

Evolution of the Grey Partridge (*Perdix perdix*) Population in the Corbii Mari Hunting Fund (Dâmbovița)

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Introduction

Hunting should be a conscious activity, through which a renewable natural resource is exploited in a sustainable manner. Grey partridge - *Perdix perdix* (Linnaeus, 1758) population showed drastic decreasing numbers throughout Europe in recent decades, despite it being a common species in western Eurasia. The purpose of this study was to analyze the trends of the Grey partridge population, identify threats to the species (including hunting and poaching) and establish conservation measures for the species in the study area.



Materials and Methods

The Grey Partridge is a game bird species. The research was carried out on the territory of the Hunting Fund no. 29 Corbii Mari managed by A.J.V.P.S DÂMBŌVIȚA. The Hunting Fund Corbii Mari is located in the southern part of Romania and Dâmbovița County. The area occupied by the hunting reserve is 5 758 ha (agricultural land - 85%, vineyards, orchards, grazing land - 6%, forests – 8% and waterland – 1%). The Grey Partridge can be

considered a barometer species for the future of biodiversity in the study area, for management actions. The assessment of the number of specimens was carried out all year round, and in teams in the spring, between May 15 and June 15, between 2011 and 2022, through repeated observations, morning and evening, with binoculars over the entire surface of the hunting fund, using the direct observation along transects and from fixed points.



Results and Discussions

During the research period, we observed negative trends in the studied population. Therefore, regarding of the dynamics of the number of specimens, according to official records, it was observed that the population is in slight decline, from 210 specimens (in 2011) to 187 specimens (in 2022), and the harvest has decreased from 60 specimens (in 2011) to 5

specimens, starting with 2015, until now. The hunting quota was determined according to the spring density. However, although according to official data, hunting records, the population is in slight decline, in the field we observe a collapse in the number of partridges compared to ten years ago, especially on lands with monocultures, accentuated mechanization and intense chemicalization (intensive agriculture).



Figure 1: Spring populations (effective), the hunting quota (cota de extras) and harvest (recolta) per hunting season

We must integrate species conservation with traditional agricultural practices. Excessive hunting without a management model affects the viability of the population (population growth rate and extinction risk) and the quota must be set to zero when reproductive success is poor.

Conclusion

Perdix perdix is a very affected species among all the species of hunting interest studied in this hunting fund, having the most natural enemies found in the area of the hunting fund - from birds of prey, to marten, European polecat, fox and, especially, jackal, but also intensive agriculture through the large-scale use of pesticides. The current threats to the species are numerous: habitat loss, monocultures, the disappearance of huts, cultivation under plastic, intensive agriculture, hunting, poaching, natural predators, cats, dogs, cold winters. etc. We propose management actions. In addition, it is necessary to control poaching and temporarily limit hunting.

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