

## **Abstract**

The aim of this thesis is to describe the changes of bird species diversity along elevation gradient on six mounts in Cameroon and nearby Bioko island. The results of the analyses confirm most of the defined hypotheses, especially they show that species diversity declines with altitude and rises with area. The absolutely highest diversity was detected on mount Kupé and mount Cameroon, but above 2100 m above sea level mounts Oku and Manenguba are the most diverse. Other analysis showed that the biggest changes in beta diversity of bird assemblages along altitudinal gradients are on the lowest elevational belts which are on the edges of a degraded habitats and continuous undisturbed forests. Other important changes in bird assemblages happen around altitude 1200 m, where the assemblages of lowland rainforest change to assemblages of mountain forest. Analyses of affinity of bird species to forest habitat showed that the most affined assemblages to the forest are those found on mounts Kupé and Rata. On the other hand bird assemblages on mounts Manenguba and Oku are the one of least affined to the forest biotope. Analysis of habitat generalism and specialism did not show the expected outcome and for clearer results the design of analysis needs to be improved. The results of this thesis contribute to a clearer notion about factors influencing species diversity; however, more thorough data and data extension for e.g. bird abundance would enrich the study and it would enable us to perform more detailed diversity analysis.

## **Keywords**

Species diversity, Cameroon, bird assemblages, elevational gradient