

# Improving national biodiversity data accessibility in Trinidad and Tobago

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**Programme:** BID

**Project ID:** BID-CA2020-039-NAC

**Project lead organization:** The University of the West Indies Zoology Museum

**Project implementation period:** 1/7/2021 - 30/6/2023

**Report approved:** 24/6/2022

## Narrative Midterm report

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### Executive Summary

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#### Digitisation of Collections

We employed & trained 2 Database Assistants (DAs) who are digitising the collections. We've successfully digitised 100% of the NMAG collections, 70% of the NH collection and 7% of the UWIZM collection. As the DAs started 2-3 months later than planned (Oct not July), the expected end date for this activity is now Apr 2023, by which time we should have met targets of 100% for NMAG & NH and 25% for UWIZM.

#### Publishing to GBIF & TTBIS Integration

We've published 1 dataset and have 3 more ready to publish over the next month. The integration aspect will be pushed back to January 2023.

#### Training Workshops

We plan to run the 1st workshop in Sept 2022, the 2nd in Jan 2023 and the final workshop in May 2023. The delay means we these can all be in person, as T&T and our campus is finally open again. We've established a successful social media campaign that has introduced local stakeholders incl. the public to GBIF and the project's objectives via our regular posts. This means that many workshop participants will have some familiarity with the concept of GBIF and the advantages of open access databases before beginning the practical training.

#### Monitoring & Evaluation

We have team meetings each Monday to evaluate progress, set aims for the week/month & answer queries. DAs share datasheets & totals by email each Friday. We check social media analytics to monitor the reach of our communication strategy. We connect with partners regularly concerning the progress with digitisation and social media posts highlighting their collections.

#### Changes

Now we have a better idea of the % of the UWIZM collection that is achievable, we can prioritise key taxa for digitisation. E.g. those of agricultural, ecological or public health interest.

## Progress against milestones

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**Has your project published at least one dataset through GBIF.org?: Yes**

**Dataset published:**

Dataset	DOI
Terrestrial Mollusc Survey of Trinidad & Tobago from 2014-2017	<a href="https://doi.org/10.15468/3whympm">https://doi.org/10.15468/3whympm</a>

**Has at least one member of your project team received certification following the BID capacity enhancement workshop?: Yes**

**Name of the workshop participant:**Jennalee Ramnarine

**Certification obtained:** Advanced Badge

## Report on Activities

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### Activity progress summary

#### Digitising Biodiversity Collections

This activity is ongoing. We are on track to publish 100% of the NHTT by October 2022, and 100% of the NMAGTT dataset by July 2022. We are currently at 7% of the entire UWIZM and do not expect to complete the digitisation of all taxa. Now that we have a good idea of our weekly digitisation rate we are able to estimate 25% of the collection as a realistic target and will continue working towards this until April 2023 when the DAs finish their contracts. This means that this deliverable is around 20% complete based on the new target, and once the other datasets are published both DAs will concentrate on digitising as much of the UWIZM collection as possible.

We have also decided to prepare and publish a data paper in connection with the collections, specifically working with a Freshwater Decapod collection from 2004. We hope to have the dataset published by October 2022, and the data paper submitted by early 2023.

#### Integration with TTBIS

This activity has been delayed. It became clearer once we began the project and discussed with partners that the most logical workflow would be to get datasets published on GBIF first, and then adapt these for TTBIS, given the nature of the TTBIS platform. We now plan to begin this integration activity at the end of 2022, by which time we anticipate that the complete NHTT dataset will be published and can be reformatted for the GIS, protected-area-focused platform, along with vertebrate and invertebrate data from the current and previous efforts to digitise the UWIZM collections. We do not anticipate this delay having any negative impact on the project, and indeed believe that postponing will ensure we optimise the way we integrate the data. We have been prioritising certain datasets for digitisation/publishing with TTBIS in mind given the focus on protected areas and distributions.

