Main topic 3: Achieving Biodiversity & Sustainability Targets

Chairing: Joan Walley; Question-master: Nancy Pascoe (BVI); Rapporteur: Mike Jervois (Falkland Islands)

Introduction

Joan Walley, UKOTCF Council Member and former Chair of the UK Parliament's Environmental Audit Select Committee

Can I first of all welcome absolutely everyone who has contributed, is contributing, and is present at our 7th conference today. I personally think it's a team effort and I'm very aware that a lot of people have made themselves available, not just for the help with the recommendations but day in-and-day-out with the work that you do everyday no matter where you are in the Overseas Territories and the Crown Dependencies too. So, welcome everybody, I think we had a good day yesterday and my job as chair is to keep the momentum going, the energy going – which isn't always easy when we have this technological way of dealing with these things these days. What I really want to say is that I really hope it will allow us to share and broaden our view-points. Most of all. at the end of this important session on Achieving targets for biodiversity, is how we use the recommendations that we come up with – based on best practice – and what we are going to do with them. In conclusion I want to pick up something that Minister Creagh said, which was she talked about Overseas Territories to not be seen as "niche", but for us to embed it in all different aspects of government thinking and territory government thinking as well. So what I'm really hopeful of is that today the different aspects of work that are going on across all our Overseas Territories can somehow add to the whole sum, not just the individual parts of the work, but the whole picture of where we wish to take biodiversity in the Overseas Territories and Crown Dependencies. We've got a really full agenda; I'm just going to move us on piece by piece.

Question-master Nancy Pascoe (left) and Rapporteur Mike Jervois

The spider fauna of Saint Helena: taxonomic and ecological advances

Danniella Sherwood (IUCN SSC Atlantic Islands Invertebrate Specialist Group, UK; Arachnology Research Association, UK; Fundación Ariguanabo, Cuba; Centro de Investigaciones Biológicas de Honduras) & Daryl Joshua (Saint Helena National Trust and IUCN SSC Atlantic Islands Invertebrate Specialist Group))

Above: Danniella Sherwood
Below: Daryl Joshua

Sherwood, D. & Joshua, D. 2025. The spider fauna of Saint Helena: taxonomic and ecological advances. pp 87-95 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

Thanks to the Saint Helena Cloud Forest Project (SHCFP), recent research has catapulted the spiders of Saint Helena to being the best-studied invertebrate group on the island. This joint lecture explores both strands of the story behind this historic achievement. British arachnologist Danni Sherwood summarises her SHCFP-funded taxonomical project and expedition, followed by a presentation on her latest research on identification of intercepted invasive non-native species (INNS). In tandem, exciting ecological knowledge has been advanced by Daryl Joshua, Saint Helena's first local arachnologist, whose training over the last two years was also funded by the SHCFP. Daryl will talk about his journey to becoming an arachnologist and his pioneering year-long study of the ecology of the flagship species *Argyrodes mellissi*, better known as the Golden Sail Spider.

Danniella Sherwood (IUCN SSC Atlantic Islands Invertebrate Specialist Group, UK; Arachnology Research Association, UK; Fundación Ariguanabo, Cuba; Centro de Investigaciones Biológicas de Honduras) & Daryl Joshua (Saint Helena National Trust and IUCN SSC Atlantic Islands Invertebrate Specialist Group))

Part I: The spider revolution of Saint Helena – *Danni Sherwood*

The remote island of St Helena, situated in the South Atlantic Ocean, has long been a point of intrigue for biologists and conservationists alike. Despite its ecological significance and unique biodiversity, our understanding of the island's arachnid fauna, particularly its spiders, remained limited for over a century. Prior to 2022, scientific knowledge was confined to historical

Figure 2. Mole Spider Molearachne sanctaehelenae

work.

The earlier studies of St Helena's spiders date back to two main periods: between 1869 and 1873, and again from 1966 to 1977. These studies, although valuable at the time, provided only limited insights, mainly through illustrations and written accounts without modern taxonomic tools. As a result, much of the island's arachnid diversity remained undocumented, with many species possibly overlooked or misclassified. Given the importance of spiders in ecosystems as predators and as many of the species on St Helena are endemics, a thorough revision was deemed essential to inform conservation efforts.

Starting in 2022, a concerted effort was launched to revise and expand the knowledge of St Helena's spider fauna. The project, led by me (Danni Sherwood) and St Helenian colleagues, involved extensive fieldwork, DNA-analyses, and collaboration with local partners in the government and the St Helena National Trust. Over this two-year period, we described seven new species and established four new genera, significantly enriching the island's known arachnid diversity.

We described the totally unique Mole Spider (Fig. 2) *Molearachne sanctaehelenae*, known for making 'mole hills' in arid areas of the island, especially its stronghold in the Central Basin of Prosperous Bay Plain. It is the first non-cave living wolf spider with small eyes discovered. This discovery highlighted the unique evolutionary trajectories that have taken place on the island, likely reflecting long-term isolation of lineages.

Other new lycosids included *Dolocosa joshuai* (named for Daryl Joshua) (Fig. 3) and *Lynxosa veseyensis* (Fig. 4) (endemic to a single waterfall, possibly the most restricted spider in the world by range). Additionally, two more new species, *Ero lizae* (Fig. 5) and *Ero natashae* (Fig. 6), were described in 2024, representing a significant addition to the genus *Ero*, well-known as Pirate Spiders. These species are particularly interesting because they exhibit a case of sympatric speciation, where sister species evolve from a common ancestor

From top:

Fig. 3. Dolocosa joshuai*;*

Fig. 4. Lynxosa veseyensis*;*

Fig. 5. Ero lizae*;*

Fig. 6. Ero natashae

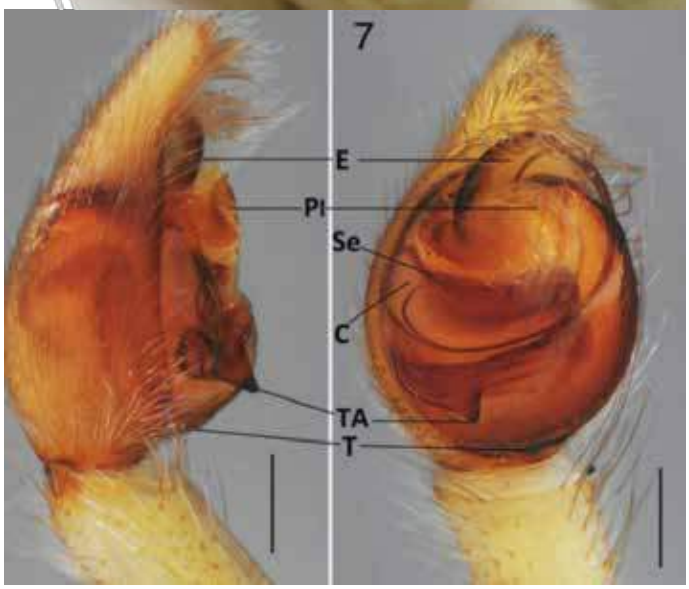
while inhabiting overlapping geographical areas.

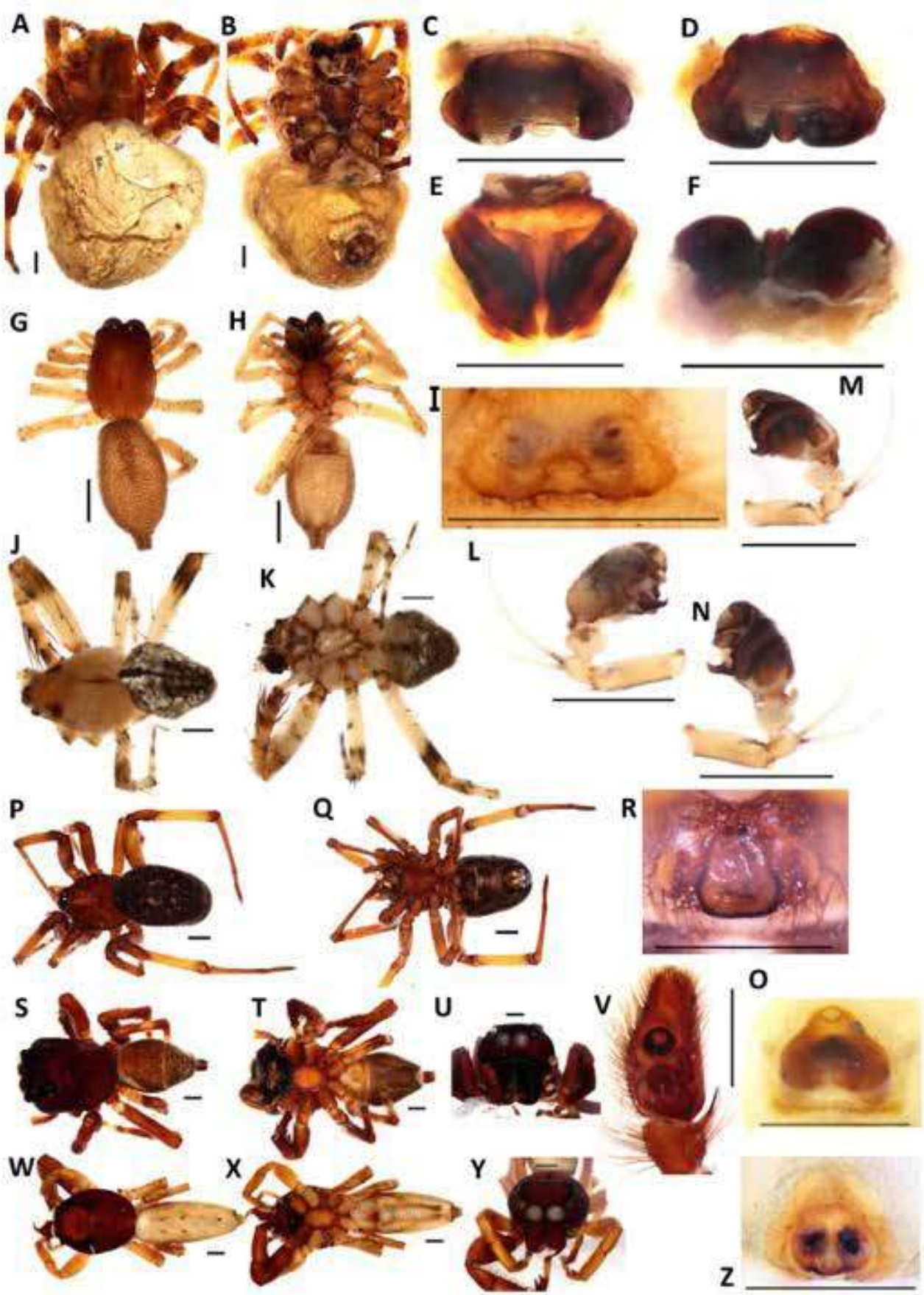
Further discoveries included two minute, specialised species: *Anapistula martinae*, an eyeless spider (Fig. 7) from the locality of Lot, and *Ischnothyreus christyjoae* (Fig. 8), a type of goblin spider. All new species were named after local collaborators or, in one case, a local place (Mount Vesey Waterfall).

The revision also saw the establishment of new genera, broadening the taxonomic framework for St Helena's spiders. *Helenidion* (Fig. 9, type species *Helenidion sciaphilum*) was introduced as a new genus, providing a taxonomic grouping for certain species that did not fit existing genera from mainland countries. Moreover, *Trust* was named to accommodate *Trust solium* (Fig. 10), an endemic species previously placed in a common genus but now recognised as distinct and deserving of a new status. The genus name honours the St Helena National Trust, recognising the incredible work the community has done past, present, and future. Another genus, *Antembolus* (Fig. 11), belonging to the wolf spider family, was named for the distinctive position of the embolus, the male reproductive structure, on the male palp, which is a key identifying feature in spider taxonomy.

Another key aspect of this research was the collaboration with the St Helena Government's Agriculture and Natural Resources Division (ANRD). We gained invaluable

From top, first this column then next:
Fig. 7. Anapistula martinae*;*
Figure 8. Ischnothyreus christyjoae*;*
Figure 9. Helenidion sciaphilum*;*
Figure 10. Trust solium*;*
Figure 11. Antembolus.





Fgure 12. A–F Araneus quadratus *Clerck, 1757 female (NHMUK), G–I* Clubiona *sp. female (ANRD 563), J–N* Neoscona rapta *(Thorell, 1899) male (ANRD 924), O* Physocyclus globosus *(Taczanowski, 1874) female (ANRD 667), P–R* Steatoda capensis *Hahn, 1990 female (ANRD 416), S–V* Zenodorus *sp. male (NHMUK), W–Z* Zenodorus *sp. female (NHMUK). A habitus, dorsal view; B Idem, ventral view; C epigyne (dissected, scape missing), ventral view; D Idem, dorso-ventral view; E Idem, posterior view; F vulva, dorsal view; G habitus, dorsal view; H Idem, ventral view; I epigyne (undissected), ventral view; J habitus, dorsal view; K Idem, ventral view; L palp, prolateral view, M Idem, retrolateral view; N Idem, retro-ventral view; O epigyne (undissected), P habitus, dorsal view; Q Idem, ventral view; R epigyne (undissected, completely filled by epigynal plug), ventral view; S habitus, dorsal view; T Idem, ventral view; U cephalothorax, frontal view; V palp, ventral view; W habitus, dorsal view; X Idem, ventral view; Y cephalothorax, frontal view; Z epigyne (undissected), ventral view. Scale bars = 1mm.*

insights into the island's non-native (INNS) spider species. St Helena's global connectivity, via shipping and air-transport, poses a significant biosecurity risk, as it frequently receives stowaways, organisms that are inadvertently transported from elsewhere. Spiders, being highly adaptable and often small, are prime candidates for introduction. To address this, we produced a comprehensive catalogue of the known INNS spiders on the island, including detailed (Fig. 12) photographs to aid biosecurity officers and conservationists locally. This proactive approach enhances the island's capacity to detect and manage invasive species, which can threaten native biodiversity and ecosystem stability.

Beyond taxonomy, the project emphasised capacity building among local conservationists and researchers. Field and classroom-based training sessions were organised to equip St Helena Government and St Helena National Trust personnel with skills in arachnid identification, using keys and collection techniques. This empowerment ensures that the island's scientists and conservationists remain active participants in ongoing research into the future.

The culmination of these efforts makes spiders one of, if not the, best-studied invertebrate group on the island taxonomically. The success of the St Helena Cloud Forest Project-funded arachnid research serves as a model for similar taxonomic studies on other taxa and islands. Through my (Danniella Sherwood) training and mentoring of Daryl, the project has also allowed the establishment of St Helena's first arachnologist, who I'm delighted to introduce now.

Part 2: Studying the iconic Golden Sail Spider of Saint Helena – *Daryl Joshua*

The Golden Sail Spider, a fascinating endemic species and flagship for the Cloud Forest project (Fig. 13), was formally described in 1870. Despite this early recognition, much about its ecology remains a mystery, leaving room for ongoing research and discovery.

Below, and then next column, from top:
Figure 13. Golden Sail Spider;
Figure 14. Golden Sail Spider locations;
F1gure 15. Oak Bank Valley
Figure 16. Oak Bank Bridge
Figure 17. Rose Cottage.

To delve deeper into its behaviour and ecology, three key sites were selected for monitoring over a one year period (February 2024–2025): Oak Bank Valley, Oak Bank Bridge, and Rose Cottage. Each site (Figs. 14–17) has unique environmental conditions of dense canopy cover and site disturbance. Over 400 sightings of adults and 800 of juveniles were observed during the year.

Our findings from these sites have shed some light on *Argyrodes mellissi* behaviour and adaptations. The Golden Sail Spider exhibits nocturnal behaviours, and its diet includes other spiders and Diptera species, which we saw them eating at night. Females are highly maternal, often seen repairing and guarding their egg-sacs (Fig. 18) with great care. The egg sacs were observed to have an incubation period of approximately 38 to 41 days.

Figure 18. Galden Sail Spider egg-sac

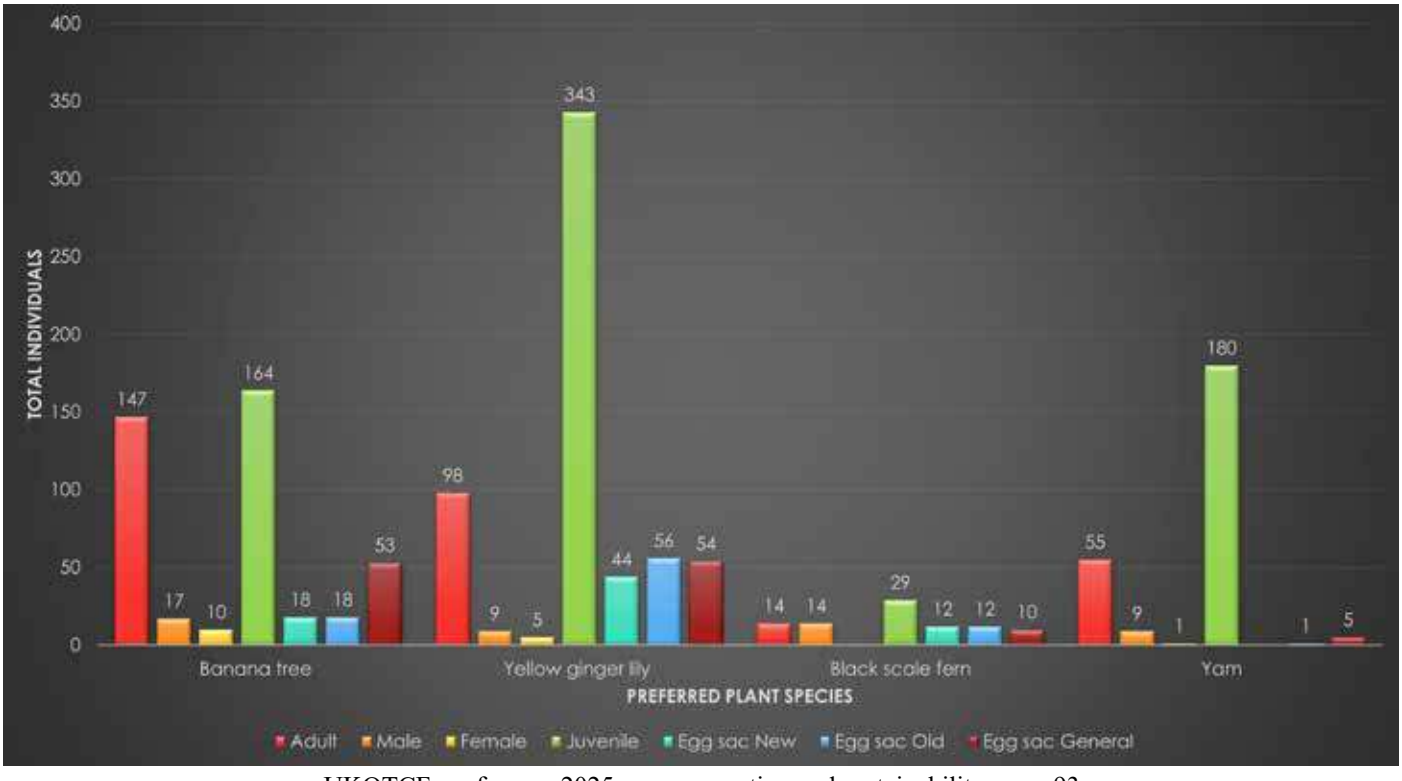
The undisturbed Oak Bank Valley recorded the highest overall total of *A. mellissi* across all life stages, with 1,374 individuals, including both adults and juveniles. In contrast, the two other sites, Rose Cottage (85) and Oak Bank Bridge (69), had significantly lower counts. Oak Bank Valley's total was 16 times higher than Rose Cottage and 19 times higher than Oak Bank Bridge, highlighting its role as a key habitat. Population fluctuations showed peaks in late summer (March) and early spring (November), with declines in April and December, suggesting that activity is highest during spring and summer, especially at Oak Bank Valley, where monthly records confirm this pattern.

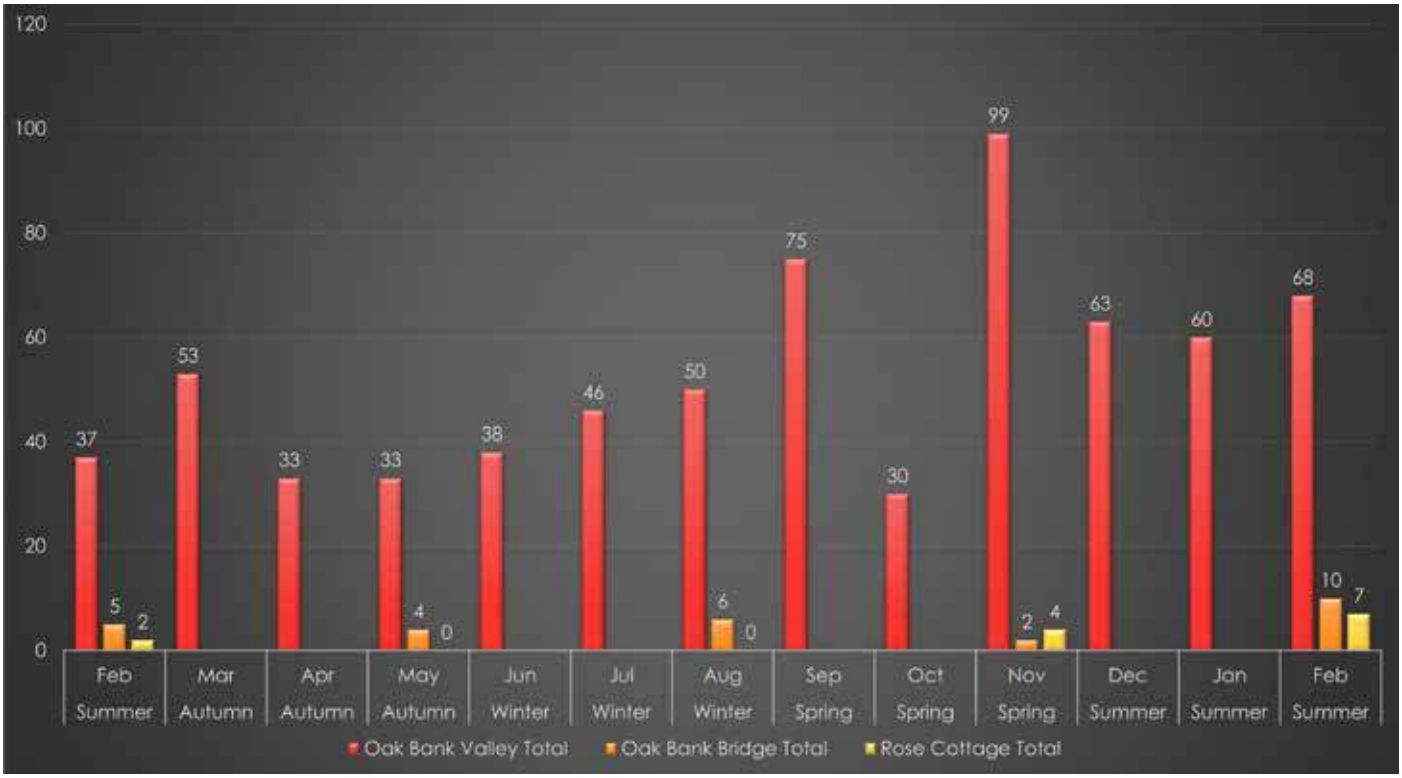
The Golden Sail Spider was most abundant on four plant species, particularly on non-native Banana trees *Musa acuminata*, Yellow Ginger Lily *Hedychium flavescens*, and Yam *Colocasia esculenta*, as well as the endemic Black Scale Fern *Diplazium filamentosum*. The species appears to prefer low-elevation, non-native plants, with adults favouring banana plants that can reach 2.5 metres or taller.

The graphs for this talk are presented in Figs. 19–21, to which I (Daryl Joshua) direct the reader. We are still in the process of analysing fully the temperature and humidity data from the surveys. It is hoped, with time, that the results of this study, with support from Danni, will be written up as a scientific paper.

As an addition, a brief mention of something else that happened due to the SHCFP funding. During the project, I completed an intensive arachnology course led by Danni. This included lots of fieldwork whilst Danni was on her expedition to the island, and also lots of lab work learning how to make identifications, and reading scientific papers. I learned about the evolution of male spider palps and the reproductive anatomy of females. We also covered phylogenetic theory, helping me better understand spider family trees and evolutionary relationships, and I learned about fascinating interplay

Figure 19





Above: Figure 20; below: Figure 21.

Site Status	Site	Adult	Male	Female	Juvenile	Egg sac new	Egg sac old	Egg sac general	Total
Scoping Sites	Diana's Peak	3		1	1			1	6
	Monchers Gut	1							1
	Mount Actaeon	4							4
	Taylors Hut	1							1
	Pleasant Valley				1				
Monitoring Sites	Oak Bank - Bridge	14	4	3	31	10	1	6	69
	Rose Cottage	22	8	6	42	3		4	85
	Oak Bank - Valley	301	27	16	747	65	90	128	1374
	Total	346	39	26	822	78	91	139	**1541**

between morphology and DNA in studying spiders. I am proud to be Saint Helena's first local arachnologist.

Q&A

Nancy Pascoe: How did you create the collaboration of the partnership? I am interested in this, because you name partners as the Fundacion of Cuba, as well as Honduras.

A (Danni Sherwood): The funding all came from the UK Government. There were partners on St Helena and British Partners like RSPB and the Species Recovery Trust. My work as a contractor was done with the Species Recovery Trust, I came on to the project as a contractor. As an academic, I am affiliated with species recoveries all around the world, including Latin America, I do speak Spanish; so I already had established research connections in the other countries like Cuba and Honduras, so it was really interesting that, when I came on to this project, I was able to use some of our literature resources that we had in Latin America to compare certain species from islands. Of course, Cuba is a great example of a large island and it has large biodiversity in its cloud-forest, so it was good to have a comparison there. So that particular connection with Cuba just comes from the fact that I am a highly collaborative and affiliated researcher. In terms of our collaborations more

broadly, it was great being in St Helena because it had those different strands. It had the St Helena National Trust being an integral part of the project. We also had many different divisions of SHG which contained the biosecurity division for instance. Also the ANRD, which is the team responsible for custodianship of the Cloud Forest So the research needs to make the collaboration as broad as possible. One of my passions in terms of that is trying to bring together those links which you mentioned, trying to think outside of the box actually turns into some really interesting team-work.

Nancy Pascoe: Another question: do you have specimens on display in St Helena. Like we have herbariums, for plants, is there any place that people could look at the spider collections or are they just digital?

A: For the spider taxonomy, they are very small specimens, very small glass tubes filled with ethanol, and they are just brown crumpled little invertebrates. We have a lot of digital photographs; all the research that I have done can be found online freely – you don't need to pay to access it. You can just put "Saint Helena spider papers" in and it should all come up on Google. I am very happy to send pdfs directly to people if they are interested in our research. In St Helena, we have a very nice display where we repatriated a giant earwig for display in the St Helena Museum, which does now have a complete giant earwig. This was the result of the Cloud Forest Project, I went to Belgium to study specimens, Belgium has a large number of specimens of the Giant Earwig. St Helena had a specimen which had been damaged, essentially broken in two, so I negotiated the donation of one of an intact specimen from Belgium which was repatriated to England, and then arranged with St Helena partners that it be returned. And that specimen now is part of a display in the Museum.

Nancy Pascoe: And then a final one. Do you have any venomous spiders on St Helena.

A: In terms of spiders, the vast majority of spiders are venomous. Very few are not venomous but spiders in the family Uloboridae are not venomous. But this does not translate into being a threat to public health. In terms of species which are dangerous to humans, we are talking about fewer than 20 species in the world, out of about 54,000 spiders. None of the species on St Helena are likely to cause a medical incident. We have no data on results where people have been seriously bitten; there is no public-health risk posed by any spiders on St Helena.

