

Chapter 3

A Rapid Survey of Butterflies in Ajenjua Bepo and Mamang River Forest Reserves, Eastern Region of Ghana

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SUMMARY

During 11 days of field work (25 August – 4 September 2006) in the Ajenjua Bepo and Mamang River forest reserves, 1800 specimens of butterflies and moths (Lepidoptera), representing 486 species in 18 families, were collected. The survey focused primarily on diurnal butterflies of the superfamilies Papilionoidea and Hesperoidea, with 187 recorded species (128 at Ajenjua Bepo and 116 at Mamang River). Twelve species are of particular conservation interest and are discussed in detail; a clearwing moth *Metasphesia xanthopyga* Aurivillius 1905 (Sesiidae) represents both the first record of this species for Ghana, and the first male specimen ever collected.

INTRODUCTION

The order Lepidoptera is one of the most species-rich groups of insects, with the estimated number of species close to 146,000. Based on the different modes of activity, the Lepidoptera are traditionally divided into diurnal butterflies and nocturnal moths. This division does not truly reflect the phylogenetic relationships within the group as many “moths” show a diurnal activity pattern, while some butterflies show limited nocturnal activity. However, butterflies include only the superfamilies Papilionoidea and Hesperioidea, while moths include a large number of superfamilies, such as Pyraloidea, Nepticuloidea, Hepialoidea, Lasiocampoidea, Noctuoidea, and many others.

Because of the ease of collecting and identification, and close ties of individual lepidopteran species to host plants and their habitats, butterflies have often been used in biomonitoring and as habitat change indicators. These attributes makes them a good candidate for use in Rapid Assessment Program (RAP) surveys.

The butterflies of West Africa, especially in Ghana, are well studied (Emmel and Larsen 1997; Kühne 1999, 2001; Larsen 2005a, 2005b). The most current list of known Ghanaian butterflies, including the Volta region, includes 915 species (Larsen 2005a). Yet the knowledge of other groups of the Lepidoptera in this region is not nearly as good. Many species of moths, especially those classified as “microlepidoptera” still await comprehensive studies, or even the initial scientific description.

METHODS AND STUDY SITES

During the survey the following collecting methods were employed:

Collecting on a transect line

At both sites of the current survey, transects were selected within the forest, along trails, on the edges of the forest, and at selected locations in cocoa and plantain plantations. Most specimens were physically collected with hand-held nets, except in a few cases when easily recognizable members of the family Papilionidae were identified in flight. Collecting was done daily in the