

## Project Update: August 2014

### MARCH 2014

#### WORK PROGRESS

Currently, all the activities are in progress and are expected to yield great success by the end of March 2014. The forest department butterfly collections recorded 149 genera including species endemic to Africa.

#### Activities achieved

- Sorting and arrangement of butterfly collections into their various genera
- Sorting species of Papilionidae and Charaxinae from the rest of collections (genera)
- Sorting and cleaning of damaged set butterfly specimens
- Relaxing and setting of family Papilionidae
- Photographing of different species of Papilionidae

From the above activities achieved, 32 species of family Papilionidae were sorted and recorded. Only one photograph was taken for each species in the group, collected from 55 forests, wetlands and grassland areas across Uganda (Northern, Southern, Western and Eastern regions). Currently, 624 specimens from family Papilionidae are recorded and digitized. Subfamily Charaxinae recorded 3 genera, with over 50 species are expected and over 1000 specimens are expected from this family.

#### Expectations for next month

The above activities will be complete for subfamily Charaxinae by the end of March and by mid-April, family Papilionidae and subfamily Charaxinae will be digitized and uploaded on the website (when the site is ready).

#### Summary of records for family Papilionidae and subfamily Charaxinae

Family/subfamily	No. of Genera recorded	No. of species recorded	No. of specimens recorded	Total number of forests
Papilionidae	2	32	624	55
Charaxinae	3	56	>1000	56

#### List of species for family Papilionidae

species	No. of specimens	No. of forests
<i>Papilio antimachus</i>	2	2
<i>Papilio demodocus</i>	51	35
<i>Papilio phorcas</i>	65	33
<i>Papilio dardanus</i>	70	39

<i>Papilio rex</i>	15	9
<i>Papilio cynorta</i>	30	19
<i>Papilio bromius</i>	48	31
<i>Papilio nireus</i>	41	28
<i>Papilio mechowii</i>	12	7
<i>Papilio zenobia</i>	3	1
<i>Papilio echeriodes</i>	5	3
<i>Papilio zoroastres</i>	50	18
<i>Papilio interjecta</i>	10	4
<i>Papilio nobilis</i>	22	8
<i>Papilio jacksoni</i>	10	5
<i>Papilio mackinnoni</i>	6	4
<i>Papilio sosia</i>	15	7
<i>Papilio lormieri</i>	30	21
<i>Papilio hesperus</i>	20	9
<i>Papilio chorapus</i>	20	5
<i>Graphium antheus</i>	25	8
<i>Graphium angolanus</i>	20	8
<i>Graphium leonidas</i>	7	5
<i>Graphium almansor</i>	15	6
<i>Graphium policeses</i>	20	13
<i>Graphium ucalegon</i>	1	1
<i>Graphium ridleyanus</i>	1	1

## APRIL 2014

### WORK PROGRESS

The digitization work is in progress; we are dealing with sub family Nymphalinae and identification of some species of Charaxes and Nymphalinae (Euphaedra).

### Activities achieved

- Identification of species of Charaxes
- Sorting of genera Euphaedra from the rest of the collections
- Relaxing and setting of Charaxes and some species of genus Euphaedra
- Photographing of the different species of Charaxes

From the above activities achieved so far, 41 species of Charaxes have been identified, verified and recorded out of 65 species known in Uganda. From the recorded specimens, a single voucher specimen was photographed for each species recorded, collected from 52 forests, wetlands and woodland areas across Uganda. A total of 2125 specimens of Charaxes are recorded in the Data Form as hard copy with their detailed information of collection.

Only genus Euphaedra was recorded from sub-family Nymphalinae, registered 275 specimens from 12 species identified.

### Expectations for the next month

The taxonomy of sub-family Charaxinae is expected to be completed, verified by experts (entomologists) and also work on family Nymphalidae should be completed at the end of May.

