Chapter 3

Odonata (dragonflies and damselflies) of the Kwamalasamutu region, Suriname

Natalia von Ellenrieder

SUMMARY

Odonata were studied during a Rapid Assessment Program (RAP) survey of the Kwamalasamutu area in SW Suriname. Ninety-four species, representing one-third of the species known from Suriname, were registered at forest rivers, streams, and swamps; in particular 57 species were found at the Kutari River Site (Camp 1), 52 at the Sipaliwini River Site (Camp 2), and 65 at the Werehpai Site (Camp 3). Fourteen species represent new records for Suriname, of which four, belonging to the genus *Argia*, are new to science, and five represent first records of a species at a new locality since their original descriptions, increasing considerably their known extent of occurrence. The results indicate a healthy watershed and well preserved forest at all three sites; if forest cover and stream morphology are maintained in the area, the present odonate assemblages are expected to persist.

INTRODUCTION

Dragonflies and damselflies (Order Odonata) are widespread and abundant in all continents with the exception of Antarctica, with centers of species richness occurring in tropical forests. As larvae they live in aquatic habitats and use a wide range of terrestrial habitats as adults. Larvae are sensitive to water quality and habitat morphology such as bottom substrate and aquatic vegetation structure, and adult habitat selection is strongly dependent on aerial vegetation structure, including degrees of shading. As a consequence dragonflies show strong responses to habitat change such as thinning of forest and increased erosion. Common species prevail in disturbed or temporary waters, whereas pristine streams, seepage, and swamp forests house an array of more vulnerable, often localized species. Thus odonates are useful for monitoring the overall biodiversity of aquatic habitats and have been identified as good indicators of environmental health (Corbet 1999; Kalkman et al. 2008). Due to their low species numbers relative to other insects (about 5,700 species worldwide) they also constitute an ideal target group for a Rapid Assessment Program because it is feasible to fully document their species diversity for a particular area in a relatively short period of time. This is the first instance where odonates were included in a RAP survey in South America. The taxonomy of the odonates from Suriname is relatively well known in general compared to that of other South American countries, since two odonate specialists devoted over 60 years of continuous research to its study (Geijskes 1931, 1943, 1946, 1954, 1959, 1976, 1986; Belle 1963, 1966a, 1966b, 1970, 1984, 1992, 2002). However, no published data regarding regional distribution or particular ecological requirements of the odonates from Suriname exists at this moment, and the Kwamalasamutu area has never before been sampled for odonates.