

MID-TERM NARRATIVE REPORT

Guidelines on how to complete this report are included in italics.

Use the information included in your BIFA Full Proposal (reproduced in Annex 1 of your BIFA contract) as a baseline from which to complete this report.

Remember that this report will be made available on your project page on the GBIF website and therefore should not include any contact information, unless you have permission from all mentioned in the report that their contact information can be published.

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Project information

Main contact person and role:	Djunijanti Peggie, project manager
Institution/network/agency affiliation:	Entomology Lab, Zoology Division (Museum Zoologi Bogor), Research Center for Biology, Indonesian Institute of Sciences
BIFA Project ID:	BIFA4_037
Project title:	Data mobilization of Indonesian butterfly collections at Museum Zoologi Bogor, Indonesia
Start date and end date of the reporting period:	15 May 2019 to 30 April 2020
Country in which the activities take place:	Indonesia

Executive summary

Provide a brief explanation of the project and its implementation, the context and the approach taken for the mid-term evaluation, and a summary of progress of your project's original objectives. Also include any additional objectives that have been defined since the implementation of the project and explain why they've been added to the project's initial objectives. In the event of unexpected challenges which have prevented you to reach a planned project objective, please provide explanations and indicate how you plan to reach these objectives within the project implementation period and if you would like to receive the help of a specific project mentor. (Max. 350 words.)

This project covers data mobilization of Indonesian Papilionidae butterfly collection at Museum Zoologi Bogor (MZB), Indonesia. Before the project started, it was difficult to quantify the number of butterfly specimens at MZB because most of them (estimated at 95%) did not have the registered individual number. Under the IndoBioSys project, with Dr. Christoph Häuser, we explored QR code application as unique identifiers to complement specimen digitization. For this project, digitization including the application of QR codes for Papilionidae specimens at MZB have been undertaken by hired assistants and permanent staff. We have worked with Mfn (Berlin), Naturalis (Leiden), and InaBIF towards fully georeferencing butterfly collection data of MZB, Indonesia. We have learned together and have implemented a great workflow that ensure safety for the specimens and maintain high productivity. The BIFA workshop in July 2019 has had a great impact on implementation of this project. To date, over 5,200 specimens of Papilionidae have been sorted, identified, validated, given QR code and MZB-Lepi number, registered, georeferenced, and photographed (a male and a female from each locality for each species). Five datasets (of genera *Atrophaneura*, *Chilasa*, *Cressida*, *Meandrusa*, and *Trogonoptera*) have been published this October 2019 to GBIF for wider use and greater advancement of knowledge. Specimens of *Graphium*, *Lamproptera*, *Losaria*, and *Pachliopta* have been registered and digitized, and are in the process of data checking, georeferencing, and photo cleaning prior

to publication to GBIF. Specimens of *Ornithoptera*, *Papilio*, and *Troides* still need to be validated and will further be registered, digitized, and published.

At the beginning, we could not start the project on-time because of administrative matters. After we resolved the matter of opening bank account, we still needed to wait for the computers and cameras to be ordered through our purchasing unit. We started to hire persons to implement the project in July 2019 and we have kept great working pace to keep up with our objectives and can achieve the goals for this mid-term report. An IT staff from InaBIF has joined our team and has supported us with the IPT and publication of the datasets.

Progress against expected milestones

Please indicate the status of the expected milestones as outlined in Annex 3 of the contract, at the time of mid-term reporting. Please provide links in the sources of verification.

In the event of unexpected delay(s), please provide detailed explanatory notes.

