

Chapter 12

A rapid assessment of mammals of the Nassau and Lely plateaus, Eastern Suriname

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INTRODUCTION

Mammals, along with birds, constitute the most important groups of vertebrates in terms of economic importance for people. They are found everywhere in the World, and recent estimates suggest more than 5400 species (Wilson and Reeder 2005). In the Neotropical region, they are very diverse and some groups are exclusive to this geographic area. Small mammals, such as opossums, bats, and rodents, are particularly diverse and constitute a primary component of the Neotropical rainforests (Eisenberg 1989, Emmons and Feer 1997, Voss and Emmons 1996). Through seed dispersal, pollination, mycorrhizal dispersal and control of insect populations and as part of the food chain for carnivorous animals, the small mammals help in the natural functions of ecosystems. A role as indicators of environmental change has also been shown for these groups (Ascorra et al. 1996, Solari et al. 2002), with larger herbivores and carnivores acting as “umbrella species” (Primack 2002) rather than indicator themselves.

The forest of northern South America, and the Guianas specifically, support a number of small mammals in various habitats (Eisenberg 1989, Engstrom and Lim 2002, Husson 1978, Lim and Engstrom 2002; Lim et al. 2005, Simmons and Voss 1998, Tate 1939, Voss and Emmons 1996, Voss et al. 2001); in the Guayana Shield, almost 10% of the 282 mammal species known to occur may be endemic (Huber and Foster 2003). At the Nassau and Lely Mountains (Eastern Suriname), our main goal was to obtain baseline information through an inventory of mammals in most of the several habitats there presents, with emphasis on the factors affecting the sampled communities. The area has great importance because of its biodiversity (see Lim et al. 2005), its geographic location nearby areas well studied in recent times (Lim et al. in press), and also by the chance to study potential effects of mining exploitation on its mammal communities.

The Initial Biodiversity Assessment and Planning (IBAP) program of Conservation International (CI) was carried out in conjunction with BHP-Billiton Maatschappij Suriname (BMS) and the Suriname Aluminum Company LLC (SURALCO) to survey the biological diversity of the Lely and Nassau Mountains of eastern Suriname. Given that these mountains fall into an area with high priority for conservation in the Guayana Shield (Huber and Foster 2003), our aim was to provide a rapid survey of the mammals in the area to increase our understanding of the whole ecosystems and help in future decisions about mining exploitation. With these data, we compare the diversity found in the sampled areas, between them and also between eastern Suriname and others in the Guayana Shield.

MATERIALS AND METHODS

Study Area

We conducted our study from October 25 through November 06, 2005, at the beginning of the dry season. We worked for one week at each sampling site; the first locality was the Nassau Mountains (25-31 October), at 04°49.23' N, 54°36.34' W, 514 masl, and the second locality was Lely Mountains (1-6 November), at 04°16.23 N, 54°44.29" W, 640 masl. Both sites are