

Biodiversity and Microsite Divergence of Insects at “Evolution Canyon”, Nahal Oren, Mt. Carmel, Israel. II. Orthoptera: Acrididae

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ABSTRACT

Fifteen species of grasshoppers were recorded from “Evolution Canyon”, Lower Nahal Oren, Mt. Carmel, Israel. Species richness and abundance in those were higher on the African savanna like south-facing slope (SFS) which is drier, warmer and climatically more fluctuating than the cooler and climatically less fluctuating north-facing slope (NFS) covered by a dense brushwood forest. Only one species of European origin, *Oedipoda caerulescens*, was recorded and, interestingly enough, this was the only species significantly more abundant on the NFS than on the SFS. Specimens of *O. aurea* were in general significantly larger in size and lighter coloured on the SFS than on the NFS, but on both slopes the specimens collected from darker soil habitats were darker than the specimens collected from lighter coloured rock habitats.

Key words: Grasshoppers, pigmentation, variation, body size, species richness, abundance

INTRODUCTION

The relative role of evolutionary forces controlling heterogeneity of biodiversity at the microgeographic level is uncertain. In the present study, we examined the pattern of biodiversity differences of grasshoppers between the spatiotemporally warmer, drier and microclimatically more fluctuating south-facing slope (SFS) and the cooler and microclimatically more stabile north-facing slope (NFS) of a typical Mediterranean canyon within the Carmel ridge of northern Israel.