♦ University of Granada
- ♦ SEO/BirdLife
- ♦ SECEM
- ♦ Barcelona Zoo Foundation

Morocco

- ♦ Scientific Institute of Rabat, Mohammed V University
- ♦ High Commission for Water and Forests (Morocco)
- ♦ Ibn Tofail University
- ♦ Tabiaa Bilahodoud Association (Assa, Morocco)

International

- ♦ CIBIO/InBIO, University of Porto
- ♦ IUCN-Mediterranean
- ♦ Panthera Foundation
- ♦ National University of Comahue (Argentina)

Contact

For more information about our projects or potential collaborations:

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NATIONAL REGISTRY

No. 605582