Assessment of Lepidoptera pollinator species diversity data in East Africa

Cymothoe teita Fact Sheet

Alex Mutinda, Esther Kioko, Augustine Luanga, Duncan Mwinzi and Oliver Cramswel Genga

Invertebrate Zoology Section, Zoology Departmnt, National Museums of Kenya

Teita Glider

Cymothoe teita is butterfly belonging to Nymphalidae family. It is commonly called the Teita Glider. Teita Glider is a montane forest species occurring in Taita hills only where it inhabits the remaining blocks of indigenous forest fragments in this part of the larger Eastern Arc Mountains. The species has an all year round flight period where both male and female butterflies visits different flowers both wild and cultivated leading to **pollination**: the transfer of pollen grains from the anthers to the stigma. This leads to sustainable plant biodiversity regeneration and food security to man and both domesticated and wild animals.

Figure 1: Teita glider feeding on nectar in wild flowers

Description

Teita glider males are cream in colour, with black borders while the females are dark brown with white median marks.

Teita glider is a large-size wing-span butterfly. The males have 48-50 millimeters while the females are a bit large with a wing span of about 60 millimeters wingspan.

Males are high flyers and defend territories from perches high up in the forest while females spend most of their time inside the forest.

Biology

Teita glider undergoes a complete lifecycle involving a mated female adult butterfly laying eggs on suitable host plants like *Dasylepis integra* (only found in the Taita hills only) and *Rawsonia* (Flacourtiaceae). The eggs hatch into larval stage (caterpillars) that feed on leaves of these host plants. The caterpillars are the feeding stage of the butterfly thus making butterflies pest due to their intensive feeding on the food plants.

Later, caterpillars change into pupa stage. Pupa stage is a resting stage in which there is development of adult features: head, thorax and abdomen including the appendages like antenna for sensing, legs for perching and wings for flying.

The last stage in the cycle is the adult. Adult butterflies emerge from the pupa when conditions are favourable. Adults visit flowers to look for on nectar and during this process they lead to transfer of pollen grains from the anthers to the stigma of the flower leading to development of pollen tube towards the ovary and the ultimate fusion of pollen grains and the ova/ovum leading fertilization of plants both wild and cultivated.

Taxonomy

Cymothoe teita exhibits pronounced **sexual dimorphism:** males and females have different pigmentation and size.

Males are cream in colour with black borders containing cream arrow marks. The base of the forewing is dark while the central portion is cream with black veins. Next to this cream area, the wing is dark grey-black with a series of very distinct arrow shaped cream marks. The wing edges have triangular orange tips. The underside of the wings is crossed by a narrow dark median line.

Females are dark brown with a wide median white band running across the four wings. Basal half of both wings is black while the marginal border is broadly grey black. The wings have triangular orange spots on the edges. The underside basal portion is brownish-grey bordered by a brown median line.

Figure 2: Cymothoe teita male (left) and Cymothoe teita female (right)

Use and trade:

The species is hardly farmed by butterfly farmers in Taita Hills due to scarcity of food plants and it been a canopy dweller.

Threats to Teita Glider

- Most of the original forest fragments have been cleared for cultivation or reforested with non-native timber-tree species.
- Lack of clear boundary demarcations for some indigenous forest fragments and clearing forest edges compromises conservation efforts.
- Having a montane distribution this species is potentially susceptible to climate change.

Species conservation strategies

- Awareness creation to the local communities on importance of the species in the ecosystem
- Promotion of forest conservation as the habitat of the species
- Promotion of reforestation using the indigenous trees
- Promotion of establishment of pollinator gardens within the homesteads and institutions to act as foraging habitat.
- Promotion of establishment of buffer zones surrounding the forest fragments comprising of the species food plants to ensure conservation and availability of the food plants.

Figure 3: Establishment of pollinator garden at Dawida Biodiversity Conservation (DABICO)

The Project **"Assessment of Lepidoptera pollinator species diversity data in East Africa"** is a regional collaboration of partners, National Museums of Kenya, Makerere University and National Museum of Tanzania working together to enhance the understanding of butterflies and moths and other insect pollinators in Kenya, Uganda and Tanzania.

For more information please contact the project PI
Dr Esther N. Kioko
Zoology Department, National Museums of Kenya
P.O Box 40658-00100, Nairobi, Kenya
Email. Ekioko@museums.or.ke