AIISG NEWSLETTER

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AIISG
IUCN SSC
Atlantic Islands Invertebrate Specialist Group
www.aiisg.net

HI AIISG MEMBERS

The first semester AIISG newsletter brings you updates and new information on invertebrate conservation across the Atlantic Islands.

In this issue, Danniella Sherwood, Paulo Borges, and António Franquinho Aguiar share new papers addressing distinct arthropod groups from the Azores and Madeira Archipelagos, as well as Anguilla, Ascension Island, and Bermuda. These papers explore the discovery of new species, conservation actions for species and their habitats, and the risk of extinction.

Furthermore, Danniella Sherwood and Dinarte Teixeira discuss the efforts regarding the green listing and species assessment from Saint Helena and the Tenerife Island.

Finally, Dinarte Teixeira shares the reintroduction efforts regarding the critically endangered land snail *Geomitra grabhami* and the population reinforcement that took place in April 2025.

We hope you enjoy this first newsletter edition of 2025.

Best wishes,

Vicky, Paulo, Lena and Dinarte

SUPPORTING ATLANTIC TERRITORIES INVERTEBRATE CONSERVATION DPLUS216 - ACHIEVEMENTS IN YEAR 1

By Danniella Sherwood

The Supporting Atlantic Territories Invertebrate Conservation project seeks to improve knowledge of endemic and native invertebrates across Anguilla, Ascension Island, Bermuda, and the Falkland Islands. By identifying species and their distributions, the project highlights Important Invertebrate Areas (IIAs) and informs targeted conservation actions. Funded by the UK Government through Darwin Plus (DPLUS216), it is led by Buglife in collaboration with local trusts, governments, and conservation organisations.

In Bermuda, Myles Darrell and Mark Outerbridge, assisted by local students, collected extensive invertebrate samples now en route to the UK. In the Falklands, Christy Jo Scipio-O'Dean and local partners conducted standardised surveys, with moth samples already being analysed in the UK. In Anguilla, a 28-day field visit enabled the collection of data across diverse habitats and provided hands-on training for local organisations. This work has uncovered numerous previously unrecorded species, including several new spiders and the first mainland camel spider.

Taxonomic revision is ongoing, with spiders nearly fully analysed and other groups in progress. Two papers have been published, and updated checklists for all islands have been produced. These form the foundation for mapping IIAs and guiding conservation priorities.

The project provided training in sampling and identification to partners and local staff, supplied field equipment, and engaged the public through night walks and lectures. Over 1,000 new records have been added to iNaturalist, supplementing the existing 5,000 historical records, thereby supporting both research and public engagement.

The IIA methodology, adapted from the UK system for island ecosystems, was piloted on the island of Ascension. Preliminary maps have been produced and refined with stakeholder input, with plans to extend the approach to other territories and publish a methodology paper.

The second year will focus on completing species identification, finalising IIAs, delivering advanced partner training, and embedding invertebrate conservation into local policies.
The project is funded by Darwin Plus (DPLUS216) and involves Buglife, local trusts, government departments, Falklands Conservation, and The Species Recovery Trust.


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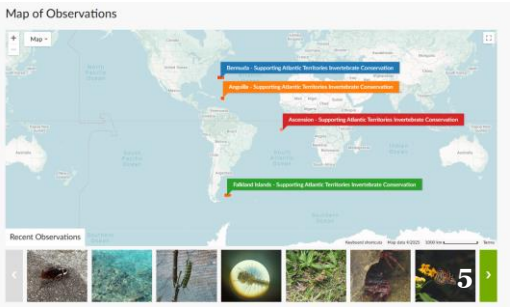

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"Over 1,000 new records have been added to iNaturalist, supplementing the existing 5,000 historical records, thereby supporting both research and public engagement."

NEW STUDY REVEALS OVER HALF OF AZOREAN ENDEMIC ARTHROPODS AT RISK OF EXTINCTION

By Paulo A.V. Borges

The picture is stark: more than half of the archipelago's 235 endemic terrestrial species are currently at risk of extinction, five have already disappeared, and many others are hanging by a thread.

The analysis shows that only a quarter of species can be considered relatively secure, while half are already classified as Vulnerable, Endangered or Critically Endangered. Uncertainty is even greater for the species listed as Data Deficient, which account for over 20% of the total and may conceal an even higher number of critical situations.

