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Food Preferences of the Crested Porcupine *Hystrix cristata* L., 1758 (Rodentia: Hystricidae) in South-Eastern Tunisia

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Abstract: The present work is focused on the diet of the crested porcupine *Hystrix cristata* L., 1758 in South-Eastern Tunisia. Feeding habits of this species were assessed through faecal analysis in both cold and warm months: 105 samples of faecal pellets of porcupine were collected during two seasons. We found that wild species dominated the diet of this large rodent in both seasons, represented by 15 species. The most frequently recorded species in both seasons were *Stipa lagascae* (20.54%), *Hedysarum carnosum* (10.26%) and *Hordeum marinum* (9.69%). In summer, the diet included also potatoes (*Solanum tuberosum*), barley (*Hordeum vulgare*) and figs (*Ficus carica*), of which barley was the most common species.

Key words: *Hystrix cristata* , feeding habits , faecal analysis , South-Eastern Tunisia.

Introduction

Rodents represent an important link between plants and predators (Botkin & Mellilo 1981). Previous studies have shown that herbivores have important role in regulating biological processes at different temporal and spatial scales (e.g. Seagle et al. 1992). They can affect the production of an ecosystem through food selection, which can change the structure of the plant communities (Zimmerman & Neuenschwander 1984, Belsky & Blumenthal 1997). The porcupine *Hystrix cristata* L., 1758 (Rodentia: Hystricidae) is a protected rare species in Tunisia (Bernard 1969, Cuzin 2003, Mohamed 2011). It is a herbivore rodent, which is a subject of growing interest in agrosystems, especially in farms suffering from damages caused by this species on vegetable crops. However, there is a lack of information on the biology of the porcupine in Africa, both in general and in Tunisia. Contrary, several studies concerning the diet of *H. cristata* have been carried out in Italy (Santini 1980, Pigozzi & Patterson 1990, Bruno & Riccardi 1995, Lucherini & Lovari 1996, Massei et al. 1997, Bozzi & Lovari 1999, Lovari et al. 2013, 2017, Mori et al. 2014a, 2017).

Knowledge of diet of wild mammals in their natural environment is of fundamental interest for understanding the ecology and organising the management of species and habitats (Symondson 2002, Krahn et al. 2007). Two main approaches have been used ub studying diet of mammals: the "direct" approach, based on the observation of animals during their feeding phase, and the "indirect" approach, based on analyses of faeces or samples taken from digestive system of animals. Historically, the application of the indirect approach in dietary studies of a number of species relies on the identification of the stomach contents of killed individuals (Murie & Lavigne 1986, Perez & Bigg 1986). More recently, emphasis has been placed on the development of alternative non-destructive methods for determining diets (Butet 1987,

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