Expected milestones	Completed? Yes/No	Explanatory notes	Sources of verification
Gain certification at BIFA Capacity Enhancement Workshop (Mid-term report milestone)	Yes	We did not get the certification at first apparently because many assignment files were not uploaded properly and thus the trainers could not access them. We did the assignments of Use Case 2 and Use Case 3 again thoroughly.	https://openbadgepassport.com/app/badge/info/170085

<p>At least one dataset has been published to GBIF.org (Mid-term report milestone)</p>	<p>Yes</p>	<p>Dataset of <i>Chilasa</i> butterfly collection at MZB was published on 23 October 2019, datasets of <i>Cressida</i> and <i>Meandrusa</i> were published on 24 October 2019, datasets of <i>Atrophaneura</i> and <i>Trogonoptera</i> were published on 29 October 2019.</p>	<p>url for Chilasa dataset: www.gbif.org/dataset/d13e5b4c-e838-4244-8ac1-dfe1d75e2f48;</p> <p>url for Cressida dataset: www.gbif.org/dataset/2ce88946-0fb0-413a-b513-e87d735a0e29</p> <p>url for Meandrusa dataset: www.gbif.org/dataset/46b22f62-bd4f-4157-8a57-f97cf22fda9e</p> <p>url for Atrophaneura dataset: www.gbif.org/dataset/6676b3f8-e389-4911-aa09-2e04f964a419</p> <p>url for Trogonoptera dataset: www.gbif.org/dataset/3839d127-ff17-4477-9069-2b0746d4bc83</p>
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Activities

Please indicate the status of the activities as outlined in the BIFA Full Proposal (section 4.4), at the time of mid-term reporting.

The table below should be completed in the same way as in the BIFA Full Proposal, but should include information and updates on the status of each activity. Please indicate relevant source(s) of verification and provide links, or a copy of the source of verification mentioned if no links are available. Attachments should be provided in the Annex.

In the event of unexpected delay(s), please provide detailed explanatory notes and indicate new planned completion date(s) within the project implementation period.

In the event of any additional activities having being completed, please add rows as required.

Activity name	Expected deliverable	Contribution to goals listed in table 4.3 of the BIFA Full Proposal	Status of activity as of mid-term reporting Provide % complete and state either on-track or delayed	Explanatory notes, inc. new planned completion date if necessary	Source(s) of verification
Learn, get familiar, and adopt a data management system which can be compatible worldwide	Data base system for specimen registration will be selected, based on the Darwin core system.	We adopt the data management system using Excel sheet with columns in accordance with Darwin core. Images are taken, cleaned, and the links to images are provided	The skills for specimen data management have been acquired. Approximately 40% of specimens have been registered and completed. I consider that we are on-track.	The skills to manage specimen data have been acquired, including data interpretation and data cleaning. However, we still need to familiarize ourselves with the procedures to provide links to images.	Fig. 1

		as extension in the associated Media column. We have reached our goals to have MZB butterfly specimens digitized, species by species.			
Sort, validate, and make the specimens available for data registration and photography	Butterfly specimens will be ready for data entry	We have sorted, identified and validated all unmounted papilionid specimens. As of the mounted specimens, we have done most genera except <i>Ornithoptera</i> and <i>Troides</i>	100% specimens of unmounted Papilionidae were validated. 85% mounted specimens (spread butterflies) were validated and ready for data registration and photography.	Identification and validation of <i>Ornithoptera</i> will be conducted on the 1 st week of November 2019. Identification and validation of <i>Troides</i> will be conducted before mid December 2019.	Fig. 2 – 4
Fully develop and implement specimen registration system including: give QR code to each	Credible data base will be available	Specimen registration system have been fully developed and implemented. Each specimen, mounted	About 95% of the validated unmounted specimens <i>i.e.</i> 3,053 (see Fig. 14) were each moved to new tracing paper envelope, were	The remaining 5% of the validated unmounted specimens will be processed next month. The data entry process for the validated spread specimens have been	Fig. 5 – 11, 13 – 14

