Chapter 9

Rapid Survey of the Small Mammals of Ajenjua Bepo and Mamang River Forest Reserves, Ghana

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SUMMARY

Small mammals (shrews, rodents and bats) were surveyed in the Ajenjua Bepo and Mamang River forest reserves of eastern Ghana. A total of 128 specimens belonging to at least 18 species were recorded including five species of rodent, six species of shrew and seven bat species. Within Ajenjua Bepo, six shrew species were recorded including four forest species. Despite the high degree of disturbance of the secondary forest, three specimens of *Crocidura muricauda* were collected. Only three species of murid rodents were collected, with two forest species (*Malacomys edwardi* and *Praomys tullbergi*). Six pteropodid bat species and a single insectivorous bat species were recorded. Several of these species were forest-dwelling species. Within the Mamang River Forest Reserve, five or six shrew species were collected, the dominant species being the forest-dwelling *Crocidura obscurior*. With a similar trapping effort as at Site 1, a higher number of specimens (39) and species (5) of rodents were recorded within Mamang River. The forest-dwelling *Praomys tullbergi* was dominant. Only four specimens of a single forest-dwelling bat species (*Myonycteris torquata*) were recorded within the forest, most likely a result of weather conditions during surveys. Both species richness and species abundance of the forest shrew and murid rodent species point to a higher conservation potential of Mamang River than Ajenjua Bepo. Mamang River appears to present better conservation value due to 1) its larger size, 2) the absence of plantations within Mamang, and 3) the more structured arboreal vegetation within Mamang probably providing more fruit and leaf litter.

INTRODUCTION

Small mammals (shrews, rodents and bats) were investigated to assess the biodiversity of Ajenjua Bepo and Mamang River forest reserves, in the Birim North District of the Eastern Region of Ghana, on the Right bank of the Volta River.

Small mammals are considered to be good bio-indicators of habitat because of their short lifespan, rapid population dynamics and low level of pressure on their populations as a result of hunting in comparison to larger mammals (shrews are never hunted because of the strong, unpleasant smell of their flank glands). They are also good bio-indicators because of the diversity, in tropical Africa, in terms of species and habitat preferences (Barrière et al. 2006).

SAMPLING METHODS AND STUDY SITES

In each of the two forest reserves, terrestrial small mammals (shrews and small rodents) were sampled mainly with pitfall and Sherman traps, and flying small mammals (bats) with mist nets. The pitfall trapping protocol follows Nicolas et al. (2003) except for the number of buckets per line as the number of available buckets was limited to 25. Two types of Sherman live traps were available: 112 Large Fording Aluminum (LFA) and 26 Small Folding Aluminum (SFA). Large Sherman traps were set at the ground level, in line, 10 m apart and small traps were set 5 m apart on combined or distinct lines, or even on lianas up to 3 m above the