GBIF | Global Biodiversity Information Facility

MID-TERM ACTIVITY REPORT

BIFA3_17 - Flora of Sumatra: Digitizing and data basing specimen of Sumatran Floras deposited in Herbarium Universitas Andalas (ANDA)

Guidelines on how to complete the activity report are included in italics.

Contents

Executive summary

Provide a brief explanation of the context and the approach taken for the mid-term evaluation, and a summary of the main conclusions, lessons learned and recommendations for the remaining project period.

Activities that we have done until this report period, such as workshop, acquiring IT equipment and data capture. We conducted a workshop on data management in August 2018. The workshop was aimed to train data entry team as well as to promote the project in our institution.

The data capture for the specimens have been done and will be kept continuing according to the schedule. Up until the writing of this report, we have been entry the data and taking photo for more than 6,000 sheet specimens. Meanwhile, we also working on to verify the

specimen identification. This activity will ensure the accuracy of the specimen ID. Experts from each taxon will help us to verify it.

Another activity that have been done is re-mounting and labelling the damaged collections. This activity will be kept going during the process of data entry.

Contact information

Please provide the name, institutional affiliation, role in the project and contact details of the author(s) of the report.

Contact person: Nurainas

Institutional affiliation: Herbarium of Andalas University (ANDA), Department Biology, Mathematics and Natural Science, Andalas University, Padang, West Sumatra, Indonesia

Role in project: lead of project

Introduction

This section should explain to readers what they will find in this report. It should include:

- *A description of how the evaluation has been carried out (e.g. consultation or surveys with project partners and participants). Please refer to the description of monitoring and evaluation plans in the original project proposal.*
- *A description of how the project partners will use the evaluation results.*

In this project, we brought together our partners from both inside and outside the universities where the herbarium is ministered. We conducted a workshop to train our prospectus volunteers. To improve the awareness of the project and to gain more support from the department, we also invited lecturers and students (undergraduate and post-graduate students) at the Department of Biology, Andalas University. From this workshop, we selected nine students to volunteer for data entry. The data verification will be conducted in partnership with respected plant taxonomists from each taxon, including taxonomists from Herbarium Bogoriense (BO, Indonesia), Herbarium Edinburgh (E, Scotland), Kagoshima University (Japan), and some other respected plant taxonomists working on the targeted taxa. For data publication, we will get helps from Indonesian Biodiversity Information Facility (InaBIF) as a GBIF main partner in Indonesia.

We reviewed and evaluated the project based on the facility and volunteer availability to conduct the project and the number of collections that have been processed. The evaluation is conducted within the project community. We also worked together with our partner to inform them about the progress. For the first target, we have acquired suitable facilities and have recruited volunteers for the digitalization. At the time of writing this report, we have digitized

over 6,000 collections, which is more than 50% of our targeted collections for this project. Some of the collection information and identifications have been verified by our taxonomist partners.

The project and its objectives

A brief summary of the project to help readers understand its objectives, including, for example:

- *The project's start date and expected duration*
- *A list of project participants and description of the main stakeholders*
- *The targeted capacity needs as outlined in the project proposal*

The project started in April 2018 and will end in March 2019. The aims of the project are to digitize the collections hosted at Herbarium ANDA; to prepare and establish well-managed and integrated specimen database following GBIF standard; to manage collections, locality information and specimen images; and to produce the checklist of the Flora of Sumatra. The participants and the main stakeholders involved in the projects consisted of students and lecturers at the Department of Biology at Andalas University, some world's well-known herbariums including their staffs, and our domestic partner, the Indonesian Biodiversity Information Facility, as well as respected plant taxonomists working on the targeted taxa. Students and lecturers at the department of biology are our main partner to provide supports for the project from within the university. Our herbarium partners participate for data verification and specimen identification. InaBIF provides us with their expertise and support for data publication. Within the project committee we have two senior technicians, six volunteers, four project assistants, and three project coordinators. Our main targeted capacity is to gain knowledge and expertise for the digitalization of the collections and to improve our skills in herbarium management. We also aimed to produce a book on the checklist of the flora of Sumatra.

