

41. The Role of the Camel in the Preservation of the Flora Covered Rangeland

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Introduction

Seed dispersal by animals (the zoochory), particularly the endozoochory is one of the crucial elements for the ecological balance of ecosystems. In Sahara, the camel is the main farm animal using resources desert flora (Ghauthier Pilters, 1977 and Chehma *et al.*, 2010) and can thus contribute to the transfer of seeds per endozoochory. The role of disseminator camel has long been noted (Grenot, 1968 ; Barkoudah and Van Der Sar and Corraera, 2006) but no real study has focused specifically on this interesting aspect of its ecology. The aim of the present study was to highlight the quantitative importance of seeds transferred the camel on the basis of the analysis spatiotemporal its faeces.

Methodology

Samples of droppings fresh faeces, scattered on the ground, several individuals (different sexes and ages) were collected into two areas involving the six types of journey camels; Ghardaia (wadi bed, Depression and Hamada) and Touggourt (Reg, Salty soil and Erg) for the four seasons of the year 2009/2010.

The seeds and faeces were selected, coded and counted in several types. They were been classified according to their morphology, size and color before they were stored in sealed bottles.

Results and Discussion

The total number of seeds identified in the faeces of the camel was representing seeds of a 2967 spatiotemporal. Differences in morphological (shape, size and color) seeds were observed and grouped into 35 different types representing 35 species.

The number of seeds depending on the areas identified. The results showed that the largest recorded in the Ghardaia region with 1802, Touggourt with 1125 seeds. Chehma *et al.* (2008) show a low record of the river seeds, while the lowest of phytomass, reg and salty soils, seeds and the highest values of phytomass and reg and salty soils, the lowest.

This study showed that the area of Ghardaia is 94.3% and 60% Touggourt of seed types identified. The inequality, two harvest areas is closely related to the types of rangeland that make up each.

During summer, 1609 seeds were collected and this figure is of five times more than the other seasons, followed by winter and spring with 516 and 422 seeds and then fall with 420 seeds. This might be due to variability of the production time of phytomass grazed rangeland.

The number of identified 35 types is unevenly distributed according to the season. The season summer is the most represented with 28 types, followed by the fall with 21 types, then winter with 15 and 12 types in spring. This uneven distribution is due to the phenological stages of Sahara plants.

Our results showed the special role of the dromedary as a vector seed dispersal in terms of quantity and quality. In addition, faeces offer conditions for the preservation and seed germination. From this we can assume that camel is helping to preserve its environment and its role in seed dispersal may be ecologically important in the community extremely fragile.

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