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THE HISTORICAL PRESENCE OF THE BROWN BEAR IN THE APENNINES

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Research on historical archives and literature of past centuries has revealed that the former distribution of the Marsican brown bear (*Ursus arctos* L.) was much more widespread than that of today. Their range extended from the Sibillini mountains to the Apennines of Molise. At present, the species inhabits an area which includes Abruzzo National Park and its surrounding area, and extends to the Majella Massif. The preservation of the Marsican brown bear was seriously threatened by contraction of their range and reduction of the population. There are two major explanations for this situation:

1. hunting
2. changes in land use during the last century and their consequent impact on the environment

Information about population trends and the reasons for the numerical decline in the bear population are vital to the formulation of the measures which may be enforced to preserve this species.

I. Introduction

While the past and present distribution of the brown bear (*Ursus arctos* L.) in the eastern Alps is relatively well documented (Castelli 1935, Couturier 1954, Pedrotti 1972, Daldoss 1973, 1976, Osti 1975, Roth 1978, Roth & Osti 1979), little is known about the brown bear's presence along the Apennine chain during the past centuries. Therefore, the aim of this study is to examine the presence of brown bear in the Apennines in past centuries. It is our contention that information about the historical range of the species is important for management of the present-day population.

II. Study area

The area examined in our historical research is that of the Apennines, a mountain range which stretches along the Italian mainland in a north westerly – south easterly direction, with one north eastern and one south western slope. The principle mountain massives rise to 3000 m. above sea level, while the usual height along the entire range is about 1500 m above sea level. The climate is temperate-cold. Vegetation consists mainly of beech (*Fagus sylvatica*), oak woods/turkey oak (*Quercus cerris*), chestnut (*Castanea sativa*) and oak (*Quercus pubescens*), along with other combinations (*Orno ostrion*) at lower altitudes. The only cultivated areas are some irrigable fields at the bottom of valleys, and certain areas of extensive cultivation associated with cattle breeding usually located below 1000 m above sea level.

The fauna includes a low density of wolf (*Canis lupus* L.), a normal presence of wild boar (*Sus scrofa* L.), occurrence of deer (*Cervus elaphus* L.), and roe deer (*Capreolus capreolus* L.) only in few areas.

III. Material and methods

This research, which is still in progress, involves systematic study of many historical texts from several archives, which deal with agriculture, forestry and hunting of the fauna present in the time period examined.

IV. Results and discussion

Results of six months' research, where 29 different literary sources printed between 1750 and 1926 (see historical literature) were examined, are presented in a preliminary report. During the first stage of our research, we intentionally concentrated on studying text relating to areas close to those which the brown bear inhabits in the Apennines today (Altobello 1921, Zunino & Herrero 1972, Zunino 1976, Zunino & Roth 1981, Fabbri et al. 1983, Boscagli 1987, 1989). A map showing historical and present day distribution of bears around the Abruzzo National Park is given in Fig. 1.



Although it is too early to draw definite conclusions, a preliminary analysis of the literature, where the brown bear was mentioned 57 times, indicates that the brown bear inhabited mountainous areas 800 m above sea level and dense forests (mainly beech and oak woods). It is interesting to note that all of the present day "anomalous" occurrences of bears, i.e. outside areas normally associated with the species, coincide with areas formerly inhabited and in particular, from the Apennines mountains to the northwest and northeastern sections of the Abruzzo National Park. It would appear that the sharp reduction in range which has taken place during the past 200 years has been caused by hunting and serious changes in land usage in the last century. The brown bear was therefore forced to inhabit protected areas within Abruzzo National Park. We have deduced from our data that areas suitable to the biological requirements of the bear, were once much more extensive than those inhabited by the species at the present time. Several areas previously occupied by bears are still suitable habitat for this plantigrade species. The reduction of the bears range is not proportionate to the decrease in potentially suitable habitat, but related to persecution by man.

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