<p>specimen, enter data on specimen labels to spreadsheet on computer, take photograph of upperside and underside of the specimen with the labels (we will need to decide how many specimens per species to be photographed) This will be done also to unmounted specimens in envelopes</p>		<p>or unmounted, is given QR code and the same MZB number. This is used as the occurrenceID of Darwin Core. Photographs of upperside and underside of selected male and female specimens were taken, complete with the labels. Specimens to be photographed are selected to represent the subspecies and geographic ranges of each species.</p>	<p>given QR code and MZB number and were registered. As many as 2,240 mounted specimens or spread butterflies (see Fig. 13) have been given QR code and MZB number, and registered until this time of reporting. Prior to this project, all unmounted specimens did not bear any MZB number and many mounted specimens did not have the MZB number either.</p>	<p>conducted for some genera: <i>Graphium</i>, <i>Lamproptera</i>, <i>Losaria</i>, and <i>Pachliopta</i>.</p>	
<p>Add data of life history and biology based on existing LIPI's butterfly garden on site</p>	<p>Additional data will be available</p>	<p>This data has not been made available.</p>	<p>Preparation for publication has been conducted.</p>	<p>If the manuscript is accepted, the publication will be out by early January 2020. Then the data can be extracted.</p>	

Maintain contact and coordination with participating partners to ensure the activities are in-line with the collaborative scheme	Communication and understanding with all partners will be achieved	Especially at the early stage of establishing specimen registration system, we have support from MfN and Naturalis. They offered assistance whenever we need them.	Suggestions were received about improving the specimen data registration system.	We hope to publish the results with our participating partners.	
Register and upload geo-referenced Indonesian butterfly collection data to GBIF	Butterfly data (family Papilionidae, endemic species, highly traded non-Papilionidae species) of MZB collections will be submitted and made available through GBIF	Dataset of <i>Chilasa</i> butterfly specimens was published to GBIF on 23 October 2019. Datasets of <i>Cressida</i> and <i>Meandrusa</i> were published on 24 October 2019. Datasets of <i>Atrophaneura</i> and <i>Trogonoptera</i> were published on 29 October 2019	In the next few weeks, we are going to upload and publish some other datasets as the photographs are being cleaned and prepared to be linked.	By the end of November 2019, we expect to upload and publish additional 3 datasets.	Fig. 12

<p>Conduct a workshop on digitizing butterfly specimens</p>	<p>Butterfly enthusiasts can be encouraged to help out and become citizen scientists</p>	<p>The workshop will make people aware of the importance of collection data.</p>	<p>The workshop is scheduled for February 2020</p>	<p>Preparation for the workshop will be started in December 2019</p>	
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Deliverables

This section should summarize the project deliverables as outlined in the BIFA Full Proposal (section 4,5), at the time of mid-term reporting. Please highlight any changes from the original plans.

If no result has been achieved on a specific point, please clearly indicate this and provide expected date of completion.

In the event of unexpected delay(s), please provide detailed explanatory notes and indicate new planned completion date(s) within the project implementation period.

In the event of any additional deliverables having being completed, please add rows as required.

a. Data

Details of datasets published and/or pending publication as an outcome of the project. The table below should be completed in the same way as in the BIFA Full Proposal but should include information and updates on the status of each dataset. Please provide links in sources of verification.

If the dataset is not yet published, please provide a detailed explanation, % of digitization and expected date of publication. Add rows as required.

Title of dataset	Data type (checklist/occurrences/sampling event) ¹	Estimated number of records (specimens)	Status of dataset: Published or % of digitization/pending publication and expected date of publication	Data holding institution agreed to publish its data via GBIF.org (Yes/No)	Explanatory notes	Source(s) of verification: DOI or URL
Datasets of Papilionidae	occurrences	At the beginning were estimated	5 datasets were	yes		

¹ Dataset classes: <http://www.gbif.org/publishing-data/summary#datasetclasses>

Title of dataset	Data type (checklist/occurrences/sampling event) ¹	Estimated number of records (specimens)	Status of dataset: Published or % of digitization/pending publication and expected date of publication	Data holding institution agreed to publish its data via GBIF.org (Yes/No)	Explanatory notes	Source(s) of verification: DOI or URL
butterfly specimens at Museum Zoologi Bogor, Indonesia with subsets of genera:		about 7,000 specimens, but apparently will be more records as we have recorded over 5,200 specimens (Figs. 13-14) by mid October 2019	published, additional 3 datasets are going to be published by the end of November 2019 (they were digitized and are in the process of data checking and georeferencing). Specimens of other genera are expected to be all digitized by mid March 2020 and all are to be published by mid April 2020.			

