

Updating Species Red List of Bangladesh

(RAG-Butterfly)

Tour Place: Sundarban

Justification

Background

Sundarbans is the largest mangrove forest in the world. This mangrove forest is unique for its biodiversity, which is characterized by a wide range of flora and fauna. The faunal composition of the Sundarbans consists of a variety of wild animals namely the tigers, deer, wild boars, monkeys, otters, variety of birds, crocodiles, various snakes including python, lizards, amphibians, mollusks, crabs and so on. Besides, it has been an important habitat for many invertebrate fauna including butterflies.

Butterflies play a vital role in maintaining the mangrove ecosystem by pollination.

In Sundarbans, researches on different aspects of and vertebrate fauna have been conducted for a long time. On the other hand, research on the butterfly is scanty in this mangrove forest. It is mentionable; Professor Monwar Hossain has last conducted a detail inventory in this area (June 2011 to March 2013) where he has identified a total of 37 species including 10 new. Larsen TB (2004) also enlightens this area in his book with the identification of 27 Species.

Considering the uniqueness of vegetation, location, duration and ecological factor, it is evident that the present list is not exhaustive. Only successive survey in this location can reveal actual status of butterflies and its ecological relation with the nature.

Reason for selected the area for the assessment

1. Adequate baseline scientific survey on butterfly were not took place of the mentioned survey areas.
2. The survey areas vegetation and unique biodiversity which usually supports rich butterfly diversity
3. Documentation of climatic condition of the areas
4. Record of anthropogenic changes/impact of the survey areas in relation to butterfly taxon

Region specificity of the species

Sundarbans mangrove forest is very rich in honey producing plants which attract large number of birds and insects including butterflies. The major plant species include khulshi (*Algerias corniculatum*), goran (*Ceriops decandra*), baen (*Avicennia officinalis*), keora (*Sonneratia apetala* and *S. acida*), gewa (*Excoecaria agallocha*) and passur (*Xylocarpus mekongensis*). In addition, there are many herbs, shrubs and climbers such as baoli lata (*Sarcolobus globosus*), asam lata (*Mikania scandens*), swarpogandha (*Aristolochia* sp.), dodhi lata (*Tylophora indica*), akond (*Calotropis procera*), wedellia (*Wedelia chinensis*, *W. biflora*), khulsi (*Aegiceras corniculatum*), hargoza (*Acanthus illicifolius*) and Ipomoea (*Ipomoea illustris*) which are also good attractants for various butterflies, particularly for nectar collection and egg laying. In the mangrove forest there is a few place of complete grassy lands, i.e. meadows that covers the wider areas from Katka to Kachikhali which is an ideal place for the butterfly. However, most of the butterflies found in this mangrove forest are in general periodic visitors that come from nearby places . They come to sip nectar and get back again to the main land after foraging.

Survey Methodology and Techniques

The methodology and techniques of the survey is given below where both qualitative and quantitative methods approached based on the taxon seasonal approach.

Following methodologies and techniques will be implemented during the field survey:

1. Data collection will be made through working in forest trail. Each trail will be encompassed likely 3-1 kilometer.
2. Gentle walking approach will be followed during the survey.
3. Transact count of species with walk through the trail area.
4. Vegetation documentation (digital media)

5. Taxon sample recording (digital media)
6. Geo-location coordinates through GPS (trail wise with spot metering)
7. Specimen Voucher Sample testify (very limited)
8. Meteorological Data Collection each field work (temperature, humidity)
9. Documentation of anthropogenic changes / impact (digital media)

Minimizing Gap of the Existing Data

The availability of butterfly status and metrological data in the survey area not rich. So this survey will be enriched the existing data and at the same time will work also as baseline data for onward study.

Expected Outcome of the study

1. New record might be encountered
2. Information on threatened taxon (Sundarban crow) will be recorded in detail, especially its ecology and biology
3. Population status of Butterflies will be determined
4. Vegetation types and dependency of butterflies will be recorded
5. Anthropogenic study will be made

Plan of survey area

The possible route will be katka-kochikhali and the working day will be for 5 days.

List of team member

1. Dr. Md Monwar Hossain –Lead Assessor (RAG-Butterfly)
2. Md shahtabul Islam –Assessor
3. Mirza S A Habib—Assessor
4. Farjana Akter—Assessor
5. Nazmul Huda—Assessor