DPLR3\1068

Darwin Plus Local - Final Report (1)

Officer: Linzi Ogden

Section 1 - Darwin Plus Local Project Information (Essential)

Project Reference Number

DPL00084

Q1. Project Title

No Response

Overseas Territory(ies)

☑ St Helena, Ascension, and Tristan de Cunha

Lead Organisation or Individual

Ascension Island Government Conservation & Fisheries Directorate (AIGCFD)

Partner Organisation(s)

Ascension Island Government

Value of Darwin Plus Local Grant Award

£45,797.94

Project Start Date

01 April 2024

Project End Date

31 March 2025

Project Leader Name

Chrisna Visser

Project Website/Twitter/Blog etc.

www.ascension.gov.ac

Report Author(s)

Chrisna Visser, Tiffany Simpson; April 2025

Report Date

29 April 2025

Project Summary

No Response

Project Outcomes

Checked	**Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;**
Unchecked	**Climate Change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;**
Checked	**Environmental quality: improving the condition and protection of the natural environment;**
Unchecked	**Capability and capacity building: enhancing the capacity within OTs, including through community engagement and awareness, to support the environment in the short- and long-term.**

Section 2 - Project Outcomes (Essential)

On a scale of 1 (high – outcome substantially exceeded) to 5 (low – outcome substantially did not meet expectation), how successful do you think your project has been?

⦿ 3 - Outcome met expectation

Project outcomes and justification for rating above

Actions undertaken:
1. The project introduced the Evippe sp. #1 moth as a biological control for invasive Mexican thorn (Neltuma juliflora) on Ascension Island. A Risk Assessment (DPLUS134) completed in December 2023 was reviewed by Fera and approved by the Governor in February 2024.
2. Four Evippe moth releases took place in April, June, July, and September 2024 at Donkey Plain and St Mary's Grotto, with support from CABI UK.
3. Three release methods were tested: (a) Polystyrene boxes with leaf ties and fresh Mexican thorn leaves; (b) Mesh sleeves with leaf ties and mining fastened around branches; (c) Plant material containing leaf ties and mining secured to branches with cable ties. Mesh sleeves proved most effective, showing higher densities of leaf ties and mining, likely due to increased inoculation in the confined area.
4. Larval activity (defoliation, leaf ties, and mining) is documented through photographs from the first release in April 2024 to March 2025, improving on previous releases where no records were available.
5. Monthly fixed-point photography tracks landscape changes at release sites. April 2024 photos are compared

to monthly images post-release. While significant changes are evident, the team considers that climatic factors and seasonality play a role.
6. No-kill traps, including moth bucket traps and light traps, were used to monitor adult moths instead of sticky traps during early establishment. No Evippe moths were captured despite using various attractants, aligning with the Evippe Risk Assessment (Dec 2023), which noted Evippe moths rarely encounter humans and are not attracted to light. These efforts still provided valuable insight into other native moths and potential predators coexisting with Evippe moths.
7. Drone photography established a baseline for Mexican thorn in Nature Reserves and Evippe moth release sites. The images also help assess cover by other non-native species like Tree tobacco (Nicotiana glauca) and Yellow Boy (Tecoma stans) as the trained eye can easily distinguish between different species. Monthly monitoring at the St Mary's Grotto and Donkey Plain release sites are crucial. Drone images aid in monitoring progress through chemical and mechanical clearance efforts.
8. Propagating Mexican thorn to sustain the Evippe population was challenging due to mealybug infestations and poor growth, despite regular care. As a result, the step of keeping moths in cages before infield release was eliminated.
9. Projects DPLUS134 and DPL00084 helped secure support for biological control on Ascension through public talks, consultations, workshops, and social media (Facebook, X), as well as public notices and Islander publications. Project updates were posted on the AIG website: www.ascension.gov.ac. A public meeting in April 2025 reached 30 attendees.
10. South West Bay (Pan Am) Nature Reserve, covering 0.30 km² and a 200m buffer zone, was cleared of Mexican thorn and Tree tobacco with the help of Conservation Interns and volunteers.
11. Improved relationships with island role-players like USAF, RAF, AIG, Encompass, CSO, and Mitie, through continued site clearance and volunteering opportunities.
12. The Mexican Thorn Control Plan and M&E Plan are distributed and implemented by island role players.