Nancy Pascoe: And how did the local community respond to this project? I know spiders are not always very popular

Andrew Pearce: Does St Helena have many more unique spider species than other islands of a similar size? If so, what might be the reason for that?

A: In terms of the UKOTs, St Helena has by a high margin the most endemic arachnids and other invertebrates. It is an island of very old geological age. It is very isolated, half way between Angola and Brazil. It has a wide variety of habitat from the dry Prosperous Plain to the Cloud Forest. The Cloud Forest is a refuge for over 120 invertebrates found nowhere else in the world. So it is very much a combination of unique habitat, a unique geological position, and the age of the island, and the fact that it has been a very good location for speciation. As I mentioned in the talk, there are no non-endemic Wolf Spiders. Every Wolf Spider that is found on the island has evolved there and is endemic, being found nowhere else. This speaks a lot to this island; when organisms reach it, speciation begins rapidly. In summary, it is very uniquely positioned, and has a combination that enables speciation to a fascinating degree. In terms of the UKOTs, it has the highest of any of the UKOTs that I know of.

Nancy Pascoe: There is a note from **Vicky Wilkins, Species Recovery Trust**: "There is also a St Helena invertebrate guide with a great spider chapter https://www.nhbs.com/terrestrial-freshwater-invertebrates-of-st-helena-book, we can send out individual chapters of this."

Liza Fowler noted: "On St Helena, we also have a reference collection where the public can come into the SHNT."

Joan Walley: Our recommendations note we need to know which species and habitats need protecting. I wonder if you could give advice to other territories about how to go about mapping and monitoring spiders.

A: In terms of advice to other Territories, involve taxonomists in surveys to identify specimens. But equally, then, to transfer that knowledge to those locally. For instance, there is a reference collection locally on the Island that is not on display but everybody who wants to see the preserved specimens can access that at the St Helena National Trust. There is also a reference collection at the Natural History Museum in London. I would just stress the fact that, for a lot of other UKOTs, there haven't been many biodiversity-surveys; we don't know what arachnids are there. We are not in a position where we can truly appreciate and conserve our biodiversity unless we know what is there first. So I would really emphasise the need for collaborative taxonomy on UKOTs.

Joan Walley: Thank you very much. I hope that it will be possible for people to take forward the advice you have just given.

Backyard rewilding as a mitigation response to habitat loss in the UKOTs

Kathleen McNary (SWA Environmental)

Kathleen McNary

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This paper presents a practical and scalable ecological restoration-strategy – backyard rewilding – tailored to small-island and resource-limited communities. By integrating concepts from rewilding ecology, cooperative research methodologies, and the Chthulucene framework, this approach promotes biodiversity-recovery and strengthens human–more-than-human relationships. A case-study conducted in Asheville, North Carolina, demonstrates measurable ecological improvements achieved over one year using backyard rewilding principles. The results underscore the potential of localised, participatory restoration practices in complementing broader conservation efforts.

In response to global habitat loss, the United Nations has declared the decade spanning from 2021-2030 as The Decade on Ecosystem Restoration. However, the ecological restoration methods the UN espouses reinforce the same narratives that have failed to reverse the trajectory of biodiversity loss and have contributed to global ecocide by valuing agentic beings exclusively in terms of their utility to humans. The ecological restoration approach known as "rewilding," on the other hand, posits that almost four billion years of ecological evolutionary intelligence uniquely qualifies the natural world (which includes humans) to self-will toward ecological wellness (Foreman, 2021; Gammon, 2018). Rewilding was first conceived in the United States in the 1990s (Soulé & Noss, 1998) and originally referred to human facilitation of ecological restoration on a landscape level via three "Cs," including cores, corridors and carnivores. However, in most UKOTs, habitat and biodiversity losses do not occur on landscape levels and are instead a result of piecemeal land clearance resulting from inadequate planning, illegal land-use, and sprawl. Furthermore, the realities of a burgeoning population of more than eight billion humans and global anthropogenic ecological impacts trouble ambitions to create ecological utopias. However, backyard rewilding methods can address the fundamental threats faced by UKOTs by restoring land one small patch at a time, thus serving as a practical means to achieve some of the Decade on Ecosystem Restoration's objectives.

Keywords: backyard rewilding, ecological restoration

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Introduction

Hello fellow conservationists. I am Kathleen McNary, the principal at SWA Environmental, a Turks and Caicos Islands based environmental consultancy company specialising in environmental conservation research. First, I want to express my gratitude to all the organisers who have worked tirelessly to put this important conference together so we in the UKOTs can share our professional challenges and successes. It is this kind of cross-territory collaboration that the UKOTCF excels at and which, I am sure we can all agree, provides invaluable services to those of us in the UKOTs who face the ever-present challenges of underfunding and under-resourcing. So, Mike, Ann, Catherine, Council Members, and all the volunteers who give tirelessly of their time, thank you!

As conservationists embedded within our communities, we often face a dual burden: confronting the enormous

challenges of environmental degradation while mourning the incremental and sometimes catastrophic losses of species and ecosystems. In small-island territories, such as the Turks and Caicos Islands, these challenges are amplified by persistent underfunding and limited resources. Yet, it is precisely these communities that stand to benefit most from localised, scalable restoration strategies.

Backyard rewilding is a restoration strategy that empowers individuals to effect ecological change on small plots of land while contributing to broader landscape-level restoration. Drawing on Robin Kimmerer's (2013) insight that the problem is: "not Land that is broken but our relationship with it," backyard rewilding seeks to restore ecological integrity and foster a reconnection with the more-than-human world.

Context and Rationale

The United Nations General Assembly declared 2021–2030 as the Decade on Ecosystem Restoration, aiming to restore degraded ecosystems and re-establish ecological functionality (MARN, 2018; UN 2019). Despite global declarations, anthropogenic impacts – including deforestation, rising atmospheric CO_2, ocean acidification, and coral-reef decline – persist at alarming rates. Traditional approaches often fail because they rely on the same systems responsible for ecological degradation, reflecting Audre Lourde's (1984) observation that "the master's tools will never dismantle the master's house." Donna J. Haraway (2016) added that: "it matters what stories we tell to tell other stories with". New approaches are needed that engage multiple worldviews, particularly those that embrace the agency of the more-than-human world.

Rewilding, as an ecological strategy, recognises Earth's evolutionary intelligence as a partner in restoration. Unlike conventional conservation science, which demands researcher objectivity, thereby reducing ways of knowing and understanding the world, backyard rewilding employs cooperative research methodologies (Heron 1997), treating humans and other species as co-researchers. This approach aligns with Aldo Leopold's (1949) land ethic, which states that, : "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

Conceptual Framework

Rewilding has historically been applied as a large-scale landscape restoration strategy, such as the reintroduction of wolves into Yellowstone in North America. While effective, this approach can reinforce a human-free wilderness narrative, which is historically inaccurate and

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Reconsidering Anthropocene

Anthropocene = The Era of Man (Crutzen, 2002)

Chthulucene = Every End = a New Beginning (Haraway, 2016)

"…more modest possibilities of partial recuperation and getting on together" (Donna Haraway 2016)

practically limiting. Freedman *et al.* (2019) found that only 5% of Earth's land remains untouched by human activity, highlighting the need to integrate human-occupied landscapes into restoration efforts.

Backyard rewilding extends this principle to residential and cultural landscapes. It encourages the reintroduction of native plants and ecologically beneficial fauna, the creation of wildlife-corridors, and the incorporation of permaculture principles for sustainable food-production. Such practices allow for mutual flourishing of human and more-than-human communities while preserving biodiversity in urban and semi-urban environments.

Methodology

A one-year case-study was conducted on a former clear-cut deciduous forest in Asheville, North Carolina, USA, which had been maintained as a manicured lawn for several decades. Baseline ecological data were collected using standard quantitative methods, including transect-analyses, point-surveys and species-identification for flora, mammals, birds and reptiles.

The rewilding process incorporated iterative cycles of co-operative inquiry. Initial phases focused on observation and relationship building with the land, refraining from intervention, and allowing all species – including invasive species – to participate as co-researchers. Subsequent interventions included planting native species beneficial to pollinators, creating safe corridors for herbivores, and selectively removing non-native species with limited ecological value.

Results

After one year of backyard rewilding, measurable increases in biodiversity were observed. The calculated Shannon-Weaver Index rose from H = 3.238 to H = 3.807. Floral species-richness increased from 91 to 183 species, mammal species increased from 10 to 13, bird species rose from 24 to 51, and reptiles from three to four species. Anecdotal evidence also indicated a substantial

increase in invertebrate diversity although these were not quantified. Invasive-species prevalence declined naturally from over 50% to approximately 35% of the total vegetation-cover.

Discussion

These results demonstrate that backyard rewilding can restore effectively biodiversity in small, resource-constrained settings. Key to success is a paradigm shift from detached objectivity to engaged subjectivity, fostering a relationship-based approach to land stewardship. This method acknowledges the complexity and agency of all ecosystem participants, including humans, and emphasises coexistence rather than control.

Rewilding also challenges conventional notions of human-dominated landscapes. Residential and urban lands, often dismissed as "human-only" spaces, can be transformed into ecologically meaningful sites for mutual flourishing. The approach aligns with Haraway's (2016) Chthulucene framework, which embraces entanglement, regenerative capacities, and modest possibilities for ecological recuperation amidst ongoing anthropogenic challenges.

Conclusion

Backyard rewilding offers a low-cost, scalable, and participatory approach to ecological restoration, particularly relevant for small-island communities facing resource constraints. By integrating cooperative research principles, ethical land-management, and a relational understanding of human and more-than-human interactions, individuals can contribute meaningfully to global restoration efforts, one patch of land at a time. While not a panacea, this strategy demonstrates that localised, relationship-centered restoration practices are both practical and ecologically effective, providing hope and agency in a time of unprecedented environmental uncertainty.

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Q&A

Joan Walley: Kathleen, can I say, even though you are in the Pacific somewhere and not able to join us on the conference now, I think that your words will have inspired virtually everybody on this call today. Thank you very much indeed for that presentation. I am going to bring in Nancy. I don't know about you, Nancy, but one of the things that came across to me in that presentation was the mind-set that we each have and how we deal with these huge challenges in terms of loss of biodiversity. And I wonder how much the debate about rewilding, and I note that it is perhaps not much underway in the UK but is starting to be, how much it's actually got to teach us, and whether or not practices in the Overseas Territories could be a space, not in a geographical sense but an opportunity for the rewilding ideas to be more thoughtfully pursued as the result of this presentation we have just had today.

Nancy Pascoe: I wasn't expecting the depth of analysis that Kathleen did. And some of the take-aways, some of the main points that I picked out, are: land-use; who owns land; who has access to land; how we have used land in terms of invasive species being introduced; whether they are farm-animals, our own pets escaping into the wild, and impacting the native fauna and flora. The whole concept of rewilding with native species. I think the term rewilding is a new buzz-word for us. Here in the BVI I would say the only people I have heard saying that are people who have moved here, UK people who have come here. And I would say the concept of rewilding is something that has been talked a lot about, maybe in North America and the UK. But when I listened to Kathleen, I thought this is what we are trying to do all along. National Parks, we have invasive species of plants and animals. We've got projects right now where that is exactly what we are trying to do, rewild – ecosystem restoration is another way you could term it. Education and changing mind-sets of people are I think the key to what Kathleen is talking about, how we are looking at the land. In BVI 80% of the land is privately owned. I am not sure what it is in other territories, but really who is owning the land, is responsible for changes, and how we are interacting with it, are key. Are we seeing it just as a resource to be used, or should we be regenerating it back to nature.

A [later]: Nancy, I am so pleased to hear that you

can see the broad application in BVI of the concepts I discussed. What I really appreciate about your comments is your recognition of the problematic nature of "land ownership," and how this presents both challenges and opportunities. In terms of challenges from a conservation standpoint, there is little that can be done to try to force people to do what is right for their Land, but as individuals, we can become stewards of our own circles of influence and, if enough of us take up that challenge, it could make a big difference in terms of biodiversity conservation.

Nancy Pascoe: I think there is a comment in the chat from **Emily Bunce:** "Thank you for this inspiring talk Kathleen! It's clear you have a depth of ecological knowledge that has supported you to rewild your space – to what extent do you feel people need to understand the science of their local ecosystems, and are there any particular resources that can help people to learn?" So I think this is about how can we all apply this to our own Overseas Territories. What does it mean and how can we do it? And I think she poses a lot of really great questions.

A [later]: Emily, I am so pleased that you raised this issue of knowledge. One of the key takeaways from my discussion that I hope people will embrace is that Land possesses 3.5 billion years of evolutionary knowledge and the capacity to self-will itself toward healing. Rather than imposing our human will on Land, which is what led to all the ecological problems we have in the first place, rewilding begins by doing nothing other than waiting, watching, learning and adopting an attitude of humility. A person does not need any particular resources or knowledge to do this, just a willingness to observe and participate, which makes it an ideal approach for resource-strapped UKOTs. By being curious about the process, people will gradually get to know the plants and animals they share space with and will thereby gain the knowledge they need to assist as needed in the rewilding process as good stewards. Although I have all the degrees and experience needed to be deemed "an expert," I learned a great many things from Land during my year of rewilding that have turned a lot of the things I thought I knew upside down, and every case will be different, so we all still have a lot to learn.

Mike Pienkowski: Could I just chip in there and say this is so wide-ranging it might be a topic worth returning to in the general discussion at the end of this session, if I could make that suggestion, Madam Chairman.

Joan Walley: You can indeed Mike. Just to return to Nancy's point, I think this is something we need to embed in some of the thinking we are promoting. Yes, let's return to this in the general discussion, and also perhaps a particular agenda item at one of our UKOTs meetings.

Nicholas Watts: So enjoyed that, thank you.

Melanie Carmichael: Fascinating and some helpful information there.

Restoring Manx Wildlife and meeting our “30 by 30” target

David Bellamy (Head of Conservation and Land, Manx Wildlife Trust)

David Bellamy

Bellamy, D. 2025. Restoring Manx Wildlife and meeting our “30 by 30” target. pp 101-104 in *UKOTCF’s 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

Manx Wildlife Trust (MWT), the Isle of Man’s leading environmental non-governmental organisation, has undergone a significant transformation over the past five decades. Initially founded to address a local conservation crisis, MWT has evolved from site-specific preservation efforts to a broader strategy of nature recovery at a landscape-scale. This paper outlines the organisation’s origins, challenges posed by the island’s unique political context, the limitations of traditional conservation methods, and the role of collaboration in achieving meaningful ecological restoration. Case-studies and strategic shifts highlight how MWT is redefining its approach to conservation in response to ongoing biodiversity-loss..

David Bellamy (Head of Conservation and Land, Manx Wildlife Trust)

Introduction

Manx Wildlife Trust was established in 1973. Plans for an oil refinery at the Ayres sand-dune system, now the island’s only National Nature Reserve sparked a need for such an organisation to champion nature and the natural landscapes of the Isle of Man. As the Isle of Man is not part of the United Kingdom or the European Union, and larger NGOs do not have a presence on the IoM, MWT was formed to fill a critical conservation void. This political isolation limits access to many UK and EU funding opportunities, such as the Darwin Initiative or the LIFE+ Programme.

Sand-dunes at the Ayres. Photo: MWT

Over the years, MWT has become the largest environmental NGO on the island, with over 1,300 members – an impressive figure for a population of just 84,000. However, the organisation has focused historically on preserving small, botanically-rich sites, often without broader ecological or strategic cohesion.

The Calf of Man from the Isle of Man. Photo: MWT

Conservation Approaches

For much of its history, MWT followed a traditional conservation model: acquiring small parcels of land for protection. Many of these reserves were isolated, lacked landscape-scale connectivity, and were managed through low-intervention or prescriptive methods.

While this strategy successfully protected plant-diversity, it was insufficient for mobile species such as birds and bats. Fragmentation and limited scope contributed to the continued decline of many species. Notably, the yellowhammer *Emberiza citrinella* once common, has become extinct on the island within recent decades.

A long list of lost breeding bird species – corn bunting, lapwing, red kite, and others – illustrates the scale of biodiversity decline. The extinction of the great auk, formerly found on the Isle of Man and now globally extinct, further highlights the importance of local action in global conservation efforts.

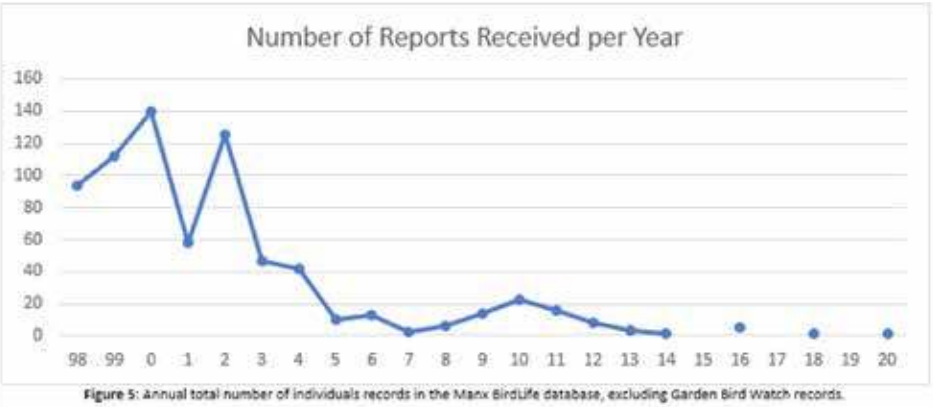
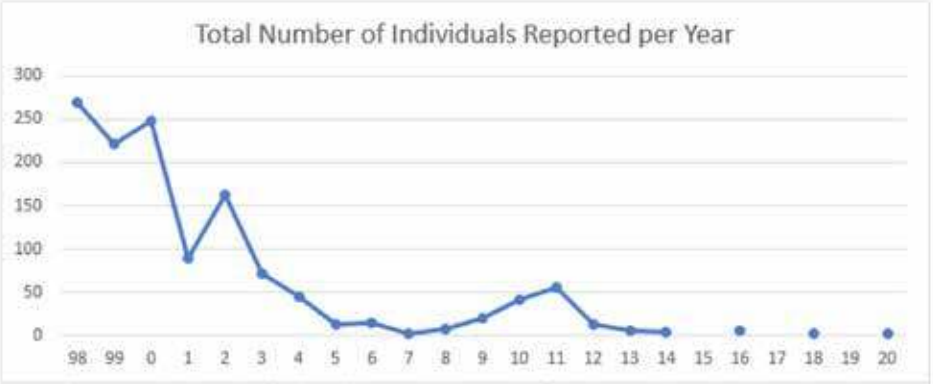


Figure 5: Annual total number of individuals records in the Manx BirdLife database, excluding Garden Bird Watch records.



Yellowhammers: above: numbers of reports and of individuals reported in each year since 1998 (David Bellamy); upper right: yellowhammer (Pete Hadfield); lower right: the only type of yellowhammers currently in the Isle of Man: museum specimens (Laura McCoy, Manx National Heritage).

Transitioning Toward Nature Recovery

MWT's 50th anniversary in 2023 marked a pivotal moment of strategic reassessment. Recognising that traditional conservation alone is inadequate, the Trust began transitioning toward a nature-recovery model focused on ecological restoration at a landscapescale.

This shift is exemplified by a comparison between two nature reserves:

Ballamooar Meadow: Less than one acre, but home to over 100 vascular plant species (one-fifth of the island's flora).

Aerial view of Ballamooar Meadow (MNT)

Glen Auldyn Estate: Recently acquired 1,124-acre site comprising significantly degraded habitats, representing a move toward large-scale restoration.

Part of Glen Auldyn with trees in winter (Graham Makepeace-Warne, MWT)

The Glen Auldyn acquisition was made possible through strategic collaboration with the Royal Society of Wildlife Trusts and external funding from Aviva, enabling restoration work to be funded through to 2075.

The Role of Collaboration and Influence

The Isle of Man's small population and centralised government present unique opportunities for influence. With only 24 members in its parliament and a single governmental department responsible for environmental policy, MWT can engage more directly in policy advocacy than might be possible in larger jurisdictions.

Approximately 70% of the island's land is agricultural, managed by just 343 businesses. If each business were

Heather-clad hills (Visit Isle of Man)

represented by one person, this equates to just 0.4% of the population. This presents both a challenge and an opportunity: small numbers of land-managers mean that significant landscape-scale changes can be achieved through collaboration with a relatively limited group of stakeholders.

However, current agricultural subsidies may contribute to biodiversity-decline, and future reform must support nature-positive land management.

Marine Conservation Progress

Beyond terrestrial restoration, the Isle of Man has also become a leader in marine conservation. Though much of the fishing industry continues to rely on destructive methods, the island has designated 10 highly protected marine nature reserves. In nine of these, mobile fishing gear is fully prohibited; the tenth has restricted use driven by scientific monitoring.

These achievements have been made by working collaboratively with the fishing industry rather than opposing it, demonstrating the value of stakeholder engagement in marine protection.

Case Study: Seabird Recovery on the Calf of Man

A successful example of low-cost ecological restoration is the eradication of non-native brown rats (locally known as "longtails" [not to be confused with the tropic-birds known by the same name in the Wider Caribbean!]) from the Calf of Man, an islet owned by Manx National Heritage and managed in partnership with MWT. This intervention has supported the recovery of ground-nesting seabirds, such as the formerly extirpated Manx shearwater *Puffinus puffinus*. The cost was relatively low – only into the tens of thousands of pounds – demonstrating the potential for high-impact outcomes from well-targeted efforts.

Conclusion and Future Directions

Manx Wildlife Trust's evolution from small-site conservation to a landscape-scale, collaborative model of nature recovery represents a significant strategic shift. Today, MWT owns 32 reserves, managing 2% of the island's land area. The Trust's future efforts will rely on:

- Strategic partnerships
- Landscape-scale ecological planning
- Integration of terrestrial and marine conservation
- Engagement with landowners, farmers, fishers and policymakers.

This transition reflects a broader movement within conservation, recognising that localised preservation alone is insufficient. To halt and reverse biodiversity loss, especially in small island nations, conservation must be integrated, ambitious, and inclusive.

Manx Wildlife Trust
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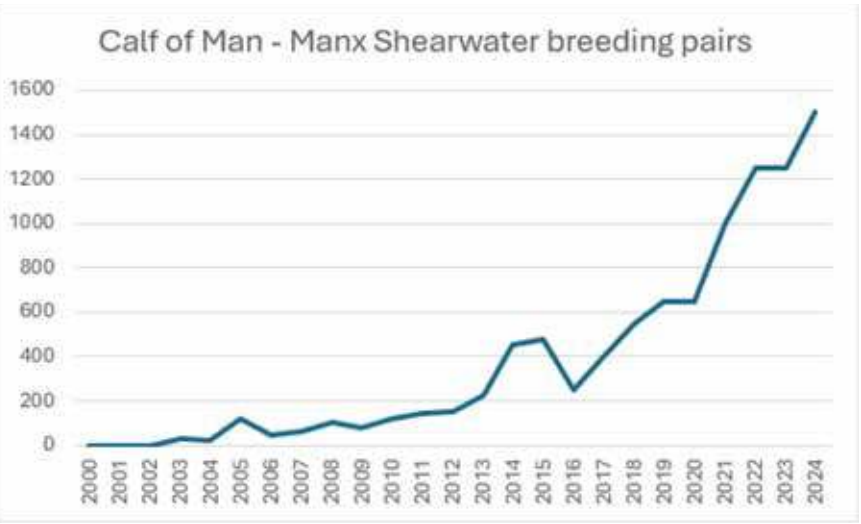

Manx shearwater adut (above left) and chick (below left), with (above) their recolonisation of the Calf of Man (Calf of Man Bird Observatory).

Acknowledgements

MWT gratefully acknowledges the support of the Royal Society of Wildlife Trusts, Aviva, and all collaborating partners involved in the Temperate Rainforest Recovery Project.

Q&A

Joan Walley: David isn't actually with us live, and also the presentation he has just made was first given to the Inter Island Environment Meeting (IIEM) on the Isle of Man in September. But what I do want to say, in terms of thanking David for that inspiring presentation, is that those of us who are knowledgeable about the progress that has been made in the Isle of Man, feel that the scale of ambition that there is in the Isle of Man, and the way in which the Manx Wildlife Trust has taken this whole agenda forward, has lots of resonance with many of us, either in Crown Dependencies or Overseas Territories, not just in UK. I think the point that David made that the Isle of Man is neither in the EU or in the UK does not stop us being as ambitious as we want to be.

Nancy Pascoe: The phrase that stood out for me was: Nature Conservation to Nature Recovery, just looking at how we are all managing sites. And I think I would want to ask him as well about the human impact on the land of the site just acquired, the impact of climate-change. Nature conservation is not just a static situation. He talked about some sites which he wondered why they had them. I think we have some of those sites too. Is it land that has been donated? How have we acquired that land? How can it be managed to advantage and for the benefit of what they are trying to achieve? All very interesting. And I was interested in how they got millions of pounds donated for a site via the central wildlife trusts. Is this a UK fund only, I've not heard of that. Do you know more about that, Joan?

A [from David Bellany, later]: Our first action after the acquisition of Glen Auldyn was to hold an evening community-meeting with supper, hand delivering an invitation to each of the 87 households within the valley. Stakeholder-engagement will be key at every stage of developing our plans. One benefit of operating at landscape-scale, is that Glen Auldyn's elevation range is from 50m above sea level to almost 400m, allowing for some altitude shift for wildlife. We are exploring ways to work with neighbours to expand the site's reach to 550m, impressive when the very highest point on the Isle of Man is 620m.

Yes we have been both gifted and bequeathed some very small reserves, sometimes with low ecological value. Some of these are urban woodlands, surrounded by third party houses which makes the financial liability for tree-risk management quite high, for little ecological return. Whilst these sites may have low general biodiversity-value, we have not yet fully realised the human value of these sites for engagement, nature-outreach and well-being. This will make us reflect on their true value to us as a nature charity.

When operating at landscape-scale, we will be shifting towards restoring natural processes (and suitable proxies for these where necessary, such as kept grazing animals) to allow nature to guide us in site-management and reduce the management-burden.

Joan Walley: Something that you have touched upon there is something that came up in the discussion with the Environment Minister, Mary Creagh, when we talked about the urgent need for funding, and she reminded us it is not just about government funding; it's how we can link up with business. I know a little bit about the Aviva Fund which has really been quite transformational in the Isle of Man and in other places in terms of the work they are doing, which is obviously also in the insurance companies' interests to mitigate and prevent many of the policies they are dealing with from having huge claims. I think there is huge scope for companies like Aviva, and I also know that Leigh Morris, a UKOTCF Council member, has been specifically tasked with looking at how we might bring in more private finance in terms of getting some of the things we need properly funded.

Mike Pienkowski: Perhaps I can chip in and say that Leigh is chairing a session on this very topic on the last day of the conference, on Thursday. He is not attending the conference now because he is at the IUCN Conference instead. His day-job required him to do that, but the Wildlife Trusts network is mainly UK but includes also the Isle of Man and Alderney. Both of those are also members of the Forum but they are members of that network too. Leigh's new job is in the Wildlife Trusts supporting organisations in an international role, which does include the territories. He is still on UKOTCF Council, with the support of his new boss, so I think there is a lot of potential there. We will learn more about it on Thursday.

Catherine Wensink: There are a couple of links in the chat about the temperate rainforest project: https://www.wildlifetrusts.org/temperate-rainforest-restoration; and Wildlife Trust & Aviva Impact Report 2024-2025 (https://www.wildlifetrusts.org/sites/default/).

Richard Selman (IoM DEFA): Glen Auldyn funding is from Aviva, for Celtic rainforests.