The threats are both clear and widespread. Climate change and extreme weather events affect the vast majority of species. Agricultural expansion and the spread of invasive species further compound the risks,

impacting much of the Azorean fauna. However, not all islands are affected equally. Santa Maria and São Miguel present the most concerning indices, particularly due to the high concentration of restricted-range endemics in critical danger. In contrast, Terceira exhibits greater resilience, thanks to its larger and better-preserved native forest fragments.

In light of these results, researchers emphasise the need for urgent action. Key recommendations include protecting and expanding native forests, enforcing rigorous control of invasive species, integrating climate projections into management plans, and actively engaging the community through citizen science initiatives. These actions are essential to fill knowledge gaps and to deliver effective responses to the threats facing this unique natural heritage.

The message is clear: Azorean biodiversity is at risk and requires immediate, coordinated action. Safeguarding these endemic arthropods means preserving millions of years of evolution, fragile ecosystems, and a natural legacy that cannot be lost.

Please find the full citation below:

Oyarzabal, G., Pozsgai, G., Tsafack, N., Cardoso, P., Rigal, F., Boieiro, M., Santos, A.M.C., Amorim, I.R., Malumbres-Olarte, J., Costa, R., Lhoumeau, S., Gabriel, R. & Borges, P.A.V. (2025). Species traits may predict the extinction risk of Azorean endemic arthropods. Biological Conservation, 309: 111282. DOI: 10.1016/j.biocon.2025.111282

Link: https://www.sciencedirect.com/science/article/pii/S0006320725003192

"In light of these results, researchers emphasise the need for urgent action. Key recommendations include protecting and expanding native forests, enforcing rigorous control of invasive species, integrating climate projections into management plans, and actively engaging the community through citizen science initiatives. "

NEW STUDY SHOWS GROUND-DWELLING ARTHROPODS IN THE AZORES FACE ELEVATED EXTINCTION RISK

By Paulo A.V. Borges

Published in Insect Conservation and Diversity, this study provides the first trait-based assessment of extinction risk for 77 endemic arthropod species in the Azores. By applying a Bayesian binomial framework with taxonomic order included as a random effect, the researchers examined how key traits — body size, trophic group, and vertical stratum occupancy — influence species' likelihood of falling into different IUCN Red List categories.

The study demonstrated that the vertical stratum is the most powerful predictor of extinction risk among Azorean endemic arthropods. Ground-dwelling species face a markedly higher risk of extinction than canopy specialists, with verticality emerging as the only trait whose 97.5% credible interval did not overlap zero, confirming a strong negative association with extinction risk. Indeed, verticality alone accounted for nearly three-quarters of the model's explanatory power. In contrast, other traits, such as body size and trophic group, showed no significant influence on the IUCN threat status. These findings underscore the

value of trait-based approaches in conservation biology, illustrating how functional traits can help identify the species most at risk before they are lost.

From a conservation perspective, these results call for urgent action to protect ground habitats. Restoring native forest understory and the rich leaf-litter environments upon which many vulnerable arthropods depend is essential. Equally important is improving forest connectivity through the creation of ecological corridors that link remaining patches of native vegetation, thereby facilitating the dispersal of both ground-dwelling and canopy-dwelling species. Conservation monitoring should also explicitly incorporate traits such as verticality into IUCN reassessments and long-term biodiversity surveys, ensuring that management strategies are tailored to the ecological characteristics most strongly associated with survival. Finally, the removal of invasive understory plants must be intensified, as these species degrade ground habitats and undermine restoration efforts that have hitherto focused primarily on the canopy.

Together, these insights convey a clear and urgent message. By integrating species traits into conservation planning, it is possible to anticipate vulnerabilities more effectively and take decisive action before the unique biodiversity of the Azores is irreversibly lost.

Please find the full citation below:

Oyarzabal, G., Cardoso, P., Rigal, F., Boieiro, M., Santos, A.M.C., Amorim, I.R., Malumbres-Olarte, J., Costa, R., Lhoumeau, S., Pozsgai, G., Gabriel, R. & Borges, P.A.V. (2025). Species traits may predict extinction risk of Azorean endemic arthropods. Insect Conservation and Diversity, Online Early DOI: 10.1111/icad.12822

Link: https://resjournals.onlinelibrary.wiley.com/doi/10.1111/icad.12822?af=R

> *"From a conservation perspective, these results call for urgent action to protect ground habitats. Restoring native forest understory and the rich leaf-litter environments upon which many vulnerable arthropods depend is essential. "*

NEW RECORDS OF THRIPS FOR MADEIRA ARCHIPELAGO AND SELVAGENS ISLANDS

By António Franquinho Aguiar

Published in December 2024, but only available online in 2025, this paper is the first major update on the Thysanoptera fauna of the Madeira Archipelago since the last checklist published in 2008. The authors added 27 new records belonging to 4 different families.

