

**A LARGE-SCALE MIGRATION OF THE AFRICAN SKIPPER
ANDRONYMUS GANDER EVANS, 1946 NEAR CALABAR, NIGERIA
(LEPIDOPTERA: HESPERIIDAE)**

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Introduction

I SPENT ALL OF MARCH, 1995 surveying the butterflies of the Oban Hills Cross River National Park, Nigeria. The Park lies just north of Calabar, the type locality of numerous African butterflies from the past hundred years and more. The Park is by far the largest forest area in Nigeria and one of the largest in West Africa. The habitat is wet evergreen forest in good shape and the park is being conserved and developed by grants from the European Union and Germany, with technical assistance from, among others, the Worldwide Fund for Nature (WWF).

It is one of the centres of biodiversity in Africa. I recorded about 430 butterfly species during my own trip. However, many other collectors have been active in the area, so the total confirmed checklist stands at almost 650. My own "discovery curve", my knowledge of the habitat, and the distribution of other butterflies both east and west of the Park make the prediction that at least 950 species are found in the Park area quite safe.

The lowland wet evergreen forest of the southern Nigeria/Cameroun border is almost certainly the richest habitat anywhere in Africa for butterflies – and by implication other arthropods as well. Nowhere in Asia are as many butterflies found in one locality, but in the Neotropical Region up to 1300 may be found in some localities (Beccaloni & Gaston 1995).

Migration observation at Mkpot 1

At 15.30 on 13th March I was heading my team back to the village of Mkpot 1 in the centre of the park after an excellent, though exhausting day of collecting, having covered nearly 20km. We were walking along a fairly broad, cleared forest path, but one wholly covered by the canopy. Just as we came into the first small open clearing at the edge of the village, hordes of small insects came straight at us with the speed of bullets. They emerged from the continuation of the path on the other side of the clearing and continued along the path we had just walked. They were medium-sized brown HesperIIDae, though only just recognisable as such since I have seen migrating *Borbo* in southern India (Larsen 1988).

"Catch as many as you can!", I shouted to my team, as I began to collect a sample. This was no easy task. The speed was more rapid than anything I have seen before. However, so dense was the swarm that backswipes with the net would usually land a few specimens.

After a while, I looked back at my team – a local guide, a research assistant and two park rangers, all equipped with nets – to see how they were getting on. They were not. They were prostrate on the ground with butterfly

nets over their heads. Rather sheepishly they confessed they thought we had met a swarm of aggressive bees! Back in camp, I found the following quotation in respect of the almost identical *A. neander* Plötz, 1884 from Tanzania on the computer: "In February, 1984 I watched swarms continually flying over the Mafwemiru Forest in the Rubehos for two days. Sometimes so thick that they reminded me of swarming bees." (Kielland 1990). My team felt somewhat exculpated!

The entire event lasted only six minutes. As far as I could make out, the butterflies were limited to the width of the path. I saw none flying high. They came at us at a density of 10-15 a second, for a total of 3,600 to 5,400 on the 1.5 metre-wide path.

Sex and condition of migrants at Mkpot 1

The sample collected consisted of 14 males and nine females, indicating a normal sex ratio. This is interesting since collections of *Andronymus* usually contain many more females than males (Evans 1937; Fox *et al.* 1965; Usher 1980).

Of the sample taken six were perfect, 12 worn, and five in very poor condition. This is also interesting, since migrations usually consist of freshly hatched individuals.

Other observations

That afternoon, as I was entering the day's field notes, another flight overflowed Mkpot 1, this time quite high, several metres above the ground. The front was only about 40 metres wide, and it lasted only from 17.36 to 17.42. The butterflies were more dispersed than on the path and must have contained another 5,000 to 10,000 individuals.

Three days later we trekked the 22km north to the friendly little village of Itaka. Here we were told that a huge migration of "bee-like" butterflies had been flying towards the north-east on the 13th. It was not possible to get very precise details, but evidentially it was a larger, wider, and more long-lasting event than at Mkpot 1.