Roland Gauvain: Aviva's funding of the Atlantic rainforest project helps to demonstrate the scope for ESG focused corporate partnerships. However, you have to be within the geographic region to be able to access the project. Unfortunately, we are not down here in semi-tropical Alderney!

Informing Conservation Priorities through Earth Observation in the Caribbean

Samuel Pike & Katie Medcalf (Environment Systems Ltd)

Samuel Pike
Katie Medcalf

Pike, S. & Medcalf, K. 2025. Informing Conservation Priorities through Earth Observation in the Caribbean. pp 105-108 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

The combination of technology and data offer increasingly valuable ways to support biodiversity and sustainability goals. This talk explores the role of Earth observation and climate data for informing conservation strategies, particularly in coastal and small island contexts in the Caribbean. It considers how satellite imagery, ecological indicators, and climate projections can help identify priority areas for action and track progress over time. Additionally, we highlight the importance of integrating local expertise, datasets, and lived experience with remote sensing and AI tools, helping to ensure that remote conservation responses are contextually grounded, forward-looking, and equipped to meet emerging threats and opportunities.

Samuel Pike & Katie Medcalf (Environment Systems Ltd)

Introduction

Small islands in the Caribbean are at the forefront of climate-related pressures. Periods of prolonged drought are interspersed with flooding from intense rainfall, while stronger hurricanes continue to reshape both ecosystems and livelihoods. These challenges are compounded by limited financial and technical resources, and by the urgency of policy and management decisions that must be made.

In this context, Earth-observation and climate data can provide practical, evidence-based support. Free and open global datasets offer a baseline from which islands can develop their own conservation and resilience strategies. The value of these datasets is not in their availability alone, but in how they are adapted to island contexts, co-created with local experts, and linked to pressing conservation questions.

The Key Factors

The work described here combines data with locally relevant information across four environmental domains:

- Habitat – identifying ecosystem extent and condition;
- Topography – characterising coastal and inland terrain;
- Soils and geology – understanding hydrology, fertility, and erosion risk;
- Land management – reflecting how people shape and use land.

Each of these foundations is available at some level from free global sources (e.g. ESA's WorldCover Map, FAO soils data, GEBCO bathymetry). If more detail is needed, which is likely when working at the island-scale, then focusing on these four key factors will ensure the data collected is used across the board and with several use-cases. When combined with local datasets and expertise,

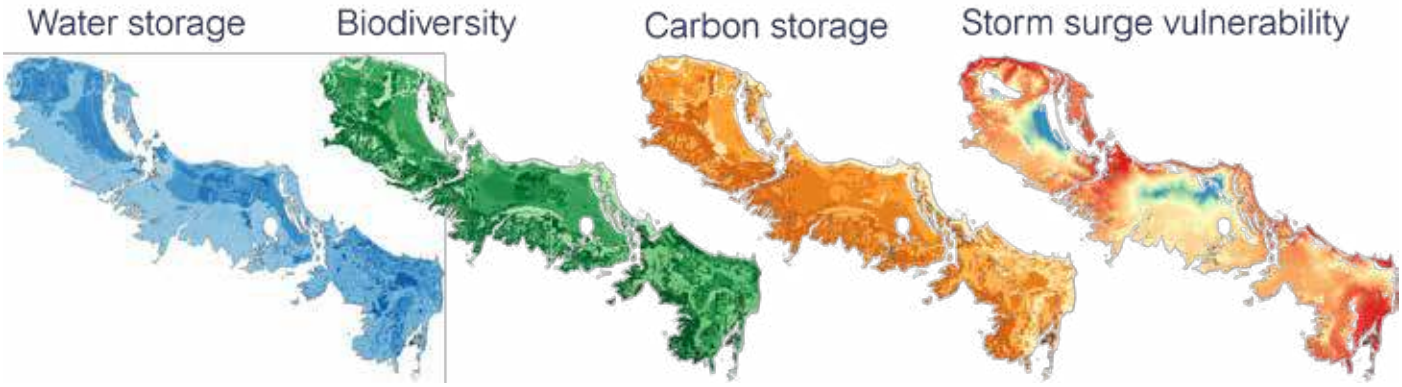

Figure 1: Ecosystem Services of Turks and Caicos Ramsar wetlands. The darker the colour the greater the contribution/risk.

they provide the basis for modelling ecosystem-services, assessing vulnerability, and exploring nature-based solutions.

Case Study 1: Turks and Caicos Islands

The Ramsar wetlands of the Turks and Caicos Islands are among the largest in the Caribbean. By combining satellite-imagery, climate-data, and core environmental layers with local experts and knowledge, the wetlands' role in supporting water-security, biodiversity, carbon-storage, and coastal protection was assessed. The analysis identified East Caicos as an area of exceptional biodiversity and carbon-storage potential. This evidence is informing current discussions on the expansion of Ramsar designations, ensuring that conservation-decisions are supported by robust and locally relevant data.

Case Study 2: Anguilla

In Anguilla, the National Trust sought evidence on storm surge and coastal vulnerability. By integrating Earth-observation, climate-data, and stakeholder-knowledge, a vulnerability assessment was produced that identified priority sites for red-mangrove restoration. Modelling showed how restoration in these locations could reduce vulnerability while also enhancing biodiversity and ecological connectivity. These outputs are already being used to guide restoration-projects, demonstrating how data can move from pixels to action.

Discussion

These examples highlight both the strengths and limitations of global datasets. Free and open data provide a consistent foundation, ensuring that no island starts from zero. However, adaptation is essential: global products are often too coarse to inform local decisions without refinement. The greatest value emerges when global and local data are combined, and when community-knowledge is integrated into the process.

This approach responds also to broader policy needs. Conservation-targets and monitoring-frameworks must be both realistic and fit for purpose. By grounding them in accessible data and local expertise, policies are more likely to be achievable, socially inclusive, and resilient to change.

Conclusions

Earth-observation and climate data have an important role to play in the conservation of the UK Overseas Territories. Free global datasets can provide a starting point, but it is the local expertise and context that give them meaning. Together, they can help identify priorities for protection, guide restoration, and support the development of clear, tailored, and practical conservation targets.

The opportunity is to ensure that technology and local knowledge work hand-in-hand, so that conservation in the UKOTs is evidence-based, inclusive, and resilient in the face of a changing climate.

Q&A

Joan Walley: Samuel, thank you so much. I understand that you are with us on the call and able to answer questions. One comment that I wanted to make: you demonstrated the importance of communication about the datasets and how that might assist. The little cartoon character stood out as much as anything else in the presentation. I just wonder how you think we can better communicate, not just to decision-makers but to the public at large? About how important funding for data or research or capacity for all of this is? How do we better communicate what it is we are seeking to achieve towards sustainability targets?

Samuel Pike: You have Nancy and the NPTVI to thank for the cartoon, I think that is a really good way to get messages across. Certainly, each way you go about things, you need to be targeting whom you are aiming at. Nancy's cartoon was fantastic for getting to the younger audiences, and building that knowledge. I work with maps, I create maps, so I have always thought that visuals work a lot more than raw data. In the workshops my experience is, if you say things like how much temperature is going to rise, or how much less rainfall you will be having in the future, putting it on display, having people connect with the data, is more

Figure 2: Storm surge vulnerability, opportunities for red mangrove restoration, and the impact of the restoration in Anguilla.

effective. For policy- and decision-makers, getting them more involved right from the beginning, not necessarily condensing the outcomes or anything at the end, but getting their buy-in right from the start, taking them along with the journey while you do your project, and they see the outcomes as a result.

Joan Walley: Thank you for that. And I think that was very much behind our thinking when we got Mary Creagh to speak yesterday.

Katie, is there anything you wish to add to the presentation that has just been delivered by your colleague.

Katie Medcalf: In response to that last question, satellite-data suffer from two views. One is that people think it is magic and will make the tea and tell you the answer to life, the universe and everything. And the other is that it is considered completely useless because it won't pick up a 3cm plant in amongst a scrubby environment. And, of course, it is understanding what it does and what it does tell and how to use it. That is its main strength.

Nancy Pascoe: I can speak highly of the work of Samuel and Katie in BVI. We have done several projects with them. I have a geographical background and I fully support the power of maps in conveying information. When we do a workshop here and put a map up, you are showing information to people and that they can visualise and can contribute. Like Sam says, you are not bringing people in at the end, saying we have done all this research and this is the endproduct. Bring people in at the beginning and you ask their opinion and you ask what data are available. Because you need to ground-truth. As Katie and Sam said, there are so many layers of information, and earth-observation is such a powerful tool and needs care to be applied. And I really do strongly urge every territory to really think how they could use earth-observation. It might seem a bit too technical, and where do we even start? Sam and Katie, if a territory has never used any earth-observation, where would you recommend they start; where is the best place. Because we are very small islands, and it makes it time-efficient to guide your ground-truthing and the work that you do. We use it so much in the BVI and I can't speak highly enough. So, Sam and Katie, where should somebody start?

Samuel Pike: So much more data is being captured and being delivered to end-users. I think starting with actual satellite-data may not be the right place for you. It is very technical; there are a lot of things going on. There are a lot of things to understand to apply the skills needed load it into GIS software. A lot of data are being generated which are derived from earth-observations, not using the images themselves. But inferred information like vegetation-health or vegetation-drought, those sort of indices, are much easier to understand and conceptually add to your framework. So I would start with that.

Nancy Pascoe: There are some questions in the chat. From the **Species Recovery Trust:** "Could this type of map be used to understand shifting of threatened species with climate-change to support their conservation?

Samuel Pike: Yes, with the right data, I think, as long as you have good understanding of where those threatened species like to live and what they need to survive: what conditions those habitats need to be in; where they exist in the landscape in terms of aspect, size of the island, and temperature-ranges, If you understand all of that, you can use climate-data to understand where those ecological envelopes might be in 30, 40, 50, 60, 70 years' time. It is not indicative, it is projectioning. You could not say that is exactly where they are going to be in 20, 40 year's time, but at least it would give you a bit of an insight into the general patterns of where these envelopes are shifting.

Nancy Pascoe: Another question from Melanie Carmichael: Are there sources of funding to support mapping Earth Observation in a territory?

Samuel Pike: At the moment it is being done through Darwin Plus. Hence the questions to the Honourable Minister yesterday about alternative funding, philanthropic endeavours. I know that some are interested in it, but not necessarily from an earth-observation point of view: how it could be used for insurance policies, for example. So it is not necessarily the data themselves but what they can be used for – which is the key driver there.

Katie Medcalf: In terms of research, there are a couple of programmes which support research using earth-observation. They might be worth investigating if you have a specific issue in mind. I haven't seen one related to an Overseas Territory but I don't see why it shouldn't. But they are more research focussed.

Joan Walley: Perhaps there is a bit more work we need to do on that, perhaps to the follow-up to the Minister thanking her for her contribution yesterday. We should make sure that that point does not get lost.

Roland Lines: As you noted, many of the global data-sets are too coarse for effective application to small islands. Are there online resources that bring together the available data for small islands?

Samuel Pike: Unfortunately, not that we are aware of. The closest resource would be the UKOTCF's own webdatabase for conservation practitioners (https://www.ukotcf.org.uk/webdatabase-for-conservation-practitioners/). This would need effort from interested parties and knowledgeable experts to source the data/information, and maintain the entries.

Nicholas Watts: It would be interesting to see a composite map including the UKOTs in a map of Commonwealth small island states. I ask from the perspective of the Commonwealth Association of Museums.

Samuel Pike: Here is a public domain map that combines Member states of the Commonwealth of Nations and

UKOT's, updated in February 2025.

https://en.wikipedia.org/wiki/Member_states_of_the_Commonwealth_of_Nations#/media/File:Commonwealth_of_Nations.svg

If this is not quite what you are after, we are always happy to help with mapping and remote sensing questions that could be of further

Paul Edgar: At Amphibian & Reptile Conservation, we have found spatial mapping and modelling invaluable in helping us target conservation and monitoring efforts on Jersey. https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/R%20Jersey%20multi-species%20distribution,%20habitat%20suitability%20and%20connectivity%20modelling%20%20181218%20DM.pdf

Mapping St Helena's Endemic Invertebrates for Targeted Conservation

Adam Riggs (St Helena Government)

Adam Riggs

Riggs, A. 2025. Mapping St Helena's Endemic Invertebrates for Targeted Conservation. pp 109-112 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

Invertebrates comprise 97% of all animal species and are vital to ecosystem function, forming the foundation of many ecosystems. However they are severely understudied and remain heavily under-represented in global conservation efforts. Oceanic islands harbour a high degree of biodiversity and are known for their magnitude higher endemic species than continents. St Helena is a remote oceanic island in the South Atlantic Ocean with a rich invertebrate fauna and over 460 endemic invertebrate species. This research carried out species distribution modelling using MaxEnt software on 176 endemic invertebrates, identifying important habitats and assessing protected area efficiency. Zonation prioritisation software was also used to understand future conservation measures on St Helena to aid invertebrate conservation. This talk will outline the methods used and interesting results from using these software types to map endemic species on St Helena. This is the first time this approach to guide conservation efforts has been used on St Helena and highlights its potential for evidence-based decisions on other UK overseas territories.

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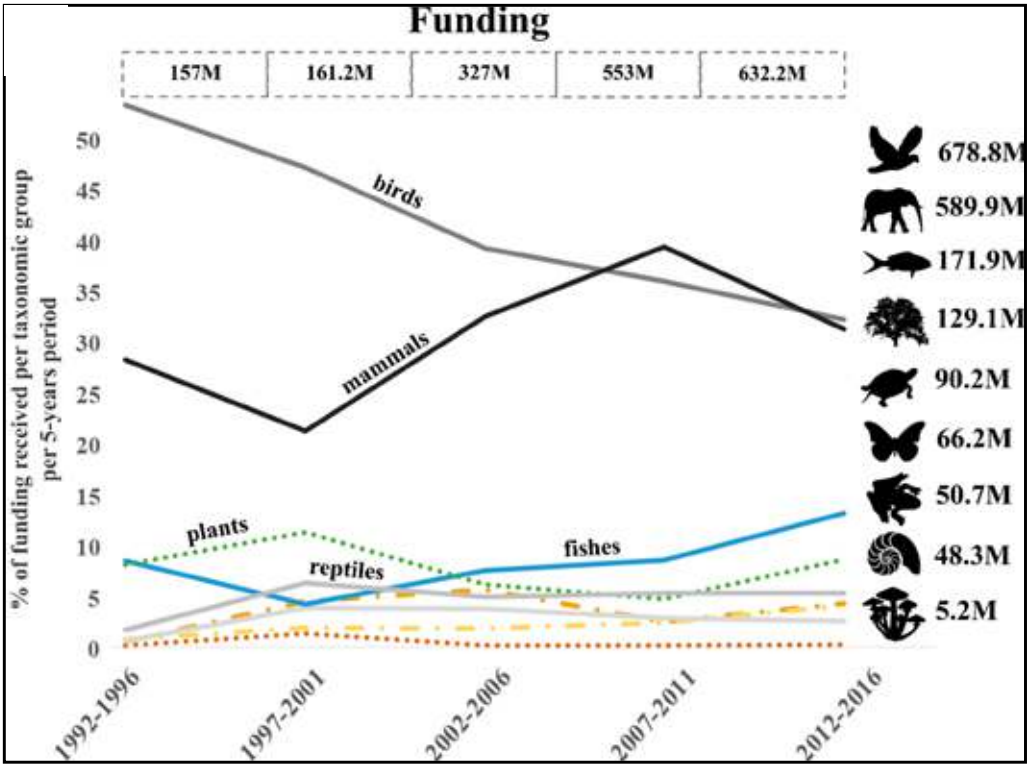
Introduction

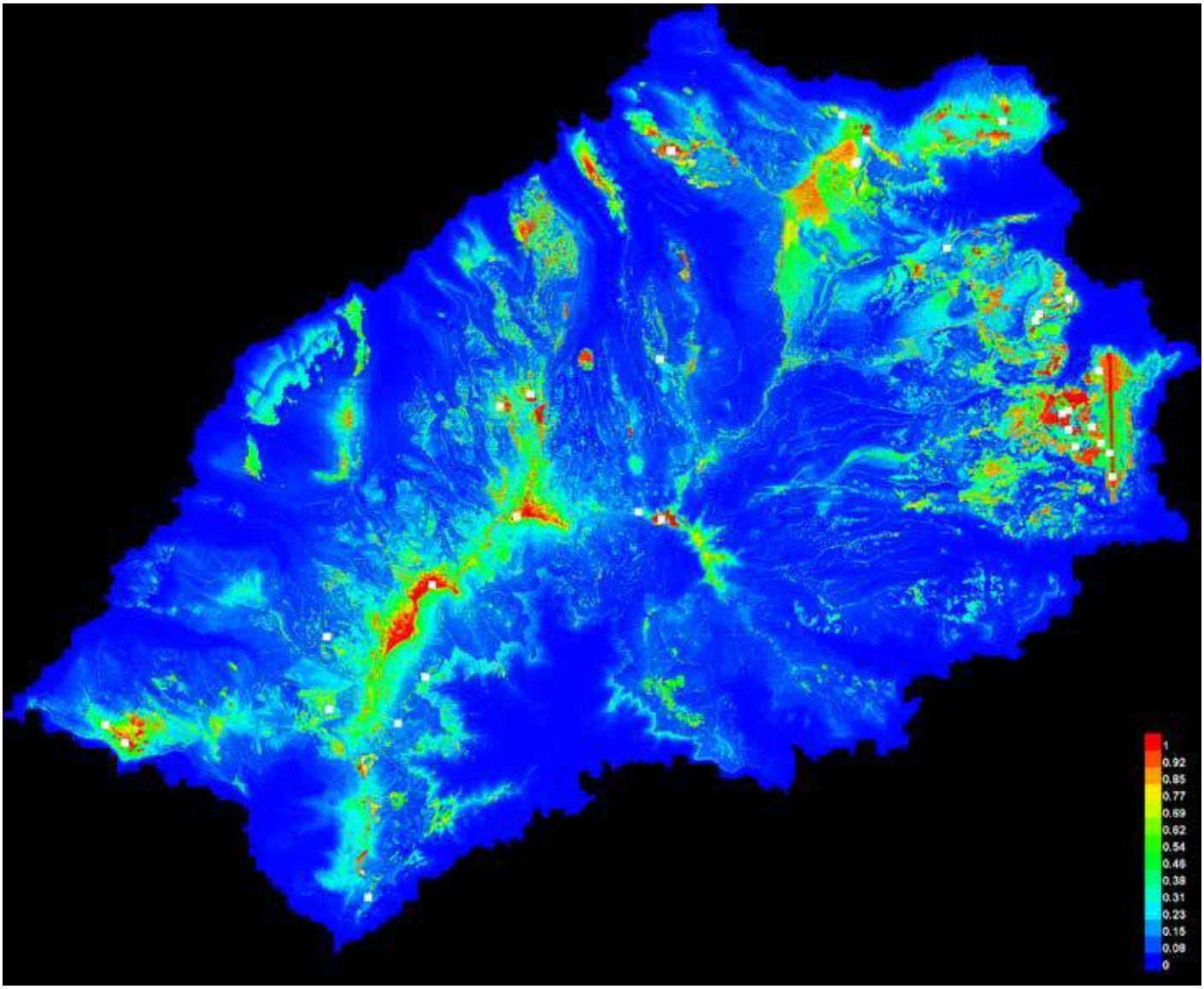
Oceanic islands, though covering only 5% of the Earth's surface, are disproportionately rich in endemic species. St Helena hosts over 460 endemic invertebrates, including 29 endemic fungus-moth species and 100% of its wolf-spider species. However, since human colonisation in 1502, the island's endemic vegetation has declined to just 1% of its original extent. Invasive species such as European wasps, the springbok mantis, and non-native plants pose additional threats, particularly given the co-evolutionary relationships between endemic invertebrates and their habitats.



This study aimed: (i) to identify habitats most commonly inhabited by endemic invertebrates; (ii) to assess the effectiveness of existing protected areas; and (iii) to inform future protected area designation to enhance conservation outcomes.

Methods

Species-presence data were provided by the St Helena National Trust, spanning historical records from the 1700s to contemporary field-surveys. Data included GPS



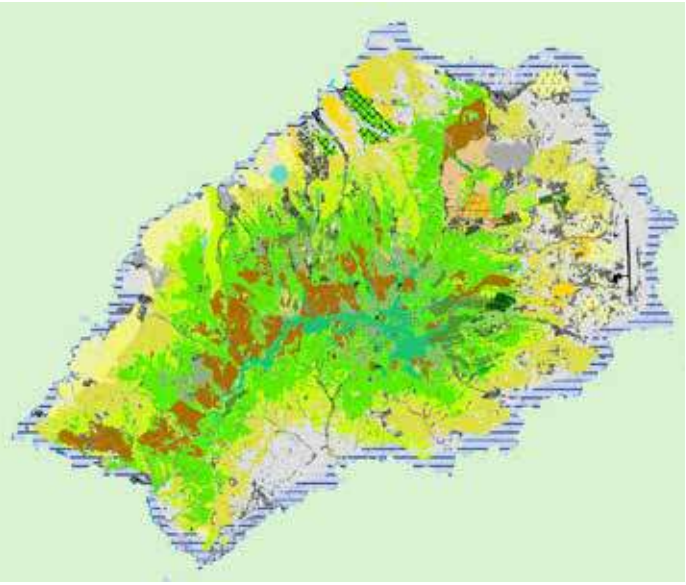
locations for 176 species, which were combined with environmental variables such as altitude, habitat-type, wind-speed and temperature. Species-distribution models were generated using Maxent, predicting areas of suitable habitat, based on observed occurrences.

Species-richness maps *(above)* were produced in R, and spatial prioritisation was conducted using Zonation software to identify high-priority areas for endemic invertebrate conservation.

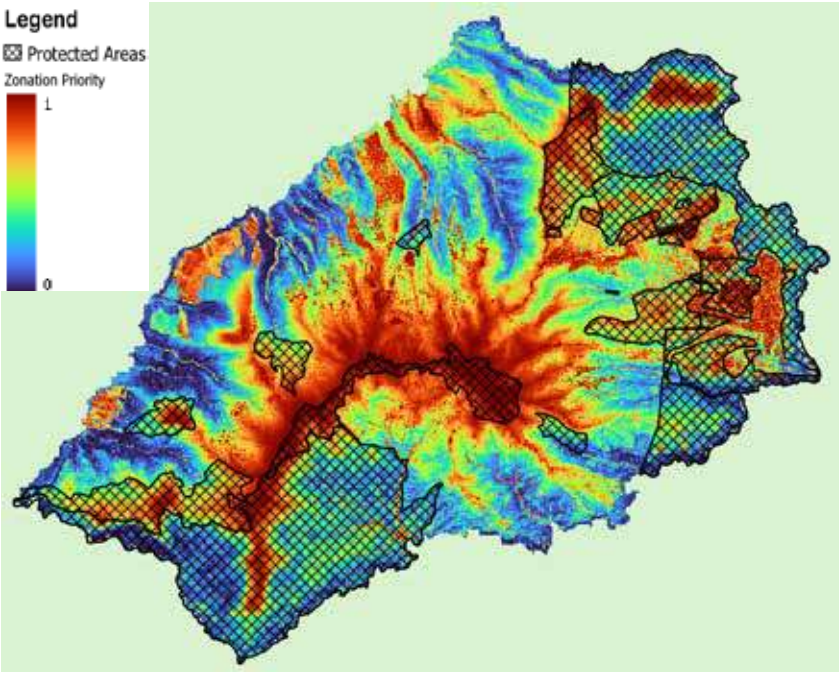
Results

Analysis *(right)* indicated that bare soil (12.3%) and pasture-land dominated by Kikuyu grass supported the highest species-richness, suggesting that low-intensity agricultural systems may provide important habitats for endemic invertebrates. Introduced vegetation also overlapped with high-species areas, indicating either resilience among endemic invertebrates or potential evolutionary traps.

Protected areas on St Helena currently conserve 69% of endemic invertebrates, with 50% or more of their distribution falling within protected boundaries. Only 4% of species had less than 25% of their distribution protected. Zonation-analysis identified additional priority



Habitat Type	Percentage cover %
Bare soil	12.3
Kikuyu Grass	9.1
Dense shrub mixture	9.0
Rocky areas	8.8
Introduced low shrub semi-desert	6.8



How can future designation of protected areas aim to increase endemic invertebrate protection?

areas, with opportunities to enhance connectivity via central ridges and tributaries, reducing fragmentation and facilitating species-movement.

Discussion

Species-distribution modelling offers a robust approach for identifying conservation-priorities, particularly on islands where survey-coverage is limited. Existing protected areas on St Helena are relatively effective; however, strategic expansion and improved connectivity could enhance further conservation-outcomes. Data-bias toward frequently surveyed areas represents a limitation and should be addressed in future research.

Conclusion

This study demonstrates that combining species-distribution modelling with spatial prioritisation provides an evidence-based framework for protecting endemic invertebrates on islands. Findings can inform both the evaluation of existing protected areas and the strategic designation of new conservation-sites.

Acknowledgements

Thanks to the St Helena National Trust for providing species-occurrence data and for their support throughout the volunteer programme.

Q&A

[Fieldwork duties prevented Adam being available for the Q&A.]

Joan Walley: I would like to add to that thanks that you gave at the end of your talk. Research institutions like Exeter University contribute hugely to the research underway in Overseas Territories. It is wonderful that there is this opportunity for collaboration and for you to share the outcome of your research with us today.

Nancy Pascoe: One of the things that jumped out at me from Adam's talk was that less than 5% of projects focus on invertebrates. This is a major point for all of us that needs addressing. It is the small things that we are not looking at; it is birds, plants, other wildlife – so we are probably guilty here in the BVI too. But it is really important to do that scale of research as well.

Another thing that struck me was that they only have 1% of native habitat in St Helena. Talking about research, we need the data. The National Parks Trust of the Virgin Islands develop protected areas; you want more protected key areas but you need the data – you have to have that strong evidence-base. So, as Adam was saying, his analysis was driven more by the data he had available. And he talked about some of the software-systems he used.

Species-distribution models were generated using Maxent. Species-richness maps were produced in R, and spatial prioritisation was conducted using Zonation software. These would help predict where other areas of distribution might be, so that could then inform where you might go and do more fieldwork. I am guessing that might be similar to Marksand, another modelling software that we have used. I am not familiar with Zonation but it sounds

similar and maybe that is a way that you can mask out urban areas. Like he said, there might be certain areas you would not want to include in a protected area network, because they are urban or whatever.

He was talking about where you might have data-gaps and how best to fill those data-gaps, because going through the whole process of designing a protected-area network is a long process and you have to have a lot of buy-in. So as much information as you can get, in many different forms, is needed to tie in to that. So you are not going to define a protected area just on invertebrates; you are going to try to put all these different layers together to say these are the best areas on the island to protect several species or habitats. So my question would be "How is he looking at the invertebrates in relation to all the other needs, on a small island where there is competition for land." Those are many factors you have to look into in designing a protected area network. That was very interesting and I would certainly agree that we need more invertebrate research.

A (later): For the question, I do not actually have a straightforward answer. My project was centred around understanding those distributions and assessing protected area effectiveness on St Helena. It did not really take into account the next steps of how to address setting up a possible protected area network for the island and factoring in the human/built environment. We are lucky on St Helena that there are areas that have been highly developed but there is still a lot of area that has not been built on. Much of that land that has not been built on is not suitable for development, due to steep slopes. Zonation does allow for that deeper analysis to exclude areas that may not be suitable, e.g. urban areas. However, with the scope and time restriction on the project, I was not able to go into any further depth with Zonation. As this was only a dissertation project, there are not any further next steps and was more to provide a resource and investigate if future protected area designation could be beneficial for invertebrates.

Joan Walley: Thank you for that contribution Nancy, and thank you to Adam.

