

Abstract in English

Mt. Cameroon is a hotspot of diversity and endemism in Africa. Recent research of avian bird communities along the elevational gradient on Mt. Cameroon based on point counts has shown low-elevation plateau of species richness. At the same time, range-restricted montane populations of birds on Mt. Cameroon are unusually abundant if compared to lowland species. I analysed data on community composition, species richness and abundance of birds using an alternative quantitative method - 200 m of understory mist nets erected for three consecutive days across seven elevational plots along the forested gradient of the Mt. Cameroon. First, I looked at the technical limits of this method and confirmed the general opinion that they are better at detecting small birds below 33 g, and that they mostly detected fewer individuals after the first day and always detected fewer new species after the first day of mist-netting. Mist nets detected high proportions of ground-feeding and understory birds and low proportions of birds foraging in higher strata in the lowland forest, which has a scarce understory and a dense canopy. Mist nets recorded similar proportions of birds foraging in all forest strata in the vastly open mid-elevation forest, which has a dense herbaceous understory. They detected higher proportions of canopy-foragers in the montane forest, which has a dense understory and an open canopy. Second, I looked at the efficiency of mist-netting in detecting elevational patterns in the ecology of birds on Mt. Cameroon. Mist nets recorded higher species abundances in the montane forest, and very low abundances or a complete lack of understory and ground-feeding foragers at the foothill of the mountain. Mist-netting data also revealed that the species richness along the elevational gradient follows a hump-shaped pattern with a mid-elevational peak. Finally, I compared data that were collected by mist nets and point counts and found that point counts are better than mist nets at assessing species richness and abundance, especially in the lowland forest where mist-nets missed a great part of the community. The two methods were equally good at detecting some ecological patterns: mist nets and point counts recorded similar patterns of species turnover along the forested gradient as well as a similar increase of individuals per species with growing elevation. The two methods also uncovered similar elevational patterns of community composition in terms of the birds' feeding guilds. Mist-netting recorded 9 species that were completely missed by point counts. I confirm that the efficiency of both methods is habitat-dependent, and that they should be used simultaneously for the sake of reaching the most accurate results possible, as each method is a valuable complement to the other.