You can find the full paper citation below:

AGUIAR, A.M.F. & D. CRAVO (2024) New records of thrips (Thysanoptera: Terebrantia and Tubulifera) for Madeira Archipelago and Selvagens Islands and the first record of the thrips parasitoid *Thripastichus gentilei* (Del Guercio, 1931) (Hymenoptera: Eulophidae). Boletim do Museu de História Natural do Funchal, 74 (369): 5-37. https://doi.org/10.5281/zenodo.14723903

> *‘”27 new records of thrips for Madeira Archipelago and Selvagens Islands.”*

IS THE LEWIS SPIDER A THREAT TO AGRICULTURAL CROPS IN EUROPE?

By António Franquinho Aguiar

The Lewis spider mite, *Eotetranychus lewisi*, has been present on Madeira Island for a long time but was recently introduced to mainland Portugal. It is an important pest of poinsettias and crops worldwide and a quarantine-regulated pest in Europe. In this study, the authors investigated the pest status and host plants in Madeira and the Algarve. The field surveys and controlled outdoor experiments conducted suggest that this mite is not causing damage to crops in the aforementioned regions and may not be as harmful as initially expected, which could have implications for its current quarantine regulations in Europe.

You can find the full paper citation below:

NAVES, P., SANTOS, M., AGUIAR, A., MIGEON, A, NAVIA, D. & AUGER, P. (2025) Does the Lewis spider mite constitute a threat to agricultural crops in Europe? New data on occurrence, host plants and damage in the invaded areas in Portugal. Experimental and Applied Acarology, 94 (35). https://doi.org/10.1007/s10493-025-01004-y

> *"In this study, the authors investigated the pest status and host plants in Madeira and the Algarve. ''*

RARE BEETLES FROM MADEIRA ISLAND

By António Franquinho Aguiar

The authors present 12 unpublished records of beetles collected between 1996 and 2023, provide new data on the recently described cerambycid *Paradeucalion maderense* and explain in detail how to recognise the two Madeiran species of *Placonotus* MacLeay, 1871.

You can find the full paper citation below:

BECKER, M., AGUIAR, A.M.F. & A. LOMPE (2025) Notes on some new and other rare beetles (Coleoptera) from Madeira Island. Bocagiana, 252: 1-7. https://doi.org/10.5281/zenodo.14865745

Furthermore, two new papers about Madeira and Porto Santo Hemiptera and Hymenoptera have been accepted and are currently in press:

AGUIAR, A.M.F. & CRAVO, D. (in press) Jumping plant-lice (Hemiptera: Psylloidea) new to Madeira and Porto Santo Islands. Entomologist's Monthly Magazine.

SILVA, H.M., AGUIAR, A.M.F., GONÇALVES, Y.M., GOMES, G. & AGUÍN-POMBO, D. (in press) A review of the ensign wasps (Hymenoptera: Evaniidae) from Macaronesia. Zootaxa

> *"The authors present 12 unpublished records of beetles collected between 1996 and 2023, provide new data on the recently described cerambycid Paradeucalion maderense and explain in detail how to recognise the two Madeiran species of Placonotus MacLeay, 1871.''*

IT'S RAINING PAPERS: TWO MORE SCIENTIFIC ARTICLES ON UKOT SPIDERS PUBLISHED

By Danniella Sherwood

We are delighted to notify AIISG that two more of our papers have now been published. These are the latest in a long line of papers we've been publishing since 2023, many of which you will already be familiar with from their significant media coverage. Together, Saint Helena and Ascension now have 100% of their currently known spiders, scorpions and pseudoscorpions documented and taxonomically assessed in a modern context.

The first focuses on invasive non-native species of spider on Saint Helena. Ever since my expedition in 2022, I've been working with the Saint Helena Government Agriculture and Natural Resources Department, identifying intercepted specimens, providing training to staff, and continuing to identify spiders once I returned to the UK. This highly successful collaboration, alongside the Saint Helena National Trust where I've also been helping with capacity building, especially with my alumni Daryl Joshua, who is the island's first local arachnologist [this is arguably the achievement I am most proud of from our project], has enabled us to publish a catalogue of all non-native spiders in Saint Helena. This paper was made possible by funding from the FCDO 'St Helena Cloud Forest Project' with support from the Species Recovery Trust, Saint Helena National Trust, and RSPB.