Planning Marine Biosecurity for Guernsey

Julia Henney (Natural Environment, States of Guernsey) & Lucinda Lintott (Senior INNS Consultant Scientist, APEM Ltd.)

Julia Henney
Lucinda Lintott

Henney, J. & Lintott. L. 2025. Planning Marine Biosecurity for Guernsey. pp 113-118 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

The development of a Marine Biosecurity Plan was prioritised by the States of Guernsey in recognition of the risks posed by invasive non-native species to the marine environment and marine industries.
APEM Ltd were engaged to deliver robust, cross-cutting biosecurity planning, with stakeholder consultation and engagement underpinning the process and outputs.
The first output, intended for top-down implementation, is a technical report for policymakers and governmental departments comprising a legislative review, contingency and rapid response planning frameworks and relevant monitoring and control methodologies.
The second output, intended as complementary bottom-up biosecurity for stakeholders, is a guide that contains accessible INNS and biosecurity information and biosecurity guidance for key sectors, including recreational boating, commercial shipping and commercial fishing. The guide outlines a three-pronged approach to robust biosecurity: practical biosecurity actions, awareness-raising and monitoring/reporting.
This work, and the promising uptake of the outputs underpins the importance of a community-based, multi-sector, collaborative approach to implementing sustainable marine biosecurity.

Julia Henney (Natural Environment, States of Guernsey; julia.henney@gov.gg) & Lucinda Lintott (Senior INNS Consultant Scientist, APEM Ltd.; l.lintott@apemltd.co.uk)

Good afternoon and thank you so much for inviting us to talk to you today. So we're going to be talking to you about Marine biosecurity planning in Guernsey. My name is Julia Henney and I am the senior environment officer at the States of Guernsey. And I am Lucinda Lintott, a senior invasive species consultant at APEM.

So this is just a very quick overview of what we are going to be talking to you about this afternoon. So we will give you a very brief introduction into Marine biosecurity, why we are prioritising it in Guernsey, and then the objectives of the marine biosecurity plan that has been produced. I will then hand over to Lucinda who will talk you through what makes effective biosecurity, the approaches that APEM took to producing a marine biosecurity plan for Guernsey, and the outputs of that work. And then I will quickly sum-up with the next steps that the States of Guernsey are taking.

So, to start then. In 2023, the States of Guernsey implemented an invasive non-native species action-plan, looking at how to prevent the introduction and spread of invasive species around Guernsey. Invasive non-native species are one of the biggest drivers of biodiversity loss globally and this is an impact that we're experiencing in Guernsey. Our marine ecosystems and industries are at risk from pests and pathogens as well, which are transmitted along similar pathways to invasive non-native species.

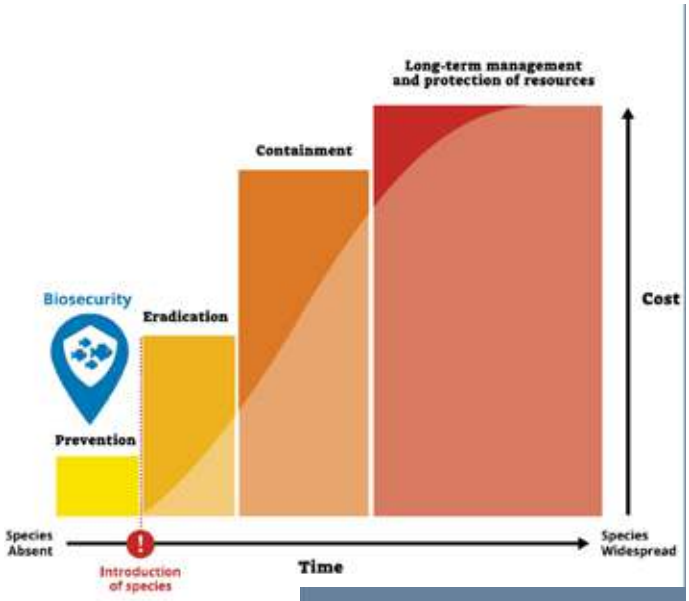
And in our marine environment, there are already species that are here and causing trouble. So, one example is Japanese wireweed or *Sargassum muticum (image below)*. This is an invasive species of seaweed that was introduced to Guernsey in the 1980s. Since then, it has spread and it is found in almost every single bay in

Guernsey, including some of our most sensitive sites. Where it is present, it shades out and changes the habitat of rock-pools. It warms them up, to the detriment of native species. And, unfortunately, there is no control and management possibility. In fact, where people have tried to control it, this has actually just encouraged its spread further, so it is here and it is causing an impact.

Another example is carpet sea squirt or *Didemnum vex (image above)*. This is a relatively new arrival in Guernsey. It was first recorded in our visitors' marina "Victoria Marina" in 2023 and since then, on an annual basis, we have been controlling it. To the best of our knowledge, those control-measures have stopped it from spreading further afield than our visitors' marina. And those control measures, we believe, are being so successful that, when we undertook eDNA sampling this summer, it was actually below detectable levels for that methodology. So, we are quite hopeful that the method that we are implementing to control it is actually reducing that propagule pressure and helping to prevent it from spreading.

Then finally one example *(image below)* of something that is not here in Guernsey and one we really do not want to get here: the oyster herpes virus. This is a pathogen of oysters and it causes almost 90% mortality in oyster-beds where it is found. And it is prevalent right across the UK and in France and in Jersey. But Guernsey, fortunately, is free from this notifiable disease and we have two industries that are reliant on that disease-free status, so we're really keen to keep it out of our waters.

And this diagram *(above right)* shows why we are



prioritising prevention. We want to keep these species and these pests and pathogens out of our waters. One of the problems with marine species is that, once they are here, they are almost impossible to eradicate and very, very costly to manage, as demonstrated by this invasion curve.

Why Prioritise Prevention?

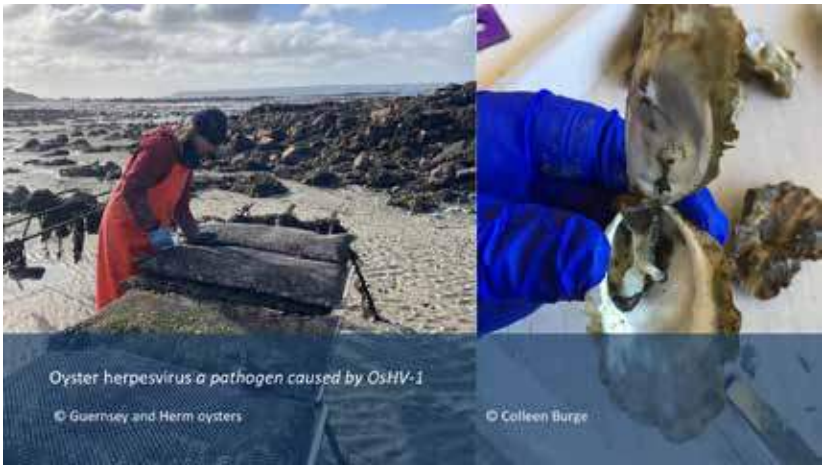
The Invasion Curve, adapted from the US National Parks Service and the Australian Department of Primary Industries.

As a species becomes established, the costs of interventions increase.

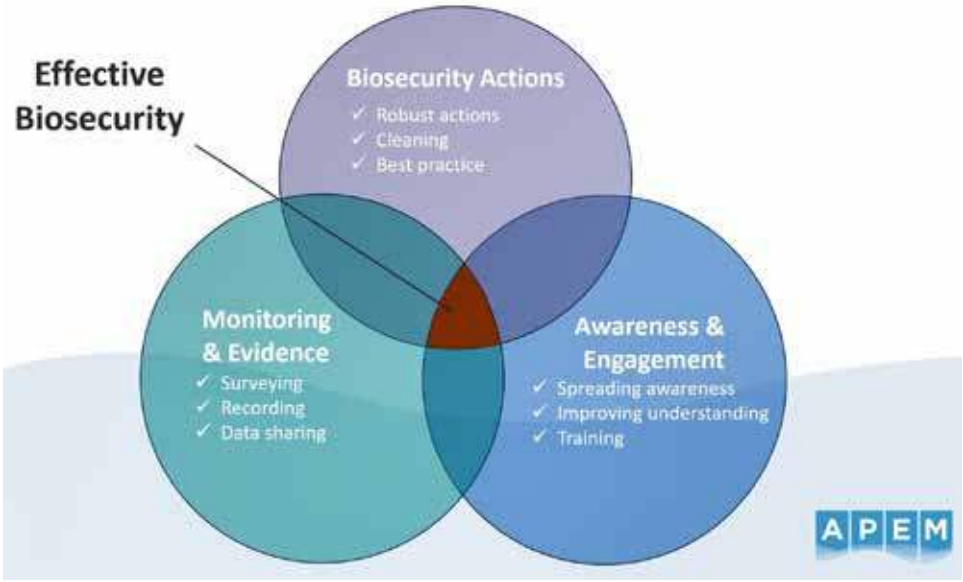
In the marine environment, biosecurity is often the **only** option.

With all invasive non-native species, the longer and the better established a species is, the more costly the management associated with that species. So, we really want to focus all of our efforts on prevention to keep these species out of our waters, so that those negative impacts do not become real.

So, because we want to prioritise prevention, and thus we really want to prioritise biosecurity, we went out to tender for the production of a marine biosecurity plan for Guernsey and this had three core objectives. The first was to reduce the risk of introduction and spread of invasive species, pests and diseases. The second one was to look at and optimise surveillance, monitoring, detection and rapid response so that, if species get to our waters, we can find them quickly and then implement control measures. And then the third one was to look at effective control programmes for existing invasive species, pests and diseases, if possible, and looking at prioritising that around those highest-risk species.



I am very pleased to say that APEM were successful and they were commissioned to undertake this work. For over a year now, they have been working to produce a marine biosecurity plan and guide for Guernsey.



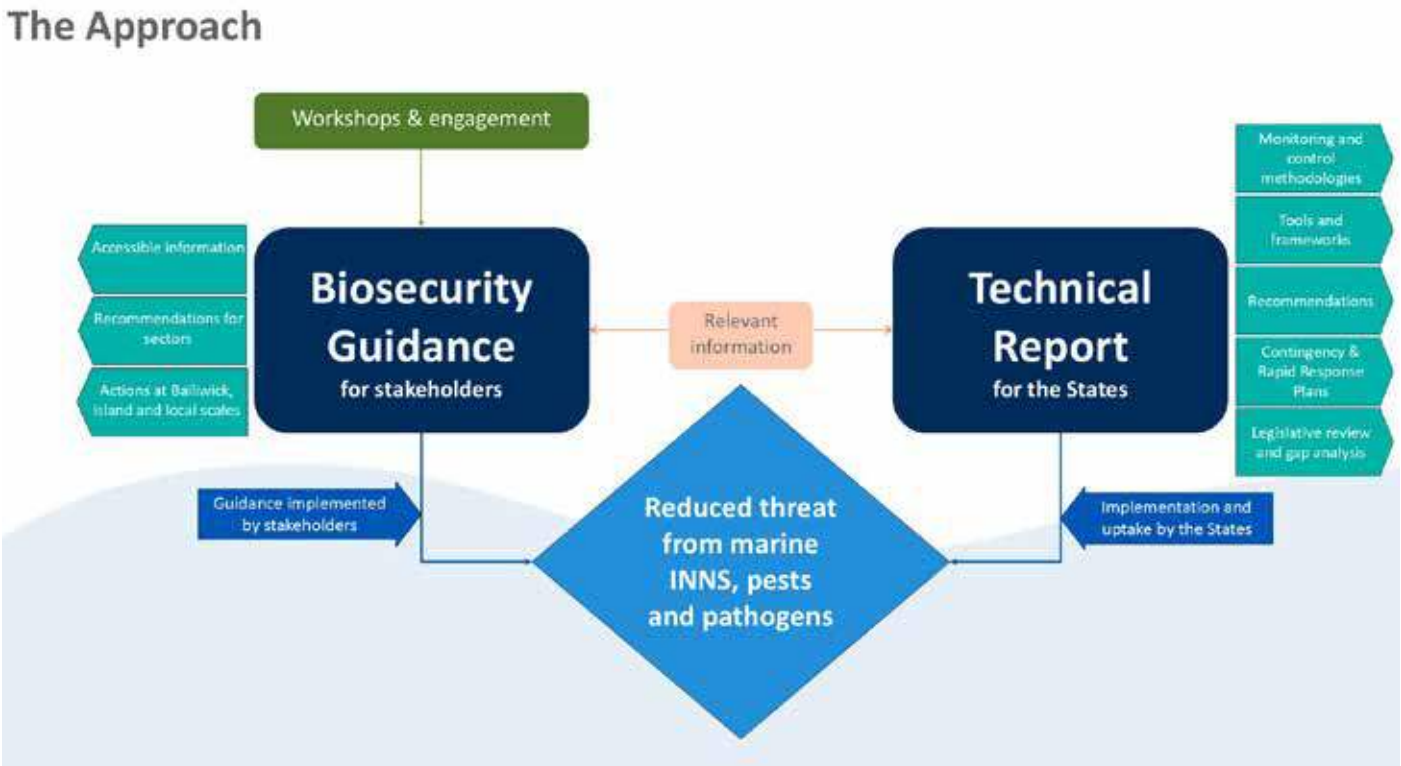
So, I will now pass on to Lucinda to talk about the approach that APEM took.

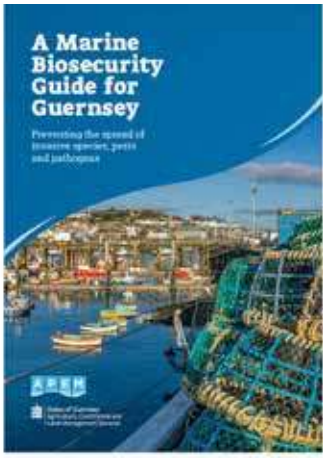
Thank you very much, Julia. When we look at biosecurity, we like to think of effective biosecurity as making use of these three-pronged approaches *(diagram above)*. So, the first is those practical biosecurity actions. That is cleaning, and undertaking best practice in the marine environment. The next is engagement and awareness: trying to spread the message, making sure people are aware of what they need to be doing and why they need to be doing biosecurity; then having training so that they can then educate other people as well. And lastly, monitoring and an evidence-base so that surveys can be undertaken frequently, and one can see what is in the area and respond quickly to new incursions. When a new species arrives, that means that one can act on things much more rapidly. And so all of these three elements together form effective biosecurity.

So the approach that we took *(diagram at bottom of page)* for this was sort of trying to marry a top-down approach and a bottom-up approach. So, we created biosecurity guidance for stakeholders, and we created this guidance using our knowledge of best practice and other national and international examples of biosecurity guidance. But we held also workshops to engage with the local stakeholders in Guernsey and get their feedback. We tried to make sure that the information that we put together was accessible and that it contained recommendations for all of the sectors that are represented within the marine environment in Guernsey.

We put forward also a technical report for the States to act on and this included all of these background elements like the legislation and how that could be enhanced or used as it is to address biosecurity requirements for the States of Guernsey. As well as some frameworks for contingency and rapid-response planning, recommendations address short, medium and long-term, and then some monitoring and control methodologies.

So, our aim was that with these two elements being undertaken together by the stakeholders and by the States, it would lead to a reduced threat from marine INNS, pests and pathogens.





These *(above)* are snapshots of the front covers of the guidance. We wanted to make sure that the guidance for the stakeholders was easy to understand, and interesting to look at as well. And so, we relied a lot on Julia and her team making everything much more visually appealing to all of the stakeholders, so that they could understand what needs to be done just by picking up the document and reading it.

With the internal technical report, as I covered already, we undertook a review of legislation and policy, and this was related legislation within Guernsey but also relevant to legislation and examples from elsewhere, such as in the UK and international examples as well. We looked also at a few of the conventions to which Guernsey is consideing joining and what it would need to do to meet those requirements.

We looked at contingency planning and rapid response, specifically to a high-risk event. So, for example, a heavily fouled vessel coming into a port and what steps would need to be taken to mitigate any risk of invasive species being brought in in that instance. And then also response to the recording or the sighting of a priority INNS and all the steps that need to be taken following that.

We put forward some information for species-prioritisation, monitoring and control. We assembled some recommendations for management and how prioritisation should work so that Guernsey can ensure that resources are adequately prioritised to make the most of the information about all of these species.

And then, finally, there was the implementation-plan which had short, medium and long-term goals and that very much married in with the feedback that we got from the stakeholders as well. So, there was a lot of input from

them that we took into account when putting these actions together.

Within the marine biosecurity guide, we used our experience to put forward best practice from around the world and we used some key messages that have been used in other places: the Check, Clean Dry campaign and the Stop the Spread campaign. So that there is that continuity between biosecurity that the people in

	Short-term	Mid-term	Long-term
Legislation	• Amend existing legislation/policy	• INNS legislation/policy enhancement plan	• New INNS specific legislation/policy
Contingency planning & rapid response	• Incident response plan • Rapid Response Plan • Reporting procedures • Training	• Test contingency plan	
Practical biosecurity actions, awareness raising & stakeholder engagement	• Promote Guide • Communication strategy • Signage • Reduce risk of wash-down	• Awareness of high-risk INNS • Biosecurity responsibilities • Site-specific biosecurity plans • Temporary wash-down facilities • Show-case best practice • Establish biosecurity forum	• Permanent wash-down facilities
Species prioritisation, monitoring and control	• Pathways analysis • Statutory surveillance • Horizon scanning • Management feasibility assessment	• Implement surveillance • Control of established INNS	• Data analysis

Guernsey would see and people who come maybe from the UK would see as well. And then the simple messaging that gets into people's minds and, if it's repeated often, it becomes a bit of a mantra.

We also put together some sector specific guidance. The two examples here *(bottom of previous page)*, recreational boating and recreational angling and we also included some commercial pathways as well. So, people have information about the practical steps that they can take that are relevant to their pathway. And we wanted to make sure that, when people pick it up, they see the information as being relevant to them. So, it's easier to then get people on board with taking on small steps to improve the biosecurity actions within their sector.

Lastly, we also have guidance for all of the sectors about what they can do for monitoring and reporting. So, whether this is what to do if you make an *ad hoc* sighting and you need to know who to send that information to. But also, a little bit of information about what they should do if they wanted to set up something more long term, like a surveillance programme.

And then also information for raising awareness: how they can contact people, what are the routes that they might want to take with that?

I'll just pass over to Julia now to talk through what the next steps have been.

Thank you, Lucinda. As Lucinda has mentioned, within the technical report, there was a proposed implementation-plan for how the States of Guernsey might want to prioritise some of the policy and legislation and infrastructure actions that were recommended to us. This table here *(top of page)* is a summary of that summary table. There is so much more detail behind all of this in that technical report.

Basically, the States of Guernsey are now using this to look at how we prioritise our resources. So, for example, within that report was a recommendation for some new invasive species-specific legislation. Obviously, that takes a huge amount of time and a huge amount of resource. So that is very much in the long-term plan. But, in the shorter term, we are looking at, if existing legislation is being amended, how we might be able to incorporate invasive non-native species and biosecurity principles into that legislation.

Also, in spring, we are going to look to promote the guide: launching it and promoting it ahead of that heavy marine water-use. So, we will be doing targeted promotion to recreational boaters and anglers and other recreational water-users. And, ahead of that, this autumn, we are also going to be producing some targeted advice around recreational vessel-owners and boatyards about the best way to wash down vessels safely and securely without risking the potential of releasing those invasive species and potentially anti-foul paint into the environment.

So, we have lots of actions over the next few years and these are just a few of them: just a brief overview of the next steps that the States of Guernsey will be taking in how to take this guide forward and bring it to life.

And that was everything from us. Thank you very much for listening and we're looking forward to any questions you might have.

Q&A

Joan Walley: Lucinda is not able to be with us. Hannah Tilbury is here in her place.

Research, best practice, guidance, all part of our recommendations: What did you take out of it?

Nancy Pascoe: Biosecurity is key to all our hearts in islands. We are undergoing biosecurity reviews here in the BVI; so one of my questions would be "Is there dedicated funding for biosecurity in Guernsey, because funding always seems to be one of the biggest challenges?"

And also "What is the lead agency for biosecurity?" I ask that because, under legislation here, it originally sat with the Agriculture Department, but it affects the wider environment. This must vary across all the territories, as to who really is responsible. When you are looking at ports, so many other players are involved. Here it's customs, ports authority, fishermen.

So my main questions would be around funding and who is the lead agency. I saw Natural Environment, is that a Government department?

A (Julia Henney): Thank you for the questions. I sit within Agriculture, Countryside and Land Management, basically our natural environment team in Guernsey. We are the lead team on biodiversity projects and production of the plan. We recognise that this touches many different service areas in the States [Government] of Guernsey. It really is a collaboration between lots of different service-areas. At very early stages, we set up an internal working group. Within that group, there are representatives from all areas which have an interest or mandate for marine resources or marine infrastructure. Fisheries sits on that, as do our ports, animal health – an array of different organisations who all have an interest in that. This is one of the reasons why it has got a lot of momentum. The key players are in the room and we all working on how to deliver this together.

As you quite rightly said, one of the sticking points, as always in implementing anything, is funding. We had initial funding to produce the plan, but the plan itself, because it is so wide-reaching, does not have specific funding for its delivery. So one of our next steps is to pull out those recommendations and add costings to it, and then we can look at how we deliver that. But all of us recognise that it won't all fall to the Government; so it might be necessary to find some interesting ways of funding bits of it, such as a public-private partnership, especially around biosecure wash-facilites, and things like that. One of the big pushes that we are going to be making in the next year is around education and awareness, producing that guide and encouraging best practice. Fortunately, this is an area of work that needs a smaller amount of funding, so can be achieved. But, when we come to improving infrastructure and the creation and enforcement of new legislation, they are huge pieces of work which, if they go ahead, need their own funding stream.

Nancy Pascoe: So, would the idea be that you are trying to integrate it into all of your group's general work-plan, like their daily operations? Again, I say that here, for example, a customs person might be looking for drugs or other illicit imports. They would not necessarily be looking for oysters or similar things, so that is a challenge which we face. So how is it you can make them prioritise these things and show the significance to your whole island economy because oysters might be very important to your economy.

Julia Henney: Yes, they are. As I said in the talk, they are wholly dependent on disease-free status. By the very fact of having that internal working group, we have representatives from all these different areas, so they buy into it; they all recognise the importance to that industry, in their relevant areas. Excitingly, on the back of this, our ports and our local harbours have agreed to produce their own biosecurity-plan. The government body which runs our harbour said exactly that – so they can integrate it in their everyday work-processes and all their decision-making, so it becomes part and parcel of daily life. Simple things like "There's a buoy in the water that's not being used anymore, we'll just take it out." And those small steps can make a huge difference. So their biosecurity-plan will help make that part and parcel of their everyday life and really integrate it. That is the only way, really, that these things are going to work. It has to be changing people's behaviour; it has to become part an parcel of people's everyday life.

Joan Walley: Do you have interactions with environmental health office at all, in terms of port authority and all that aspect of it? That seems to me one area where they could really embed that into their work as well.

Julia Henney: Yes, we work very closely with the Port Authority, and with Environmental Health. So I mentioned as well that we are producing some guidance around antifouling vessels and that will be utilising our environmental pollution legislation. At the moment, we are encouraging best practice, but it is good to have that legislation lever if and when we may need it. That really is a collaboration for the guide that we are producing in the next couple of weeks. The guide has been produced by environmental health, ourselves, and officers from the ports as well. So yes, it's great to have people from all the different service areas in the working group. Training is also important. We have already done some really great training sessions with the local dive-teams. Our ports have dedicated dive-teams, so working with them gives them confidence in knowing what they are seeing when they are diving in our harbours, and knowing when to share things with us . If something looks odd, not behaving normally, they can report it to us. And that has already been really successful; we have had a report of a new invasive species *Aplidium cf. glabrum* that came specifically from the dive-team. They have become our eyes and ears. Rolling out training like that on spotting invasive species is an important thing to do.

Joan Walley: Thank you for all your examples of best practice and for sharing that with us. I am sure it will be of benefit to many on the call. Thank you to both of you for your presentation.

Bermuda National Trust: Thank you! This was great.

Wild Water Whales: Studying the Recovery of Baleen Whale Populations in South Georgia

Stephanie Martin & Dr Jennifer Jackson (British Antarctic Survey)

Stephanie Martin

Martin, S. & Jackson, J. 2025. Wild Water Whales: Studying the Recovery of Baleen Whale Populations in South Georgia. pp 119-122 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

Baleen whales in the Southern Ocean experienced severe population declines due to intensive commercial whaling in the 20th century. South Georgia, a sub-Antarctic island, was a focal point of whaling activity, with historical estimates suggesting over 250,000 whales were taken in British Antarctic dependencies. The *Wild Water Whales* project aims to assess the recovery of baleen whale populations around South Georgia, including humpback, southern right, and Antarctic blue whales. This proceedings paper summarises methodologies, key findings, and conservation-implications, highlighting the use of modern technologies such as drones, satellite-tagging, and genetic analyses to inform management-strategies in the South Georgia Marine Protected Area.

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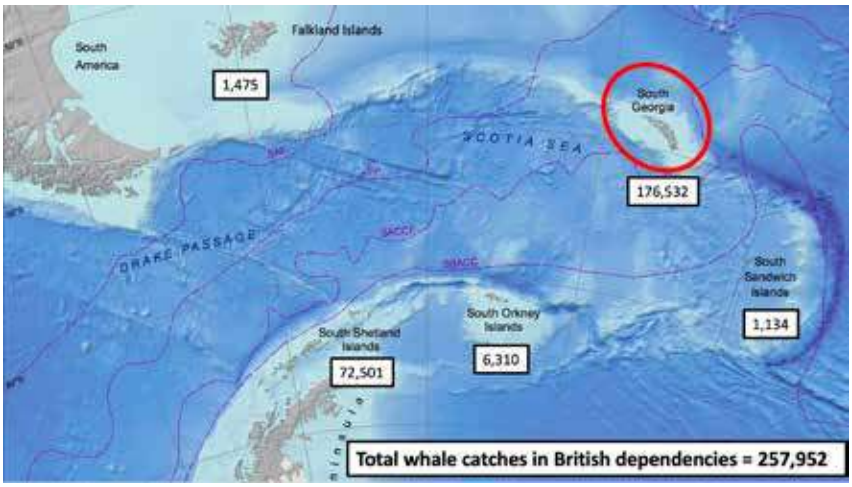
Introduction

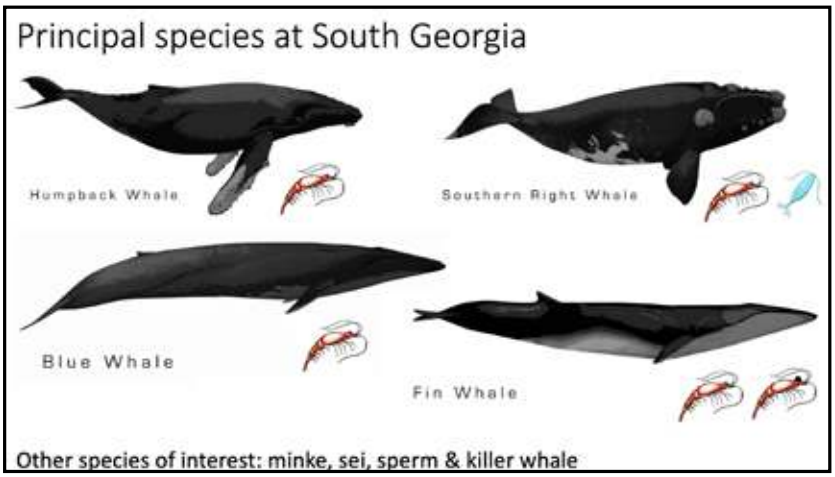
Whaling in the Southern Ocean, concentrated around South Georgia, had a profound impact on baleen whale populations. Commercial whaling began in the early 1900s and continued until the 1960s, with intermittent activity during the World Wars. Processing efficiency at flensing stations enabled the removal of multiple blue whales per hour, demonstrating the intensity of exploitation. Despite the global whaling moratorium, recovery-dynamics in the Southern Ocean remain poorly understood. The *Wild Water Whales* project, led by the British Antarctic Survey, addresses key questions concerning the abundance, distribution, and ecological role of baleen whales in South Georgia's marine ecosystem.



