

Chapter 11

Rapid Assessment Program (RAP) survey of small mammals in the Grensgebergte and Kasikasima region of Southeastern Suriname

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SUMMARY

A total of 39 species of small mammals (<1 kg) were documented during a biodiversity survey conducted from 9–24 March 2012 in a remote area of Southeastern Suriname. Taxonomic composition included 28 species of bats, 8 species of rats, and 3 species of opossums. The most common bat was the larger fruit-eating bat (*Artibeus planirostris*), which accounted for 38% of total captures. Although the capture rate for rats was substantially lower, as is typical of the Guiana Shield, spiny rats composed of 2 species (*Proechimys* spp.) were the commonest. For small opossums, there were 3 species documented by 1 individual each. Of the 3 sites sampled, the lowland sites were most similar with Upper Palumeu having the highest diversity of bats and Kasikasima having the highest abundance for bats. The highland site of Grensgebergte had the highest diversity and abundance for small non-volant mammals but the lowest for bats. This region of Southeastern Suriname has a mix of primary rainforest in a mosaic of lowland and highland habitats that supports diverse and different faunal communities of small mammals. The species composition was heterogeneous with no opossums shared among sites, whereas 25% of rats and just over 50% of bats were shared among sites. The most noteworthy records were the documentation of the poorly known water rat (*Nectomys rattus*) near the open granite outcrop of Grensgebergte.

INTRODUCTION

Small mammals (bats, rats, and opossums) that are less than 1 kg in body mass comprise approximately 75% of the mammalian species diversity in the Guianas (Lim et al., 2005). However, they are poorly known in comparison to the more charismatic and conspicuous larger species such as monkeys and cats. In Suriname, there are 194 species of mammals currently known from the country. Small mammals, in particular, are important for conservation because many are seed dispersers responsible for natural forest succession, pollinators of flowers, and controllers of insect

populations through their foraging behavior and diet. High species diversity and relative abundance make small mammals an ideal group for rapid assessment program (RAP) surveys and long term monitoring. This is particularly important for regions such as the Grensgebergte area that have not been surveyed for biodiversity and conservation purposes (Husson, 1978).

METHODS

(1) The first study area (Site 1) was a camp on the Upper Palumeu River along a trail to Brazil used by the local Amerindians (N 2.47705°, W 55.62941°, 234 m elevation). It was situated in rainforest on rolling terrain and surveyed for 6 nights from 9–14 March 2012. (2) The second area (Site 2) was a granite outcrop in the Grensgebergte mountain range (N 2.52667°, W 55.77018°, 778 m) in montane forest. It was surveyed for 3 nights from 15–17 March 2012. (3) The third area (Site 4; the third site was surveyed primarily for aquatic organisms) was near Kasikasima across from an Amerindian village on the Palumeu River (N 2.97741°, W 55.38479°, 210 m). It was situated in rainforest on rolling terrain and surveyed for 7 nights from 20–26 March 2012. Mist nets were set at the base of Kasikasima mountain (N2.97741°, W55.40770°, 277 m) approximately 3 km west of Site 4 on the last evening of sampling.

Survey methods for small mammals followed standard protocols outlined in the report of an earlier RAP survey of the Kwamalasamutu region of Suriname (Lim and Joemratie, 2011). Sherman live traps of 2 sizes (23 × 8 × 9 cm and 35 × 12 × 14 cm) were used for sampling the terrestrial and arboreal rats, and small opossums. A maximum of 120 traps were set approximately 5 meters apart both on the ground and in trees along a transect within the forest. For bats, mist nets were usually set in pairs (12 × 2.6 and 6 × 2.6 m) approximately 100 meters apart within the forest understory across transect trails, over creeks, in swamps, near tree fall gaps, and by rocky outcrops. A maximum of 21 mist nets were set and opened from approximately 18:00 to 24:00 h.