Back in Calabar, 35km to the south of Mkpot 1, I was told of a northeasterly migration by four independent observers ("so you saw it too"). Some talked of rather broad-based migration several metres above ground, others emphasised that the migration had snaked through a narrow gap between two houses. Again, the width and duration of the migration appeared wider and longer than that at Mkpot 1.

Discussion

During the ten days preceding the migration, I had collected just four or five individuals of the migrating species. I saw none on the ten-hour walk north from Mkpot 1 to Itaka. I was very interested in them, since they did not quite seem to be the expected species, *A. neander*, a known migrant. They turned

out all to be *A. gander*, a species not previously recorded from Nigeria (mainly known from Congo, Zaïre and western Tanzania). Recording a species new to any country is nice, doing it by the million must be rather unusual!

The migration obviously took place over a large front – at least 50km across, judging from the observations at Calabar and Itaka. Millions must have been involved (though not billions as I saw with *Catopsilia florella* Fabricius, 1793 in Botswana (Larsen 1992)). The comportment of the migrants was not quite typical; sometimes they flew quite high, over broader fronts, sometimes they flew low and adapted to local contours such as paths and houses.

There are a number of records of migrating *Andronymus* from Cameroun (Fox *et al.* 1965) and the Calabar area (Ried, Kunzel, & Kunzel 1990) (almost certainly *A. neander* in Cameroun, possibly *A. gander* in Calabar), but especially from East Africa (Kielland 1990; Williams 1976). The only other rainforest butterfly that is a regular migrant is *Libythea labdaca* Westwood, 1851. There are similarities. *L. labdaca* sometimes migrates over a wide front, sometimes adapts to local contours. Also, many *L. labdaca* migrations take place just before the rains, which is when the current observations were made (Larsen 1977, 1981).

The main remaining impression is the usual one. What happened was phenomenal, and obviously important to the species in question. Being privileged to observe such a migration was gratifying. Being unable to explain where and why was the origin, where and why was the destination, and what were the underlying causes remains deeply frustrating.

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Evidence of White Admiral butterfly (*Limenitis camilla* L.) larvae feeding on Aspen (*Populus tremula*)

Whilst searching honeysuckle (*Lonicera periclymenum*) leaves in a well-known Surrey locality, following up resulting larvae of the White Admiral (*Limenitis camilla*) from hatched eggs located on 17th July 1995, I noticed two nearby leaves of Aspen (*Populus tremula*) with feeding damage of exactly the same nature as on the honeysuckle leaves – a long exposed bare midrib with leaf eaten well down either side. The classic and unmistakable feeding pattern of the White Admiral. Unfortunately both larvae were absent from their midrib “seats”, as indeed were three out of four known larvae in similar situations on the honeysuckle which was in close proximity to the aspen. The White Admiral suffers high mortality as a first instar larva, as I have ascertained from regularly searching for larvae in July and August prior to their hibernation in September.

It is interesting to note here that the larval foodplant of the European Poplar Admiral (*Limentis populi*) is most commonly aspen and there is an illustration in the excellent Swiss book *Tagfalter und ihre Lebensraume* (Arten, Gefährdung, Schutz 1987) of an aspen leaf damaged by the larva of this species. It is identical to the leaves located by myself in Surrey and I am certain that they were utilised by the larvae of the White Admiral.

An extensive search of the surrounding aspen growth was undertaken without finding similar feeding damage or an extant larva. There was a wide variety of feeding patterns on the leaves, ranging from mere holes, edge of leaf, to a complete strip bar leaf veins, leaving a skeletal appearance. There was no comparison on the aspen leaves to the unmistakable feeding pattern of the early instar White Admiral larva. It is important to note that the aspen leaves were in such a highly suited position for ovipositing White Admirals – dappled shade, next to an already well utilised spray of honeysuckle leaves. A rarely found combination which perhaps led to this unusual ovipositing choice?

Are there any other records of White Admiral larvae being found or suspected of feeding on aspen? Initial literature searches by myself have yet to reveal any. The aspen leaves were photographed and then pressed for a permanent record. The same site will be visited a little earlier next year with the hope of finding an actual deposited egg or feeding larva.

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