Methods

Research at South Georgia is logistically challenging due to harsh weather conditions and limited accessibility. Fieldwork typically occurs during the austral summer (November–March) and is based at King Edward Point and nearby research stations. Multi-method approaches are employed, including:

- Photo-identification: Individual whales are photographed for long-term monitoring.
- Satellite-tagging: Enables tracking of movements to feeding and breeding grounds, including off Brazil and the African coast.



- Drone-surveys: Assess body-condition and estimate prey-consumption.
- Biopsy-sampling: Skin and blubber samples provide DNA for genetic analyses, determining sex, assessing pregnancy-rates, and monitoring population-health.
- Faecal collection: Used for dietary and genetic studies.
- Acoustic monitoring: Mooring buoys record whale-vocalisations and ship-noise to assess strike-risks.

Collaborative efforts with the South Georgia Government and Bird Island Research Station enhance survey-coverage and contribute to adaptive management of marine resources.

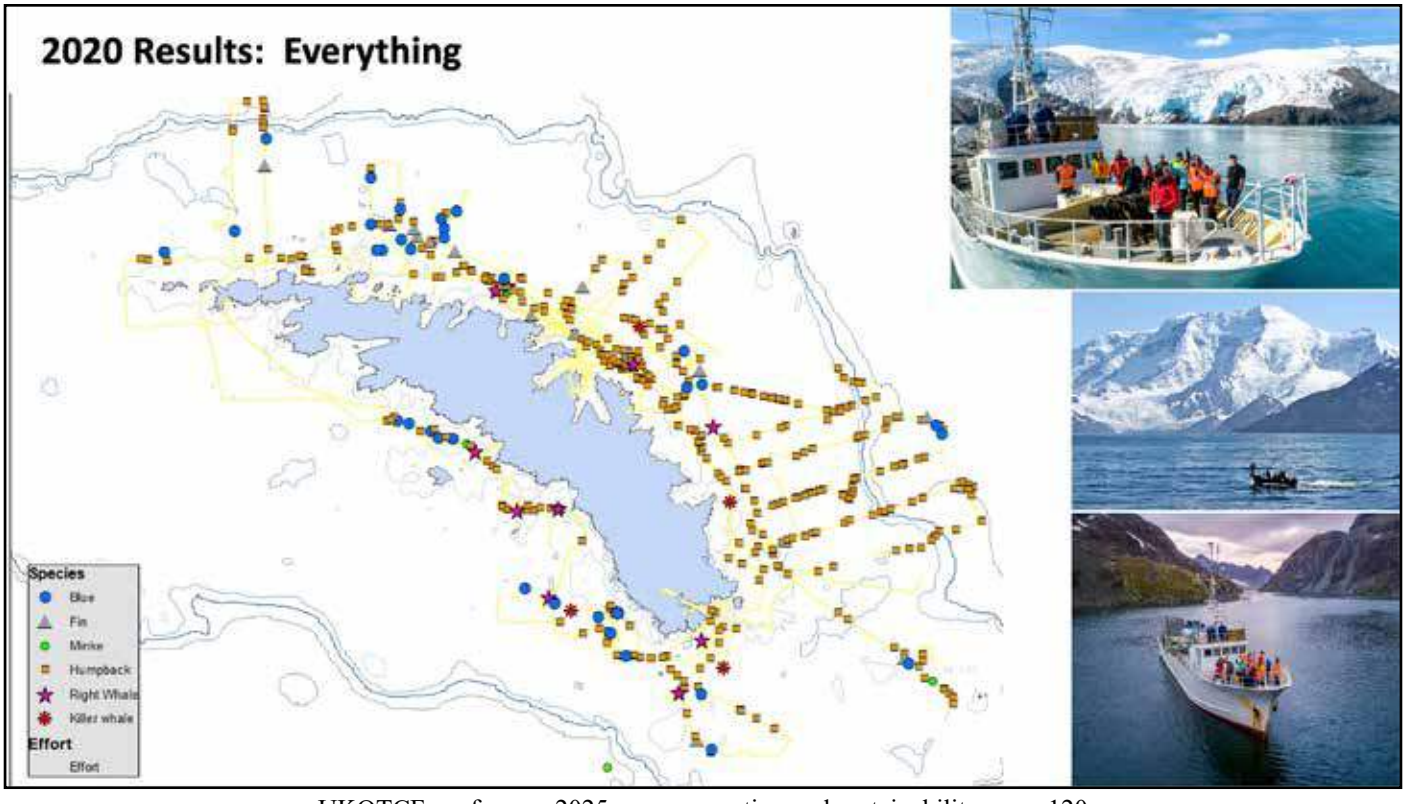
Results

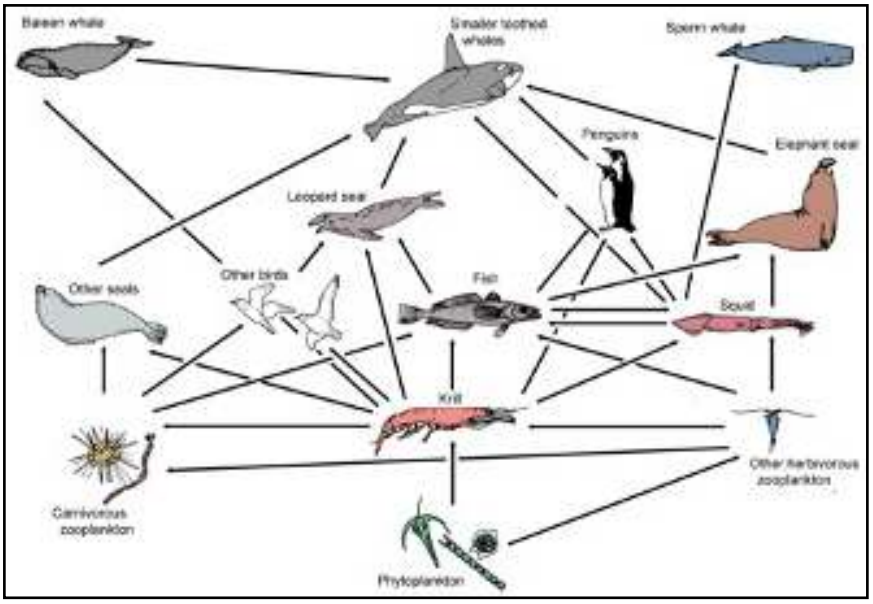
Satellite-tagging in 2019 revealed divergent migratory-behaviours among humpback whales. One individual travelled to Brazilian breeding grounds, while another visited the South Sandwich Islands. Circumnavigation surveys of South Georgia in 2020 documented several baleen-whale species, including humpback, southern right, and Antarctic blue whales. Observations suggested that humpbacks are now the most common summer visitors. Population estimates indicate over 30,000 baleen whales utilise the South Georgia – South Sandwich Islands region during the feeding season.

Studies under the Darwin Plus-funded *Hungry Humpbacks* project aim to quantify krill-consumption and understand the ecological implications of whale-recovery for other predators, including seals and penguins. The Darwin Plus-funded *Sustained Monitoring of Whales at South Georgia* project helps the UKOT government take management-actions to improve environmental quality for recovering whales in South Georgia (SG) waters.

Threats and Conservation Management

Despite signs of recovery, baleen whales remain vulnerable to anthropogenic threats. Ship-strikes represent a potential risk, particularly near King Edward Point and Grytviken. Acoustic monitoring and line-transect surveys provide baseline-data to assess the efficacy of management-interventions. In 2022-2023,





the South Georgia Government implemented a voluntary reduction in shipping speed to 10 knots. Ongoing analyses evaluate the effectiveness of this measure in reducing strike-risk.

Discussion

The recovery of baleen whales in South Georgia represents a major conservation-success. Observations of blue whale and southern right whale mother–calf pairs in 2024 demonstrate encouraging population-trends. However, challenges remain, including limited historical data, variable survey-effort, and environmental pressures from climate-change and commercial fisheries. Funding for continued monitoring, combined with modern technologies and international collaboration, is essential to ensure sustainable management of South Georgia's marine ecosystem.

Conclusion

The *Wild Water Whales* project demonstrates the value of multi-disciplinary approaches in studying remote marine ecosystems. Satellite-tracking, drones, genetic analyses and acoustic monitoring provide critical insights into whale population-recovery, ecology and management. Early results suggest substantial recovery of humpback and other baleen whale populations in South Georgia, with important implications for ecosystem-dynamics and conservation-policy. Ongoing research will continue to inform strategies for mitigating anthropogenic threats and enhancing the resilience of these iconic species.

Acknowledgments

We acknowledge gratefully funding from Darwin Plus, the South Georgia Heritage Trust, Friends of South Georgia Island, and other supporting agencies. Special thanks to the field-teams at King Edward Point and Bird Island Research Station, as well as our collaborators in Brazil and Africa.

Q&A

Joan Walley: Thank you very much indeed Stephanie. It's good to have had a glimpse of such magnificent creatures – and to have such a good-news story, which I think will make us much more committed to bring good-news stories to every bit of habitat, species etc, not forgetting invertebrates, which we are looking after. Nancy, how do we use these good-news stories? How can we help give hope to all the others where we need, perhaps, to do extra work?

Nancy Pascoe: Stephanie, thank you: that was really interesting and, as Joan said, what a great story to hear, that we have gone from 250,000+ whales caught to the recovery that you have seen. I would love to see the technology that you use. You said that you were using drone-imagery, to do the analysis to work out how much krill the whales eat, and I guess my question would be "Has there been any success in influencing the krill fishery?"

A: Well, the krill fishery in South Georgia is incredibly well managed. It is a winter-fishing-only time-period; so it does not compete directly with the several species that

rely on krill in the waters of South Georgia, including penguins, the seals and the whales. The South Georgia Government has worked really closely to have a very sustainable quota for the krill-fishery. During the winter time-period, fishing is allowed only in certain sections of the MPA, so that there are quite a lot of closed areas in the MPA. Just recently, the South Georgia Government Marine Protected Area Review has reported one of the highest standards of all MPAs in the world. So I applaud them for all their efforts. I think what has made the headlines recently about krill-fishing is what is happening in the Antarctic Peninsula. It is the first time ever that the quota was cut, for the krill-fishery in the Antarctic Peninsula, and it is a summer fishery. This is all managed under the CCAMLR [Convention for the Conservation of Antarctic Marine Living Resources] system, which is under the Antarctic Treaty system. Actually next week is the start of the meeting, so I am sure this will be a very hot topic. CCAMLR is a consensus-based organisation with ecosystem-management at the heart of it, and for a very long time it was very good to be driven by the science, that has shifted a bit recently. It is not my area but I work with a lot of the krill-scientists going to CCAMLR, and there are a lot more political overtones influencing whether or not any changes to that management is happening. You may be hearing a lot about that in the next couple of weeks because there is a lot of concern about the increase in the krill-fishery around the Antarctic Peninsula, but not in South Georgia.

Nancy Pascoe: A couple of questions have come in. From **Roland Lines:** "How good are the protections for these whales in their calving grounds?"

A: In the calving grounds, it is a little different. They face a lot more potential for ship-strikes and entanglement in fishing-gears, particularly off the coast of Brazil. And, for our Southern Right Whales we find some of ours from South Georgia in Argentina; there are some potential threats for them there. The African connection is still something that we are discovering. There are very few sightings so we need to collect a bit more data to understand what the potential threats are there. But one of the changes that could potentially be impacting one of the things we are starting to study is the increased water-temperatures and climate-change and the lack of sea-ice which will impact the krill-populations which will then, of course, impact all the predators: the whales, the seals and the penguins. So we are doing a lot of work with the krill-scientists to look at that potential shift. That could happen, particularly in South Georgia, but there could be implication also on the breeding grounds.

Nancy Pascoe: Mike Jervois says: "Hi Steph, you mentioned ship-strikes, are your findings changing the way shipping happens in South Georgia or ways to avoid strikes?"

A: Right now, the main measure, and what we think is probably the most effective one, as Russell's work has shown, is the speed slow-down. It is different from other parts of the world as we do not have cargo-vessels going through shipping-lanes. One cannot really adjust the areas where the ships are coming in and out. It is primarily the tourist-vessels, which come very close to the shore. So one of the main things with our project and sustained monitoring is to engage with the International Association of the Antarctic Tour operators, because no-one wants to hit a whale; no-one wants that to happen. So we are trying to do a lot more raising of awareness, just to make people understand there are a lot more whales around South Georgia and to encourage compliance with the 10 knot speed-restriction.

Joan Walley: Stephanie, you mentioned what you are doing with the tour-operators, I just wondered is there any contact with the IMO in terms of looking at shipping practice and guidance etc?

A: There is a little; the South Georgia Government obviously works really closely with the IMO, but South Georgia, as you know, is in a disputed territory – so there are a lot of political sensitivities, and it is not actually a port. I think the things that IMO could do maybe in other parts of the world may not be applicable to South Georgia, given its special status. By working with the industry, and by working with the Government, we are providing data to say that these are areas where more whales have been sighted and what can we do to prevent ship-strikes that way, rather than going down the regulatory route with IMO.

Joan Walley: Thank you very much and I would just like to acknowledge what is in the chat:

Pamecia Ollivierre: Captivating presentation Stephanie, thank you

Helen Balfour: Thank you Stephanie, brilliant work from your whole team. Fascinating to hear about the biopsy samples too!

Bermuda National Trust: Really interesting insight and great to hear some good news. Thank you!

Tracey Williams: Really interesting presentation. It would be interesting to know if these travel up to St Helena.

A (later): Our research has shown no photo-matches, or tag-tracks to St Helena. The current thinking is that whales from St Helena migrate to areas off of South Africa but there is still lots of uncertainty.

Reflections on Biodiversity Data Challenges and Opportunities in the UK Overseas Territories

Quentin Groom (Meise Botanic Garden, Belgium)

Quentin Groom

Groom, Q. 2025. GBIF Building sustainable biodiversity-data for the UK Overseas Territories. pp 123-127 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

Biodiversity data are critical for conservation-planning, ecosystem-monitoring, and responding to global threats such as climate-change and invasive species. In this paper, we reflect on collaborative work with UK Overseas Territories (UKOTs), particularly Montserrat, the Cayman Islands, and the Chagos Archipelago, and explore the unique challenges these regions face in collecting, managing, and using biodiversity-data. We discuss the importance of data-integration, open data-infrastructure, and data-sovereignty in supporting effective and equitable conservation in small-island systems.

Quentin Groom (Meise Botanic Garden, Belgium)

Introduction

The UK Overseas Territories are globally significant for biodiversity, hosting many endemic and threatened species. Despite their ecological value, these territories face systemic challenges in managing biodiversity-data due to small populations, limited infrastructure, and geographic isolation. This paper draws on experiences from collaborations between Meise Botanic Garden and partners across several UKOTs, highlighting the importance of data-collection, -sharing, and -sovereignty for effective biodiversity-management.

The Role of Biodiversity Data

Biodiversity data support a wide range of conservation and policy needs including:

- Monitoring ecological change over time
- Assessing impacts of climate-change
- Managing non-native species
- Conducting Red-List assessments and conservation planning.

Data are collected through various means: remote-sensing (e.g. satellites, drones), environmental DNA (eDNA), mobile apps like iNaturalist, field-surveys, and more traditional specimen-based methods. Regardless of the method, all biodiversity-data require proper storage, long-term maintenance, and analytical frameworks to be useful.

Challenges in the UK Overseas Territories

The UKOTs face a unique combination of challenges that affect biodiversity data management:

Figure 1. Data integration

- Small populations and low population densities limit capacity for long-term data collection and management.
- Territories are often far from research institutions, making it difficult to access specialist knowledge or support.

- High levels of biodiversity and endemism increase the demand for robust monitoring and conservation measures.

Even in Belgium, with a population of 12 million, we struggle to maintain a national biodiversity-infrastructure. These challenges are greatly amplified in the UKOTs.

Where Are the Data?

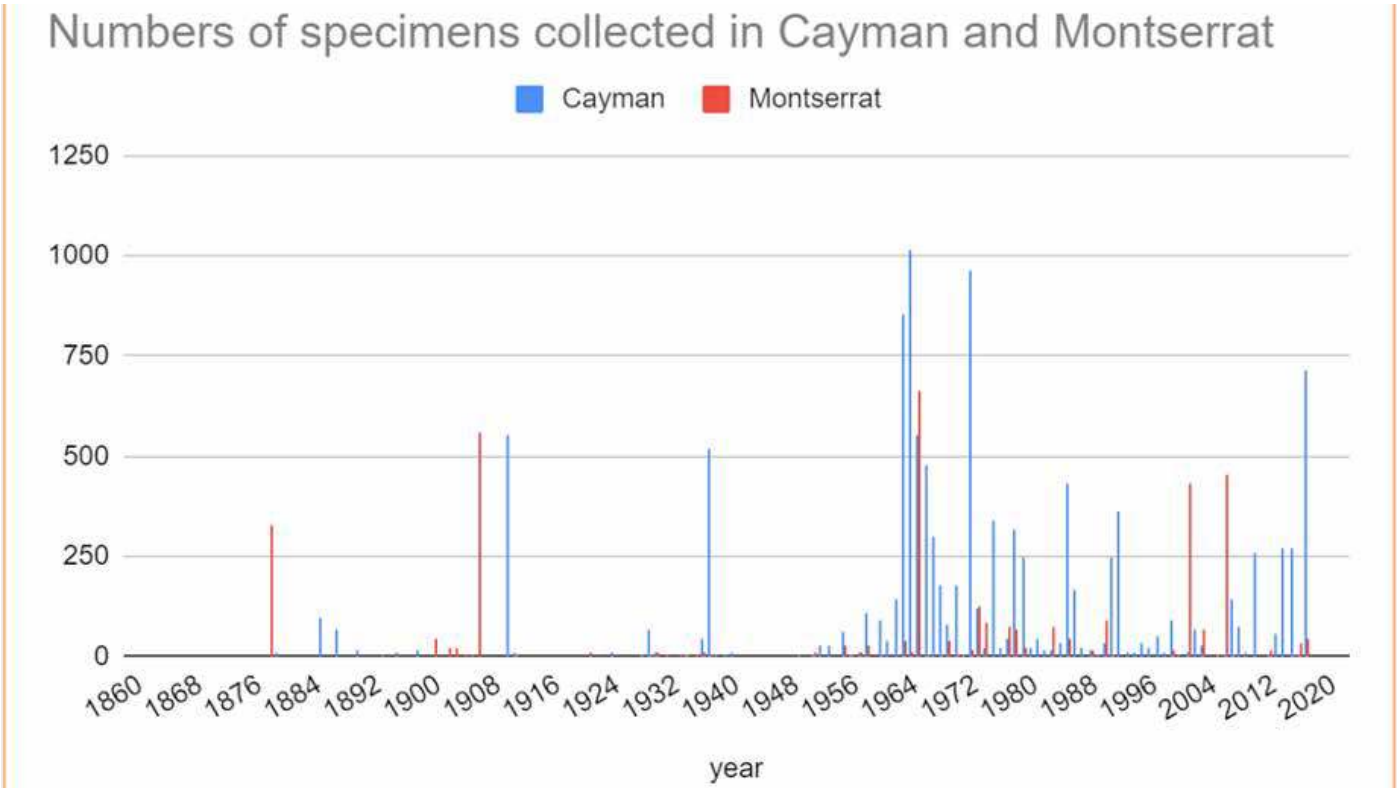
A significant proportion of biodiversity-data from the UKOTs is held outside the territories themselves. A study, as part of the *Hidden Histories* project (on Montserrat and the Cayman Islands: https://www.ukotcf.org.uk/key-projects/blue-iguanas-to-blue-vervain/wp3/) showed that:

- Most specimens are stored in institutions in the USA, Canada, and the UK.
- The majority of historical collectors were also from outside the territories.
- The digital availability of these data often depends more on digitisation levels than on where the specimens are held.
- Many specimens were collected in earlier decades (particularly the 1960s and 1970s) without local involvement. More recent efforts are increasingly equitable and collaborative.

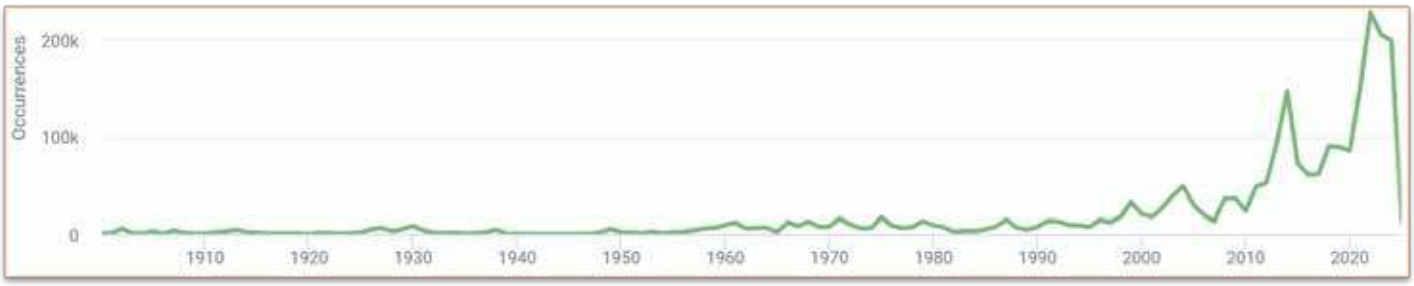
As part of the same project, a recent paper by Groom *et al*. (2024) highlighted the urgent need for capacity-building to enable countries, particularly in the Global South, to benefit fully from biodiversity-collections and digital data. Key priorities include training scientific and administrative staff, involving local communities in research, integrating biodiversity into education and other sectors, and ensuring long-term investment in infrastructure and skills. These steps are essential to turn accessible data into effective local conservation-outcomes.

The Rise of Open Biodiversity Data

The creation of platforms like the Global Biodiversity Information Facility (GBIF) has transformed biodiversity-data accessibility. GBIF now hosts over 3.5 billion occurrence records from around the world, standardised



Above: Figure 2. Where specimens were collected.
Below: Figure 3: Temporal trends in specimen data-collection across all UK Overseas Territories. Data-collection has increased substantially in recent years with a smaller peak visible around the 1960s–1970s. Much of the recent increase is driven by contributions from iNaturalist.



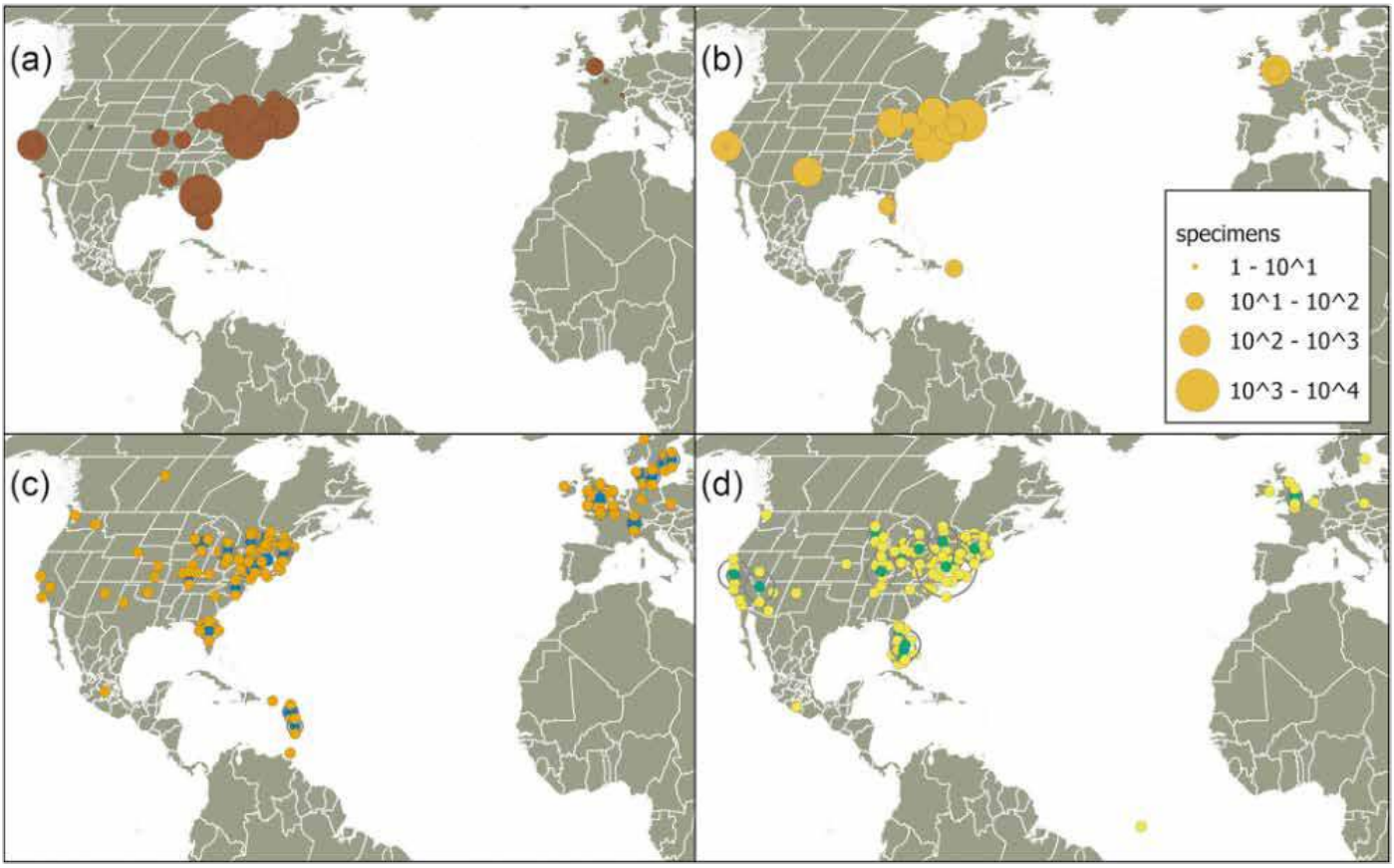


Figure 4. Where specimens are. Spatial distribution of specimen repositories and collectors for Montserrat (left) and the Cayman Islands (right). The top row shows the locations of institutions holding specimens from each island while the bottom row shows the origins of collectors who conducted fieldwork. Most specimens and collector contributions are concentrated in North America particularly the USA with smaller contributions from Canada and the UK.

using formats like Darwin Core. This enables global analysis, trend-detection, and conservation-planning that were previously impossible.

The GBIF Hosted Portals initiative allows organizations and countries to create customized biodiversity data portals. We are currently developing one for Montserrat, modelled after successful regional portals like the Pacific Biodiversity Information Facility.