Title of dataset	Data type (checklist/occurrences/sampling event) ¹	Estimated number of records (specimens)	Status of dataset: Published or % of digitization/pending publication and expected date of publication	Data holding institution agreed to publish its data via GBIF.org (Yes/No)	Explanatory notes	Source(s) of verification: DOI or URL
<i>Atrophaneura</i>	occurrences		Published (101 records) on 29 October 2019	yes		url: www.gbif.org/dataset/6676b3f8-e389-4911-aa09-2e04f964a419
<i>Chilasa</i>	occurrences		Published (69 records) on 23 October 2019	yes		url: www.gbif.org/dataset/d13e5b4c-e838-4244-8ac1-dfe1d75e2f48
<i>Cressida</i>	occurrences		Published (5 records) on 24 October 2019	yes		url: www.gbif.org/dataset/2ce88946-0fb0-413a-b513-e87d735a0e29
<i>Graphium</i>	occurrences		All specimens were	yes		

Title of dataset	Data type (checklist/occurrences/sampling event) ¹	Estimated number of records (specimens)	Status of dataset: Published or % of digitization/pending publication and expected date of publication	Data holding institution agreed to publish its data via GBIF.org (Yes/No)	Explanatory notes	Source(s) of verification: DOI or URL
			digitized and in the process of data checking, georeferencing and photo cleaning prior to publication			
<i>Lamproptera</i>	occurrences		All specimens were digitized and in the process of data checking, georeferencing and photo cleaning prior to publication	yes		
<i>Losaria</i>	occurrences		All specimens were digitized and in the	yes		

Title of dataset	Data type (checklist/occurrences/sampling event) ¹	Estimated number of records (specimens)	Status of dataset: Published or % of digitization/pending publication and expected date of publication	Data holding institution agreed to publish its data via GBIF.org (Yes/No)	Explanatory notes	Source(s) of verification: DOI or URL
			process of data checking, georeferencing and photo cleaning prior to publication			
<i>Meandrusa</i>	occurrences		Published (12 records) on 24 October 2019	yes		www.gbif.org/dataset/46b22f62-bd4f-4157-8a57-f97cf22fda9e
<i>Ornithoptera</i>	occurrences		Specimens are in the process of verification / validation, specimen registration and digitization will be conducted in December 2019	yes	Detailed locality will not be given for these CITES-regulated and protected	

Title of dataset	Data type (checklist/occurrences/sampling event) ¹	Estimated number of records (specimens)	Status of dataset: Published or % of digitization/pending publication and expected date of publication	Data holding institution agreed to publish its data via GBIF.org (Yes/No)	Explanatory notes	Source(s) of verification: DOI or URL
					Indonesian species	
<i>Pachliopta</i>	occurrences		All specimens were digitized and in the process of data checking, georeferencing and photo cleaning prior to publication	yes		
<i>Papilio</i>	occurrences		Specimens are in the process of verification / validation, specimen registration and digitization will be conducted in November	yes		

Title of dataset	Data type (checklist/occurrences/sampling event) ¹	Estimated number of records (specimens)	Status of dataset: Published or % of digitization/pending publication and expected date of publication	Data holding institution agreed to publish its data via GBIF.org (Yes/No)	Explanatory notes	Source(s) of verification: DOI or URL
			- December 2019			
<i>Trogonoptera</i>	occurrences		Published (36 records) on 29 October 2019	yes	Detailed locality will not be given for this CITES-regulated and protected Indonesian species	url: www.gbif.org/dataset/3839d127-ff17-4479069-2b0746d4bc83
<i>Troides</i>	occurrences		Specimens are in the process of verification / validation, specimen registration and digitization will be	yes	Detailed locality will not be given for these CITES-	

