

DNA Barcoding and Taxonomic Classification of Black Flies in Southeast Asia

Programme:BIFA
Project ID: BIFA6_017
Project lead organization:Universiti Malaya
Project implementation period:1/9/2021 - 28/2/2023
Report approved: 7/6/2022

Narrative Midterm report

Executive Summary

A total of 284 occurrence data of black flies (Diptera: Simuliidae) in Malaysia, Indonesia and Vietnam have been deposited into the Global Biodiversity Information Facility (GBIF) database. The reported data has been aided by morphological and DNA barcoding COI analyses, of which 21 species in Malaysia, 30 species in Indonesia, and 47 species in Vietnam were successfully sequenced. Submission of the generated sequences to the National Center for Biotechnology Information (NCBI) GenBank is in preparation. Identification of black flies in Thailand and deposition of their data in GBIF are in progress.

Publication of datasets from Malaysia, Indonesia and Vietnam through GBIF is nearly completed. We have been communicating with Mr. Chihjen Ko, the Asia Regional Project Support Team for improvement of the datasets. Thank you very much for his guidance and endless support!

Minor change is needed for the successful implementation of our project in the remaining project period. The metabarcoding activity, and monitoring and evaluation plan for is not tally in the proposal. As mentioned in the monitoring and evaluation plan, metabarcoding will be applied on the bulk samples in selected populations to generate occurrence dataset, once the database is established. Metabarcoding of black flies is only feasible to be carried out once the DNA sequences of black flies are deposited into the GenBank.

Progress against milestones

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

Dataset published:

Dataset	DOI

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

Name of the workshop participant:Putt Qi Yan

Certification obtained: Basic Badge

Report on Activities

Activity progress summary

DNA sequencing of black flies in Malaysia, Indonesia and Vietnam is completed. Publication and standardization of datasets from Malaysia, Indonesia and Vietnam are also nearly completed.

DNA barcoding, publication and standardization of black fly datasets in Thailand are in progress.

Metabarcoding of black flies is only feasible to be carried out once the DNA sequences of black flies are deposited into the GenBank. Thus, this activity will only be carried out by 31 Jan 2023.

Completed activities

Report on Deliverables

Deliverables progress summary

1. A total of 284 occurrence data of black flies (Diptera: Simuliidae) in Malaysia, Indonesia and Vietnam have been deposited into the Global Biodiversity Information Facility (GBIF) database.
2. Manuscript writing is in the preparation stage.
3. Two research assistants under this project have registered as the students of Master of Philosophy in the Universiti Malaya

Progress towards deliverables

Title: Two master students

Type: Other

Description: Miss Putt Qi Yan and Miss Hew Yan Xin, the research assistants for this project have registered themselves as the students of Master of Philosophy in the Universiti Malaya

Sources of verification: Please see attached proof. You may also verify with Institute for Advanced Studies, Universiti Malaya at ias.um@um.edu.my.

Communications and visibility

A total of 284 occurrence data of black flies (Diptera: Simuliidae) in Malaysia, Indonesia and Vietnam have been deposited into the GBIF database. Submission of black fly sequences to the GenBank is in progress.

4th Asian Simuliidae Symposium has not been confirmed. We will share the outcome of this project at other related conferences.

Manuscript writing is in the preparation stage.

Monitoring and evaluation

Monitoring and evaluation findings

DNA barcoding of black flies in Malaysia, Vietnam and Indonesia is nearly completed and we are in the midst of preparing sequence submission to the GenBank. DNA barcoding of black flies in Thailand will be completed by 31 July 2022 as planned.

Since the project is still on-going, longer-term impact of the project could not be assessed.

Impact of COVID-19 pandemic on project implementation

not applicable

GBIF leads the Biodiversity Information Fund for Asia (BIFA), a programme funded by the Ministry of the Environment, Government of Japan. The programme provides supplementary support for activities addressing the needs of regional researchers and policymakers through mobilization and

use of biodiversity data.