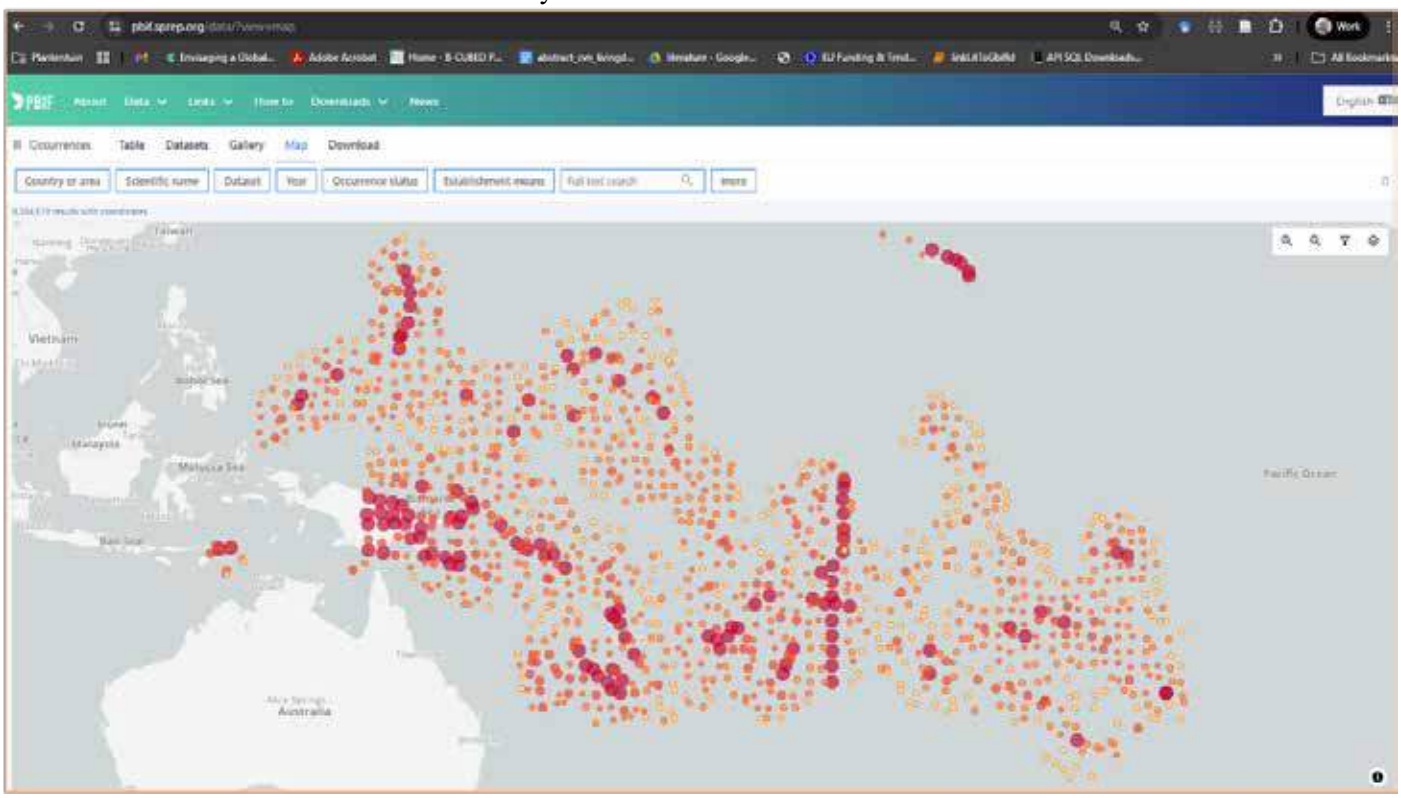


Figure 5. Pacific Biodiversity Informatin Facility GBIF Hosted Portals

Data-Sovereignty and Ethical Considerations

While open data are essential for global conservation, data-sovereignty is a critical issue for the UKOTs. Local communities and governments rightly seek control over their biodiversity-data to:

- Protect sensitive species and ecosystems
- Ensure equitable benefit-sharing
- Make informed policy decisions aligned with local priorities.

However, maintaining local data infrastructures is costly and technically demanding. There is a risk of data-hoarding or data-decay if data are isolated or mis-managed, especially when key individuals retire or move on.

The key is to find a balanced approach: leveraging global open data-infrastructure while maintaining local control where needed. Collaboration, trust-building, and transparency are essential.

Conclusion

Biodiversity data are essential for informed decision-making in the UK Overseas Territories, but challenges of capacity, infrastructure, and sovereignty remain significant. Overcoming these barriers will require:

- Stronger partnerships between local and international institutions
- Greater investment in data digitization, accessibility, and training
- Continued support for open and ethical data-sharing.

By building trust and sharing data responsibly, we can create a more connected, effective, and inclusive system for biodiversity conservation in the UKOTs.

Acknowledgements

Thanks to colleagues including Sofie Meeus at Meise Botanic Garden, and our collaborators in Montserrat, the Cayman Islands, and beyond. Special thanks to the institutions and individuals contributing to open biodiversity data and supporting data sovereignty in the UK Overseas Territories.

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Q&A (answered by **Dr Sofie Meeus**)

Dr Sofie Meeus

Joan Walley: Thank you Quentin for that presentation. I think the thing that came out of it for me was stronger partnerships if we are going to tackle the issue about data. Sofie, you have joined us on the call live. Do you wish to add anything to what we have heard so far? And it is really good to welcome you here in person, so thank you for making this time available.

A (Sofie Meeus): Glad to be here. I am a data-steward at the Meise Botanic Gardens, and it is the same problem in Botanic Gardens that people on islands face. Finding a balance: the fear of opening availability of your data and not knowing the mechanisms you can use to protect the data, while being as open as possible. There are legal frameworks that can support striking this balance, like Quentin said. That is basically what I wanted to add but I am happy to answer any questions.

Nancy Pascoe: Jodey Peyton has put some links in the chat for data collectors in the UK Overseas Territories:

Jodey Peyton: This is a bit out of date but it shows the data collated from GBIF for the UKOTs https://www.ukotcf.org.uk/key-projects/blue-iguanas-to-blue-vervain/wp3/ (this was mapped through a UKRI-supported [UK Research and Innovation] project).

Here is the paper Quentin is referring to: https://nph.onlinelibrary.wiley.com/doi/full/10.1002/ppp3.70029

You can see examples of Data Hosted Portals here: https://www.gbif.org/hosted-portals.

Nancy Pascoe: What I think jumps out at me, as Joan said, are partnerships. This is the key to everything, I think: partnerships and capacity-building in countries, which is what we talk a lot about here. There is this historical practice of data being collected and taken away from territories. How do we find out: a) what data are out there and exist; and b) ways in which we can use it. Another thing, as Quentin said, is keeping data current, that is so important, because we have these historic records. I do not know what your thoughts are in terms of any of those things: keeping data current, sharing data, capacity-building. I think your Botanic Garden is the one involved in the project in Montserrat, and you are a key part of that. Would you like to talk about that?

A: Speaking about Montserrat, I know there are issues with people coming, studying insects, and going back. Well the taxonomists, they do great work, but they could improve on their data-sharing and open science. They have their whole career to identify specimens, while the people locally might not have all this time. So it does happen that people take away the specimens and they say, yes, sure we will open up the data, share the data with

you, as specified in your regional permits, but then there is a mis-match between the timing of the work they are doing overseas and the need for the data on the island. But permitting, and making sure the agreements made in these permits, are being kept to, are important. Quentin showed about the specimens scattered around the world. I think the good news there is that a lot of collections are being digitised and the whole natural history museum community knows that those digitised records need to go into GBIF. Using the GBIF-portal that Jodey put in the chat, we can pull them in. Those historical records are very valuable so we can see trends using that data. That is what we are trying to do on Montserrat: finding more resources, not just to pay for the infrastructure but to do the capacity-building, the training, on using that kind of data. Letting people know that they are not restricted to using only their own recorded data, but they can also step into much larger data-sets, is also vital.

Nancy Pascoe: A comment from **Mike Jervois:** "Another example is the environmental data solution centre that was set up for the South Atlantic (https://www.south-atlantic-research.org/data-solutions/)."

Paul Edgar: Is data-verification more of an issue these days with the advent of citizen-science recording, as opposed to the collection of museum specimens?

Nancy Pascoe: I think what we are talking about is the accuracy of collections and who is identifying.

Nicholas Watts IUCN CEC: Are there established regional partnerships for data-management with neighbouring islands that are not UKOTs, for example in the Caribbean?

Nancy Pascoe: I can say, being in the Caribbean, there are not established regional partnerships.

Selene Gough: Great presentation! Just a note: It is clear that UKOTs are all moving in a similar direction in wanting to develop standardised data-management systems. It would be good to a have a forum/discussion-board between territories where data-challenges, solutions, thoughts and ideas can be shared

Jodey Peyton: https://irecordsthelena.edu.sh is another great example!

A: Well that's great news [iRecords St Helena] We would love to do more work in the UK Overseas Territories – happy to assist. The data-verification of citizen-science: at least I can speak to collecting data by iNaturalist, for example. There is validation of the data; the system they use is quite good. We use it to engage with the people on Montserrat in biological recording, and it is being used professionally as well. A lot of experts are also on that platform, identifying records and species. I do not think there is an issue; often there are things the users of the data need to take into account when using citizen-science data, because there can be gaps you need to take into account.

but there are solutions for these things. And that is also what my team is working on.

Joan Walley: Finding those solutions is part of what we are trying to do this afternoon, so thank you Sofie for joining us. And thank you to you and your colleagues for the presentation.

Invisible, Undervalued and Underappreciated? Fisheries transparency in Small Island Developing States

Tyann Henry (Fisheries Transparency Initiative, FiTI)

Tyann Henry

Henry, T. 2025. Invisible, Undervalued and Underappreciated? Fisheries transparency in Small Island Developing States. pp 128-130 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

Small Island Developing States (SIDS) are prominent custodians of our blue planet, owning vast areas of the ocean and some of the most productive fishing grounds. Consequently, marine fisheries tend to have greater national significance for SIDS in comparison to other coastal States. However, fishery resources continue to decline – and SIDS are no exceptions to this global trend. Unsustainable fishing – taking too many fish from the ocean than nature can sustainably reproduce – is one of the biggest contributors for declining fisheries resources, further accelerated by pollution, habitat destruction and the climate crisis. The need to manage our marine resources sustainably – balancing economic, social and environmental aspects – is urgent.

It is widely accepted that the equitable and sustainable management of natural resources, including fisheries, depends on public access to information. Without reliable information, the capacity of national authorities to make decisions based on the best available data is diminished. So is the ability of non-governmental stakeholders to exercise effective oversight, demand accountability and engage in public dialogue.

The Fisheries Transparency Initiative provides the only globally recognised framework for enhancing transparency in marine fisheries management. As a multi-stakeholder partnership, it has been supporting coastal states and SIDS for over a decade now in enhancing the accessibility, credibility and usability of fisheries data, contributing to better governance of marine fisheries. This talk will reflect on the FiTI's learnings and implementation experiences and critically reflect on benefits and challenges for enhancing fisheries transparency in SIDS.

Tyann Henry (Fisheries Transparency Initiative, FiTI)

Introduction

At today's forum, we at the Fisheries Transparency Initiative (FiTI) share our perspective on the crucial role of transparency in ensuring sustainable fisheries in Small Island Developing States (SIDS). Our presentation, "Invisible, Undervalued and Underappreciated? Fisheries Transparency in SIDS", shows that openness in fisheries is not a luxury, but a necessity for resilient and inclusive governance.

Why Transparency Matters

Emphasising findings from the FAO's State of World Fisheries Report (2010), the absence of basic transparency is identified as a root cause of challenges that continue to undermine fisheries worldwide, including, IUU fishing, fleet overcapacity, overfishing, poorly directed subsidies, corruption and weak governance.

For us, transparency goes beyond simply publishing data. It means ensuring that credible, accessible,

and understandable information is available to all. Transparency:

- Protects vulnerable groups, including small-scale fishers and women, from being sidelined.
- Increases the value and visibility of fisheries to national economies and societies.
- Strengthens public oversight, accountability, and informed debate.
- Helps authorities make evidence-based policy decisions.
- Reduces risks of mis-information and market barriers.
- Builds trust and resilience in coastal communities.

The FiTI Approach

The Fisheries Transparency Initiative is a global multi-stakeholder partnership that works to improve how governments disclose information on marine fisheries. Through implementation of an internationally recognised framework, the FiTI Standard, we work alongside governments to address and improve existing gaps in fisheries information, with continuous involvement of civil society, business and academia throughout the fisheries sector.

Our work is guided by the FiTI Standard, which rests on two core principles:

1. Transparency requires trust – Implementation includes the voices of government, civil society, and business to be legitimate.
2. Progressive improvement – Countries are not expected to be perfect on day one, but to show a consistent commitment to closing information gaps over time.

Putting Transparency into Practice

Through FiTI, governments align their fisheries data disclosure with global good practice while demonstrating progress to citizens, trading partners, and international organisations. More importantly, the FiTI process creates

spaces for inclusive dialogue, where diverse actors work together to strengthen management and accountability.

We show that improved transparency leads to more credible and accessible data, more effective evidence-based decisions, and ultimately more sustainable outcomes for ecosystems, economies and coastal communities.

Our Call to Action

We invite governments, civil society, and fisheries-stakeholders across the UK Overseas Territories and other small islands to engage with the Fisheries Transparency Initiative. We stand ready to support countries and territories in embedding transparency at the heart of their fisheries governance, ensuring that the sector is no longer invisible, undervalued, or underappreciated.

Contact and Resources

We encourage interested partners to connect with us at https://fiti.global or follow our social media updates on Twitter/X, Bluesky, Facebook, Instagram, LinkedIn, and YouTube.

Q&A

Joan Walley: Thank you, Tyann, for that information and that open-ended request to everybody to be part of the journey that you are on. It is all about building the partnerships.

Nancy Pascoe: It was very interesting, Tyann. Being based in the Caribbean ourselves, in the British Virgin Islands, I guess my main questions are:

"Are you working with any of the UK Overseas Territories in the Caribbean at present?"; and

"Have you any relationships already with the Caribbean UKOTs?"

I do know some of the challenges of sharing fisheries information with people, and about data-gaps as well,. So I would be very interested in our ability to have that information

A: We are hoping to expand to the UKOTs. Currently we have been engaging with Jamaica, Trinidad, Bahamas, Guyana and Surinam. I was hoping to get some feedback from the UKOTs.

Nancy Pascoe: Is it that you have approached Governments already; have you already made some contacts? I admit I do not deal with fisheries at the National Parks where I am, but I do usually get invited to meetings. I am just wondering if you have made approaches and you are just looking for help from other agencies to raise that questions again, or is it that you are just going to start reaching out.

A: Yes, we just want to start reaching out. We have not approached Governments as yet, but I really wanted to see if I could get some feedback on the interest level with respect to the different UKOTs.

Amdeep Sanghera: Great presentation Tyann; thank you. As you know, UKOTs, e.g. Caribbean territories, can suffer from regional IUU fishing from other range-states. How do you think FiTI could support UKOTs: bi-laterals with affected UKOTs and other range-states, e.g. Dominican Republic?

A: At present, with regards to IUU fishing, I know it has been a bit of a challenge across all of the Caribbean Islands, especially with the Dominican Republic. At the moment, we still do not know what to do in terms of mitigating, with IUU fishing.

We do want to work on improving the accessibility of information and data-management. One of our recent innovations is the creation of a fisheries information-system on a national scale for each country that we partner with. I think that would now be really beneficial in the different territories. I suppose in this sense we could even have a mechanism that would enhance accessibility for the different territories rather than just having on a national scale: perhaps have a mechanism that would allow each territory to access information across all territories.

Amdeep Sanghera: That would be very useful.

Catherine Wensink: You mentioned France. Do you work with French Overseas Territories / Outermost Regions?

A: Currently no. We are engaging with Senegal at the moment.

Joan Walley: Thank you Tyann for that presentation, and a big thank you to Nancy.

Grasses of Montserrat: An Introduction to Common and Useful Species

Virginie Sealys[1], Ajhermae White[2], Sarita Francis[1], Jodey Peyton[3], Catherine Wensink[3], Vicky Wilkins[4], Quentin Groom[5], Sofie Meeus[5], Alan Gray[6] (1. Montserrat National Trust; 2. Department of Environment Government of Montserrat; 3. UK Overseas Territories Conservation Forum; 4. Species Recovery Trust; 5. Meise Botanic Garden; 6. UK Centre for Ecology & Hydrology)

From top, then l-r: Virginie Sealys, Ajhermae White, Sarita Francis, Jodey Peyton, Catherine Wensink, Vicky Wilkins, Quentin Groom, Sofie Meeus, Alan Gray

Sealys, V., White, A., Francis, S., Peyton, J., Wensink, C., Wilkins, V., Groom, Q., Meeus, S. & Gray, A. 2025. Grasses of Montserrat: An Introduction to Common and Useful Species. pp 131-133 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

Grasses are often overlooked in discussions of biodiversity, yet they are essential to ecosystems, agriculture, and cultural heritage. On Montserrat, grasses are found across a wide range of habitats—from forest edges and roadsides to backyard gardens and pastures—where they play key roles in shaping the landscape, supporting wildlife, and providing ecological services such as erosion control.This work introduces common and culturally significant grass species found on Montserrat, as part of the Biodiversity and Well-being Toolkit project (DPLUS192). The project combined scientific knowledge with local expertise, oral history, and citizen science to document plant species and their uses. It led to the creation of an illustrated leaflet and educational resources that promote awareness and conservation building on work started through the *Blue Iguana to Blue Vervain* project funded by UK Research & Innovation, via a call "Hidden Histories" funded by the Natural Environmental Research Council (NERC) and the Arts and Humanities Research Council (AHRC).

The intersection of art, botany, and well-being is central to this project, using visual storytelling to deepen our connection with nature. By illustrating these species, the project not only aids in plant identification but also invites reflection on the natural beauty and resilienceof Montserrat's flora. Artist Lizzie Harper created detailed, hand-drawn illustrations of each featured grass species, based on both live specimens and photographic references collected at the Montserrat National Trust's Botanic Gardens. These artworks serve as more than scientific tools, they evoke curiosity, memory, and a sense of place, fostering emotional engagement and promoting mental well-being through increased awareness and appreciation of the island's natural heritage.

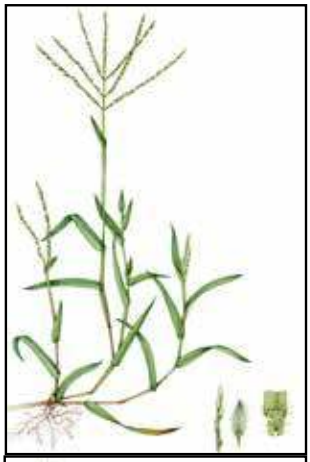
Virginie Sealys[1], Ajhermae White[2], Sarita Francis[1], Jodey Peyton[3], Catherine Wensink[3], Vicky Wilkins[4], Quentin Groom[5], Sofie Meeus[5], Alan Gray[6] (1. Montserrat National Trust; 2. Department of Environment Government of Montserrat; 3. UK Overseas Territories Conservation Forum; 4. Species Recovery Trust; 5. Meise Botanic Garden; 6. UK Centre for Ecology & Hydrology)

Project Background

In 2022, a collaborative project, funded by several UK research institutions, aimed to document traditional plant-knowledge in Montserrat. Local experts were trained in oral-history techniques and equipped to record community-knowledge, which is now preserved in the island's National Archive.

This work led to the development of educational materials, including a richly illustrated leaflet featuring artwork by Lizzie Harper and photographs from the Montserrat National Trust's Botanic Gardens. These resources promote grass-identification and the recognition of their ecological and cultural importance.

Citizen-science platforms like iNaturalist have played a key role in engaging the public and collecting observational data on Montserrat's flora. The platform continues to be popular among local users and contributes valuable data for conservation and education.



For more information see: https://www.ukotcf.org.uk/key-projects/blue-iguanas-to-blue-vervain/ and https://www.ukotcf.org.uk/key-projects/biodiversity-and-wellbeing-toolkit/

Selected Grass Species of Montserrat

Crab Grass *Digitaria ciliaris*

Introduced. A spreading grass with hairy stems and leaves 4–15 cm long. Common in disturbed soils. Often considered a weed, but valuable for stabilising bare ground.

Bamboo Grass *Lasiacis divaricata*

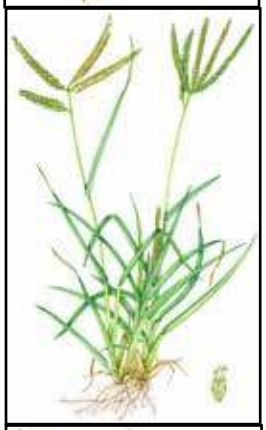
Native. A climbing or scrambling grass with bamboo-like hollow stems. Found in shady forested areas, where it provides habitat for wildlife.

Carpet Grass *Axonopus compressus*

Native. Low-growing, mat-forming grass with broad, flat leaves (3–15 cm). Common in lawns and moist areas; effective ground cover.

Purpletop Grass *Chloris barbata*

Introduced. A tufted grass with purple-tinged seed heads and narrow leaves (5–20 cm). Found in dry, open areas. Helps prevent soil-erosion.



Lovegrass *Eragrostis ciliaris*

Introduced. A small tufted grass (15–60 cm), often growing in gravel or rocky areas. Its tiny seeds are eaten by birds; useful for erosion-control.

Sour Grass *Digitaria insularis*

Native. A tall grass (1–2 m) with coarse, sour-smelling leaves. Common in old pastures and disturbed sites. Deep fibrous roots make it difficult to remove.

Lemon Grass / Fever Grass *Cymbopogon citratus*

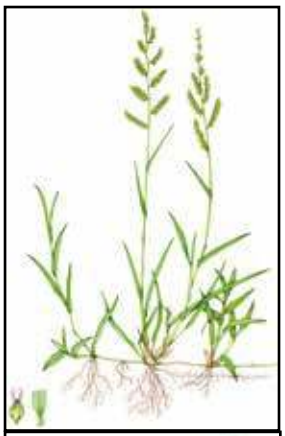
Introduced. Grows in dense clumps up to 1.5 m. Known for its lemon scent. Widely used in teas, cooking, and traditional medicine. Also acts as a natural insect-repellent.

Dutch Grass / Crowfoot Grass *Eleusine indica*

Introduced. Hardy grass with a distinctive “crow’s foot” seed head. Grows 30–90 cm. Found along roadsides and footpaths; useful for soil-binding.

Guinea Grass *Megathyrsus maximus*

Introduced. Robust grass reaching 2–3 m. Thrives in sunny, open areas. Used for livestock fodder but may become invasive.



Jungle Rice / Little Barnyard Grass *Echinochloa colona*

Introduced. Fast-growing, short-lived grass (30–100 cm), often in wet or muddy sites. Can be used in culinary applications.

Sugar Cane *Saccharum officinarum*

Introduced. A tall, thick-stemmed grass growing up to 6 m. Historically significant to Montserrat's agricultural economy. Cultivated for sugar and rum.

Acknowledgements

This project forms part of the Biodiversity and Well-being Toolkit (DPLUS192), with contributions from local experts and community members.

Design and layout by the Field Studies Council.

Colour illustrations © Lizzie Harper.

Educational use only. Species identification may vary slightly by location.

Further Information

Montserrat National Trust:

http://www.montserratnationaltrust.ms

UKOTCF Project Page: https://www.ukotcf.org.uk/key-projects/biodiversity-and-wellbeing-toolkit

QR Codes:

below left: iNaturalist Montserrat Gallery

below right: Sound of Grasses

Predation of sea-turtle eggs by rats and crabs

Holly Jayne Stokes[1], Nicole Esteban[1] & Graeme C Hays[2] (1, Swansea University, UK; 2. Deakin University, Australia)

Holly Jayne Stokes

Nicole Esteban

Stokes, H.J., Esteban, N. & Hays, G.C.. 2025. Predation of sea-turtle eggs by rats and crabs. pp 134-135 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

Offspring survival is a vital demographic factor that drives population success. To put it simply, there is a trade-off between parental investment in individual off-spring and their survival. In the case of sea-turtles, where there is no parental care, egg-predation by invasive and native species can have severe impacts and negatively affect species-recovery. On the island of Diego Garcia, Chagos Archipelago (Indian Ocean), we assessed the levels of egg-predation within green turtle *Chelonia mydas* clutches between 2021-2022. We found that native coconut crabs *Birgus latro* and ghost crabs *Ocypode* spp. as well as introduced black rats *Rattus rattus* predated on eggs. Whole eggs were often removed from clutches, made apparent through observations and differences between initial clutch and final excavation counts. Clutch-size at oviposition (mean = 127.8 eggs, range = 74-176, n = 23) was significantly larger than at excavation (mean = 110.9 hatched and unhatched eggs, range = 9-147, n = 16), i.e., a 13.2% decrease. Where both measurements at oviposition and excavation were available for the same clutch there was a similar decrease of 13.9%. On other occasions, egg-predation was recorded where egg-contents were eaten within the nest. Ultimately, hatching-success was 64.9%, while 3.1% of eggs were predated in the nest, 18.1% did not survive incubation and 13.9% of eggs were removed from the nest. To place our results in the context of sea-turtle egg-predation around the world, we reviewed evidence from 34 sites and identified 36 predators that were either native (e.g. crabs and goannas, n = 30) or invasive (e.g. rats and pigs, n = 8). A predator could also be identified and reported as both native and invasive (e.g. dogs) depending on site. Globally, the most important predators were medium-sized mammals (e.g. pigs, red foxes), crabs (e.g. *Ocypode* spp.) and goannas (*Varanus* spp.). To the best of our knowledge, we report the first cases of coconut crab and rat predation on sea-turtle eggs. In conclusion, we highlight the need to consider whether predation intervention is necessary and whether nest-protection and/or invasive-predator eradication may be used to increase egg-survival and in turn population-recovery.