Title of dataset	Data type (checklist/occurrences/sampling event) ¹	Estimated number of records (specimens)	Status of dataset: Published or % of digitization/pending publication and expected date of publication	Data holding institution agreed to publish its data via GBIF.org (Yes/No)	Explanatory notes	Source(s) of verification: DOI or URL
			conducted in January 2020		regulated and protected Indonesian species	
Indonesian endemic species	occurrences		Specimens are still in the general collection and will be handled in January – February 2020			
Highly-traded non-Papilionidae species	occurrences		Specimens are still in the general collection and will be handled in January – February 2020			

b. Other deliverables

Describe other deliverables (e.g. publication of data papers, analysis, reports etc.) produced and/or planned to be produced/completed as part of the project. Please provide percentage complete and status of deliverable, together with an indicative dates/estimated time for completion.

Please provide links in the sources of verification. Attachments should be provided in the Annex.

Name and type of deliverable	Status of deliverable Provide % complete and on-track/ delayed	Explanatory notes	Source(s) of verification
Data paper of the swallowtail butterflies of Indonesia as an update checklist	We have not made significant progress on the data paper as we have been focusing our efforts on getting the MZB papilionid specimens registered and digitized.	During the process of sorting, identification, and validating the specimens, we have come across a few records that might be of interest and will give insights to the data paper that we are going to publish later in 2020.	
Data on life history of some butterfly species reared in captivity at LIPI's butterfly garden	A manuscript has been prepared for submission	Data of the pre-adult stages will be added to the dataset	

Events organized as part of the project

Please indicate the status of the events as outlined in the BIFA Full Proposal (section 4.6), at the time of mid-term reporting.

The table below should be completed in the same way as in the BIFA Full Proposal, but should include information and updates on the status of each event. Please provide links to any documents or web pages documenting the event(s) in the sources of verification. Attachments should be provided in the Annex

In the event of unexpected delay(s), please provide detailed explanatory notes and indicate new planned completion date(s) within the project implementation period.

In the event of any additional events having being completed, please add rows as required.

Event title	Organizing institution	Date held / expected dates	Number of participants	Explanatory notes	Source(s) of verification
Workshop on digitizing butterfly specimens	Zoology Division, Research Center for Biology, LIPI	February 2020	25 persons from butterfly watcher community	This event is expected to be on schedule	

Calendar of activities

The calendar should be completed in the same way as in the BIFA Full Proposal (section 4.7) but should also clearly indicate and include any changes (e.g. use of colour-coding to indicate expected changes and/or delays). Please provide explanations for any changes in the “Notes” column and/or the explanatory notes section.

Activity	2019								2020				Notes
	M	J	J	A	S	O	N	D	J	F	M	A	

Activity	2019								2020				Notes
	M	J	J	A	S	O	N	D	J	F	M	A	
Activity: Learn and adopt the data management system which can be adaptable worldwide		X	X										
Activity: Sort, validate, and make specimens available for data registration and photography		X	X	X	X	X	X	X	X				
Mandatory attendance of a project team member to the BIFA Capacity Enhancement Workshop (expenses for attending the workshop are covered by the BIFA programme)			X										
Deadline for mid-term report – 31 October 2019 Mandatory milestones attached to the mid-term report: - Gain certification at BIFA Capacity Enhancement Workshop - At least one dataset has been published to GBIF.org						X							
Activity: Develop (or maintain the few existing) specimen registration system which include: Give QR code to each specimen, enter data on specimen labels to spreadsheet on computers, take photograph of upperside and underside of the specimen with all labels. This will be done also to unmounted specimens in envelopes			X	X	X	X	X	X	X	X	X		

