Dataset Paper

Butterfly Species List for Selected West Albertine Rift Forests

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This dataset gives details on a study which was conducted in seventeen forests in western Uganda (Albertine region) between 1993 and 1995. Different methods were used to sample butterflies from these forests. A total of 630 butterfly species were collected in 5 main families. Key characteristics of the forests were recorded, and these were found to influence the butterfly species richness of the forests.

1. Introduction

Butterflies are known to respond to environmental changes, and there have been considerable amounts of data collected on how particular species contend with alteration in land use [1, 2] and thus may play a valuable role in ecological monitoring [3].

In Uganda, some 1245 species of butterflies have been recorded [4] from a variety of habitats, and it is thus feasible to evaluate the butterfly fauna of the region as well as derive reasonably accurate comparisons of sites and subsequently identify conservation requirements. This dataset paper examines the butterfly species diversity and distribution in selected West Albertine Rift Forests.

2. Methodology

This study was based on secondary data collected by the former Forest Department, now National Forestry Authority (NFA), over a period of three years from January 1993 to December 1995 as part of a National Forestry Biodiversity in seventeen forests (see [5]). For the purposes of this study, West Albertine Rift Forests were taken to be those found within the geographical boundaries north of Lake Albert between Arua and Pakwach (West Nile) and the forests of western Uganda (Figure 1).

Twelve fine-mesh cylindrical traps (approximately 70 × 40 cm diameter) were set at a range of heights from 1 to 10 m above ground level for the duration of the survey. A variety of baits including fermenting banana, dog feces, chicken offal, urine, and locally distilled alcohol were used in the traps. Traps were checked regularly, and representative specimens of each species were collected. For those species not usually attracted to traps, sweep netting was carried out daily in a range of habitat types within the forests. The average sampling efforts for each forest were measured in terms of man-days and the different forests' characteristics recorded (Table 1). Secondary data on the ecological attributes of interest (forest size, altitude, plant species richness, rainfall, and temperature) and the human activities in the forests recorded by the Forest Department were used to generate Table 1. We made visits to the forests in order to determine the levels of human activities in them. It was these activities which were regarded as forest disturbance. The activities considered for the purpose of this study were lumbering, agriculture (crop and livestock), hunting, charcoal burning, and settlement. These were arbitrarily scored within a range of 0–5, where 0 is nonexistent and 5 is the highest activity present. All the collected specimens were put in papers with their wing folded on the back and later identified. The species list was compiled as shown in Dataset Item 1 (Table).

TABLE 1: Key characteristic of the study forests.

Number	Forests	Forest Size (Km ²)	Average Altitude (Masl)	Number of Plant spp.	Disturbance Level	Mean Annual Rainfall (mm)	Mean Annual Temperature (°C)	Number of Butterfly Species
1	Kalinzu-Maramagambo	854	1380	414	13	1275	21.25	227
2	Itwara	87	1365	256	12	1325	21	119
3	Bugoma	401	1142.5	527	16	1225	22.7	278
4	Kisangi	54	1007	98	8	1350	21.5	41
5	Budongo	793	985	127	16	1325	22.3	254
6	Rwenzori	996	3404.5	195	5	1250	21.5	78
7	Echuya	34	2420	127	7	1650	17.25	54
8	Mafuga	34	2420	115	9	1650	17.25	32
9	Kagombe	113	1242	209	12	1350	21.3	190
10	Matiri	54	1363.5	115	6	1350	21.3	98
11	Kitechura	53	1280.5	114	7	1325	19.75	114
12	Kasyoha-Kitomi	399	1555.5	376	14	1325	21.25	235
13	Semliki	219	715	339	5	1350	20.5	309
14	Kibale	564	1350	351	5	1650	17.25	220
15	Bwindi	231	1898.5	324	5	1440	17.25	162
16	Mt. Kei	384	1123.5	229	13	1250	23	126
17	Era	74	945	261	13	1250	23	56

3. Dataset Description

The dataset associated with this Dataset Paper consists of one item which is described as follows.

Dataset Item 1 (Table). Species list for the different forests. Data presented in this table were based on the presence (1) or absence (0) of a butterfly species and used to establish the similarity among the forests. The species list was generated by recording representatives of each species. The number of individuals per species was not considered.

Column 1: Butterfly Family

Column 2: Butterfly Subfamily

Column 3: Butterfly Species

Column 4: Kalinzu-Maramagambo

Column 5: Itwara

Column 6: Bugoma

Column 7: Kisangi

Column 8: Budongo

Column 9: Rwenzori

Column 10: Echuya

Column 11: Mafuga

Column 12: Kagombe

Column 13: Matiri

Column 14: Kitechura

Column 15: Kasyoha-Kitomi

Column 16: Semliki

Column 17: Kibale

Column 18: Bwindi

Column 19: Mt. Kei

Column 20: Era

4. Concluding Remarks

This dataset paper was developed in order to come up with butterfly species list which can be used in the analysis of different factors responsible for their diversity and distribution. Although Era and Mt. Kei forest reserves are not part of the Albertine Rift Forests, they were included for comparison with those within the rift.

Dataset Availability

The dataset associated with this Dataset Paper is dedicated to the public domain using the CC0 waiver and is available at <http://dx.doi.org/10.7167/2013/451461/dataset>.

Disclosure

The data presented here were generated from secondary data and information collected by the former Forest Department (now National Forestry Authority, NFA). The samples were collected during a National Biodiversity Assessment between January 1993 and December 1995 by a team of six rangers supervised by Dr. Tim Davenport.

FIGURE 1: Forests of the WARFs whose butterfly fauna was studied (adopted from [5]). NP: National Park; FR: Forest Reserve.

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