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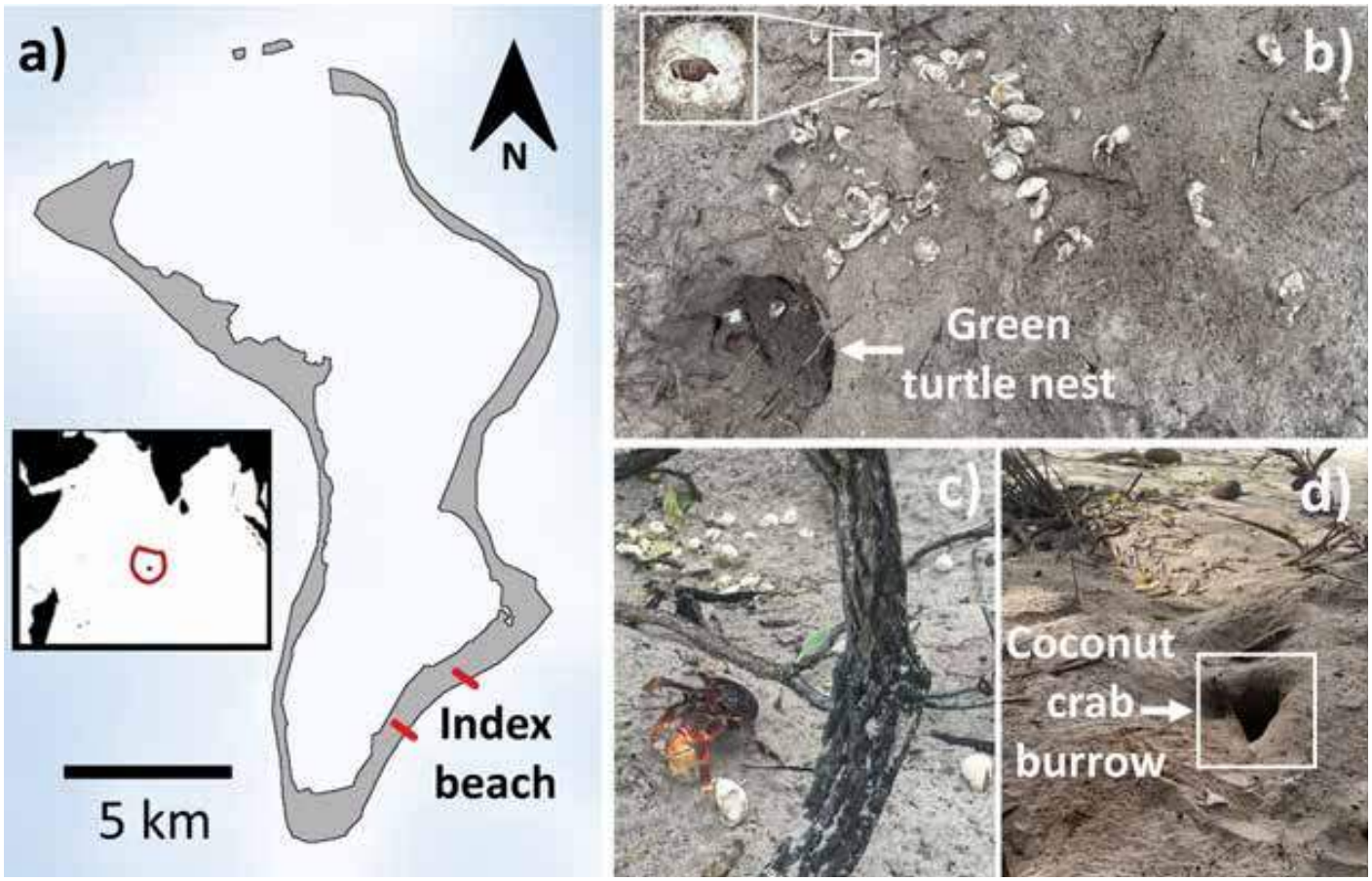
2.Deakin Marine Research and Innovation Centre, School of Life and Environmental Sciences, Deakin University, Geelong, Victoria, Australia

Stokes, H.J., Esteban, N. & Hays, G.C. (2024) Predation of sea turtle eggs by rats and crabs. *Mar Biol* 171, 17. https://doi.org/10.1007/s00227-023-04327-9

UK Overseas Territories (UKOTs) provide important nesting habitat for sea turtles, but these animals face many threats, including predation by native and invasive species. We investigated green turtle *Chelonia mydas* egg-predation on the island of Diego Garcia, Chagos Archipelago, a key rookery within one of the world's largest marine protected areas. Using clutch-counts, nest-monitoring and excavations, we recorded hatching success of 64.9 %, while 18.1 % did not survive incubation, 13.9 % of eggs were removed from nests, and 3.1 % were predated in the nest. Predators, identified through field observations, included native coconut crabs *Birgus latro* and ghost crabs *Ocypode* spp. as well as introduced black rats *Rattus rattus*. Whole eggs were often removed from clutches, made apparent through observations and differences between initial clutch and



a) Diego Garcia (grey island) with a map showing the location of the British Indian Ocean Territory (BIOT; Chagos Archipelago) in relation to the wider Indian Ocean. b) Remnants of a green turtle nest predated by a coconut crab Birgus latro *with scattered eggshells on the sand surface. c) A coconut crab piercing and eating green turtle eggs. d) Coconut crab burrow into a green turtle nest which was used by other predators (e.g., black rats* Rattus rattus*), ghost crabs (*Ocypode *spp.), strawberry hermit crabs* Coenobita perlatus*, warrior crab* Cardisoma carnifex *to scavenge eggs.*

final excavation counts. To the best of our knowledge, we report the first cases of coconut crab and rat predation on sea-turtle eggs. Our global review of 34 sites identified 36 predator species, highlighting how invasive mammals (rats, pigs, dogs) and native crabs can reduce hatching success. Rat-predation on sea-turtle eggs adds to the well documented ecosystem-impacts of rats on seabirds and coral reefs.

Predator-management offers an opportunity to increase sea-turtle hatching success, as well as supporting broader island-ecosystem recovery. In the Chagos Archipelago, further research is needed to quantify the impact of each predator and to understand how predation-patterns vary across the incubation-period.

In conclusion, we highlight the need for further research to consider whether intervention is necessary and whether nest-protection and/or invasive-predator eradication may be used to increase egg-survival.

Q&A

Jodey Peyton: I think it's amazing about the predation of the eggs. Do you think it's having an impact on the population? Do you think that the turtles have any strategies to avoid the coconut crabs? Have you seen anything like that at all?

A (Holly Stokes): I haven't seen avoidance when the coconut crabs are predating. Yes: the coconut crabs are predating on the nests as the nesting females are laying the eggs, when the nests are fresh; so they have a really good olfactory system. They are sniffing out those nests early on. I think that, once they find the nest, they pretty much destroy that nest pretty soon. We did find a successful-hatching rate of 64.9%. 70-90% is pretty good for the population, but anything below 50% would be of concern. So, it's something to keep an eye on. Right now we don't have plans for an intervention or protection.

Jodey Peyton: It's a healthy population, isn't it, of coconut crabs. I was wondering if you could also link to Mark Leder's work on coconut crabs, and look at their diet as well.

A: I have definitely thought about that. If you could get an idea of the coconut crab diet, and see how much sea-turtle eggs actually makes up of their diet would be a really interesting study.

Other Effective Area-Based Conservation Measures

Catherine Wensink (University of Exeter, Jersey International Centre for Advanced Studies (JICAS), and UK Overseas Territories Conservation Forum)

Catherine Wensink

Wensink, C. 2025. Other Effective Area-Based Conservation Measures. pp 136-138 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

As the global conservation community advances toward achieving the Convention on Biological Diversity's "30 by 30" target, the role of Other Effective Area-Based Conservation Measures (OECMs) has emerged as a critical complement to traditional protected areas. The research evaluates OECMs from ecological and governance perspectives, highlighting their contribution to biodiversity conservation beyond legally designated reserves. Through a systematic review using the PRISMA framework, 386 publications (2010–2023) were analysed to identify patterns, gaps, and future directions in OECM research and implementation. Key findings include the need for more adaptable effectiveness criteria, integration of underrepresented ecosystems such as small islands and freshwater systems, and innovative approaches to monitoring and governance. A case-study from Montserrat offers insights into how OECMs can align local stewardship with global conservation goals. By supporting ecological connectivity, resilience to climate change, and social equity, OECMs are shown to be essential tools in the evolving landscape of area-based conservation.

Catherine Wensink (University of Exeter, Jersey International Centre for Advanced Studies (JICAS), and UK Overseas Territories Conservation Forum)

Introduction

The need for effective and inclusive biodiversity-conservation tools has intensified in response to the dual crises of climate-change and ecological degradation. Among emerging strategies is the concept of Other Effective Area-Based Conservation Measures (OECMs), formalised in Aichi Target 11 of the Convention on Biological Diversity (CBD) and central to the post-2020 Global Biodiversity Framework's "30 by 30" target – aiming to conserve 30% of Earth's land and ocean by 2030.

Unlike traditional protected areas (PAs), OECMs are defined by their conservation-outcomes rather than their designation. This flexibility allows for recognition of a wide range of governance types, including Indigenous territories, community-managed lands, and private conservation-initiatives. This study explores how OECMs can complement protected areas through a global evidence-review and a case-study focusing on Montserrat, a small island in the Caribbean.

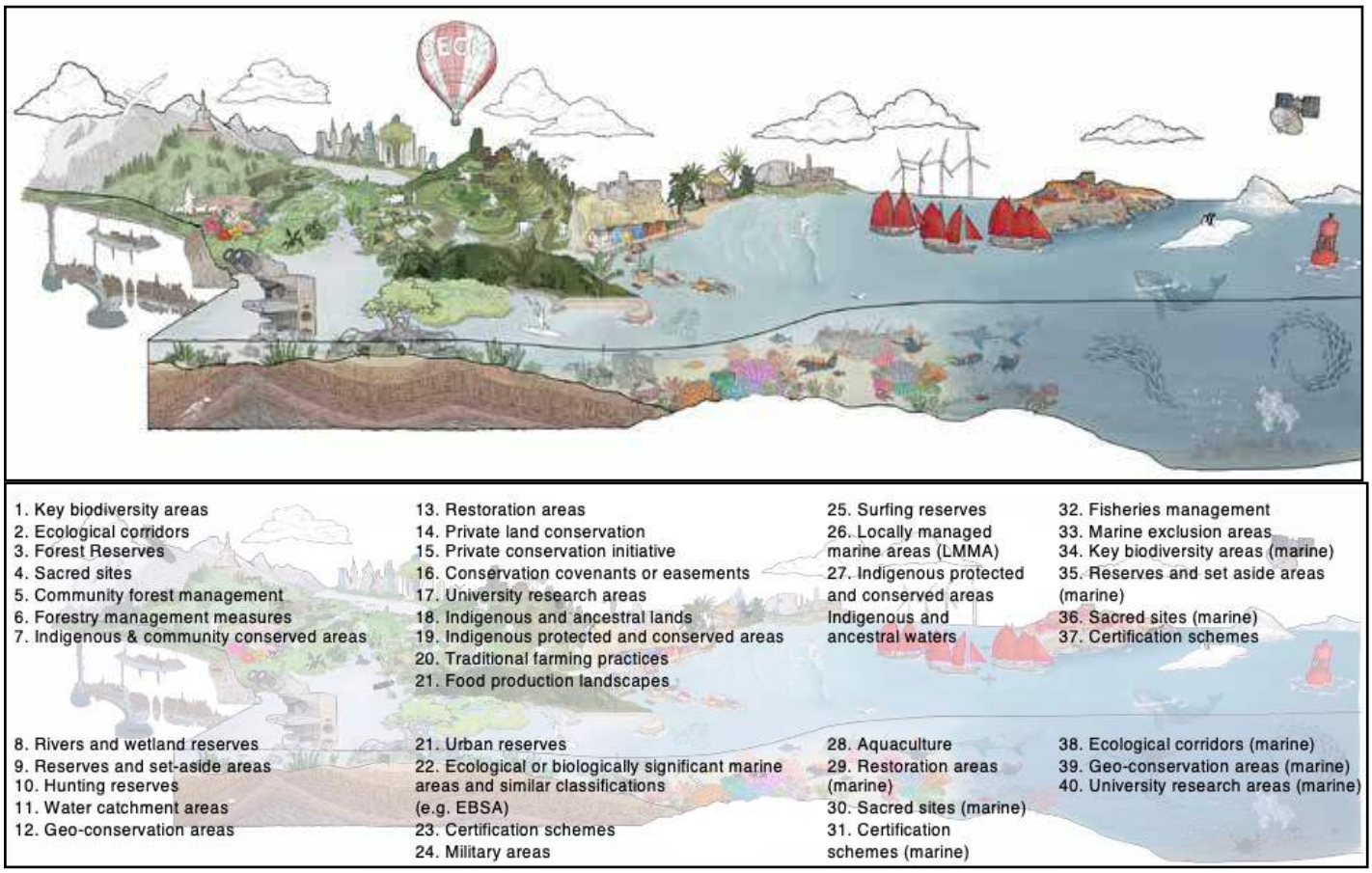
Methods

A systematic literature review was conducted following PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. A total of 386 publications related to OECMs (published between 2010–2023) were identified and screened.

Key themes were extracted and categorised around:

- Effectiveness-metrics
- Ecosystem-representation
- Governance-models
- Legal recognition
- Risks (e.g. PADDD – Protected Area Downgrading, Downsizing, and Degazettement)
- Monitoring tools and data-needs.

Figures 1a and 1b (*overpage*; adapted from Cook 2024) illustrate updated OECM typologies and their conservation objectives across terrestrial and marine contexts.



Key Findings and Discussion

1. Criteria for Effectiveness

Current frameworks are adapted largely from protected-area management-effectiveness (PA-ME) tools but require flexibility for diverse OECM contexts. Future criteria should balance ecological outcomes with social and cultural dimensions.

2. Underrepresented Ecosystems

Significant gaps exist in the application of OECMs to freshwater systems, groundwater reserves, and small island ecosystems. These areas often have rich biodiversity and strong community-governance, making them ideal for OECM recognition.

3. Legal and Customary Recognition

OECMs exist often within customary law or community-managed frameworks, which may lack formal statutory protection. Efforts must ensure legal clarity without undermining local governance-rights.

4. Risks of Downgrading (PADDD)

As with PAs, OECMs are not immune to land-use pressures and policy-reversals. Transparent tracking and reporting mechanisms are needed to mitigate PADDD risks.

5. Monitoring and Data

Emerging tools, such as environmental DNA (eDNA), drone-based surveys, and citizen-science, offer scalable, cost-effective ways to monitor biodiversity and ecosystem health in OECMs. However, long-term datasets remain limited.

6. Governance Transparency

Governance-quality is critical. Clear roles, responsibilities, and benefit-sharing arrangements enhance OECM effectiveness and legitimacy. Overlaps with PAs and other designations must be clarified to avoid confusion or double-counting.

Case Study: Montserrat

Montserrat offers a compelling example of how small-island environments can apply the OECM framework. With a mix of government-reserves, community-managed forests, and areas of cultural significance, conservation here integrates traditional ecological knowledge with formal biodiversity-objectives. Current fieldwork (2024–2025) is focused on mapping these areas, evaluating their ecological contribution, and supporting local stakeholder engagement.

Conclusion

OECMs provide a vital mechanism to recognize and support conservation-efforts beyond traditional protected areas. Their strength lies in blending biodiversity-outcomes with socio-cultural values and diverse governance-systems. To realise their full potential, greater attention must be paid

to adaptive criteria, inclusive representation, long-term monitoring and robust governance.

As the global conservation-community shifts toward more inclusive and resilient strategies, OECMs will play an increasingly central role in safeguarding biodiversity, promoting equity, and achieving international conservation-targets like the 30-by-30 goal.

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Restoring Biodiversity with urban pockets

Katrina Jurn (Sustainable Cayman)

Katrina Jurn

Jurn, K. 2025. Restoring Biodiversity with urban pockets. pp 139-140 in *UKOTCF's 7th conference on conservation and sustainability in UK Overseas Territories, Crown Dependencies and other small island states, 13th-16th October 2025 Proceedings* (ed. by M. Pienkowski, C. Wensink, A. Pienkowski, K. Bensusan, J. Peyton & B.N. Manco) UK Overseas Territories Conservation Forum, www.ukotcf.org.uk

Sustainable Cayman's pilot initiative, Nature at the Water's Edge, explores youth-led, nature-based coastal resilience in small public spaces. These "urban pocket parks" use simple, replicable techniques – such as coir terraces, native plantings, and mangroves – to stabilise shorelines, restore biodiversity, and maintain public access. Backed by Darwin Plus Local and corporate sponsors, the pilot projects at Pirate Cove (2024) and South Sound (2025) demonstrate real-world impact: thriving native ecosystems, increased community-use, and practical pathways to scale. Designed for island realities – modest budgets, low maintenance, and ESG/CSR alignment – this model is building the foundation for sustainable, community-owned restoration. Protecting Cayman's coastlines requires both restoring what has been lost and safeguarding what remains.

Katrina Jurn (Sustainable Cayman)

My name is Katrina Jurn and I am the Founder and executive committee member of Sustainable Cayman. We'll be sharing about our experience restoring biodiversity with urban pocket-parks.

In the Cayman Islands, climate-change is already shaping our coasts. Rising seas, stronger storms and decades of unsustainable coastal development have left many shorelines vulnerable. But with tangible, community-driven action, we can restore biodiversity and build resilience together.

In 2024, Sustainable Cayman launched its first shoreline-restoration project, Pirate Cove Nature Park, to demonstrate how small, targeted projects can deliver measurable impact. This initiative was designed around three goals: strengthening shoreline-resiliency, implementing nature-based coastal defences, and enhancing community-wellness through access and education. By reshaping the beach-profile and restoring a foredune-system with native vegetation. The site now supports coastal stabilisation and provides critical habitat for shorebirds and pollinators. The foredune reduces vehicle-impact, buffers against erosion, and contributes to a more diverse and resilient ecosystem.

But restoration is also about people. Pirate Cove now provides an accessible public beach with educational signage, community-seating, and youth-led conservation activities. Clean-up events and outreach-programmes have built broad support, turning the shoreline into both a protective barrier and a community learning-space.

Our second project builds on this model. Along the South Sound Boardwalk, where mangroves once thrived, we are piloting a red-mangrove restoration-project. Using coir terraces and widely spaced seedlings, this small-scale installation will demonstrate cost-effective methods for stabilising shorelines while engaging the public in hands-on conservation. Companion coastal plants above the high-water mark will add further stabilisation and biodiversity benefits.

Our "Mangroves Thrive, Life Survives" campaign continues to raise public awareness of the importance of protecting our threatened – and still largely unprotected – Central Mangrove Wetlands. This trial is designed as a visible, hands-on experiment, supported by the Cayman Turtle Centre and corporate partners like RF Bank & Trust and Grant Thornton.

By aligning scientific best practice with community-involvement and youth-leadership, we are creating scalable approaches to address erosion, habitat-loss and climate-adaptation. Sustainable Cayman's pocket-parks are proving that small, well-designed initiatives can restore biodiversity, protect coastlines, and empower Caymanians to shape a resilient and sustainable future.

Q&A

Myles Darrell: What role has the community played in maintaining or monitoring these sites once they are established, and how do you keep those volunteers

engaged?

A (Melanie Carmichael of Sustainable Cayman on behalf of author): As far as keeping volunteers engaged at the moment, the work is very much community-led, and we have chosen spaces that are very much in a very highly active community. So, they are highly visible, easily accessible, and pretty much on our main traffic-route into town.

In South Sound, it is a public boardwalk; you can't miss it if you're driving past – so it is creating that curiosity. Monitoring is by our group, while we see if it establishes, because mangroves will be self-maintaining themselves.

The Pocket Park is an unusual one, simply because, it is part of a strata association. So, the strata owns a beach access that they were not doing anything with. So, we approached them to offer to beautify the area and do the Darwin project. As far as ongoing, it would be up to the strata to maintain the park but, at the moment, we are still working that part out. The point of pocket-parks is they are really small. So, one person going there and doing a bit of tidying up really isn't a problem. They are not identified as being public parks, so they are not going to have facilities with lighting, toilets and things like that. They really are just going to be as close-to-nature spaces as possible that you can enjoy and appreciate what island-biodiversity is supposed to be all about.

Myles Darrell: What have been the most effective indicators for tracking the ecological success of this project? Is it the species diversity? Is it the shoreline?

A: I don't think they are stabilising anything, because they're quite small, or is it really just the community use and the beautifying? So, at the moment, I think the one thing we are demonstrating is that local plantings work. We have worked with Caribbean Blooms, the only local licensed plant-propagator on the island. So we are very lucky to have that resource. She is working on landscape-projects with local endemic species. That is what this park is, and it shows. First of all, it's a demonstration to everyone that you don't need to bring in plants from Florida. You can create your nice local garden like this – which is similar to our sand-gardens that we always used to have.

Myles Darrell: There is no irrigation on site, right? So it's showing drought-tolerance and salt-tolerance?

A: On the coastal ridge, that is what we are hoping it's going to do. We are in the early stages yet, but I'm already seeing that it is actually capturing the sand. It is building up that beach-ridge, because we are not allowing people to remove any of the beach-vegetation that is growing there. You know that everyone likes to see a nice golden sand-beach. This is not that type of beach, It is going to be one where you are going to be stepping over vines and things like that but, as a result, you can definitely see that layering is creating a build-up of the protection of the ridge there and retaining the sand, basically, in place, so it doesn't get washed back out.

Manx Birdlife

Allison Leonard (Manx Birdlife)

Allison Leonard

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Manx BirdLife is a leading independent wildlife-conservation charity based on the Isle of Man, working to protect, restore, and enhance wild-bird populations and the habitats on which they depend. This poster-presentation showcases a multifaceted conservation approach, combining scientific research, habitat-management, environmental education, and citizen-science. Highlights from recent work include: the 2022 Hen Harrier Census and the forthcoming 2025 Chough Census, the landmark *Birds of Conservation Concern in the Isle of Man* (BoCCIoM) publication, and long-term engagement initiatives such as the Garden Birdwatch scheme and education outreach to over 2,000 schoolchildren annually. Recent innovations include satellite-tracking of Hen Harriers and pioneering work on urban and coastal-habitat restoration. Together, these programmes provide critical data, foster public engagement, and inform policy to secure the future of wild birds and biodiversity on the Island.

Allison Leonard (Manx Birdlife)

[Poster originally shown at the Inter-Island Environment Meeting, Isle of Man, September 2025; no proceedings material available.]

General Discussion on Topic 3

Joan Walley: One of the points that Minister for Nature Mary Creagh made yesterday was the fact that we have a new UK Parliament with lots of new members of Parliament in it who are not necessarily well briefed on how to meet the sustainability targets, for example. I am sure that is the same in the Overseas Territories, as well. Are there things that we can be doing to get across to those who are making the legislation the importance of embedding some of the thinking we have been talking about here.

Nancy Pascoe: That is obviously very relevant indeed because you can be working with people in politics for a few years, and then elections come and they change and you have got to tell and re-interpret the whole thing all over again. What we find, and I am sure other territories find the same, when we are doing our workshops for our Darwin Projects, we always invite our Ministers for the Environment. We try to be so inclusive of so many different Government Departments – so we are not including just the Environment people; it will include, for example, the town-planners, people in Public Works.

Naqqi Manco: I will be proposing to incorporate use of GBIF data-portals into the new position for Data and GIS Manager we have proposed for the Department of Environment and Coastal Resources in Turks and Caicos Islands (no guarantee we will get the position approved in budget but it is a top priority).

Nancy Pascoe: So yes, learning about the data-sets that are available to all of us, that we can all dip into.

St Helena National Trust: I will await on the conference summaries and recommendations, and provide them to island Legislative Council, particularly our Minister of Environment.

Nancy Pascoe: And I think it would be great if, when we do these things, not just sharing them by email, we are actually presenting them and having conversations. This is because I think if you are not here and you are not listening to all these presentations and you just share a document, it might not come alive as much as a person saying "This is relevant to us right here." This happens in another territory; these are the recommendation; this is so relevant to us in our UKOTs.

Mike Pienkowski: Ideally to each other as well so we can copy it in different territories – so we know what each territory has done.

Nancy Pascoe: Exactly. There is some great input from people about how what we are learning today can be shared.

Catherine Wensink: So far, the number registered for the conference is 165. Not the same folks attending at the same time. There are also some still registering!

Joan Walley: The point has been made in different presentations about telling a story. And how you can present a map or a graphic or a piece of raw data but there is actually nothing like telling a story, how it impacts on a place or a person or an animal. How it can be conveyed through a different communication-means. Is that something we should be looking at, how we tell a story of why this is so important?

Nancy Pascoe: I agree. We found that recently, when we were doing a project on climate-change. It seems that, when we have these big hypothetical topics, how is it really relevant to us as a person, an individual living in the territory as well, and sometimes that's when Ministers and politicians also listen when the voting public is impacted – so, if we can also tie all these messages to how individual people in our communities, all of us, the youth who are the people who are going to inherit all of this, I think maybe we have to find ways to make it relevant, things that politicians listen to as well. Climate-change is not just ice melting far away. When we are on a Caribbean Island, it is from hurricanes; it is rebuilding; how do you find the money to rebuild, so you are trying to make yourself more resilient? How do we turn all these messages into something specific to our Territories?

We encourage all our UKOT participants to jump in and tell us what they think. What I think in the Caribbean might be very different to what someone thinks in the South Atlantic. We are all very different in our territories but we have some of the shared issues: not enough capacity, resources.

Catherine Wensink says that **Melanie Carmichael**, Sustainable Cayman asks: "For the end of the Question & Answer, are there any wetland trusts that fund land-conservation acquisition in the Caribbean, specifically mangroves?"

Nancy Pascoe: This might come up again in the funding discussion around nature-based solutions. That would be really interesting if anyone has the answer to that one. Finding money to buy land is a really big question. Land is very expensive, especially in the Caribbean, and high tourism property as well, so finding the money. Mike, are we having a discussion on finding money, sustainable financing?

Mike Pienkowski: On Thursday, most of the day is on that topic.

Nancy Pascoe: Rickeem Lashley says: Amazing discussions so far! Where do we leave our comments on the recommendations? Should people email you directly Mike?

Mike Pienkowski: If anybody has got any serious problem then please let me know because, if we have got to change anything, then we have to do a wide consultation which takes time. We cannot change substantively without consulting everybody.

Rickeem Lashley: Good afternoon everyone. Thank you so much for taking up my queries. Basically I am a PhD researcher at the University of Essex. I am from

the Cayman Islands. I am basing my PhD on looking at nature protection and restoration, these two conservation measures, and looking at who wins and who loses out, based on which method of conservation you want to do. I am trying to focus my thesis on the Overseas Territories, looking at how protecting a particular ecosystem; there are people attached to it, so these stakeholders are impacted very differently, for example the marine protected area and fisherfolk. Are you locking away their economic potential if you are declaring a marine protected area and putting regulations in? You might see compliance over a period of time but then not. How do you manage that tug and pull relationship? What are we trying to preserve with the protected area? Does a protected area over time threaten people's livelihoods? I am looking through the recommendations and wondering about equity from the community perspective, and seeing where the gaps fall with that in mind. From my perspective, if anything is going to be sustainable long term, if people are going to enforce it and follow the rules, the community has to be engaged with it on a daily basis. The recommendations are pretty strong; they mention equity throughout, but could the language be a bit stronger and clearer in places, so it does not fall by the wayside – which we have seen historically, dealing with environmental things and targets etc, with the community as an afterthought. I don't want to go into detail here, but I could email my thoughts. Does what I am saying make sense? I am thinking of equity within coastal communities, where relevant indigenous people, a bottom-up perspective rather than top-down.

Mike Pienkowski: Thank you very much for that. By all means, email me so that we can see the details of that. I think what I should probably say is it is certainly not a top-down evolved document. There are certainly some top-level recommendations, but that is because people lower down the triangle have been saying "Can we get the government to do this?" We have done a lot of juggling over the 5 drafts, and much of it was addressing the sort of point you said. Someone says "that's not strong enough" and someone else says "that's too strong." So we tried to take a middle course, using some of the weasel-words that drafters tend to use in these situations, so that the essence is there rather than being prescriptive. Looking at your particular example of fisheries, and I am not a fisheries expert – there are much more fishery experts on this grouping than me – but I do recall some of the stories about this. Some of the best fishery protected areas are the ones set up by consultation between interests, often led by the fisher-people, I think all of the ones in the Isle for Man, for example, were led by the fishery-people. Also I do remember an old story from the Bahamas where they couldn't get agreement in the first place, so they rather bravely went ahead and made some no-fishing zones and, within a year or two, fishermen in other areas were saying "Can we have one of those too?" – because, of course, what was happening was there was high productivity in the protected areas which was then flowing out. So we certainly, all of us, want to do things in collaboration and consultation with those interested in using those resources. Because as you rightly say, if it is not done that way, it is not going to last.

Joan Walley: Just to reiterate, some of these recommendations are designed to go to UK Government, some to Overseas Territories government, and then it is for those governments to work out if and how to implement these recommendations. Thinking about what you have just said, I would have thought that, if these go to the Cayman Islands Government, then it would be for the team there inside the government, not just the environment department but all the different departments to then work out in detail how that recommendation might be made a reality – working with the National Trust there, working with the youth groups, working with whoever else has an interest, which would then take account of the points you are making about equality, so that policy is top-down but bottom-up as well. And engaging the wider community as well. Having visited Cayman, I know the context in which those decisions are being made. I do hope, and you said you are from the Cayman Islands and doing this PhD with the University of Essex, that you will be able to go back and enriched with that research, to perhaps be able to be part of that process back in the Cayman Islands.

Rikeem Lashley: Yes, that is the hope.

Joan Walley: I hope so too.

Nancy Pascoe: Amdeep Sanghera says: It would be interesting to see what comes out of the conference with respect to sustainable finance, and with the JMC [Joint Ministerial Council] next month having a focus on climate-finance, it could be very timely (e.g. potential prior engagement with UKOT environmental ministers)!

Catherine Wensink: Thanks so much Rickeem. Very interested in conservation and equity. I'd like to get in touch.

