Abstract

Tropical areas are usually expected to be a stable environment when compared to the temperate zone. This is true especially for the temperature and the day length which ensure relatively stable food supply. As a consequence, tropical birds, especially rainforest species, are thought to breed all year round. But even in the tropics, breeding can be synchronized with some fluctuating environmental conditions such as rainfall and differences in food supply and breeding and singing activity may occur seasonally in tropical rainforest as well. But the data for testing these assumptions are still scarce. In the first part of my thesis, I focused on the seasonality in breeding activity in various feeding guilds of birds inhabiting tropical rainforest on Mount Cameroon in three different elevations – lowland, submontane and montane forest. The second part focuses on the seasonality in singing activity at both population and species level. I also compared singing activity with the data on breeding activity. The extent of breeding activity differed between feeding guilds and I showed preferences of different guilds to different seasons for breeding. Most of the groups, especially insectivorous birds, bred in the beginning of the dry season, except of species searching for invertebrates on the ground. These species bred mostly during the wet season. Contrary to my assumptions, I did not find any significant differences in breeding activity between elevations. But I found significant difference in the number of species vocalizing between elevations. Most of the species were recorded in the lowland forest where there was also the highest species turnover in the course of the year. The number of species vocalizing was dependent on the amount of rainfall and the temperature in all three elevations. The number of species decreased with increasing amount of rainfall and decreasing temperature. In some selected species I observed different singing activity in the course of the year. Species sang more often during the season when higher breeding activity of corresponding guild was confirmed. Thus, I confirmed relation between breeding and singing activity in tropical birds.

Key words: tropical rainforest, breeding seasonality, singing activity, altitudinal gradient, Mount Cameroon