Darwin Plus:
Overseas Territories Environment and Climate Fund
Annual Report

To be completed with reference to the "Project Reporting Information Note" (https://dplus.darwininitiative.org.uk/resources/information-notes/).

It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Submission Deadline: 30th April 2022

Darwin Plus Project Information

Project reference	DPLUS134
Project title	Repelling the invader: turning the tide on Ascension's Mexican thorn
Territory(ies)	Ascension Island
Lead partner	Ascension Island
Project partner(s)	CABI
Darwin Plus grant value	£184,191
Start/end dates of project	1/9/2021 – 31/3/2024
Reporting period (e.g. Apr 2021-Mar 2022) and number (e.g. Annual Report 1, 2)	1/9/2021 – 31/3/2022 Annual Report 1
Project Leader name	Diane Baum
Project website/blog/social media	N/A
Report author(s) and date	Chrisna Visser, Diane Baum

1. Project summary

Mexican thorn is the most damaging invasive species on Ascension. This project is taking a strategic and integrated approach to controlling Mexican thorn on Ascension including rigorous assessment of further biocontrol and improved chemical and mechanical treatment. The project will ensure local capacity is built to deliver those most appropriate and cost-effective for Ascension. The outcome will be a step change in our ability to control Mexican thorn and result in a long-term contraction of its range and restoration of habitats.

2. Project stakeholders/partners

Three meetings have been held between AIG and the project partner CABI to identify plant species to include in host range testing for the potential biocontrol agent Evippe sp. (Annex 3) and establish the scope of the Evippe moth Risk Assessment. CABI have extensive expertise in biocontrol risk assessment and their guidance has been crucial is developing the framework for this.

The project officer has also established links with representatives from the Centre for Biological Control, Rhodes University, South Africa. Evippe was released as a biocontrol agent for Mexican thorn (Prosopis) in Meerkat National Park, South Africa during March 2021 and their experiences will help to inform the Ascension risk assessment and public engagement campaign.

3. Project progress

3.1 Progress in carrying out project Activities

Activities under Output 1

1.1 Use aerial imagery and AIGCFD drone to map the distribution of Mexican thorn across 3000ha of suitable habitat on Ascension. Train volunteers to ground truth results over at least 10% of the survey area.

The project experienced mechanical issues with the drone. The project explored the use of high resolution satellite imagery as an alternative, but struggled to obtain quotations and help from colleagues in this field. Now that the drone is back on island, the project will start monitoring the spread of Prosopis in the nature reserves and other sensitive sites of Ascension.

1.2 Based on the results of Evippe releases in Australia, create maps showing potential impact of Evippe on Ascension.

This activity is not scheduled to begin until Year 2 of the project.

1.3 Transport five endemic and valued plant species from Ascension and Evippe from culture sites in South Africa to CABI's UK quarantine facilities to provide Ascension-specific host range testing to supplement Evippe testing already carried out.

Seeds from seven endemic or valued plant species and Prosopis from Ascension were sent to CABI. The plants are currently being cultivated in the CABI quarantine facility in the UK (Annex 4). Some difficulty was experienced while trying to grow Euphorbia origanoides, but the Royal Botanic Gardens, Kew are now assisting with this process. The Prosopis seeds germinated well and the CABI team are working to have mature plants of Prosopis and the Ascension plants ready at the same time for host range testing.

The COVID-19 Pandemic however, prevented the import of Evippe sp. during 2021/22. The project is now aiming to import the biocontrol agent during Q2 of 2022/23 from South Africa and not Australia as originally planned.

1.4 Conduct full risk assessment of Evippe as a biocontrol agent on Ascension using PRA method developed through DPLUS074 and following advice on the scope of the assessment form DEFRA.

The project has started scoping the Risk Assessment and data requirements with CABI. AIG and CABI are sharing information as required. In addition to the results of the host range testing described above, the following areas have already been identified for further consideration in the risk assessment:

- Impact of Evippe on Ascension's endemic invertebrates
- Impact of Prosopis removal on Ascension's endemic invertebrates
- Impact of Prosopis removal on the distribution of other invasive plant species
- Impact of Prosopis removal on dust suppression and erosion
- Impact of Prosopis removal on soil formation and microclimate
- Potential loss of food source for feral donkey and sheep populations

Preparation of the risk assessment will take place in the next reporting period.

