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edited by Roberta Chirichella and Damiano G. Preatoni



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## Riassunti: Comunicazioni e Poster

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Comune di Cogne

#### Relationship between wolf, wild boar and collective hunting: beyond popular belief

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The presence of wolf in highly anthropized areas, lead to an increase of conflict with humans since impact on anthropic activities such as livestock breeding as well as on wildlife of hunting interest (i.e., wild boar and roe deer). While wolf-livestock conflict was strongly debated and several strategies were adopted to face this conflict, lack of knowledge are available on wolf impact on species of hunting interest, fueling the popular belief of wolf as a competitor of hunters for wild boar. The aim of this study was to assess the impact of wild boar collective hunting on wolf persistency on the territory as well as of wolf presence on wild boar population in a highly atrophic area of lower Pisan hills of 1295 ha (Casciana Terme-Lari and Crespina-Lorenzana, Tuscany, Italy).

Between 2018 and 2021, twenty camera-traps were permanently placed in the study area where a wolf pack ranging from 5 to 10 individuals is present. Impact of wild boar collective hunting on wolf pack was assessed by compare the frequency of video-capture events of wolves recorded in the wild boar hunting period (November to January) with those of non-hunting period (February to October) in the hunting seasons 2018/2019, 2019/2020 and 2020/2021. For each hunting season, both the number of weekly collective wild boar hunting events and the total number of culls carried out were recorded.

In 2018/2019 and 2019/2020 the frequency of wolf video-

capture events did not show statistical differences between the hunting and non-hunting period, while in 2020/2021 resulted significantly higher in the non-hunting period than in the hunting one ( $\chi^2$ =48.6665; p<0.001). In the hunting seasons 2018/2019, 2019/2020 and 2020/2021 a total of 108, 90 and 60 wild boars were killed during collective hunting, respectively. In the third hunting season, wild boar collective hunt events were performed 3 times/week but only for two months instead of three as in other two seasons due to COVID19 pandemic. Moreover, three young wolf-wild boar interactions were recorded during the monitoring period and in all cases young wolves quickly escaped from the wild boar adult male.

The absence of significant variation in the frequency of wolf video-capture events between hunting and non-hunting seasons in 2018/2019 and 2019/2020 suggests that wild boar collective hunting does not affect wolf pack persistency on the territory. In June 2021 the pack has chosen a rendezvous area in a place monitored by a camera-trap that have determined the higher frequency of wolf video-capture events recorded in the non-hunting season 2020/2021 than in the hunting one. Number of killed wild boar recorded suggests a low impact of wolf presence on wild boar population in this study area and the lower number of wild boars killed in the third hunting season is attributable to the shorter period of hunting

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# Never stop looking: multi-year pack dynamic, genetic variability and introgression estimates in a small still-growing wolf population of the Northern Italian Apennines

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Human persecution and habitat decline are global threats for

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the wildlife, especially for large animals. Despite this trend, in Europe several large carnivore populations are growing, due to species conservation laws and changes in human activity in rural areas. In Italy, the wolf has had a recent transition from threatened to locally abundant, after naturally recolonizing the country. Different studies have investigated the first years of

this expansion and those focused on identifying family groups with non-invasive genetic sampling were particularly useful in understanding packs dynamics.

However updated information are lacking in the Apennines,

despite their importance in checking if the population is still

growing and healthy. We focused on a National Park in the

Northern Apennines, where noninvasive genetic sampling was carried out from 2002 to 2020. We assessed the status of this small population, checking if the number of packs has changed across the years, if families were stable and the status of genetic diversity. We found a numerically healthy still-growing population, with long-lasting families showing a significant female-biased philopatry. On the contrary, genetic diversity decreased in the last years and road kill resulted as the majority cause of death in wolves found dead in the study area. These results highlight the importance for protected areas to keep checking their populations' status, in order to detect possible threats and guarantee genetic flow among different populations of the same species.

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