### Problems identified

1. Most specimens were wrongly identified and species verification in each envelope takes a lot of time, thus limits the work activities and progress.
2. Some specimens kept in the envelopes are damaged by collectors and beetles in the store as well as Museum poor management practices, this makes taxonomy very hard.
3. Limited equipment to run the project activities for example few pins and setting boards were provided. This makes few specimens to be relaxed and set for photographing for example currently, only ten (10) specimens can be set and photographed in a week.
4. Insufficient preservatives to protect set specimens from beetles in their cases

Species without information in Table 2 above are not yet entered in the Data Form due to unclear identification and are waiting to be approved.

**Table 1. Showing general information about sub-family Charaxinae and Nymphalinae recorded**

Family/sub-family	No. of Genera recorded	No. of species recorded	No. of specimens recorded	Total No. of forests
Charaxinae	3	41/65	2125	52
Nymphalinae (Euphaedra)	1	12	275	28

**Table 2. Showing list of species photographed from sub-family Charaxinae**

Species	No. of species	No. of forest
<i>Charaxes achaemenes</i>		
<i>Charaxes ameliae</i>	67	15
<i>Charaxes anticlea</i>		
<i>Charaxes baumanni</i>		
<i>Charaxes boueti</i>	125	16
<i>Charaxes brutus</i>	65	30
<i>Charaxe candiope</i>	123	41
<i>Charaxes castor</i>	35	17
<i>Charaxes cedreatis</i>		
<i>Charaxes Cynthia</i>	169	16
<i>Charaxes epijasius</i>	168	19
<i>charaxes etesipe</i>	38	22

<i>Charaxes etheodes</i>		
<i>charaxes eudoxus</i>	16	10
<i>Charaxes eupale</i>	30	15
<i>Charaxes protoclea</i>	6	5
<i>Charaxes porthos</i>		
<i>Charaxes pollux</i>	98	36
<i>Charaxes pleione</i>	33	14
<i>Charaxes paphianus</i>		
<i>Charaxes numenes</i>	147	28
<i>Charaxes lactetinctus</i>		
<i>charaxes kirki</i>		
<i>Charaxes jahlnusa</i>		
<i>Charaxes imperialis</i>		
<i>Charaxes hansalii</i>		
<i>Charaxes fulvescens</i>	226	46
<i>Charaxes zoolina</i>	50	10
<i>Charaxes zingha</i>	40	16
<i>Charaxes virilis</i>		
<i>Charaxes varanes</i>	134	42
<i>Charaxes tirrdates</i>	189	43
<i>Charaxes subornatus</i>		
<i>Charaxes smaragdilis</i>		
<i>Charaxes bipunctatus</i>	33	6
<i>Charaxes Lucretius</i>	36	13
<i>Euxanthe eurinome</i>		
<i>Euxanthe crossleyi</i>		
<i>Palla violinitens</i>	2	2
<i>Palla ussheri</i>	2	2
<i>Palla publius</i>	1	1

**Table 3. Showing list of species identified from genus Euphaedra**

<b>Number</b>	<b>Species</b>
1	<i>Euphaedra rex</i>
2	<i>Euphaedra paradoxa</i>
3	<i>Euphaedra alacris</i>
4	<i>Euphaedra eusemoides</i>
5	<i>Euphaedra christyi</i>
6	<i>Euphaedra edwardsi</i>
7	<i>Euphaedra pressi</i>
8	<i>Euphaedra harpalyce</i>
9	<i>Euphaedra medon</i>

10	<i>Euphaedra hollandi</i>
11	<i>Euphaedra Uganda</i>

## **MAY 2014**

### *WORK PROGRESS*

The Butterfly digitization project activities are under progress; we are still dealing with sub family Nymphalinae and as well as Charaxes (taxonomy of black Charaxes).