Activities

Please indicate the status of the activities as outlined in the project proposal. The table below should be completed in the same way as in the full proposal but should include information about the status of the activity.

Description of activity	Partners involved	Contribution of activity to goals listed in table 4.3	Status of activity as of mid-term reporting
Digitizing and publishing georeferenced species occurrence data based on specimens held in Asian collections			

Volunteer recruitment and training for specimen management	-	Providing resources and knowledge to manage the collections, locality information, and specimen images at Herbarium ANDA	Completed.
Volunteer training for data digitization	-	Providing workshop/training to digitize the specimens hosted at Herbarium ANDA	Completed.
Define strategy for data basing prioritization.	ANDA, RBGE	Quality data for checklist preparation	Completed
Acquiring digitalization facilities for the project	-	To digitize the specimens hosted at Herbarium ANDA	Completed
Data Entry (collection, image and locality information data)		To manage the taxonomic, geographic and collector data linked with specimen images	Ongoing. At the writing of this report, we have cataloged and photographed over 6,000 collections.
Specimen IDs validation	BO, RGBE, KAG	To guarantee the accuracy of the identification data	Completed for some targeted plant families. Those who involved in the data verification and specimen identifications included Dr. Nanda

			Utami (BO) for famili Balsaminaceae, Dr. Mark Hughes (E) for Begoniaceae, Prof. Dr. Suzuki Sensei (Kagoshima University Japan) for the family Dipteocarpaceae, and Dr. Shinji Fujii (University of Human Environment, Japan) for the family Fagacea.
Compiling inventories of biodiversity data holdings (for example, by implementing metadata catalogues)			
Compiling and arranging collection metadata, locality information, and specimen images	ANDA	To help in integrating collections, locality information, and specimen images with GBIF database	Ongoing.
Integrating the metadata following on GBIF system	InaBIF	To help in integrating collections, locality information, and specimen images with GBIF database	In preparation. It will be conducted in October 2018.
Uploading database	InaBIF	To help in integrating collections, locality information, and	Have not been started. It will be conducted after we finish data recording.

		specimen images with GBIF database	
Preparing data papers			
Drafting the checklist of the flora of Sumatra	BO, RGBE, KAG	Verifying the identification data to produce the checklist of the flora of Sumatra and to promote the database of Sumatran plant diversity	In progress.
Attending an international seminar to promote online sumatran biodiversity database		Promoting the database of Sumatran plant diversity	It will be conducted after the project has been completed.
Other activity types			
Re-mounting and re-labeling the damaged collections	-	Digitizing the specimen data deposited at ANDA	Ongoing. We have completed this activity for some collections and we will keep conducting the activity during digitalization of the collections.

Deliverables

This section should summarize the project activities completed by the mid-term, with a description of the associated outputs and deliverables. Please highlight any changes from the original plans provided in the full project proposal.

If no result has been achieved on a specific point, please indicate it as "no result achieved yet".

   a. Data

Details of datasets expected to be mobilized as an outcome of the project:

Title of dataset	Taxonomic/geographic scope	Approximate number of records (specimens)	Current format (e.g. undigitized, digitized)
Collection data	Angiosperms/Sumatra	6,000 sheets of specimens	Digitized
Specimen images	Angiosperms/Sumatra	6,000 sheets of specimens	digitized
Locality information	Angiosperms/Sumatra	6,000 sheets of specimens	digitized

b. Other deliverables

Describe other deliverables expected from the project (e.g. publication of data papers, catalogues, reports etc.)

The other deliverable from the project will be a scientific paper that will be presented at the International Flora Malesia Symposium 11 in Brunei and will be prepared for publication. We will also produce a book on "The checklist of Sumatran Flora Diversity for Selected Families". The draft of the book will be prepared as an output of this project.

Calendar of activities

The calendar should be completed in the same way as in the Full Project Proposal (4.6) but should include any expected changes. Please provide reasons for any expected changes in the Notes column in the table below.

