Chapter 3

Floristic assessment of the Upper Palumeu River, the Grensgebergte, and the Kasikasima areas

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SUMMARY

We collected a total of 609 plant specimens during the RAP survey, including 433 fertile and 175 sterile plants. The majority, 238 plant specimens consisting of more than 50 percent of sterile collections, was collected in the surroundings of Kasikasima (site 4). Of these specimens, 602 were identified to family level, 512 to genus and 439 to species. The identified plant specimens belong to 354 species, 152 genera and 93 families. At site 1, along the upper Palumeu River, we collected 188 plant specimens. At the Grensgebergte (site 2) we collected 69 plant specimens and 75 at the Makrutu camp (site 3). We also collected 11 plant specimens at the Palumeu village and 27 specimens at the rapids of the Palumeu River. We found 15 new plant species records for Suriname and two new genera. Two of these belong to lianas, four to shrubs and herbs and ten to trees. The Grensgebergte and the Kasikasima Mountains contain several vegetation types which are dominant and floristically distinct for the central and southern parts of Suriname. These vegetation types include tall dryland tropical forest on laterite/granite hills, short savannah (moss) forest and open rock vegetation, including rocky outcrops around rapids, and tall seasonally flooded forest. Within these vegetation types, we recorded nearly all of the 15 new plant species records and the two new genus records for Suriname. We also recorded several rare species with only a few known occurrences in Suriname and/or in the Guianas. The noteworthy species include several rare orchids that are listed on appendices I and II of CITES, some carnivorous plants, and three tree species that are listed on the IUCN Red List, including one tree species listed as Critically Endangered. Plot surveys (0.1 ha) also indicated that the forests of South Suriname are floristically distinct from those of North Suriname, but do not significantly differ in tree alpha diversity. The forests on the Guiana Shield basement complex are not uniform as stated by some. Our findings indicate the pristine status of the forests and vegetation types in Southeastern part of Suriname, and the fact that these forests are still poorly explored.

INTRODUCTION

Plants are the principle building blocks of forests, and the fundamental components of ecosystems. On a global and national level, forests supply vital ecosystem services that sustain life on earth. Forests also support livelihood of millions of people throughout the developing world (Hall 2012). Forests in tropical regions, however, despite their importance are under pressure of global change (e.g. mostly human impacts). The countries in the Guianan region still contain large stretches of pristine tropical rainforest due to their low human populations. Together with the Amazonian forests, the Guianan forests belong to the largest area of pristine tropical rainforest in the world. Suriname, especially the southern region of the country, is the least botanically explored compared to the other countries in the Guianan region. Not much is known in terms of plant composition and diversity from the South of Suriname.

During the 2010 Rapid Assessment Program (RAP) survey around Kwamalasamutu in south-western Suriname, we recorded 9 plant species as new records for Suriname, including a newly recorded plant species for the Guianan region, and many rare and endangered species (Bánki and Bhikhi 2011). The knowledge that can be gained through this rapid assessment is needed to assess the conservation value of the forests in southern Suriname. This conservation value is needed for sound decision-making and conservation planning in the southern Suriname. During the 2012 three-week RAP survey reported here, we studied the flora of the Grensgebergte and the Kasikasima region of Southeastern Suriname. This report presents the preliminary results of the plants that were collected and inventoried.

METHODS

The floristic team consisted of approximately 10 members: André Semmy (tree spotter, plot inventories), Jeffrey Krimbo (field assistant plant collecting, plot inventories), about seven field assistants and the authors of this chapter for general plant collecting, plot inventories, and species identification.