Please find below the full citation:

Sherwood, D., Stevens, N., Peters, R., Fowler, L., Joshua, D. & Balchin, J. (2025). Arachnological biosecurity on one of the world's most remote inhabited islands: a checklist of stowaway spiders found on Saint Helena, South Atlantic Ocean. Natura Somogyiensis 45: 57-68.

Link:
https://www.researchgate.net/publication/391895187_Arachnological_biosecurity_on_one_of_the_world's_most_remote_inhabited_islands_a_checklist_of_stowaway_spiders_found_on_Saint_Helena_South_Atlantic_Ocean

The second paper is a comprehensive checklist of the spiders of Ascension Island, a notable achievement as it means all arachnids, except mites (which my research group does not work on), are now fully documented for Ascension. We were also able to show three more INNS spiders occur on the island, further highlighting the threats which exist for its one endemic genus and five endemic species. This research was made possible through funding from the UK Government through Darwin Plus grants DPLUS135 and DPLUS216.

Please find below the full citation:

Sherwood, D., Sharp, A., Wilkins, V. & Ashmole, P. (2025). Annotated checklist of the spiders of Ascension Island with new faunistic records, including three newly recorded non-native species (Araneae: Araneomorphae). Acta Zoológica Lilloana 69(1): 449-474.

Link:
https://www.researchgate.net/publication/392468991_Annotated_checklist_of_the_spiders_of_Ascension_Island_with_new_faunistic_records_including_three_newly_recorded_non-native_species_Araneae_Araneomorphae

With the taxonomy completed – unless new species are discovered, which we will then, of course, describe – it's now time to turn focus towards other areas of arachnology for these sister islands. We have exciting upcoming work on ecology and natural history of various Saint Helenian spiders, including Daryl's project on the Golden Sail Spider, which I outlined in my recent lecture for the Saint Helena Research Institute conference.

> "*Together, Saint Helena and Ascension now have 100% of their currently known spiders, scorpions and pseudoscorpions documented and taxonomically assessed in a modern context*."

FIRST GREEN LIST ASSESSMENT FOR UKOT INVERTEBRATE PUBLISHED

By Danniella Sherwood, Liza Fowler & Vicky Wilkins

AIISG has made a big step forward with the recent publication of our assessment of the Green Status of the Spiky Yellow Woodlouse. Our assessment showed that it is Critically Depleted, the most threatened category on the Green list, one step below Extinct in the Wild. This further demonstrates why the species is listed as Critically Endangered on the Red List, because this flagship species of Saint Helena's biodiversity is one of the most threatened invertebrates in the world. Fortunately, our data also show that it has high potential for population recovery (65%) if restoration of cloud forest habitat continues sustainably in the long term.

Thus, there is hope for this remarkable species yet. We are also pleased that this can open the door for green-listing of other Critically Endangered invertebrates on Saint Helena, with aspirations to list a number of spiders and beetles in the near future.

Please find below the full citation:

Sherwood, D., Fowler, L. & Wilkins, V.L. 2025. *Pseudolaureola atlantica* (Green Status assessment). The IUCN Red List of Threatened Species 2025: e.T67368866A6736886620251.Accessed on 20 June 2025.

Link: https://www.iucnredlist.org/species/67368866/67368879#green-assessment-information

> *" Our assessment showed that it is Critically Depleted, the most threatened category on the Green list, one step below Extinct in the Wild. This further demonstrates why the species is listed as Critically Endangered on the Red List, because this flagship species of Saint Helena's biodiversity is one of the most threatened invertebrates in the world."*

TENERIFE HOSTS URGENT CONSERVATION WORKSHOP FOR ENDANGERED CANARY ISLAND MOLLUSCS

By Dinarte Teixeira

Between 22 and 26 June, Tenerife (Canary Islands) became the focal point for a vital conservation initiative, as experts gathered at the Loro Parque Foundation to assess 35 species of endemic terrestrial molluscs from the Canary Islands, all of which are under threat of extinction.

This unique workshop brought together a diverse team of conservationists, botanists, malacologists and technical specialists, representing a wide array of institutions, which included the Loro Parque Foundation, the University of La Laguna (Tenerife), the IUCN SSC Atlantic Islands Invertebrates Specialist Group (AIISG), through facilitators and researchers, botanists and local independent researchers. It was the culmination of a three-year project initiated in 2022, involving the development of a training workshop designed for students, conservationists, and conservation stakeholders, which enables the implementation of a monitoring scheme for the critically endangered species in the Canary Islands.

