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Distribution, Abundance and Life Cycle Strategies of Some Grasshoppers and The Ground hopper of the Aripo Savannas.

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On the Aripo Savannas three orthopteran species are the dominant herbivores. This study investigated the spatial distribution, seasonal abundances and life cycles of these three species.

Insect abundances were determined by a sweep-net sampling programme, over a 13-month period. A Point-Quadrat method was used to estimate vegetation cover and density.

Vegetation structure was found to influence distribution of the insects. Two grasshopper species, *Leptysma filicornis* and *Orphulella punctata*, were most abundant in areas with heavy cover and density and tall vegetation, whereas *Tettigidea sp.*, a groundhopper, preferred areas with low vegetation cover and density and short vegetation. This distribution is thought to be related to the feeding habits of the three species, as the two former feed on grasses and sedges, while the latter feeds on decomposing vegetable matter, lichens, algae and mosses on the surface of the soil. Of the three species, *Tettigidea sp.* was the most abundant followed by *L. filicornis* and lastly by *O. punctata*.

The *L. filicornis* population fluctuated proportionally to seasonal changes in rainfall, the dry season being an unfavourable period during which numbers dropped. The *O. punctata* population showed only a slight fluctuation of this type. The occurrence of nymphal stages throughout

the year indicated that these two species reproduced continuously. *Tettigidea* sp., whose adult population was not affected by seasonal changes, had a bivoltine life cycle with two discrete generations. Egg hatching in this species appeared to coincide with particular levels of soil moisture; this factor is thought to be the stimulus initiating hatching.

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