1.5 Seek independent evaluation of risk assessment process from DEFRA. Address any concerns DEFRA have and provide final recommendations on the use of Evippe on Ascension.

This activity is not scheduled to begin until Year 2 of the project.

Activities under Output 2

2.1 Carry out desk based review of potential chemical and mechanical methods of Mexican thorn control including evidence of efficacy, resource requirement and applicability to Ascension. Recommend most appropriate methods for Ascension.

Potential control methods that could be trialled on Ascension have been researched and the results summarised in a desk study (Annex 5).

2.2 Deliver training courses on Ascension for employees from AIGCFD and other organisations and volunteers. Training to cover methods recommended in review and result in qualification in herbicide application.

This activity is not scheduled to begin until Year 2 of the project.

2.3 Design and conduct trials of recommended treatment methods on Ascension comparing the results and resource input of each method and control sites.

This activity is not scheduled to begin until Year 2 of the project, but progress has already been made.

The project is currently trialling foliar and cut stump application methods at Waterside Nature Reserve (Annex 6). The area is approximately 1.8km² in size. The project is also trialling cut stump, bark stripping, ring barking and chemical frilling control methods in Long Beach Nature Reserve which is approximately 0.6km² in size. The project had volunteers help out on four separate occasions (Annex 7).

Activities under Output 3

3.1 Organise four public meetings to introduce the project and outline control options. Produce written material to support meetings and encourage involvement

A public presentation introducing the project took place on 20 April 2022 at Two Boats Club. It explained the treatment trials that will be undertaken and provided an opportunity for members of the public to discuss the possible introduction of the biological control agent. 29 members of the public attended the meeting (Annex 8).

3.2 Create articles for the local press and social media to publicise and describe project. Use as a platform to seek views of the community and recruit volunteers.

Two articles have been written for the local newspaper, the Islander. One article was introducing the project and Project Officer to the island, while the other article was used to advertise the Mexican thorn public presentation. These were accompanied by two social media posts published on the AIG Conservation Facebook site (Annex 9).

Activities under Output 4 and Output 5

No activities under these outputs are scheduled to begin until Year 2 of the project.

3.2 Progress towards project Outputs

Output 1. Risk assess the use of Evippe sp. as a biocontrol agent on Ascension following CABI risk assessment protocol

This output is scheduled to take place during Year 2 of the project, but some progress has been made. Seeds from important plant species were sent to CABI to cultivate as part of the host range testing for the Evippe moth. The moth will be imported from South Africa and not Australia as originally planned. The results from the host range testing will inform the Risk Assessment.

The distribution of Mexican thorn and the predicted impact of Evippe sp. could not be mapped yet, but the process is underway. The drone will be used to map sensitive sites and the Nature Reserves on the island during May 2022. Measurable indicator 1.3 is currently underway and the results from the host range testing will inform the Risk Assessment.

The full Evippe risk assessment will be completed by Y2 Q3 as planned and will still be independently assessed by DEFRA and FERA by Year 2 Q4. The project representatives and CABI are scoping the risk assessment and data required to formulate the risk assessment.

Output 2. Best practice methods of chemical and mechanical control identified and people on Ascension trained to undertake these techniques.

This output is scheduled for Y3 Q2, but is already underway. The Mexican Thorn Control Project is currently trialling seven different chemical and mechanical control methods to determine which can be best implemented on Ascension. All results from the trials will inform the decision of what methods will be best to implement on island. Measurable indicator 2.2 is scheduled to take place by Y3 Q2 and no progress has been made thus far. The training outcomes will be determined once the appropriate control methods have been selected to be implemented on island.

Progress has been made with Measurable indicator 2.3 as the proposed new methods are being trialled at 2 different sites covering 4 ha. Trial have commenced at Long Beach and Waterside Nature Reserves. The project will expand to cover North East once the turtle season subsides.