Over the course of the event, participants conducted a thorough review of each species' conservation status, combining decades of expertise with the latest research. The outcomes of this collaborative effort will contribute to the forthcoming update of the IUCN Red List, scheduled for December 2025, reinforcing the urgent need to protect these remarkable and irreplaceable creatures.

"Tenerife (Canary Islands) became the focal point for a vital conservation initiative, as experts gathered at the Loro Parque Foundation to assess 35 species of endemic terrestrial molluscs from the Canary Islands, all of which are under threat of extinction. "

870 SNAILS REINTRODUCED IN MADEIRA TO SAVE A SPECIES ONCE THOUGHT EXTINCT

By Dinarte Teixeira


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In April 2025, conservation teams from the Institute of Forests and Nature Conservation (IFCN), Beauval Nature, ZooParc de Beauval, and Chester Zoo reintroduced 870 individuals of *Geomitra grabhami* — a snail endemic to the Desertas Islands (Madeira Archipelago) and listed as Critically Endangered on the IUCN Red List.

Once considered extinct in the wild, *Geomitra grabhami* was rediscovered only a few years ago and today survives with fewer than 500 individuals. Its survival is threatened by drought, erosion, and above all, the invasive house mouse (*Mus musculus*).

Thanks to ex-situ breeding programmes at Chester Zoo and ZooParc de Beauval, the reintroduction has now doubled the wild population. This milestone builds on years of fieldwork by the IFCN and its partners, including Mossy Earth, which combines predator control, habitat protection, and genetic management.

According to Dr Gerardo Garcia (Chester Zoo), this represents “the first-ever reinforcement of the species — a crucial step to bring it back from the brink of extinction.”

For Noé Vimal (ZooParc de Beauval), the mission was a career highlight: “Seeing the snails we cared for return to their natural home is the highlight of my work — and a vital step for their survival.”

Looking ahead, Dinarte Teixeira (IFCN) stressed the long-term goal: “We’ve doubled the wild population thanks to captive-breeding success. The next step is monitoring and preparing to reinforce other endangered species, such as *Discula lyelliana*.”

This mission not only secures new hope for *Geomitra grabhami* but also demonstrates the power of international collaboration in saving even the smallest species from extinction.

"*In April 2025, conservation teams from the Institute of Forests and Nature Conservation (IFCN), Beauval Nature, ZooParc de Beauval, and Chester Zoo reintroduced 870 individuals of Geomitra grabhami — a snail endemic to the Desertas Islands (Madeira Archipelago) and listed as Critically Endangered on the IUCN Red List.* "

FINAL REMARKS

A big thank you to everyone who helped bring the first 2025 newsletter to life! It's wonderful to see such a variety of invertebrate projects thriving across many different locations.

As our community continues to grow and expand to new Atlantic islands and archipelagos, we'd love for both new and long-time members to continue sharing news and stories about their projects and research. Every contribution helps us discover even more inspiring work in invertebrate conservation across the Atlantic Islands.

We can't wait to share the next edition with you!

Best wishes,
Vicky, Paulo, Lena and Dinarte

Image credits:

Figure 1. Malaise trap at Spittal Pond, Bermuda. Photo by Myles Darrell.

Figure 2. Light trap in the Falklands. Photo by Christy Jo Scipio-O'Dean.

Figure 3. Danni Sherwood and James Gumbs in-field training at Cove Pond. Photo by Zavier Morrishaw.

Figure 4. Undiscovered wolf spider (Lycosidae) found by Danni during fieldwork in Anguilla. Photo by Danni Sherwood.

Figure 5. A preview of the Supporting Atlantic Territories Invertebrate Conservation iNaturalist project. Photo by Danni Sherwood.

Figure 6. Partners of the project. Photo by Danniella Sherwood.

Figure 7. Participants in the evaluation workshop held in Tenerife, in June 2025. Photo by Juan Carlos Garcia

Figure 8. Individuals of *Geomitra grabhami* which were in May 2025. Photo by Dinarte Teixeira

Figure 9. Overview of Fajã Grande, in Deserta Grande, distribution area of the target species. Photo by Dinarte Teixeira

Figure 10. Chester Zoo keeper reintroducing the *G. grabhami* individuals in the field, Photo by Dinarte Teixeira