Digitization, georeferencing, and mobilization of Philippine Chiroptera and associated, ectoparasites and pathogens from the University of the Philippines Los Baños Museum of Natural History

---

Programme: BIFA
Project ID: BIFA6_026
Project lead organization: UNIVERSITY OF THE PHILIPPINES LOS BAÑOS MUSEUM OF NATURAL HISTORY
Project implementation period: 1/1/2022 - 28/2/2023
Report approved: 26/10/2022

Narrative Midterm report

Executive Summary

To date, the BIFA6_026 project has accomplished two of the mandatory milestones for the midterm. A dataset has been published last July 31, 2022 and is now available for viewing through GBIF.org. In addition, Jezryl Jaeger L. Garcia, our project assistant, has completed the Biodiversity Data Mobilization Course and was able to gain an advanced certification last August 18, 2022.

A leveling-off and planning workshop was conducted with the museum researchers, administrators and curators to introduce BIFA6_026 and orient involved staff about their responsibilities during the project. An additional kick-off meeting will be conducted to level-off with our partners and funders and to receive feedback regarding their thoughts about the project.

The progress of the project is regularly monitored and reported in the museum's monthly meeting which were conducted since May. Updates are presented briefly to the project leader and all involved staff of the museum.

Due to delays in the previous BIFA-funded project, administrative process such as purchasing of equipment and formal appointment of staff for this project has been rather delayed. We have decided to push through the digitization even without the funding. Now that funds have been downloaded, we will try to improve on the effciency of our digitization process to finish everything before the project end date.

Progress against milestones

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

Dataset published:

Dataset	DOI
UPLB Museum of Natural History Zoology and Wildlife Museum Chiroptera Collection	https://doi.org/10.15468/yd3up5

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

Name of the workshop participant: Jezryl Jaeger L. Garcia

Certification obtained: Advanced Badge

Activity progress summary

The proposed timeline for BIFA6_026 has been significantly affected due to our funding support being on hold until the previous BIFA-funded project handled by the museum (BIFA5_021) complies with the submission of the final narrative and financial report. Without our funding support, the project has no capability to provide salaries and honoraria to our staff and assistants as well as procurement of necessary equipment needed for digitization.

However, since the midterm reporting is fast approaching, we have decided to push through with the hiring of project staff and assistants despite not having the funds yet. The leveling-off and planning workshop was conducted last May, 13, 2022 immediately after hiring of project members. The meeting was held via Zoom web conferencing and was attended by ten UPLB Museum of Natural History staff. During the meeting, the attendees were oriented about the project overview, deliverables and timeline, payment schedule and terms, project members and their roles, budget, and activities. Last June 10, 2022, all project appointments for the project leader, staff, and assistants were already submitted to UPLB Foundation Inc. (UPLBFI) and was approved last June 24, 2022. UPLBFI acknowledged the receipt of the fund transfer from BIFA last August 4, 2022, and immediately started managing the financial aspect of the project.

In addition, a kick-off meeting will be scheduled to level-off with our partners. The participants for this meeting will comprise of BIFA6_026 project staff, GBIF/BIFA representative/s, UPLB MNH Director, and identified partners from ASEAN Center for Biodiversity, participating collaborators from Japanese Universities (Dr. T. Omatsu of Tokyo University of Agriculture and Technology, and Dr. S. Watanabe-Okayama University of Science). There will be a 10–15-minute presentations which will comprise of (but not limited to): Introduction on GBIF/BIFA initiative (by representative); Status update of BIFA6_026 implementation (Project Leader); Database of Philippine-Japan bat virus/pathogens research (Drs. Omatsu and Watanabe). Discussions will be done regarding the future direction of the BIFA6_026 implementation.

Digitization of the Zoological and Wildlife Museum new series Chiroptera collection started immediately after the leveling-off and planning workshop. The dataset has undergone data capture and data management and was published last July 31, 2022. We would like to thank Lily Shrestha for dedicating time to help us with data cleaning.

For the DS Rabor Chiroptera Collection, 83% of the target specimens were already encoded in the Darwin Core Format. After data capture, the dataset will undergo data cleaning and is expected to be published on September 30, 2022. We have started compiling relevant collection data for bat ectoparasites and bat-borne pathogens (Datasets #2 and 4, respectively). Digitization for bat ectoparasites has commenced in early September.