#### Training Workshops

This activity has been delayed. We did not receive the funds for the project until late September 2021, therefore our digitisation efforts did not begin until October 2021 with the recruitment of the two DAs. This period was a steep learning curve for the team as we trained the DAs, liaised with the data providing partners, refined the workflow and focused on publishing our first dataset. We were also working under strict covid restrictions on campus limiting in-person events and meetings. Rather than switch to a virtual first session, we decided to postpone in order that it could happen in person. The campus has been gradually opening up and will be fully open from July. We are liaising with Leo to plan for a September workshop. The Second workshop would then take place in January 2023, and the final one in May 2023. We feel that these workshops will be much improved for being held at a point where we as a team have had more experience with the publishing process, and at a point where we can offer hands-on demonstrations and in-person discussions, therefore we do not anticipate this delay in having any negative impact on the project.

### Completed activities

## Report on Deliverables

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### Deliverables progress summary

#### DATASETS

NMAGTT: 100% digitised, both datasets ready for publishing next week after final checks.

NHTT: 70% digitised & quality checked. Through working with Herbarium staff and the physical collection, we now have a better understanding of the existing digitised data, what it represents, and what can feasibly and usefully be published within this project. We wish to publish the entire collection as one dataset, which should be possible by October 2022 (a new total of around 15,000 records).

UWIZM: We have published 1 dataset (doi: 10.15468/3whypm) and have 1 more ready for publishing. We are averaging 150-200 occurrences per week and will continue to mobilise as much as we can,

prioritising groups of special agricultural, public health or ecological interest. Given the weekly rate, 25% of the total collection (10,000 occurrences) seems a potentially feasible overall target, but we can increase this if we get additional assistance from interns on a government scheme as is hoped.

#### TRAINING

This deliverable is delayed as the covid restrictions meant organising an in person event would not be possible earlier. We also wished to have published some datasets ourselves prior to offering the training. Therefore, instead of switching to virtual training, we opted to delay the first workshop so that it could be in person and this is now being planned for September 2022. We have kept partners informed of the project's progress via emails to all partners and meetings with data-providing partners, as well as via social media updates.

#### INTEGRATION WITH TTBIS

At the start of the project we considered the most effective way to integrate the GBIF datasets with TTBIS, given their platform, audience and objectives. We decided that it makes most sense to wait until we have all of the Herbarium data and more of zoological datasets published before we organise and format them in a way that is suitable for this GIS-based and protected-area focused platform, and will begin doing this towards the end of 2022. Feedback from the 1st training workshop may also inform the exact nature of the integration.

#### NEW DELIVERABLES

We would like to publish at least one datapaper during the project, and are currently exploring the freshwater decapod collection as a good candidate for this. The collector, Dr Wayne Rostant, is keen to be involved and we are in the process of finishing the digitisation and discussing the form of the paper. We hope to submit the paper by February 2023.

#### Progress towards deliverables

##### Dataset deliverables

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#### **Terrestrial Mollusc Survey of Trinidad & Tobago from 2014-2017**

**Dataset type:** Occurrences

**Dataset scope:** Terrestrial Mollusc Survey of Trinidad & Tobago from 2014-2017

**Number of records:** 743

**Data holder:** UWIZM

**Data host institution:** UWIZM

**% complete:** 100%

**Status update:** Published 20/1/21

**DOI:** 10.15468/3whypm

**Expected date of publication:**

#### **UWIZM Weevils**

**Dataset type:** Occurrences

**Dataset scope:** This dataset contains the records from the weevils in the UWIZM collections representing the following families: Anthribidae, Attelabidae, Brachyceridae, Curculionidae, Dryophthoridae, Eurhynchidae, Lycaenidae and Lycidae. Collected March 17, 1903 – November, 1988. Specimens are from across the Caribbean, and on the continents of North America, South America, Africa, Europe, Australia and Asia

**Number of records:** 933

**Data holder:** UWIZM

**Data host institution:** UWIZM

**% complete:** 100%

**Status update:** Final checks done, metadata complete. Ready to send to Leo for final check.

**DOI:**

**Expected date of publication:** 2022-06-06

#### **CAREC Mosquitoes**

**Dataset type:** Occurrences

**Dataset scope:** This dataset contains records from the CAREC (now CARPHA - Caribbean Public Health Agency) mosquito collections. November, 1945 – November 20, 1983. Records are from Trinidad and Tobago, Brazil, Curacao and Panama.

