

— SHORT COMMUNICATION —

Reintroduction and hunting harvest of the wild boar (*Sus scrofa* Linnaeus, 1758) (Mammalia, Suidae) in the Peloponnesus, southern Greece

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This study refers to the reintroduction of the wild boar (*Sus scrofa*) in the Peloponnesus. In particular, it deals with its extinction, the recent releases, and the present hunting harvest. This species has been reported in the Peloponnesus since ancient times until approximately the first half of 1830s. Since then and until 1988, no reference of its presence had been recorded in the Peloponnesus. From 1988 to 2004, a systematic release of the species has been carried out from the Hunting Associations of the Peloponnesus using individuals originating from areas of northern Greece and Sterea Hellas. During this period, a total of 78 wild boars were released (25 males and 53 females). Based on the results of this study, in 2003 approximately 1700 hunters were systematically involved in the hunting of the wild boar, while during the period 2001-2003, a total of 1957 wild boars were hunted in Peloponnesus. The results of the present study indicate that the reintroduction of the wild boar in the region of Peloponnesus was successful. The success of the reintroduction could mainly be attributed to the suitable habitats of the release sites, the absence of large carnivorous mammals (specifically the wolf) and the ten-year ban on hunting.

Key words: reintroduction, *Sus scrofa*, wild boar, hunting harvest, Peloponnesus.

INTRODUCTION

The presence of the wild boar in the Peloponnesus dates from ancient times. Several archaeological findings like vessels, frescos, and statues verify the presence of the wild boar in the region. Moreover, Koukoulos (1952) noted that during the 15th century Emperor Ioannis Komninos hunted wild boars in the mountain ranges of the Peloponnesus.

The wild boar existed in various areas of Peloponnesus until approximately the first half of the 1830s. Pouqueville (1820) noted that during his tours in mountainous areas of the Peloponnesus in 1814, he frequently encountered many wild boars. However, Stefanou (1974) based on historical documents, noted that King Othonas in 1834 was frequently going for

wild boar hunting to the region of Lavreotiki, Sterea Hellas which is situated at a long distance from Nafplio, Peloponnesus (capital of the Greek kingdom at that time). This fact implies that the wild boar was probably absent from the Peloponnesus at that time. The absence of the wild boar is probably related to a significant ecological destruction that took place in the Peloponnesus in 1826. During that year, the Turk Ibrahim Pasha burned all cultivations and a large part of the forest areas of the Peloponnesus. This event probably caused a significant decrease of the wild boar populations due to the destruction and fragmentation of its habitats. As for the wild boars survived, in the ensuing years until approximately 1830, they were probably consumed by carnivores (wolf, jackal, birds of prey) and by the local people in their attempt to survive. In 1923, after the enforcement of the first legislative degree concerning hunting, the