Supporting Evidence - file(s) upload

Annexure 7 - Photo album
22/04/2025
11:44:09
pdf 4.7 MB

Annexure 1 - Fixed-point photography Nov 2025
22/04/2025
11:44:05
pdf 7.12 MB

Annexure 6 - Social media summary
22/04/2025
11:43:43
pdf 3.16 MB

Annexure 5 - Stitched drone imagery for Evippe release sites
22/04/2025
11:43:42
pdf 2.69 MB

Annexure 4 - Moth trapping guidelines
22/04/2025
11:43:40
pdf 3.2 MB

Annexure 2 - Evippe monitoring database
22/04/2025
11:43:35
pdf 1.38 MB

Annexure 3 - Evippe moth release protocol
22/04/2025
11:43:33
pdf 898.6 KB

Supporting Evidence - links to published document/online materials

What we will submit as evidence:
Annexure 1: Fixed-point photography Nov 2025
Annexure 2: Evippe monitoring database
Annexure 3: Evippe moth release protocol
Annexure 4: Moth trapping guidelines
Annexure 5: Stitched drone imagery for Evippe release sites
Annexure 6: Social media summary
Annexure 7: Photo album

Project Challenges

Four Mexican thorn trees which was part of the Evippe long-term monitoring programme were removed by the USAF Base as it was encroaching on water pipelines and building foundations. The Project Officer met with the Commander and marked trees of concern and agreed that no further trees will be removed without consultation with the AIGCFD. The monitoring programme was not affected any further with continued drone photography and ground-truthing occurring once a month at all Evippe release sites and Nature Reserves.

Lessons Learned

1. During preparations for infield surveys, we found a lack of data from previous biocontrol releases on Ascension, making it difficult to assess their success, cost-effectiveness, and ecological impacts. The DPL00084 project addresses this by documenting each step with clear notes and photographs for future evaluation.
2. Biocontrol projects are a long-term process with multiple stages, making it difficult to complete within a single funded project. The host range testing and release phases alone may each take up to two years. Ongoing, long-term funding sources will be essential to support longer term projects.
3. The project's strengths included efficient administration, effective management, thorough monitoring, and preparation. Timely orders, awareness of health and safety with relevant Risk Assessments, and accurate data collection supported Mexican thorn clearance. Early training retained team knowledge, while public engagement through volunteers, social media, and news articles raised conservation awareness.
4. Collaborations with scientists at CABI and various institutions on the island contributed significantly to the project's success.
5. If this project were repeated, a different approach would be taken to:
• The budget would cover UK customs, delivery charges, higher transport costs, PPE, and communication equipment (e.g., radios).
• Necessary tools (chainsaws with PPE, handsaws, loppers, etc.) and a dedicated vehicle would be acquired before the project started, as the Project Officer could only conduct infield work when the vehicle was not in use by other staff.

Section 3 - Project Finance (Essential)

Project Expenditure

Project Spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual Darwin Plus Costs (£)	Variance %	Comments (please explain significant variances)

Staff Costs	[redacted]		
Consultancy Costs			
Overhead Costs			
Travel and Subsistence			
Operating Costs			
Capital Items			
Others			
Total	45,797.94	42,848.69	-6.44

Please provide a short narrative summary on project finances.

Some items under Capital Items could not be purchased due to availability at the suppliers. Prices also changed between ordering and receiving items, so amendments were made to Purchase Orders to reflect this. The shipping costs are only received by AIG Finance following receipt of items. Due to delays in shipping, some items will only be received after 30 April. Additional shipping costs will be reported in the Financial Report and Actual Claim forms as soon as available.

