

Chapter 5

A rapid survey of butterflies in the Atewa Range Forest Reserve, Ghana

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SUMMARY

Butterflies were used as one of the target species in a Rapid Assessment Program (RAP) survey to obtain quick, reliable and cost-effective biodiversity data from Atewa Range Forest Reserve. Overall, 143 species belonging to 55 genera in five families were recorded during the entire RAP expedition. The composition of butterfly species is plainly indicative of a good forest. The presence of *Tetrarhanis baralingam*, *Neaveia lamborni* and *Bicyclus auricruda* in Atewa were confirmed during our survey. *N. lamborni* and *B. auricruda*, prior to this survey, had not been seen in any protected area in Ghana. Almost half of the 17 rare species recorded are known either exclusively from Atewa or from just one other protected area in Ghana. The conservation of and further studies on these species is of ultimate importance in the quest to use butterflies as biological indicators. More than 700 different species of butterfly are now expected to occur on the Atewa Range. This is more than in any other single locality in Ghana, and for that matter anywhere in Africa west of the Dahomey Gap (and more than twice as many butterflies as in the whole of Europe!). As many as 50 rare species in Atewa may be recorded nowhere else in Ghana. The RAP expedition recorded 16 endemic species of which two (*Euphaedra mariae-christinae* and *Ceratruchia maesseni*) are endemic to the Ghana sub-region of West Africa. The remaining are endemic to the entire West Africa sub-region. The Atewa Range Forest Reserve provides a haven for many West African endemics. Ten of such endemic species are so far known only from the Range and might well in Ghana be limited to this reserve. Conservationists' understanding of the Afrotropical biological diversity has significant gaps and this hampers efforts to formulate sound biodiversity conservation measures. A few biologically rich, surviving forests like the Atewa forest remain the only hope for understanding some of the complexities and the functioning of ecosystem processes. The very high index of biodiversity, the presence of many endemic species, and several other species known from nowhere else in Ghana, and the pan-African rarity status of many of the species present in the Atewa Range Forest Reserve combine to indicate that its conservation importance is of the highest priority that the area should not be subject to development of any kind.

INTRODUCTION

Butterflies (Lepidoptera, Rhopalocera (Papilionoidea and Hesperioidea)) are a useful insect group in environmental monitoring and evaluation studies and have been used in several biodiversity monitoring programs around the globe with considerable success (Kremen 1992, 1994; Brown 1997; New 1997; Kerr et al. 2000; Larsen 2005a). They are by far the best known and most studied larger group of organisms apart from plants and vertebrates (Larsen 2006). Information such as habitat preference, habits, host plants, geographical distribution, endemism and/or rarity of most species is readily available for use in biodiversity data synthesis and interpretation. They can arguably be used as flagship taxa for terrestrial invertebrate biodiversity conservation.

The aesthetic beauty and charismatic nature of many butterflies have the ability to invoke