Amdeep Sanghera: Hi Rickeem, likewise it would be great to connect with you as our work with Caribbean UKOT partners focuses on equitable community conservation. amdeep.sanghera@mcsuk.org / emily.bunce@mcsuk.org

Nicholas Watts: We have seen here outstanding examples of community-engagement. The work of the Anguilla National Trust was praised in June by the Governor for bringing youth to nature – and away from guns. There should be joined-up thinking on funding that takes account of positive secondary effects of youth volunteering with nature projects. (My interview with Governor Ms Julia Crouch.)

Nancy Pascoe: Reiterating the secondary importance of getting youth out into the environment, so keeping that funding is vital, and links to safety and crime. Sadly that is an issue that is increasing here in the BVI too, with youth. So how do we make it a positive spin, as well?

Paul Edgar: Inspiring conference, congratulations everyone! We (i.e. Amphibian & Reptile Conservation, a UK-based NGO) are developing an internal strategy to strengthen our specialist support for local work in the UKOTs and Crown Dependencies. We have already done a lot to support herpetofauna conservation on Jersey, working with the Jersey Government and local groups and taking an integrated approach across many areas. We have also had a smaller involvement in other British Territories and are looking to expand this role. We support all the conference recommendations, particularly recommendation B of course!

Nancy Pascoe: So partnerships. How can we grow some partnerships here? Mike, you opened up the chat so anyone who wanted to get in touch could do so. Having mentioned invertebrates, I have already had someone I was talking to some months ago message me, saying they were happy to hear me talking about invertebrates and let's work together. We really need to broaden our horizons of who we work with and learning from each other. About what we can do on our own territories, continuing the research, making sure we can fund that, and then Rickeem who is doing his PhD. How can we harness more students (something Myles talked about yesterday [in the Ground lecture]), students who are going away and doing Masters and PhDs and helping the National Trust? We really need to harness all this work that is going on out there. Rather than students choosing a random topic, we need to put out there what our research needs are and what are the questions you want answered, so that when students are looking for projects we could have a list. Is that something we could do as Overseas Territories, have a shared list of research needs, strategic planning needs, all these other things – and match partners and Universities with those topics? Putting it out there so we are not just reacting to I want to study a tiny spider in your country, I would like to study all the spiders, how do we make it bigger and meaningful for all of us ?

Mike Pienkowski: We would be very happy to facilitate that. Catherine had a go at doing that a while back, we are always ready to re-open ideas.

Joan Walley: I was going to say the same thing. That has long been a wish of mine as well, Nancy. When you look at the Universities which are proactive in this, it should not be an impossible task to be able to try to match needs with what they have got to offer, what their students are interested in, and encourage them to apply for further research funding that could help address this capacity issue that we have got and the lack of funding as well. That is a really a partnership that is waiting to happen.

So I think we have just about covered what is there on the chat. We did say we would return to rewilding and I know I felt very inspired by that particular contribution and I hope Mike that that is something that fellow trustees, directors can actually return to and perhaps have a more focussed look at rewilding. We did perhaps undertake to follow that up. That would be a good outcome from this.

Mike Pienkowski: That might well be a subject for one of our webinars. We can only hold a conference every few years but, in between, we do try each year to hold a one-day webinar, and that might well be a topic. We should certainly discuss that. Given that Kathleen is one of our Council members, we could perhaps twist her arm to lead it when she gets back off her ship!

Janet Mackinnon: IUCN hase just published new guidelines for rewilding https://iucn.org/press-release/202510/iucn-commission-environmental-management-launches-new-guidance-rewilding.

Joan Walley: Thank you for all the many contributions and thank you to the 42 participants who are here to the bitter end. That's my task for today finished in the Chairmanship. It's been a pleasure being with you all.

John Pinel: Thanks for another excellent session

Nicole Esteban: Thank you for a great session - really interesting talks

Main topic 4: Poster session

Chairing: Catherine Wensink; Question-master: Myles Darrell (Bermuda); Rapporteur: Jodey Peyton

Introduction

Posters are listed and the material based on them in the Topic sections to which they were allocated. This topic session gave poster-presenters the chance to speak briefly about their poster and answer quetions about it. Below is a summary of the session by Rapporteur Dr Jodey Peyton, with just a few example posters, selected by vote. We apologise for any ineligibility; this is one reason why we consider it impracticable to continue to pubish posters, rather than articles based on themm in the proceedings.

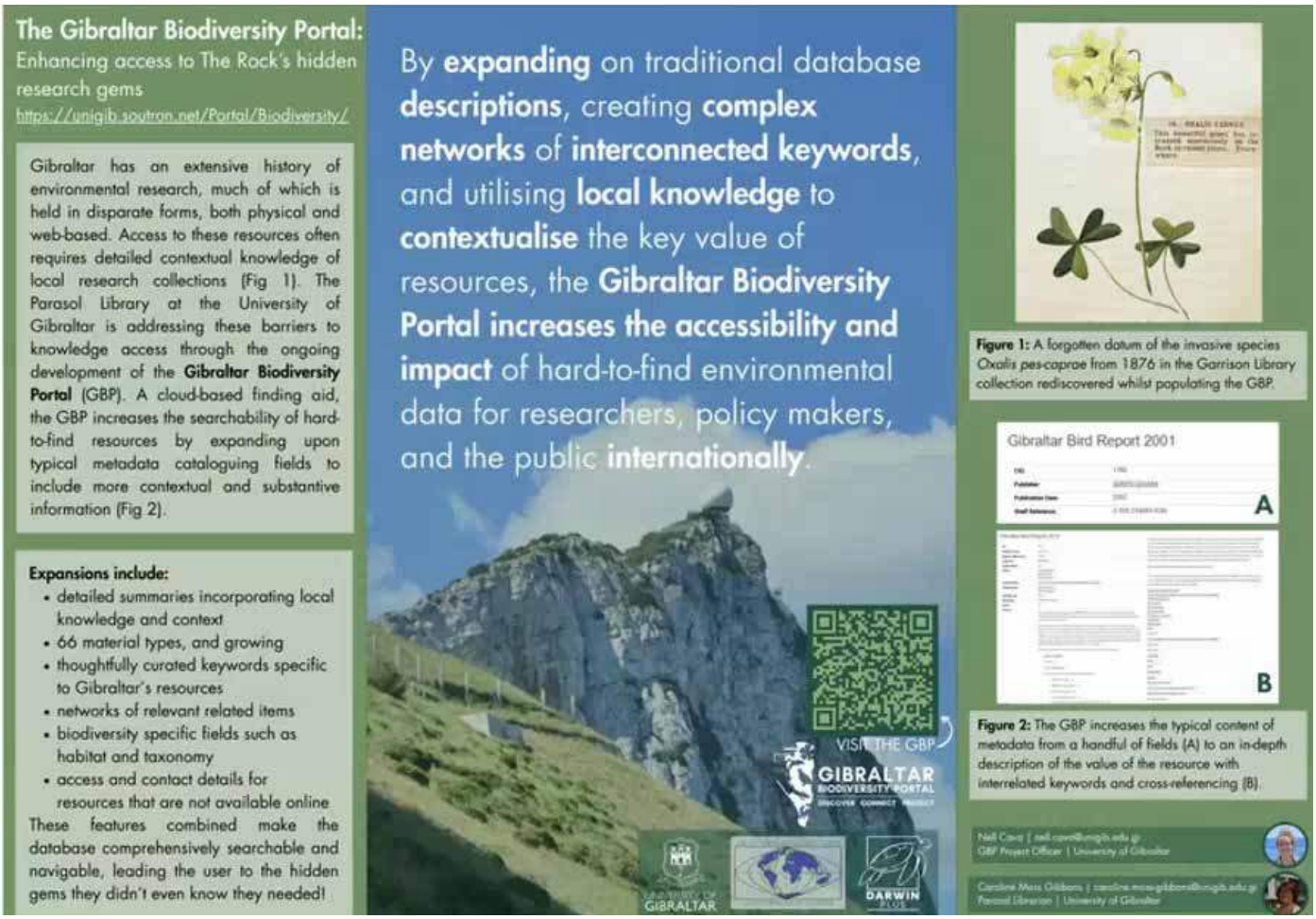
Poster-presentations summary by Jodey Peyton

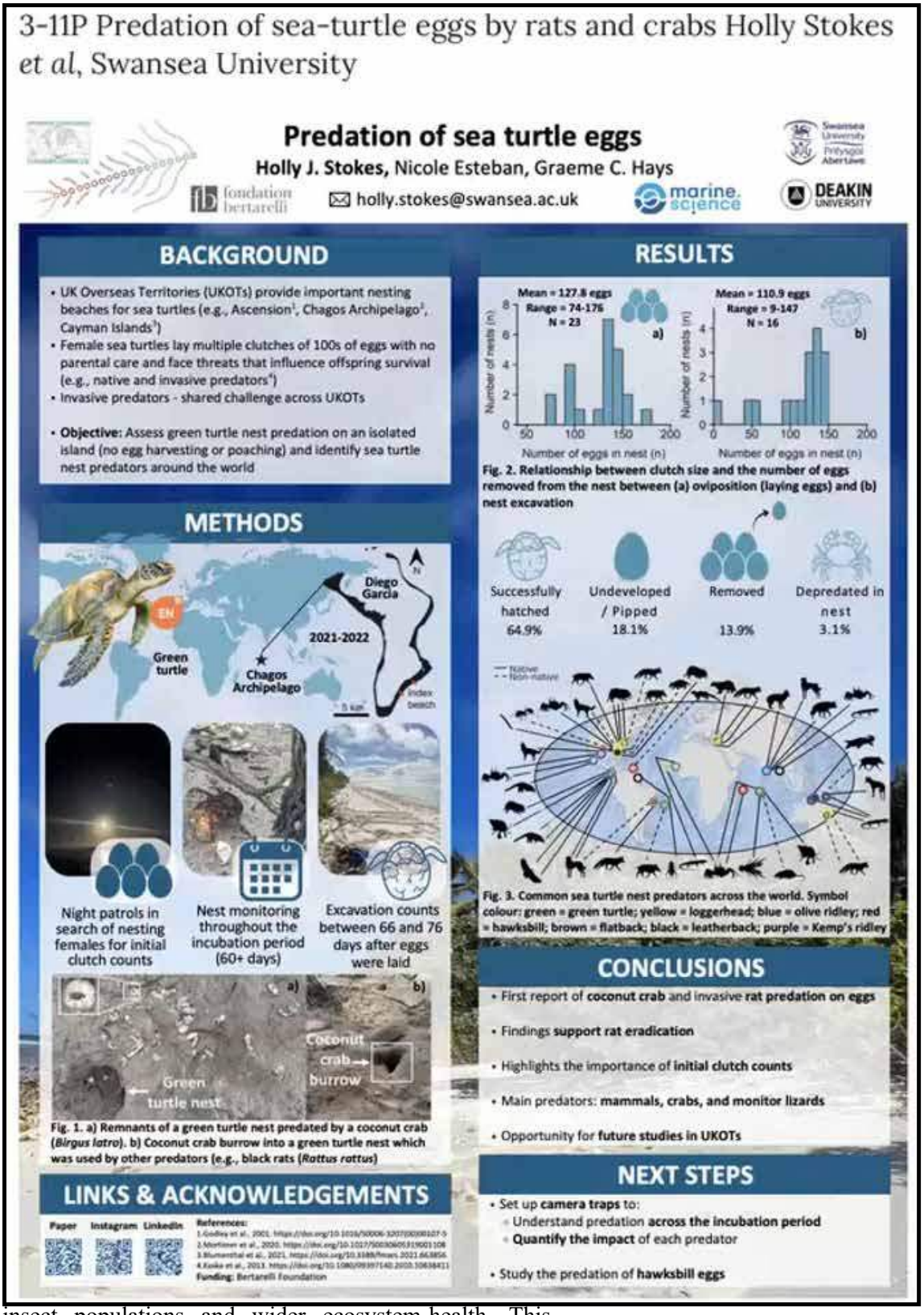
(* indicates student poster)

Catherine Wensink *(above)* opened the session with the first poster for the ***Topic 1 Theme Sharing Experiences***, *1-10P Managing the effects of Human Impacts on our marine environment (Leeann Henry, St Helena Government)*, which was an initiative looking to protect the marine environment from tourism.

The second poster, presented by Nell Cava, was on *1-11P* The Gibraltar Biodiversity Portal – Enhancing access to The Rock's research gems (Nell Cava & Caroline Moss-Gibbons, University of Gibraltar)* which looks to make biodiversity-data easier to access.

The next poster in the theme Sharing Experiences, was *1-12P Isle of Man bats (Nick Pinder, Manx Bat Group)* which outlined the work of the Manx Bat Group. All UK species of bats, including those found on the Isle of Man, are insectivorous and highly sensitive to environmental changes, making them effective indicators of nocturnal





insect populations and wider ecosystem-health. This poster highlighted the broad range of work the Bat Group is doing.

The next two posters were from the Falklands, *1-13 Managing Calafate* Berberis microphylla *in the Falkland Islands: A Strategic Approach to Landscape-Scale Invasive Species Control (Michael Lavery, Kaitiaki o te Ngahere & Indigena Biosecurity International)* and *1-14 Calafate & Community in the Falkland Islands (Erica Berntsen, Department of Agriculture, Falkland Islands Government)*. These posters both show the challenges experienced on these islands in managing this problematic species but how, alongside a systematic control strategy, working closely with an engaged community can enable large-scale invasive non-native species control.

The next set of posters was in the ***Topic 3 Theme: Achieving Biodiversity & Sustainability Targets***. The first of these posters was actually a fold-out guide: *3-10P Grasses of Montserrat (Virginie Sealys, Montserrat National Trust et al.)* and it shows a really nice example of a communication aid that will support plant- identification. There is a lack of field resources for Montserrat on their flora and this guide forms part of a toolkit of resources to help Montserratians to support biodiversity on their island.

We then moved to poster *(top of this page) 3-11P Predation of sea-turtle eggs by rats and crabs (Holly Jayne Stokes, Swansea University et al.).* I was personally delighted to see Dr Holly Stokes as she was undertaking her PhD in Diego Garcia in 2022 when I was there. This fascinating poster reported for the first time the predation of green turtle eggs by coconut crabs and rats, and highlights the importance of making initial clutch-counts.

The next poster, *3-12P Other Effective Area-Based Conservation Measures (Catherine Wensink, UK Overseas Territories Conservation Forum)* highlights the growing importance of Other Effective Area-Based Conservation Measures for supporting not only global biodiversity-

targets but also ecological sustainability and social equity.

Poster *3-13P Restoring Biodiversity with urban pockets (Katrina Jurn, Sustainable Cayman) (see above)* was a fantastic example of piloting nature-based solutions in urban areas to create pockets of land more resilient to the rapidly changing environment due to climate-change. What is particularly inspiring about this work is that it is youth-led and is being done at a very affordable scale locally. There was an accompanying video for this poster here: https://www.dropbox.com/scl/fi/miltytzgdb413feu3dcgl/3-13P_Katrina-Jurn.4?rlkey=me57h4twt9vy6ypw57p4tywnk&st=04swxnla&dl=0.

The final poster for this topic, *3-14P Manx Birdlife (Allison Leonard, Manx Birdlife)*, showed the wonderful range of projects being undertaken by Manx Birdlife including the Hen Harrier and Chough censuses, the Birds of Conservation Concern and Education and Citizen Science. This work is providing both the evidence and the community-engagement so essential for successful projects!

The next poster, 5.09P, was the first linked to ***Session 5: Using technology and data to inform and monitor conservation and novel approaches to address threats to biodiversity***. *Tracking Change: Phytoplankton Trend Analysis in British Gibraltar Territorial Waters (Marre Linthorst, University of Gibraltar et al.)* was on her work undertaking a standardised sampling strategy for phytoplankton in Gibraltar. What stood out in this talk was that the work, as with many other examples in the posters, is filling a critical knowledge gap for the marine environment.

Poster *5-10P* The Dietary Dynamics of Red Foxes* Vulpes vulpes *amidst Changing Rabbit Availability (Jemila Mellin, University of Gibraltar, et al.)* highlighted the importance of baseline-data on both rabbit and fox populations in Gibraltar, offering insights into their abundance, behaviour and dietary patterns. The video to accompany this poster can be seen here: https://www.dropbox.com/scl/fi/l9d90he8gu0i35n2stjyd/Jemila-Mellin-Conference-Poster-1.4?rlkey=2c06yee0yg4ar5p07px4dvm52&st=7qccevpp&dl=0.

The next poster, *5-11P Ecological insights and conservation challenges for the Orange Cup Coral* Astroides calycularis *in the Western Mediterranean (Awantha Dissanayake, University of Gibraltar)* celebrated a range of efforts to conserve the Orange Cup Coral in Gibraltar, including the successful transplantation of 79 coral colonies alongside engagement with 500 divers.

Poster *5-12P* Establishing a Baseline Characterisation of Marine Benthic Taxa and Trophic Structure in Guernsey: Evaluating the Ecological Impact of Local Fisheries (Eve Torode, University of Gibraltar)* showed again the importance of baseline-data in understanding the ecology of systems. Less than 1% of waters around Jersey are

protected and this work is helping scientists understand what is needed to support marine biodiversity.

The next poster *5-13P* Invasive Species dominate tree canopies in Bermuda's protected areas (Alison Copeland, Durham University et al.)* gave a fascinating insight into the plant community composition around Bermuda. It showed staggering levels of invasion of both inland and coastal areas and indicated where conservation-management

Invasive species dominate tree canopies in Bermuda's protected areas

Alison Copeland[1], Adrian Brennan[1] and Wayne Dawson[2]

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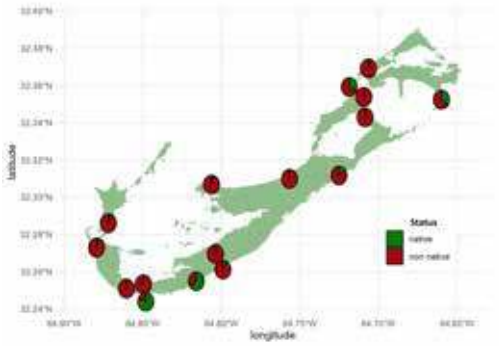
Bermuda and its Flora

- Bermuda is a subtropical archipelago in the western north Atlantic, with a total land area of 54km^2 and a human population of ~63,000.
- Bermuda's flora contains at least 1,587 vascular plant species from 162 families. Of these 1,424 or 89.8% are non-native. 52 species are considered invasive, including 15 trees, 9 shrubs and 1 palm species (Copeland and Dawson, 2025).
- We aim to quantify plant invasions of unmanaged vegetation in nature reserves and natural parks using quadrats at stratified random sites.

Survey Summary

- We surveyed the vegetation of 16 protected areas in 246 canopy plots of 20m x 20m (400m^2).
- 30,873 trees, palms and shrubs were counted from 65 species.
- 4,206 (14%) of stems counted came from 18 native species, while 26,667 (86%) were 47 non-native species.

Figure1: Proportion native and non-native trees in parks



Top: coastal plot, South Shore Park
Lower: upland plot, Walsingham Trust

Key Findings

1. 10/16 parks had canopies >95% non-native trees, and 4 had >99% non-native trees (Fig.1).

2. Twenty invasive species comprised 84.8% of stems counted (n=26,179) and 31% of species recorded.

3. Coastal plots contained more native species and native trees than uplands (Figs.2&3).

Upland Plots

129 plots.

54 canopy-forming species.

22,999 counted stems - 98% invasive or naturalized, 2% native.

Figure 2: Trees, palms and shrubs counted in upland plots

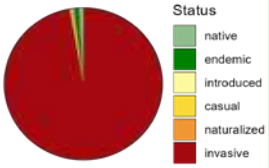
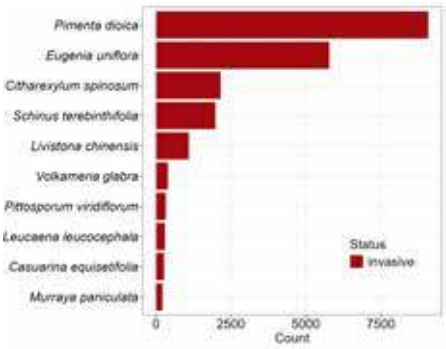


Figure 4: Top 10 Upland Species



Pimenta dioica

Eugenia uniflora

Citharexylum spinosum

Coastal Plots

117 plots.

47 canopy-forming species.

7,874 counted stems -51% invasive or naturalized, 48% native, 1% others.

Figure 3: Trees, palms and shrubs counted in coastal plots

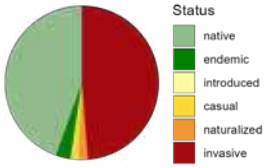
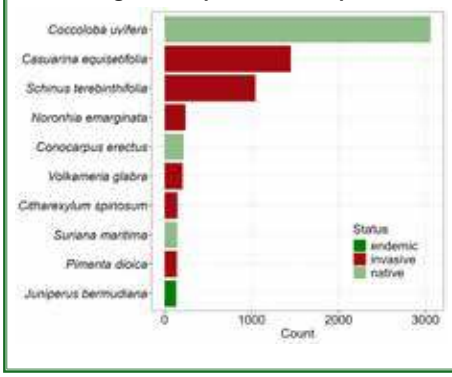


Figure 5: Top 10 Coastal Species



Coccoloba uvifera

Casuarina equisetifolia

Schinus terebinthifolia

Conclusions

1. Upland parks contain novel plant communities of primarily non-native trees.
2. Native-dominated vegetation in coastal parks should be protected from damaging developments and activities.
3. Past planting of endemic trees has maintained their presence in upland and coastal parks despite invasion by non-natives (Figs 2&3). These conservation plantings must continue.

References

Copeland, A.I. and W. Dawson. 2025. The introduced and invasive flora of Bermuda. Biological Invasions (2025) 27:102 https://doi.org/10.1007/s10530-025-03559-8.

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Ants of the Akrotiri UK SBA (Cyprus)

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INTRODUCTION

- Ants are crucial components of ecosystems, facilitating ecosystem functions such as soil aeration, habitat creation and maintenance.
- However, some invasive non-native species have detrimental effects to nature and socioeconomic parameters.
- Located at the southernmost point of the island of Cyprus, the Akrotiri UK SBA is a biodiversity hotspot for migrating birds, including a designated RAMSAR site, SPA and SAC.
- Throughout DPLUS200, a Darwin Plus project funded by the UK government, we surveyed the ant biodiversity of the Akrotiri SBA.

METHODS

- Unstructured sampling: hand collecting and entomological umbrella.
- Structured sampling: pitfall traps in 10 different habitat types for one week during Feb, May, Aug and Nov 2024.
- Specimens preserved in 75° - 95° EtOH and identified based on available identification keys, descriptions and species diagnoses.

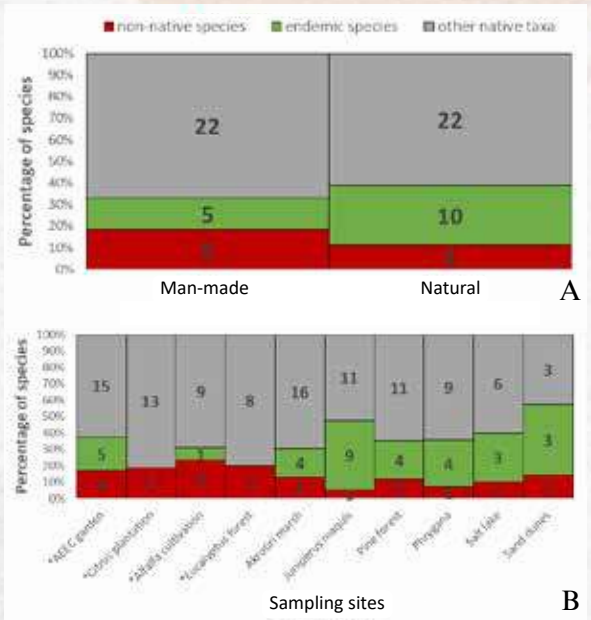
RESULTS

- 52 ant taxa, including 12 of the 18 endemic and 9 of the 18 non-native species known from Cyprus (Fig. 1).
- *Monomorium exiguum* (non-native) was first reported from natural habitats in the Mediterranean (Fig. 2A).
- *Temnothorax akrotiriensis* (endemic) is more widespread than previously thought in the peninsula (Fig. 2B).
- *Oxyopomyrmex pygmalioni* (endemic) was collected outside its only known locality i.e. the Akamas peninsula (Paphos) (Fig. 2C).
- The little fire ant *Wasmannia auropunctata* was detected in the Cyprus UK SBAs (Fig. 2D).
- Pitfall traps showed higher % of non-native taxa in man-made habitats and higher % of endemics in natural habitats (Fig. 3A,B).

CONCLUSIONS

- Despite its small size (123 km^2), the Akrotiri SBA is an important biodiversity hotspot for Cypriot ants, hosting 59% of known species.
- Urbanization and land use regimes seem to affect endemism maintenance and biological invasions.
- Nevertheless, further research is necessary, especially regarding the management of invasive non-native species, as well as the conservation of endemic species.

REFERENCES



Percentages and numbers of non-native, endemic and other native ant taxa in man-made and natural habitats (A), as well as per sampled locality in Akrotiri (B). Man-made habitats are denoted with an asterisk (AEEC = Akrotiri Environmental Education Centre).

priorities should be given to protect endemic and native trees.

5-14P Ants of the Akrotiri UK SBA, Cyprus (Jakovos Demetriou, Joint Services Health Unit, et al.)* showed, as with many of the posters, the importance of getting out and surveying for species on the ground. The surveys

found that the Akrotiri SBA holds 59% of the ant-fauna of Cyprus, with more invasive non-native species being found in urban areas and more endemic species found in natural areas.

Poster *5-15P Persistence, Accuracy and Timeliness: Finding, Mapping and Managing Non-Native Plant Species on the island of South Georgia (Bradley Myer, Indigena Biosecurity International)* gave an overview of the inspiring work of the Government of South Georgia and Indigena in eradicating and managing invasive plants on South Georgia. Since 2016, seven species are no longer present after successful control and 10 species have been discovered and prevented from establishing further. This work is ongoing as the risk of emergence from the seedbank is high.

Poster *5-16P Bailiwick Eelgrass Project, BEEP (Dr Mel Broadhurst-Allen, Alderney Wildlife Trust)* was presented on behalf of multiple organisations in the Bailiwick of Guernsey. The BEEP project was set up in 2019 and using a range of techniques to monitor the sea-grass, volunteers from the community are getting involved.

5.17P *Bugs in our drawers (Laura McCoy, Manx National Heritage)* was a wonderful poster looking at the major effort to conserve their entomology collection – the largest natural science collection in its care, with over 78,000 insect specimens, mostly pinned and historically significant.

Poster *5-18P Sea turtles at shallow depths (Kimberly Stokes, University of Swansea)* was the last in this Topic and showed several fascinating discoveries. The first was that hawks-bill turtles in the waters around Diego Garcia were spending a lot of time in shallow lagoons, avoiding predators in the deeper water of the lagoon. The second finding, from tracking female green turtles across the western Indian Ocean, was that they spend a lot of time in shallower water (3 times their body depth on average), which helps to conserve energy. This relationship was also seen in other taxa.

The only poster in ***Topic 7 Theme Funding/resourcing*** was *7-08P* Evidence of Barriers to Marine Conservation in UK Overseas Territories: A Practitioner-Informed Study (Natalie Muirhead-Davies, University of Gibraltar)*. This poster highlighted the importance of enabling existing initiatives through sustainable financing and for these to be supported in-house rather than relying on external support. The poster gave examples of multiple barriers including limited funding and resources, data-gaps, and weak enforcement-capacity, governance-challenges, political disputes, and low community buy-in.

The results of the voting (above) were totalled and announced on the last day of the conference.