Section 4 - Contribution of Project to Darwin Plus Programme Objectives

Please select up to **one** indicator that applies within **each group/indicator list (A, B, C, D)** and report your results for that indicator in the text box underneath. If you do not have relevant results to report for any of the indicators in a particular group, you can leave them blank.

Please also submit some form of evidence (above) to demonstrate any results you list below, where possible.

Group A: Capability and Capacity - Core Darwin Plus Standard Indicators (select one)

Unchecked	**DPLUS-A01: Number of people from key national and local stakeholder groups completing structured and relevant training.**
Unchecked	**DPLUS-A02: Number of secondments or placements completed by individuals of key local and national stakeholders.**
Checked	**DPLUS-A03: Number of local/national organisations with improved capability and capacity as a result of project.**
Unchecked	**DPLUS-A04: Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.**
Unchecked	**DPLUS-A05: Number of trainers trained reporting to have delivered further training by the end of the project.**

Group A Indicator Results

We enhanced the AIGCFD's capacity by improving monitoring and research by implementing a biocontrol program to control the highly invasive and problematic Mexican thorn.

Group B: Policies, Practices and Management- Core Darwin Plus Standard Indicators (select one)

Unchecked	**DPLUS-B01: Number of new/improved habitat management plans available and endorsed.**
Checked	**DPLUS-B02: Number of new/improved species management plans available and endorsed.**
Unchecked	**DPLUS-B03: Number of new/improved community management plans available and endorsed.**
Unchecked	**DPLUS-B04: Number of new/improved sustainable enterprises/ community benefits management plans available and endorsed.**
Unchecked	**DPLUS-B05: Number of people with increased participation in local communities / local management organisations (i.e., participation in Governance/citizen engagement).**
Unchecked	**DPLUS-B06: Number of Local Stakeholders and Local Communities (people) with strengthened (recognised/clarified) tenure and/or rights.**

Group B Indicator Results

With support from CABI, AIGCFD successfully introduced the biological control agent Evippe sp. #1 to manage the highly invasive Mexican thorn trees on Ascension Island. The project also facilitated the distribution and implementation of the Integrated Mexican Thorn Control Plan and M&E Plan among local role players.

Group C: Evidence and Best Practices - Core Darwin Plus Standard Indicators (select one)

Checked	**DPLUS-C01: Number of best practice guides and knowledge products published and endorsed.**
Unchecked	**DPLUS-C02: Number of new conservation or species stock assessments published.**
Unchecked	**DPLUS-C03: New assessments of habitat conservation action needs published.**
Unchecked	**DPLUS-C04: New assessments of community use of biodiversity resources published.**
Unchecked	**DPLUS-C05: Number of projects contributing data, insights, and case studies to national Multilateral Environmental Agreements (MEAs) related reporting processes and calls for evidence.**

Group C Indicator Results

AIGCFD with support from CABI were able to implement a monitoring program for the recently introduced biocontrol agent, Evippe sp. #1, to control Mexican thorn on Ascension Island. This forms part of the Mexican thorn Integrated Control Plan which was published in July 2024 as part of the DPLUS134 project.

Group D: Sustainable Benefits to People, Biodiversity and Climate - Core Darwin Plus Standard Indicators (select one)

Checked	**DPLUS-D01 Hectares of habitat under sustainable management practices.**
Unchecked	**DPLUS-D02: Number of people whose disaster/climate resilience has been improved.**
Unchecked	**DPLUS-D03: Number of policies with biodiversity provisions that have been enacted or amended.**

Group D Indicator Results

AIGCFD with the help of Conservation Interns and volunteers cleared South West Bay (Pan Am) Nature Reserve and 30m buffer zone, an area of approximately 0.30 km² of Mexican thorn and Tree tobacco. This site is an important nesting area for the Endangered green turtles (Chelonia mydas).