**Number of records:** 1,800

**Data holder:** UWIZM

**Data host institution:** UWIZM

**% complete:** 70%

**Status update:** Exact number left to do is unknown, but approx 70% imaged & digitised. Metadata drafted. Digitisation ongoing.

**DOI:**

**Expected date of publication:** 2022-07-04

### **UWIZM Flies (Diptera)**

**Dataset type:** Occurrences

**Dataset scope:** This dataset contains the records from the flies in the UWIZM collections representing the following families: Anthomyiidae, Tabanidae and Tachinidae. July, 1920 – August 2nd, 1999

Specimens are from across the Caribbean, and on the continents of South America, Europe and Asia.

**Number of records:** 2,000

**Data holder:** UWIZM

**Data host institution:** UWIZM

**% complete:** 30%

**Status update:** 635 digitised and imaged.

**DOI:**

**Expected date of publication:** 2022-08-29

### **National Herbarium of Trinidad and Tobago Collection**

**Dataset type:** Occurrences

**Dataset scope:** All Herbarium records with existing accession ('TRIN') numbers. Specimens date back to 1842 and include representatives of all major plant groups from T&T and the region.

**Number of records:** 20,000

**Data holder:** National Herbarium of Trinidad and Tobago

**Data host institution:** National Herbarium of Trinidad and Tobago

**% complete:** 70%

**Status update:** 43/61 families are completed (darwin core format and quality checked). This amounts to 11200 occurrences ready for publishing. We have not yet decided whether to publish family by family or as one large dataset.

**DOI:**

**Expected date of publication:** 2022-10-28

### **National Museum of T&T: Natural History Collection**

**Dataset type:** Occurrences

**Dataset scope:** A diverse collection of natural history specimens acquired by the National Museum of Trinidad and Tobago.

**Number of records:** 589

**Data holder:** National Museum of Trinidad & Tobago

**Data host institution:** UWIZM

**% complete:** 100%

**Status update:** This collection was already catalogued and imaged. It has now been formatted for Darwin Core & quality checked.

**DOI:**

**Expected date of publication:** 2022-06-06

### **National Museum of T&T: Bird Egg Collection**

**Dataset type:** Occurrences

**Dataset scope:** A collection of bird's eggs from Trinidad and Tobago and the region.

**Number of records:** 224

**Data holder:** National Museum of Trinidad and Tobago

**Data host institution:** UWIZM

**% complete:** 100%

**Status update:** Ready for final quality checks by Leo.

**DOI:**

**Expected date of publication:** 2022-06-06

### **UWIZM Land Arthropod Collection**

**Dataset type:** Occurrences

**Dataset scope:** Multiple arthropod taxa from Trinidad, Tobago and the region. Includes collections inherited from CARPHA, CAREC and CABI.

**Number of records:** 45,000

**Data holder:** UWIZM

**Data host institution:** UWIZM

**% complete:** 7%

**Status update:** It is very unlikely we will complete all taxa within the project's timeframe but will continue to mobilise as much as we can within the timeframe, prioritising groups of special agricultural, public health or ecological interest. 25% (10,000 occurrences) seems a potentially feasible target, especially if we get some additional assistance in the form of interns over the remainder of the project.

**DOI:**

**Expected date of publication:** 2023-04-24

### **Freshwater Decapod Survey of Trinidad and Tobago**

**Dataset type:** Occurrences

**Dataset scope:** Specimens from a survey of freshwater decapods from across Trinidad and Tobago

collected by Dr Wayne Rostant in the early 2000s.

