

## Project Update: October 2018

Achievements to date:

- Permission letter – Achieved.
- Preliminary survey and detail field survey – Achieved.
- Checklist of butterflies of Rara National Park – Partially achieved.
- Awareness campaign – Achieved.
- Field-based training – Achieved.
- Brochure design and printing – Achieved.
- Data entry – Partially achieved.
- Data analysis – Not achieved.

Unexpected challenges to date:

Weather has hindered expected detail field work to complete by July 2018. Due to early monsoon started we have only completed preliminary survey. However, detail field work has been postponed to September, 2018.

Most important outcomes so far:

1. Public and park people get basic information on butterfly.
2. Partial checklist has been prepared.
3. 49 people including locals and park people get benefitted with field based training.

The team:

Sanej Prasad Suwal - field coordinator

My major job was to lay out work plan, map reading, and transect plan

Bimal Raj Shrestha and Bibek Shrestha - research assistants

Assisting me to carry transect walk, species identification, note taking

Project so far:

Detail field work has been completed and now data entry and analysis is on the process.



Participants.

**Threats to butterflies**

- (1) Habitat fragmentation and loss due to residential, commercial and agricultural development.
- (2) Climate Change affects range, distribution and abundance of butterflies. It also affects their survival, fecundity, developmental rates and condition of larval and adults food plant.
- (3) Activities like mining, road laying, industrial activities, clearing large forest areas for construction of dams also affect on butterfly survival.
- (4) Forest plantation practices such as cutting of broad-leaved forests and plantations of exotic plant species.
- (5) Illegal collection and trade also reduce population of butterflies and may even lead to extinction of endangered species.

**What can we do?**

- (1) Enhance understanding of butterfly biology by conducting systematic scientific researches.
- (2) Assess how land management practices affect the butterfly's abundance and distribution.

## Butterfly Conservation

An Introduction

**Introduction**

Butterfly belongs to the class Insecta and order Lepidoptera. These beautiful and attractive insects mainly fly during day time and are remarkable for their elegance and beauty. There are about 18,000 - 21,000 known species of butterflies in the world. Nepal is expected to host about 650 species.

**Life Cycle of Butterflies**

Butterflies are short-lived insects. Most live up to two to four weeks. But swallowtails and brush-footed butterflies have been known to live up to eight months. After mating an adult female butterfly lays eggs on a suitable food plant. Life cycle of butterflies completes in four stages.

- i. Egg
- ii. Larvae (Caterpillar)
- iii. Pupa (Chrysalis)
- iv. Adult

**Families of Butterfly**

1. Hesperidae (Skippers)
2. Papilionidae (Swallowtails)
3. Pieridae (Whites and Yellows)
4. Nymphalidae (Brush-footed)
5. Lycaenidae (Blues)

**Importance of Butterflies**

- (1) **Pollinators:** Butterflies plays an important role in pollination of flowers. Butterflies gather pollen on their long, thin legs while they land on nectar from a flower thus, helping in increasing plant diversity.
- (2) **Ecological indicators:** Butterflies are good indicators of anthropogenic (human) disturbance, habitat quality and climate change. An abundance of butterflies usually indicates a healthier ecosystem. Many ecologists consider butterflies as model organisms to study the impact of habitat loss and fragmentation, and climate change.
- (3) **Food chain regulators:** By serving as important prey for birds, spiders, amphibians and other insect groups, butterflies assist in maintenance of healthier ecosystem. The management

Brochure.