Section 5 - Project Partnerships, Wider Impacts and Contributions

Project Partnerships

AIGCFD were responsible for project management, field surveys and contributed towards local knowledge elements for implementing the Mexican thorn Integrated Control Plan and Evippe biocontrol program.
CABI, however not a formal partner of DPL00084, provided invaluable expert knowledge in biocontrol releases and the implementation of monitoring strategies. Evippe moths were cultivated in their quarantine facility in the UK and shipped to Ascension on four separate occasions to strengthen the on-island population.
Results from the research were shared in the local community through the reports, local articles, social media and public meetings.

Wider Impacts and Decision Making

Through the work done by the DPLUS134, DPL00038 and DPL00084, we are hopeful that the capacity and understanding of what role biocontrol programs play in conservation have been greatly improved on Ascension Island. The capacity built through this project enable us to consider rolling out further biocontrol projects in future, especially as reports developed through these projects provide clear guidelines for the next steps to be taken.

Sustainability and Legacy

1. The lead partner, AIGCFD, will continue to carry out Mexican thorn clearance with improved methods which will guarantee success.
2. Outcomes from this project could inform future projects and principles applied in other OTs on similar invasive species.
3. Updated drone images of Ascension's Nature Reserves have been integrated into five AIG Management Plans.
4. This project allowed for the complete clearance of the South West Bay (Pan Am) Nature Reserve and 30m buffer zone, an important stronghold for the Endangered green turtle.
5. The Project Officer trained and supported long-term AIG staff, including the Conservation Fieldworker, whose renewable contracts help retain knowledge and information.
6. Publishing the Integrated Mexican Thorn Control and M&E Plans ensures key project learnings and best practices are preserved within the Department.
7. DPL00084 built on work done by DPLUS134 by releasing the Evippe sp. #1 moth at more sites to control Mexican thorn on Ascension and monitor its impact. DPL00038 identified biocontrol agents for other invasive plants and invertebrates which can be researched more in-depth with further funding.
8. Long-term partnerships exist with international stakeholders. This project builds on collaboration between AIGCFD and CABI UK, with support from South Africa's Invader Plant Specialists® and CBC (DPLUS134).
9. The groundwork to support sustainable invasive species control on Ascension Island is in place, with the team prepared for future biocontrol activities when funding becomes available.

Section 6 - Communications & Publicity

Exceptional Outcomes and Achievements

Project Title: BELEAF – Biocontrol: Evaluating Leaf-folding Evippe Activity on Flora
Project Reference: DPL00084
Authors: Chrisna Visser and Norbert Maczey
The Ascension Island Government's Conservation and Fisheries Directorate (AIGCFD), supported by the Darwin Plus-funded project DPLUS134, DPL00084 and CABI, secured approval from the Governor in St Helena in 2024 to release a moth, Evippe sp. 1#, as a biological control agent to control the spread of the invasive Mexican thorn (Neltuma juliflora) on Ascension Island.
Approval followed consultations with the public and Island Council, and a comprehensive Risk Assessment (RA). The RA included host range tests from biological control programmes in Australia and South Africa, and tests on Ascension's endemic, native, and cultivated plants. Results confirmed the moth's specificity to Mexican thorn,

posing no threat to other plant species.
Mexican thorn, introduced in the 1960s to prevent soil erosion around settlements, has since become a serious invasive plant. It forms dense stands, threatens native ecosystems, and poses risks to nesting green turtles (Chelonia mydas), and seabirds like sooty terns (Onychoprion fuscatus) at Wideawake Fairs, by sheltering pests like rats and mice that graze on endemic plants, including the Critically Endangered Ascension Spurge (Euphorbia origanoides).
The first cultured moths were transported from the UK to Ascension on 10 April 2024. The culture was kept at the culture facility in One Boat with moths released at suitable sites around Donkey Plain and St Mary's Grotto. Further releases at these sites took place in June, July, and September.

