

## Chapter 12

### A survey of the large mammal fauna of the Kwamalasamutu region, Suriname

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#### INTRODUCTION

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Historically, humans have used animals for food and a variety of other uses (Leader-Williams et al. 1990; Milner-Gulland et al. 2001). Examples all over the world show the effects of overhunting from humans, causing population declines and extinction (Diamond 1989). Overexploitation was almost certainly responsible for historical extinctions of some large mammals and birds (Turvey and Risley 2006). Large mammals are more sensitive to hunting due to their slow reproductive rates, long development and growth times, and large food and habitat requirements (Purvis et al. 2000; Cardillo et al. 2005). Today, roughly two million people depend on wild meat for food or trade (Fa et al. 2002; Milner-Gulland et al. 2003), yet the majority of hunting is unsustainable (Robinson and Bennett 2004; Silvius et al. 2005).

Subsistence hunting of terrestrial vertebrates is a widespread phenomenon in tropical forests (Robinson and Bennett 2000). In many parts of Latin America, cracid (Aves: Cracidae) populations are declining (Thiollay 2005). Subsistence hunting is an important cause of these declines (Thiollay 1989; Ayres et al. 1991; Silva and Strahl 1991; Strahl and Grajal 1991; Vickers 1991; Hill et al. 2003). The direct impacts of hunting on animal populations and the subsequent effects of exploitation on the ecosystem make attaining sustainable harvests an international conservation priority (Fa et al. 2003; Milner-Gulland et al. 2003; Bennett et al. 2007). Thus, the first step in making harvests more sustainable is to determine current levels of harvest (Milner-Gulland and Akcakaya 2001).

Mammals as a group provide the main protein source for indigenous peoples of Amazonia. Indigenous tribes have lived in Amazonia for tens of thousands of years (Redford 1992) and many, including the Trio of Suriname, still remain within the forest and hunt mammals actively. Abundances of large mammals have decreased in areas where they have been hunted (Peres 1990; Cullen et al. 2000; Hill et al. 2003). Unmanaged hunting is commonplace in the Amazon and tends to deplete game populations, often to levels so low that local extinctions are frequent (Redford 1992; Bodmer et al. 1994). Overhunting then becomes a double-edged threat: to the biodiversity of the tropics and to the people that depend on those harvests for food and income.

At the present time, little information is available on the occurrence, spatial variability in richness, and sensitivity to hunting and other disturbances of medium and large mammals in Suriname. The goal of this survey was to assess the diversity and abundance of medium- and large-bodied mammals in the Kwamalasamutu region.

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#### METHODS AND STUDY SITES

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We surveyed medium- and large-bodied mammals by means of three main methods: camera trapping, searching for scat and animal tracks, and making visual and aural observations. We also characterized hunting habits of the Trio through interviews with residents of Kwamalasamutu.