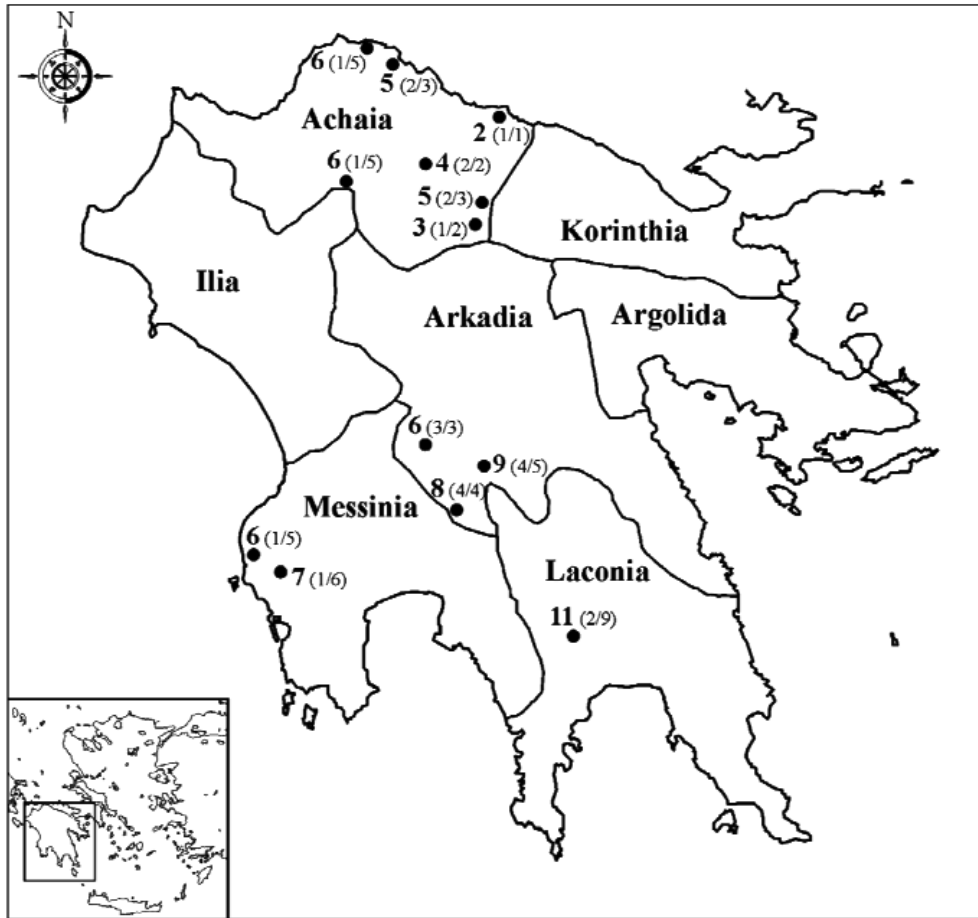


FIG. 1. Map of the Peloponnese indicating the wild boar release sites during the period 1988-2004. Numbers in bold indicate the number of wild boar individuals released while numbers in parentheses indicate the number of males and females respectively.

forestry officers carried out reports on the status of the game animals. According to these reports, no wild boars had been recorded in the Peloponnese for many years (Kalemis, 1997).

From 1988 to 2004, there was a systematic release of the species from the Hunting Associations of the Peloponnese with individuals coming from northern Greece and Sterea Hellas (Fig. 1) (Panagiotis Konstantopoulos, 3rd Hunting Association of the Peloponnese, personal communication).

Few studies exist on the reintroduction of the wild boar in countries of Europe. Leaper *et al.* (1999) discussed the feasibility of the reintroduction of the wild boar in Scotland, while Randi (2005) reported on the genetic consequences of wild boar reintroduction in areas of Italy. Some additional information has been given only by Hadjisterkotis (2004) and Hadjisterkotis & Heise-Pavlov (2006) who discussed on the fail-

ure of the introduction of the wild boar in Cyprus. With respect to Greece, to date, there is little information on the species. Some data have been published on its feeding habits, populations, genetic structure and the hunting behavior of the wild boar hunters (Paralikidis *et al.*, 2004; Tsachalidis *et al.*, 2004; Sfougaris, 2005; Sfougaris *et al.*, 2005; Tsachalidis & Konstantopoulos, 2005; Paralikidis *et al.*, 2006; Alexandri *et al.*, 2008; Tsachalidis & Hadjisterkotis, 2008).

The aim of the present study was to assess whether the reintroduction of the wild boar in Peloponnese had been successful.

MATERIALS AND METHODS

Data collection

The data concerning the releases and hunting licenses were obtained from the Peloponnese Hunting Fed-

eration records whereas the data concerning the hunting bags 2001-2003 originated from analysis of information collected from specific questionnaires distributed to the gamekeepers. Finally, the historical evidence comes from relevant book sources (Pouqueville, 1820; Stefanou, 1974; Kalemis, 1997).

