

Chapter 7

A Rapid Survey of the Amphibians and Reptiles of Ajenjua Bepo and Mamang River Forest Reserves, Eastern Region of Ghana

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SUMMARY

We recorded 45 species of amphibians and reptiles (21 frogs, 1 caecilian, 13 lizards, and 10 snakes) at Ajenjua Bepo and Mamang River Forest Reserves during 12 days of fieldwork beginning 24 August and ending 4 September, 2006. The portrait of species richness at these sites decreases to only 17 species when considering only those species found in forest habitats. We documented one Near Threatened species, the Tai Forest treefrog *Leptopelis occidentalis* (IUCN 2008), which we found at both sites. Future surveys during more optimal environmental conditions are required at Ajenjua Bepo and Mamang River Forest Reserves to provide a more accurate account of the species richness remaining in these fragmented forest habitats.

INTRODUCTION

The Guinean forest of Western Africa is a center of biological diversity with considerable endemism (Myers et al. 2000). Unfortunately, the incredible biodiversity in this region faces numerous threats including logging and land conversion for agriculture (Hawthorn and Abu-Juam 1995) and the bushmeat trade (Milner-Gulland et al. 2003, Brashares et al. 2004, Cowlishaw et al. 2005). In Ghana alone, less than 15% of the original forest cover remains as a result of logging (Poorter et al. 2004). Thus, a higher value must be placed on the remaining forest fragments to ensure biodiversity preservation.

The Ajenjua Bepo and Mamang River Forest Reserves, located in the Eastern Region of Ghana, represent two isolated forest fragments that still contain suitable habitat for forest-dwelling species. The topographical complexity of Ajenjua Bepo (peaks exceeding 450 m) and larger relative size of Mamang River (53 km², almost ten times larger than Ajenjua Bepo) make them interesting sites for a comparison of biological species richness.

Amphibians and reptiles are a prominent and conspicuous component of the West African forest fauna. They can occur at high densities in the tropics and play important roles as primary, midlevel, and top consumers (Duellman 2005). For biological assessment, amphibians are especially useful for evaluating the health and integrity of the environment (Stuart et al. 2004). Amphibians respond early to environmental changes and are relatively easy to detect in even the most complex forest habitats.

The reptile and amphibian fauna of Ghana is among the most diverse and well-studied in West Africa (Schiøtz 1967, 1999; Hughes and Barry 1969; Hughes 1988; Raxworthy and Attuquayefio 2000; Rödel et al. 2003; Leaché 2005; Rödel et al. 2005; Leaché et al. 2006). This wealth of information on the distribution and ecology of amphibians and reptiles throughout Ghana, coupled with the utility of amphibians as good environmental indicator species, makes this an appropriate taxonomic group for rapid assessment.

METHODS AND STUDY SITES

We conducted a rapid assessment of amphibians and reptiles at Ajenjua Bepo and Mamang