Activity	2019								2020				Notes
	M	J	J	A	S	O	N	D	J	F	M	A	
Activity: Maintain contact and coordination with participating partners to ensure the activities are in-line with the collaborative scheme	X	X	X	X	X	X	X	X	X	X	X	X	
Activity: Register and upload georeferenced Indonesian Papilionidae collection data to GBIF						X	X	X	X	X	X	X	
Activity: Conduct a workshop on digitizing butterfly specimens										X			
Deadline for final reporting – 30 April 2020 Mandatory milestones attached to the final report: <ul style="list-style-type: none"> - All deliverables have been produced - Sustainability and next steps have been documented 												X	

a. Explanatory notes

All activities have been going on as expected. Although at the beginning we could not start the project on-time due to administrative matters, we have been able to maintain a great pace of working in the lab for this project. The matter of opening bank account and receiving the money took about 6 weeks, and the acquisition of computers and cameras took another 3 weeks. While waiting for the processes, I have

started the curatorial work that involved sorting, identifying, and validating specimens. We started to hire persons to implement the project in July 2019 and so far they have been working so well and productive. An IT staff from InaBIF has joined our team and has supported us with the IPT and publication of the datasets. In short, we have been working well and can keep up with our objectives.

Project communications and visibility

Describe the plans and how the results of your project have been and will be communicated and shared with the project stakeholders and broader GBIF community.

Please also review the page describing your project available from <http://www.gbif.org/programme/bifa> and highlight any additional documents, events, news items or links that you would like to add to your page and provide links/attachments in the Annex.

Datasets of each genus within Papilionidae and a few other datasets will be produced and will be published to GBIF. There are some interesting records of some species that will be highlighted further and will be published in scientific journal to complement our data in the comprehensive updated distribution checklist of Papilionidae of Indonesia currently under preparation, and other papers on conservation related matters for individual taxa.

Experiences and results from the digitization implementation of the Papilionidae butterfly collection at MZB will be shared more widely, both within LIPI and between other research and collection holding organizations in Indonesia. This will be achieved through regular contributions and communications to the LIPI institutional and organization website(s), newsletters, and social media channels. Later in February 2020, a dedicated workshop is planned at Cibinong, which will bring together butterfly watchers and nature enthusiasts, to showcase the digitization efforts to a greater audience, also with the hope to generate additional interest and motivation for future volunteer work with collections, and wider sharing of butterfly and other biodiversity data.

I thus expect that the results will encourage other groups and parties to help us continue the work on digitizing other parts of MZB collections. For further communication and dissemination about the project, I would be happy to also liaise with the GBIF Secretariat which will be a great option for me for developing new contacts and gaining further insights.

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

This section should cover for example:

- *An evaluation of the project activities by mid-term and their outputs/deliverables*
- *Comments on the project implementation, and its efficiency and effectiveness, strength and weaknesses etc.*
- *Any feedback on the project's relevance from the partners and stakeholders*
- *Indications and reasons for any changes which have been made to the project's original plans, and actions to follow-up*
- *The management arrangements for the project, including support from the GBIF Secretariat*
- *Areas of success to build on during the remaining project implementation period*
- *Any request for guidance and/or assistance in the form of a specific project mentor*

(Max. 300 words)

I am happy to report that all project activities have been going on very well and we can keep up with the schedule. For this project, digitization including the application of QR codes – initiated by Dr. Christoph Häuser through IndoBioSys project in 2016 – for Papilionidae specimens at MZB have been undertaken by hired assistants and permanent staff. We have learned together, planned, and implemented a great work flow that ensure safety for the specimens and maintain high productivity. The BIFA workshop in July 2019 has had a great impact on implementation of this project. To date, over 5,000 specimens of Papilionidae have been sorted, identified, validated, given QR code and MZB-Lepi number, registered, and digitized. Five datasets have been published this October 2019 to GBIF. Specimens of 4 other genera have been registered and digitized, and are in the process of data checking and data preparation for publication. Specimens of 3 other genera still need to be validated and will further be registered and digitized.

Some impediments at the beginning included the need to resolve administrative matters with transferring the support money. After we resolved the matter of opening bank account, we still needed to wait for the computers and cameras to be ordered through our purchasing unit. We had to wait about 7 weeks before we could hire persons and an IT staff from InaBIF to implement the project. Despite the delay, we have a great team that have kept great working pace to keep up with our objectives. I believe one of the major drives is my involvement. I have been committed and fully involved with the project, ensuring the quality of the work and keeping the work space comfortable for everyone. One thing to improve is the internet connection in the collection room.