RESULTS AND DISCUSSION

Figure 1 demonstrates the distribution of the wild boar release sites during the period 1988-2004. A total of 78 wild boars (25 males and 53 females) had been released in different areas and the sex ratio was 1:2 (male/female). The dominant vegetation of the release areas is characterized by a wide variety of species (e.g., *Quercus pubescens*) that provide the best quality and highest abundance of food for the wild boar. The constant enrichment of the release areas with new individuals from different areas of Greece played a significant role in the success of the reintroduction, since for 16 continuous years the population of this species was genetically renewed and it was not degenerated due to inbreeding (Vernesi *et al.*, 2003).

Table 1 shows the average number of hunting licenses in each prefecture of the Peloponnese for the time period 2001-2003 as well as the respective numbers of wild boar hunters for 2003. Furthermore, the number of harvested wild boars in certain prefectures

during 2001-2003 is also given. Among all prefectures the highest proportion of wild boar hunters is found in Argolida although this prefecture had the lowest mean number of hunting licenses in the Peloponnese (Table 1). The high proportion of hunters should be attributed to the fact that this area does not have a variety of game species and as a result the hunters of Argolida have limited opportunities for game choice and thus, they hunt the wild boar more often.

From the values of Table 1 it is illustrated that in 2003 the hunting harvest of the species was much higher in relation to the two previous years. According to the hunter statements this is a result of their growing hunting experience on this game species, the better knowledge of the species territory as well as the increased hunting pressure. Moreover, during 2003, in Arkadia female harvest was higher than the male, a fact that should be carefully considered since it may decrease the reproductive and population growth rate. A total of 1957 wild boars were hunted during the three study years (2001-2003). This number is underestimated by approximately 10% since illegally and occasionally hunted wild boars are not included.

The results of the reintroduction of the species in the Peloponnese could be considered successful. This should mainly be attributed to the proper sex ratio of the wild boars released and the suitable habitats

TABLE 1. Mean number of hunting licenses in the prefectures of the Peloponnese for the period 2001-2003 and number of wild boar hunters for the year 2003. The number of harvested wild boars in two prefectures for the period 2001-2003 is also given. For the other prefectures no relevant data were available

Prefecture	Mean number of hunting licenses (2001-2003)	Wild boar hunters (2003)	Number of harvested wild boars					
			2001	2002	2003		Total	Total
					Males	Females		
Arkadia	4587	370	–	–	–	–	–	–
Megalopoli*	–	–	135	126	149	225	374	635
Tripoli*	–	–	140	107	76	136	212	459
Tropaia, Bitina, Dimitsana*	–	–	116	111	200	189	389	616
Argolida	2585	310	–	–	–	–	–	–
Achaia	7849	410	–	–	–	–	–	–
Kalabrita, Klitoria*	–	–	105	64	58	20	78	247
Ilia	7406	240	–	–	–	–	–	–
Korinthia	3903	80	–	–	–	–	–	–
Lakonia	4905	40	–	–	–	–	–	–
Messinia	7588	250	–	–	–	–	–	–
Total	38823	1700	496	408	483	570	1053	1957

* = sites of harvested wild boars

of the release areas (dense vegetation, increased availability of acorns and water). Furthermore, the absence of wolves during the release period (the wolf existed in the Peloponnesus approximately up to the early 1930s) contributed to the population growth of the wild boar, since this species constitutes a major prey for the wolf (Migli *et al.*, 2005). Moreover, the wild boar population increase should also be attributed to the ten-year ban of hunting (1988-1997) and the abandonment of the mountainous areas from the local populations due to urbanism.

The reintroduction of the species after many years was also studied in Cyprus in 1990 (Hadjisterkotis, 2004). However in 2006, the same author reported a failure of this introduction due to the lack of suitable habitats, the increased hunting pressure and inbreeding (Hadjisterkotis & Heise-Pavlov, 2006).

The results of the present study indicate that there is a great interest from hunters of the Peloponnesus in this species. However, the proper management of the wild boar in the Peloponnesus requires a systematic monitoring program of its populations and harvest as well as the sustainable management of its habitats, especially after the huge forest fires in the region in 2007.

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