**Number of records:** 1,200

**Data holder:** UWIZM

**Data host institution:** UWIZM

**% complete:** 50%

**Status update:** 653 occurrences are catalogued, imaged and digitised.

**DOI:**

**Expected date of publication:** 2022-10-28

## Other deliverables

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### The Diversity and Distribution of Freshwater Decapods of Trinidad and Tobago

**Description:** Data paper

**% complete:** 0%

**Status update:** The dataset is 50% digitised, and discussions about the form of the paper have been initiated. We are aiming to submit the paper in February 2023,

**Sources of verification:** N/A

## Communications and visibility

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In October we ran a UWI press release on the project which was picked up by local media. In Oct 2022 we consulted with internal media specialist, Tsania James, to design an effective social media plan. The UWIZM already had a well-established Facebook (FB) page and we created Instagram (IG) and Twitter accounts. As of May 2022, our follower numbers are 3,767 on FB, 261 on IG and 174 on Twitter. We typically post at least twice per week on each platform. Most posts feature a species from one of the collections being digitised as part of the project and highlight facts about it, thus raising awareness about local biodiversity as well as of the collections and the project. Regular features include the interactive 'What is it Wednesday' and 'Meet me Monday'. We also use social media to celebrate project milestones, such as the publication of a dataset, recruitment of new team member or cataloguing of a drawer of insects. WUsing the data analytics on each platform, we can see that we are averaging a monthly reach of 7,000 on FB(increased more than tenfold from pre-campaign), 500 on IG and 11,000 on twitter.

With permission, we narrated over the GBIF introductory animated video in English (Trini accent), producing a video that was tailored for our local audience. For International Museum Day we ran our own social media posts but also contributed to a UWI-wide blog series, highlighting how the project is increasing the power of museums in our university.

See Report Attachments.

## Monitoring and evaluation

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### Monitoring and evaluation findings

We cannot yet comment on the workshops and training as these have been postponed.

The digitisation is going well. We are on track to publish the NMAG collection next month & the Herbarium collection by the end of 2022. The UWIZM arthropod collection continues to be digitised, taxon by taxon. This collection is extensive and mostly uncatalogued so this has proved the most time-consuming activity. Imaging of tiny mosquitoes and flies is painstaking and takes time, meaning we are digitising around 150-200 specimens per week (fewer than our initial expectations). Based on this rate, we can now set a target of mobilising around 25% of this collection by the end of the project. We are attempting to recruit some interns through a government scheme to boost our efforts in this activity for the remainder of the project, in which case this target may increase.

We have had good relations with the data-providing partners, and communicate regularly with Dr Morales the new curator of the NHTT and Ms Lorraine Johnson curator of the NMAGTT. Both have been pleased with mobilisation progress and the efforts to raise awareness of the collections on social media. One DA resigned in April but we were able to recruit a replacement promptly, minimising the gap.

Our social media campaign has been a success in strengthening connections between many of the stakeholders who will ultimately also be involved in the training workshops. We have extended the UWIZM 'reach' on Facebook by 10x when compared with pre-project stats (period of May-Sept 2021 vs Dec 2021- May 2022).

Leo has been a great help, especially in giving us constructive feedback on our datasets before publication.

## Impact of COVID-19 pandemic on project implementation

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Overall, the impact of the covid pandemic on the project implementation has been minimal.

We were lucky that by the time the funds were received and our DAs were recruited, we were able to get permission for them to work on campus rather than remotely, which was important given the nature of the work needing access to the physical specimens. However, campus is still closed to the public and it is only from July 2022 that the campus will be considered fully open. As such we made the decision to delay our first workshop so that it can take place in person. Instead of January 2022, it will now take place in September 2022. One of the DAs contracted covid19 and was not on campus for 2 weeks while she recovered. During this period she could not catalogue but worked on data quality checks, preparing metadata and social media posts when feeling well enough.

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**GBIF leads the Biodiversity Information for Development (BID), a programme funded by the European Union. The programme provides supplementary support for activities addressing the needs of regional researchers and policymakers through mobilization and use of biodiversity data.**