Output 3. Improved public understanding of the impact of Mexican thorn on Ascension and shared ownership.

Measurable indicator 3.1 is underway as the initial public meeting introducing the project to the community took place on 20 April 2022 and 28 people were in attendance. The posts on social media and newspaper articles provoked interest from the community with people attending the public meeting and the project is getting requests from volunteers to work with the project in future. Two articles has been released in the local newspaper. A poster was also shared online and at public places around island to advertise the public presentation which is taking place during April 2022.

Output 4. Integrated control strategy for Mexican thorn on Ascension

The integrated control strategy is scheduled to be completed by Year 3 Q4, but is already underway. A control strategy has been drafted and will be reviewed by an external consultant from South Africa for input. Measurable indicator 4.2 is scheduled to begin Year 3 of the project, so no progress has been made yet.

Output 5. Control strategy actions delivered as part of AIGCFD work plans and best practice methods used by all organisations controlling thorn on Ascension.

Measurable indicators 5.1, 5.and 5.3 can only be delivered once other outputs have been finalised. Progress on the biocontrol risk assessment and treatment trials will provide the foundation for these outputs, and these activities are well underway as described above.

Measurable indicator 5.4 is achievable as the project has volunteers assisting the assisting on a regular basis. Interest amongst island stakeholders has been provoked through the public meeting, which took place during April 2022, and by regular newspaper articles and social media posts.

3.3 Progress towards the project Outcome

Outcome: An integrated approach to Mexican thorn control implemented on Ascension that uses all appropriate techniques, has strong public support and is sustainable within current resource availability.

It is too early to consider progress against the set Outcome. The project logic is still sound and good progress are being made with the Activities and Outputs, so the project should be on track to achieve its Outcome. Initial results from the trials have demonstrated that there is scope to improve the efficacy of treatments and attendance at the public meeting and volunteer events have demonstrated there is interest in better control methods.

3.4 Monitoring of assumptions

There is scope for improving on current control techniques without jeopardising native species or public support
The project already found efficiencies and identified new methods to control Mexican thorn on island. The initial results suggest that it will be effective on Ascension.

Public engagement activities are successful in creating interest and ownership of the problem.
The articles published in the local newspaper and social media posts have already generated interest amongst the community. Volunteers assisted the project with Mexican thorn clearance on four separate occasions as well.

Host range testing requires availability of Evippe sp. from Australia and samples of Ascension plants from Kew.
Seeds from seven Ascension plant species and seeds from Prosopis have already been sourced and sent to CABI for cultivation in their quarantine facilities in the UK. The Evippe moth will be shipped from South Africa and CABI is making the necessary arrangements with South African authorities.

Sufficient empirical evidence from Evippe sp. releases in other countries to make robust predictions of impact on thorn and non-target species on Ascension.
Host range testing data from South Africa and Australia is compiled. The project is also in contact with the scientists testing the moth in South Africa and in Australia. Additional testing for this project is designed to fill gaps in what is already available.

There is scope to improve on current methods being untaken
The project found that current control methods are effectively implemented on island.

Other organisations and volunteers are willing to participate in training.
It is too early to assess this assumption, but an encouraging number of volunteers are currently assisting with the trials. The community is already showing interest after publications in the local newspapers and social media posts.

Willingness amongst public to engage with project and ability to undertake scenario assessment
It is too early to assess this assumption.

Level of control required to protect key biodiversity sites is within the resource capabilities of AIG or potential external funding streams.
It is too early to assess this assumption.

Risk assessment and public engagement strands indicate biocontrol is appropriate for Ascension.
It is too early to assess this assumption.

There is scope for improvement in control methods and a willingness amongst organisations to adopt them.
It is too early to assess this assumption.

Volunteers can be recruited.
Members of the island community have already participated in volunteer events.

Evippe can be easily cultured on Ascension and – as climate data suggests – readily establishes on the island.
It is too early to assess this assumption.