Sustainability plans

Please provide a description of how the partners involved will build on the results of this project in their future work. This could include future collaborative activities, such as plans to complete any unfinished project activities and how the future impact of the project could be monitored and/or measured. (Max. 200 words).

Some interesting records of some species will be communicated with Dr. Christoph Häuser to complement our data in the comprehensive updated distribution checklist of Papilionidae of Indonesia currently under preparation. Experiences and results from the digitization implementation of the Papilionidae butterfly collection at MZB will be shared more widely, both within LIPI and between other research and collection holding organizations in Indonesia.

After this first year work on Papilionidae, endemic species, and highly-traded non-Papilionidae, we will continue to work on other families of butterflies, preferably if additional support can be obtained. We have come to realize that results of this magnitude can only be achieved by a fully supported project, particularly because most specimens were without registered number previously. It is expected that the specimen data generated from the project will also provide further stimulus to expand the MZB dataset and digital network.

Annex – Additional sources of verification

Sources of verification are for example links to relevant digital documents, news/newsletters, brochures, workshop related documents, pictures, etc.

Dataset of genus *Atrophaneura*, published on 29 October 2019 can be found at url:
www.gbif.org/dataset/6676b3f8-e389-4911-aa09-2e04f964a419

Dataset of genus *Chilasa*, published on 23 October 2019 can be found at url:
www.gbif.org/dataset/d13e5b4c-e838-4244-8ac1-dfe1d75e2f48

Dataset of genus *Cressida*, published on 24 October 2019 can be found at url:
www.gbif.org/dataset/2ce88946-0fb0-413a-b513-e87d735a0e29

Dataset of genus *Meandrusa*, published on 24 October 2019 can be found at url:
www.gbif.org/dataset/46b22f62-bd4f-4157-8a57-f97cf22fda9e

Dataset of genus *Trogonoptera*, published on 29 October 2019 can be found at url:
www.gbif.org/dataset/3839d127-ff17-4477-9069-2b0746d4bc83



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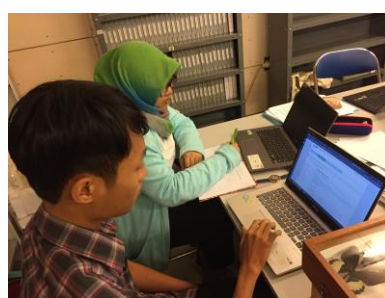
9



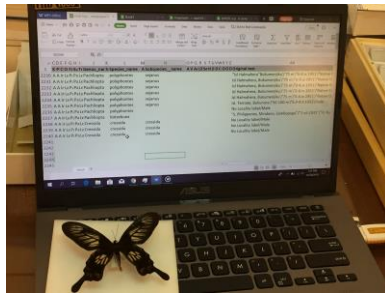
10



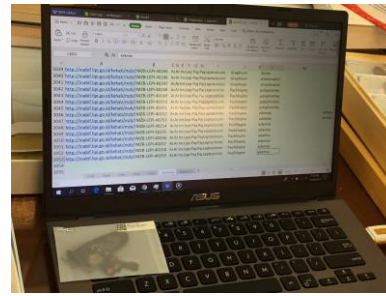
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Figure 1. learned and got familiar with data management system

Figure 2. sorted and identified unmounted specimens

Figure 3. identified specimens in old envelopes

Figure 4. transferred specimens to new envelopes

Figure 5. prepared QR codes

Figure 6. unmounted specimens in new envelopes with museum ID number and QR code

Figure 7. sorted and identified mounted specimens

Figure 8. assigned specimens to drawer according to subspecies and geographic location; take photograph; enter data into Excel data sheet

Figure 9. prepared specimen for photography

Figure 10. mounted specimens complete with museum ID number and QR code

Figure 11. cleaned the photographs for uniform background colour

Figure 12. published datasets to GBIF

Figure 13. data entry of mounted specimens, until 23 October 2019 we have done 2240 specimens

Figure 14. data entry of unmounted specimens, until 23 October 2019 we have done 3053 specimens