Chapter 7

A preliminary survey of the ants of the Kwamalasamutu region, SW Suriname

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SUMMARY

Over 100 species of ants (Hymenoptera: Formicidae) were recorded around the Werehpai caves during the RAP biological assessment of the Kwamalasamutu Region, Suriname in September 2010. While analysis of the ant data is ongoing, preliminary results indicate that the forests around Kwamalasamutu contain a diverse and abundant ant fauna. The presence of many dacetine species typical of closed-canopy rainforest indicates that the forests are in good condition. The ant fauna of Suriname is still very poorly known, as few locations have been sampled for ants. Data on the ant fauna of the Kwamalasamutu area are valuable for eco-tourism and can help to inform tourists about the hidden fauna of the rainforest and their important roles in ecosystem function and conservation.

INTRODUCTION

When people think of the biodiversity of a tropical rainforest, many think first of the colorful parrots and macaws, the elusive yet alluring jaguars and ocelots, and the majestic towering tropical trees. However, the majority of biodiversity in a tropical forest lies in the hidden and overlooked fauna of invertebrates. Ants in particular make up over 15% of the biomass of animals in a tropical forest (Fittkau and Klinge 1973) due to their high abundance. With over 12,000 described species of ants in the world, and their social lifestyle consisting of colonies ranging in size from just a few individuals to millions of workers, ants are a dominant force in all terrestrial ecosystems, especially tropical rainforests. Due in part to their social nature, ants play many critical roles in the functioning of the tropical terrestrial ecosystem, including dispersing seeds, tending mutualistic Homoptera, defending plants, preying on other invertebrates and small vertebrates, and modifying the soil by adding nutrients and aeration (Philpott et al. 2010). Another critical function provided by ants is that of scavenging; ants are often the first animals to arrive upon a dead animal and start the decomposition process. Ants are particularly important to plants since they move soil along the soil profile through the formation of their mounds and tunnels, which directly and indirectly affects the energy flow, habitats, and resources for other organisms (Folgarait 1998).

In addition to their ecological importance, ants have several features that make them especially useful for conservation planning, including: 1) they are dominant members of most terrestrial environments; 2) they are easily sampled in sufficiently high numbers for statistical analysis in short periods of time (Agosti et al. 2000); 3) they are sensitive to environmental change (Kaspari and Majer 2000); and 4) they are indicators of ecosystem health and of the presence of other organisms, due to their numerous symbioses with plants and animals (Alonso 2000).

Ants are also useful organisms for the promotion of eco-tourism. Much of eco-tourism focuses on sightings of birds and large mammals, which are elusive and often very hard to find or see in the dense rainforest. Ants, on the other hand, are ubiquitous and can be seen as