### **Activities achieved**

- Relaxing and setting of un-identified charaxes species for identification
- Sorting of genera Junonia, Salamis, Kallima, Mallika and hypolimnas
- Photographing of the different species of genera Euphaedra and Salamis
- Relaxing and setting of different species of Junonia and salamis
- Hard and soft copy data entry for genera Euphaedra, Junonia and salamis

From the above activities carried out, seven (7) species of Euphaedrae have been identified, verified and recorded out of 12 species known in Uganda, registering a total of 289 specimens from 32 forest habitats across the country. 5 remaining species of this genus is to be searched from the collections. Four salamis species were recorded, registered a total of 120 specimens, from 43 forest habitats. Genera Junonia, Kallima, Mallika and Hypolimnas were sorted from the collections ready for relaxing, setting and photographing and hard copy data entry information of these genera is under progress.

### **Expectations for the month of June and July**

The taxonomy of sub-family Charaxinae (black charaxes) is expected to be completed, verified by experts (entomologists) and also work on sub-family Nymphalinae, particularly for genera of Junonia, Salamis, Kallima, Mallika and hypolimnas should be completed at the end of June and photo upload for super family Papilionidae is expected to be on the website in this month.

### **Problems identified**

- Limited cases to store relaxed and set specimens
- Most specimens were wrongly identified and species verification in each envelope takes a lot of time, thus limits the work activities and progress.
- Insufficient preservatives to protect set specimens from beetles in their cases

**Table 1. Showing general information about sub-family Nymphalinae in different genera recorded**

Family/sub-family	Different Genera recorded	No. of species recorded	No. of specimens recorded	Total No. of forests
Nymphalinae	Euphaedra	7/12	289	32
	Salamis	4/4	120	43
	Junonia	10/10	-	-
	Mallika	1/1	-	-
	Kallima	3/3	-	-
	Hypolimnas	8/8	-	-
<b>Total</b>	<b>6</b>	<b>29/38</b>	<b>409</b>	

**Table 2. Showing different species in genus Euphaedra**

Species	No. of species	No. of forests
<i>Euphaedra edwardsi</i>	24	7
<i>Euphaedra uganda</i>	29	9
<i>Euphaedra harpalyce</i>	54	15
<i>Euphaedra eleus</i>	36	8
<i>Eupaedra medon</i>	101	26
<i>Euphaedra preussi</i>	25	8
<i>Euphaedra eusemoides</i>	20	4
<i>Euphaedra hollandi</i>	--	-
<i>Euphaedra peculiaris</i>	-	-
<i>Euphaedra ruspina</i>	-	-
<i>Euphaedra rex</i>	-	-
<i>Euphedra christyi</i>	-	-

**Table 3. Showing different species in genus Salamis**

Species	No. of specimen	No. of forest
<i>Salamis temora</i>	23	13
<i>Salamis anacardii</i>	6	4
<i>Salamis cacta</i>	16	11
<i>Salais parhassus</i>	75	34

**Table 4. Showing species in different genera**

<b>Species</b>	<b>No. of specimens</b>
<i>Salamis anacardii</i>	-
<i>Salamis cacta</i>	-
<i>Salamis parhassus</i>	-
<i>Salamis temora</i>	-
<i>Kallima ansorgei</i>	-
<i>Kallima cymodoce</i>	-
<i>Kallima rumia</i>	-
<i>Mallika jacksoni</i>	-
<i>Junonia chorimene</i>	-
<i>Junonia hierta</i>	-
<i>Junonia natalica</i>	-
<i>Junonia oenone</i>	-
<i>Junonia orithya</i>	-
<i>Junonia sophia</i>	-
<i>Junonia stygia</i>	-
<i>Junonia terea</i>	-
<i>Junonia westermanni</i>	-
<i>Hypolimnna anhedon</i>	-
<i>Hypolimnna bartteloti</i>	--
<i>Hypolimnna deceptor</i>	-
<i>Hypolimnna dinarcha</i>	-
<i>Hypolimnna dubius</i>	-
<i>Hypolimnna misippus</i>	
<i>Hypolimnna monteironis</i>	-
<i>Hypolimnna salmacis</i>	-