4. Project support to environmental and/or climate outcomes in the UKOTs

The project will address Ascension's and the UK Government's commitments under Article 8 of the Convention on Biological Diversity to control alien species that threaten ecosystems, habitats or species. Mexican thorn is identified as a major threat in Ascension's National Biodiversity Action Plan and poses a risk to populations of the endangered green turtles (Chelonia mydas), sooty terns (Onychoprion fuscatus) and the endemic and critically endangered Ascension Island spurge (Euphorbia origanoides). This project has already identified more efficient ways to control Mexican thorn so that impact on biodiversity can be reduced.

5. OPTIONAL: Consideration of gender equality issues

This question is not relevant to the project.

6. Monitoring and evaluation

Monitoring and Evaluation of the project is on track and data are being collected on the metrics identified in the Project Logframe to allow partners to review progress. There is no cause to alter the current plan. It is too early in the project to have encountered any major obstacles or to make meaningful assessment of progress towards the set Outcome.

7. Lessons learnt

There are no specific lessons that have been learned over the first six months of the project, which have progressed largely as planned. Refinement of treatment methods for example adjustments to the nozzle size and herbicide mixture for foliar spraying, is ongoing as the trials progress.

8. Actions taken in response to previous reviews (if applicable)

N/A

9. Other comments on progress not covered elsewhere

N/A

10. Sustainability and legacy

The Project's intended exist strategy still remains valid. The project is led by AIG, which undertakes most of the Mexican thorn clearance on island, so the recommendations will be adopted. AIG are already applying the new control methods in protected areas such Long Beach and Waterside Nature Reserves. The project's plan to advise and train other organisations is still valid, but will follow later in the project.

There is already a high level of interest generated through social media and the local newspaper for the community to attend public presentations and for volunteers to assist the project on a regular basis.

11. Darwin identity

The Darwin Initiative has been the principal external funder of conservation work on Ascension Island over the past decade and its identity and brand are already well known in the Territory. In the current project, the Darwin logo and acknowledgement of Darwin funding features prominently on information materials distributed to interested parties such as elected Council, Government and the community of Ascension Island.

The Darwin logo is displayed on the public meeting presentation and is linked on social media posts. The Initiative's involvement in the project is also highlighted in the articles published in the local newspaper, the Islander.

12. Impact of COVID-19 on project delivery

Like many projects, the disruption to International travel has had a significant impact on planned fieldwork and consultancy visits during the first six months of the project. The COVID-19 Pandemic prevented consultants visiting the Island as it halted direct Airlink flights from South Africa. It also prevented travel to Australia to collect the Evippe moth for testing in the UK. Sourcing the moth from South Africa seems to be a better option. Uncertainty as to when more normal access to Ascension Island will resume has also presented challenges for replanning project activities.

The range of potential impacts were identified as part of the scheduled Monitoring and Evaluation process and have been addressed through a change request approved by the Darwin Initiative on 27 January 2022. This has involved delaying a number of activities to subsequent years and reorganising the project budget accordingly which will ensure that all planned outputs can be delivered in full while ensuring the safety of project team and local population on Ascension Island.

13. Safeguarding

Please tick this box if any safeguarding violations have occurred during this financial year. ☐

If you have ticked the box, please ensure these are reported to ODA.safeguarding@defra.gov.uk as indicated in the T&Cs.

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2021 – 31 March 2022)

Project spend (indicative) i this financial year	2020/21 D+ Grant (£)	2020/21 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs	[redacted]	[redacted]	[redacted]	There was a delay in Chrisna Visser beginning his contract on Ascension due to Covid that resulted in lower staff costs.
Consultancy costs	[redacted]	[redacted]	[redacted]	
Overhead Costs	[redacted]	[redacted]	[redacted]	
Travel and subsistence	[redacted]	[redacted]	[redacted]	
Operating Costs	[redacted]	[redacted]	[redacted]	
Capital items	[redacted]	[redacted]	[redacted]	
Others (Please specify)	[redacted]	[redacted]	[redacted]	
TOTAL	[redacted]	[redacted]		

15. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here).

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	Yes
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	Yes
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	No
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	