Completed activities

Activity name: Levelling-off and planning workshop

Description: This activity shall orient all stakeholders on the implementation and timeline of the project.
Start Date - End Date: 13/5/2022 - 13/5/2022
Verification Sources: Photodocumentation and minutes of the meeting

Activity name: Hiring of Research Associate and project assistant

Description: Once we are informed of the approval of the proposal. We shall start searching for a researcher to be hired. This staff will focus on the implementation of the project. We will also hire an assistant that will take care of other administrative processes and also assist in digitization activities.
Start Date - End Date: 3/1/2022 - 13/5/2022
Verification Sources: 1. Minutes of the meeting during levelling-off meeting
2. Signed appointments of project staff

Activity name: Digitizing MNH Chiropteran Collection (Zoology and Wildlie Museum

Description: We will transcribe and standardize existing catalogs of bats. We will image representative specimens of a bat species from a specific locality. This is only for the new series Zoological and Wildlife Museum Chiroptera Collection dataset.
Start Date - End Date: 13/5/2022 - 22/7/2022

Activity name: Dataset processing and publication

Description: This activity will cover datasets cleaning and processing and publication in GBIF. The new series Zoological and Wildlife Museum Chiroptera Collection dataset has been published to GBIF.
Start Date - End Date: 31/7/2022 - 31/7/2022
Verification Sources: https://doi.org/10.15468/yd3up5

Activity name: georeferencing occurrence records

Description: All geographic information in the datasets will be georeferenced through the help of GIS experts. Only completed for the new series Zoological and Wildlife Museum Chiroptera Collection dataset
Start Date - End Date: 7/7/2022 - 22/7/2022
Verification Sources: BIFA6_026_MNH_Z_NS_Chiroptera

Activity name: Dataset processing

Description: This activity will cover datasets cleaning and processing of the DS Rabor Chiroptera Collection
Start Date - End Date: 13/5/2022 - 30/9/2022
Verification Sources: BIFA6_026_DS Rabor Chiroptera Collection (83% complete)

Report on Deliverables

Deliverables progress summary

The first deliverable completed under the project is the Zoology and Wildlife museum new series Chiroptera collection with a total of 1118 occurrences published through GBIF Asia IPT by Mr. Jezryl Jaeger Garcia. Specimen preparation was facilitated by Mr. Edison A. Cosico, one of the project staff and collections manager of UPLB MNH wildlife collection. Ms. Lily Shrestha. provided assistance and advice on data cleaning and IPT creation. Photographs of the preserved specimens are yet to be included as we are not able to take photographs of selected specimens for each locality due to the delayed on-set of the project. Mr. Florante Cruz will be assisting in specimen imaging of these bats.

The dataset encoding of the DS Rabor Chiropteran Collection is currently ongoing with 83% of the specimens encoded under the Darwin Core specification. A total of 2,899 pteropodid skins are under this collection with only 1500 being selected for the occurrence dataset. One-Thousand two hundred fifty (1250) entries have already been encoded while the rest of the entries will be done well before the expected date of publication. We set our own target for this dataset on September 30, 2022. Photographs of the specimens are yet to be included as the chiropteran skins are to be cleaned and selected with care with consideration on Museum protocols on handling skin specimens. Encoding of this data set is being handled by Mr. Jan Lumibao with assistance from Mr. Florante Cruz (assigned tasks of data encoding and specimen imaging).

Collation of data for UPLB MNH bat ectoparasite collection and bat viruses/pathogens is now underway. For the ectoparasite collection, we will be mostly drawing from the Luisito S. Cuy bat ectoparasite collection as well as from the late James Alvarez collection, both of which are deposited at UPLB MNH. As for the bat viruses/pathogens data, we are now in contact with collaborators/partners from Japan on the status of their database of our on-going bat virus research. This will be a major topic to be discussed during the planned kick-off meeting with identified partners. The target publication for ectoparasite and virus/pathogen datasets is on September 30 and October 31, respectively.

Progress towards deliverables

Title: UPLB Museum of Natural History Zoology and Wildlife Museum Chiroptera Collection

Type: Dataset
Status update: The occurrence dataset is already published in GBIF.org website.
Dataset scope: New series Chiroptera (Bats) collection of the UPLB Museum of Natural History Zoological and Wildlife Museum for the past 30 years.
Expected number of records: 1118
Data holder: UPLB Museum of Natural History
Data host institution: GBIF Asia
Sampling method: Specimens preserved in alcohol are tagged with museum accession numbers prior to digitization. These accession numbers will be the unique occurrence identifiers used in

publishing the dataset to GBIF
% complete: 100
DOI: https://doi.org/10.15468/yd3up5
Expected date of publication:

Title: UPLB Museum of Natural History D.S. Rabor Chiroptera Collection

Type: Dataset
Status update: Processing of the Dataset is currently ongoing with a total of 1,250 specimens encoded under the Darwin Core specification. 250 specimens are yet to be encoded whilst the skin specimens to be photographed will undergo cleaning and verification.
Dataset scope: Dataset will include historical data of Philippine Chiroptera from the 1940's up to the 1980's.
Expected number of records: 1500
Data holder: UPLB Museum of Natural History
Data host institution: ASEAN Centre for Biodiversity
Sampling method: Chiropteran skin specimens will be imaged together with their respective tags. The tags are to be digitized and a QR identifier for the specimens will be attached after digitization
% complete: 83
DOI:
Expected date of publication: 2022-09-30

Title: UPLB Museum of Natural History Bat Ectoparasites Collection

Type: Dataset
Status update: The specimens are being prepared for digitization.
Dataset scope: Bat ectoparasites deposited in the Entomological Museum of the UPLB Museum of Natural History
Expected number of records: 700
Data holder: UPLB Museum of Natural History
Data host institution: ASEAN Centre for Biodiversity
Sampling method:
% complete: 0
DOI:
Expected date of publication: 2022-09-30

Title: Phillippine Bat Viruses and Pathogens

Type: Dataset
Status update: We still need to coordinate with our Japanese partners about the bat viruses and pathogens dataset
Dataset scope: Philippine bat viruses and pathogens detected in voucher specimens deposited in the UPL Museum of Natural History Zoological and Wildlife Museum
Expected number of records: 100
Data holder: Tokyo University of Agriculture and Technology and Okayama University of Science
Data host institution: ASEAN Centre for Biodiversity
Sampling method:
% complete: 0
DOI:
Expected date of publication: 2022-10-31

Events

Leveling-off and Planning Workshop

Dates: 2022-05-13 - 2022-05-13
Organizing institution: UPLB Museum of Natural History
Country: Philippines
Number of participants: 10
Comments:
Website or sources of verification: photodocumentation and minutes of the meeting

Communications and visibility

For the communication of the project results, we have already submitted abstracts last September 1, 2022 to Biodiversity Conservation Society of the Philippines (BCSP) for the presentation of our datasets as well as related research involving our digitized data set on Chiroptera. in the national

conference. If accepted, we will be presenting our outputs from the project to the 30th Philippine Biodiversity Symposium in Butuan City this December 2022. We are also preparing a brief article showcasing our accomplishments for the midterm which will be shared on the museum's social media platforms. In addition, we will be presenting the status of our GBIF BIFA project in the upcoming museum's 46th anniversary (on September 30, 2022). This event is highly anticipated and will be attended by museum staff, curators, University students, and faculty. One of the planned activities after the completion of digitization will be a presentation of a short seminar regarding our project as part of the museum's Biodiversity seminar series. Relevant links and attachments will also be added to our project page to reflect our accomplishments.

Monitoring and evaluation

Monitoring and evaluation findings

Since May 2022, regular meetings were conducted every month to assess the progress of on-going activities, and monitor finished activities. We also submitted a progress report to BIFA last June 14, 2022 to update funders about the progress we made since May and to assess if we could still hit our deadlines before the midterm. Unfortunately, in contrary to our assessment last June, we were not able to finish the Biodiversity Data Mobilization Course and get at least one badge before July 31, 2022. As mentioned in the deliverables section, we have already published the New Series Chiroptera Collection of the Zoological and Wildlife Museum since publication of a dataset is one of the mandatory milestones set for the midterm. While the dataset was published on time, we have received some issues or flags in recorded date (274 records) and taxon match (16 records). We are expecting to address these issues before the end of the project. We are yet to hear feedback from our partners and other stakeholders though the kick-off meeting which schedule is yet to be determined after assessing the availability of target partners and stakeholders. We have received enough support from GBIF through Lily Shrestha and we are very thankful for the assistance provided by the organization.

Impact of COVID-19 pandemic on project implementation

COVID-19 has had a significant impact in our project implementation, and foremost of this was that several members of the project team got infected and were debilitated from conducting project activities (as well as in other duties). Mssrs. Phillip Alviola and Jezryl Jaeger Garcia who were actively involved as main point persons in project implementation, were afflicted with COVID-19. This has caused significant delays in museum specimen and database preparation, digitization activities, as well communication with partners and BIFA Coordination Team.

We previously plan to conduct the data mobilization workshop with environmental consultancy firms as our target audience. In view of the difficulties in arranging the logistics for this target audience group due to health and travel restrictions, we are thinking of delivering this workshop to a different set of audience. For this, we have identified staff from various museums and nearby universities with natural history collections. Some of the people from these institutions have already expressed their interest in participating in the workshop.