Proposed dates	Activity	Lead partner	Notes
April 2018	Team preparation and coordination with InaBIF	InaBIF	It is aimed to coordinate with InaBIF on data publishing. We planned to do it in October 2018.
April 2018	Staff recruitment for data entry	ANDA	Completed.
May 2018	Training/Workshop	ANDA (Ahmad Taufiq)	Completed.
June 2018	Attendance of project team member at BIFA Capacity Enhancement Workshop	BIFA Team	Completed. We sent our staff A. Taufiq to attend the workshop.

			Has been completed. This project is aimed to control IT preparation and to implement data entry. The monitoring for data entry has been completed in August 2018.
July 2018	Monitoring and Evaluation I	ANDA	Has been completed. This project is aimed to control IT preparation and to implement data entry. The monitoring for data entry has been completed in August 2018.
July-Nov 2018	Data entry	ANDA	Has started and will be conducted according to the project plan.
September 2018	Data analyses (verification of scientific ID)	BO, RBGE	Ongoing.
September 2018	Mid-term Report	-	

Project communications

Describe the plans to communicate and share the results of your project with the project stakeholders and broader GBIF community. Please also review the page describing your project available from [*https://www.gbif.org/project/79xWnS4oHm4y2AMIY0qo4q/digitizing-and-databasing-sumatran-flora*](https://www.gbif.org/project/79xWnS4oHm4y2AMIY0qo4q/digitizing-and-databasing-sumatran-flora)*. Highlight any additional documents, events, news items or links that you would like to add to your page.*

We are planning to communicate and to share the result at the International Flora Malesiana Symposium 11 next year in Brunei (more info available at http://fos.ubd.edu.bn/foscc/).

Mid-term evaluation findings and recommendations for the remaining project implementation period

This should be the main section of the report, covering for example:

- *An evaluation of the project activities by the mid-term and their outputs/deliverables*
- *Any feedback on the project's relevance from the partners and stakeholders*
- *Comments on the project implementation, its efficiency and effectiveness*
- *The management arrangements for the project, including support from the GBIF Secretariat*
- *Any reflection on the mid-term evaluation itself that could help inform the project's final evaluation and final report*
- *Areas of success to build on during the remainder of the project implementation*

This section is also an opportunity to draw out the main lessons from the project experience that could be applied in other contexts, including any best practice that others in the GBIF community could apply.

Try to clearly document any changes to the project plans that will be made based on the findings of the mid-term evaluation. Please discuss any substantial changes with the GBIF Secretariat (bifa@gbif.org). In addition, please outline any recommendations for the GBIF Secretariat or the community to reinforce the initial successes of the project.

The start of the project was delayed from the planned schedule. Most of the activities could not be conducted according the planned schedule. However, we ensured the most possible effort to complete the project according the target. It's revealed by a very positive response from our project partners. As in specimen ID verification, we involved not only the expert that we wrote in the proposal but we also added some other expected experts to help us to emphasizing the specimen ID. We also have reformulated some of roles in our project managerial as an effort of adjustment for our project accomplishment. The same thing also we did for the equipment, as we have chosen EPSON scanner DS-50000 for capturing specimen pictures.

Within the project committee we have two senior technicians, six volunteers, four project assistants, and three project coordinators. Our main targeted capacity is to gain knowledge and expertise for the digitalization of the collections and to improve our skills in herbarium management. InaBIF provides us with their expertise and support for data publication.

Annex – Sources of verification

Sources of verification are for example links to relevant digital documents, news/newsletters, brochures, copies of agreements with data holding institutions, workshop related documents, pictures, etc.

Pictures of Project activity
- On site Workshop in Beijing:
  https://drive.google.com/drive/folders/1i6CdF2Vcga2ZasU6jBlK4edOeDv5AOGv
- Workshop management data in Herbarium of Andalas University (ANDA):
  https://drive.google.com/open?id=1xdc4AhLE3Z0nBbXmQimr1vZ870kvY77F
- Data Capture of specimen in ANDA:
  https://drive.google.com/open?id=1slTLJd389mbDBU0nXyY31Z9GMzTEpvug