The Darwin Local project, DPL00084, provides the opportunity to monitor the release and spread of the Evippe moth over a 12-month period, and evaluate its effectiveness as a biocontrol agent against Mexican thorn. This monitoring is a vital step in managing the Mexican thorn invasion whilst evaluating the success of the moth.

Early observations indicate that the control agent is well on its way to becoming established and has started to spread locally. The population is still expanding its range in the St Mary's Grotto release site with new leaf ties and signs of leaf-mining visible. High densities of predators were recorded in Donkey Plain which may be an indication for reasons why the establishment of the moth was hampered in this area.

Photo, video or graphic to be used for publicity and communications.

Please upload at least one relevant and engaging image, video or graphic that you consent to be used alongside the above text in Defra, JNCC or NIRAS communications material.

IMG_20240702 - Leaf ties made by Evippe sp.#1 at the St Marys Grotto release site in Ascension Island, July 2024 (N. Maczey)
22/04/2025
12:02:32
jpg 74.96 KB

IMG_20240702 - Pupae at St Marys Grotto release site (N. Maczey)
22/04/2025
12:02:32
jpg 54.09 KB

IMG_20240508_092400 - Signs of initial leaf mining by Evippe caterpillars (C. Visser)
22/04/2025
11:59:46
jpg 504.87 KB

IMG_20240517_081050 - Multiple leaf ties at St Marys Grotto release site (S. Tuppen)
22/04/2025
11:59:42
jpg 228.19 KB

IMG_3514 - Evippe caterpillar on Mexican thorn (C. Pratt)
22/04/2025
11:59:41
jpg 55.17 KB

AIGCFD Logo
22/04/2025
11:57:06
jpg 26.58 KB

Darwin Plus Logo
22/04/2025
11:57:06
jpg 12.12 KB

CABI Logo
22/04/2025
11:57:06
jpg 8.84 KB

Photo, video, and/or graphic captions and credits.

FilenameIMG_3514 - Evippe caterpillar on Mexican thorn – St Mary's Grotto (Ascension Island) - C. Pratt (CABI)
FilenameIMG_20240508_092400 - Signs of initial leaf mining by Evippe caterpillars - C. Visser (AIGCFD)
FilenameIMG_20240702 - Leaf ties made by Evippe sp.#1 at the St Mary's Grotto release site in Ascension Island, July 2024 - N. Maczey (CABI)
FilenameIMG_20240702 - Pupae at St Mary's Grotto release site - N. Maczey (CABI)
FilenameIMG_20240517_081050 - Multiple leaf ties at St Mary's Grotto release site - S. Tuppen (AIGCFD)
AIGCFD Logo
Darwin Plus Logo
CABI Logo

I agree for the Biodiversity Challenge Funds Secretariat, Administrator, and/or JNCC to publish the content of this section.

⊙ Yes, I agree for the BCFs Secretariat and/or JNCC to publish the content of this section.

Please list any accounts that you would like tagged in online posts here. This can include project pages, partners' pages or individuals' accounts for any of the following platforms: LinkedIn, Facebook, Twitter, or Instagram.

Facebook: https://www.facebook.com/AscensionIslandConservation
Twitter: https://twitter.com/AIGConservation
Website: https://www.ascension.gov.ac/

Section 7 - Darwin Plus Contacts

Please tick here to confirm that you have read and acknowledge the BCF's Privacy Notice on how contact details will be used and stored and that you have sought agreement from anyone that you are sharing personal details with us on their behalf.

⊙ I confirm I have read the Privacy Notice and have consent to share the following contact details

Project Contact Details

Project Contact Name	Chrisna Visser
Role within Darwin Plus Project	Mexican Thorn Control Project Officer
Email	[redacted]
Phone	
Do you need further sections to provide additional contact details?	⊙ No