34th International Union of Game Biologists
(IUGB) Congress 2019

IUGB 2019
Lithuania

LITHUANIAN
RESEARCH CENTRE
FOR AGRICULTURE
AND FORESTRY

34 IUGB CONGRESS

Kaunas, Lithuania

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ABSTRACT BOOK

34TH INTERNATIONAL UNION OF GAME BIOLOGISTS (IUGB) CONGRESS 2019

KAUNAS, LITHUANIA, 26-30TH AUGUST 2019

An **essential key** of the **34th IUGB Congress** referred to **Wildlife: Coexistence or Opposite?**

The 34th IUGB 2019 Congress presents research related to forestry, agriculture, hunting, recreation, urbanization, climate change, ecosystem and economic development, and human-wildlife coexistence. Managers of natural resource as foresters, hunters, soil and water conservationists, civil engineers, urban and land use planners and researchers no longer have the luxury of thinking of themselves in isolation from one another. They work within the same environment (landscapes, watersheds, and communities).

Since the 1980s, sustainability has served to bind together the many intersecting social and environmental issues, from climate changes and biodiversity loss to population growth, global poverty, and public health. Sustainability of human development is feasible if it does not destroy the ecosystems on which people and wildlife depend. Since Aldo Leopold's Land Ethic (1949) that was one of the first clarion calls announcing a new era of thinking about Nature, however, around the world, human populations still continue to grow and anthropogenic ecosystem changes increasingly affect wildlife. Habitat degradation, fragmentation as well as climate warming not only may decrease food availability and destroy the movement of animals but also may increase the opportunity for contact among humans, livestock and wildlife, potentially enhancing disease transmission rates. Concurrently, infectious diseases

are identified as an increasing threat to wildlife conservation. There is perception that infectious diseases were previously under control, because of their rapid spread while development of drugs and vaccines to combat some of these is, unfortunately, slow and costly.

Over the course of time, conflict management strategies earlier comprised lethal control, translocation, regulation of population size and preservation of endangered species. Recent management approaches attempt to use scientific research for better management outcomes, such as behaviour modification and reducing interaction. As human-wildlife conflicts inflict direct, indirect and opportunity costs, the mitigation of human-wildlife conflict is an important issue in the management of biodiversity and protected areas. Maintaining biodiversity is an enormous challenge and depends on knowledge of the complex interdependencies between human and wildlife. Evaluating the state of wildlife in relation to human wellbeing underpins our ability to sustainably manage natural resources while delivering development goals.

The **International Union of Game Biologists** (**IUGB**)
is a non-profit organisation with international membership. It has its legal domicile in Cernier, Switzerland. Its actual bylaws have been signed in Moscow, in 2009.

The aims are to promote the improvement of knowledge about game biology and any other skill related to wildlife, such as wise use of animal populations and the conservation of their habitats. To reach this aim, a conference is taking place every two years since 1954. Over time, IUGB has become a platform that allows networking between its Members.

The IUGB objectives are as follows:

- organize an international congress every two year;
- promote the concept of sustainable use of wildlife resources;
- stimulate research and international technical cooperation in the elaboration of new models of development and management of renewable resources, integrating the objectives of wildlife conservation, wise land use and economic decisions;
- promote awareness and appreciation of wildlife values;
- support and advances high standards of education and professional performance in the field of wildlife management;
- contribute to the solidarity amongst its Members;
- is committed to the protection of wild animals and the conservation of species;
- exchanges information and encourages other forms of collaboration between this and other associations in allied scientific disciplines.

To achieve its objectives, the IUGB shall:

- organise, cosponsor and promote scientific meetings, training seminars, excursions and similar events;
- undertake publication of the results of its scientific meetings, encourage submission of scientific articles to peer reviewed journals, etc;

- issue international directories of institutions and bodies providing education facilities supporting the aims and objectives of IUGB;
- encourage student participation through the presentation of awards for scientific contributions;
- establish close relationships with governmental agencies, intergovernmental bodies and organisations of the private sector concerned with regulatory matters related to wildlife;
- stand up for the concerns and professional interests of its associates and participants;
- and any other means necessary to achieve the objectives.

The current Liaison Officers signing this constitution are the founder Members of the IUGB. New Members are admitted by co-optation; each participating country being entitled to one representative. The IUGB shall be composed of a) the General Assembly of Liaison Officers; b) the Board, and c) the Auditors.

We could show that available feeding trees tend to be randomly distributed whereas available roosting trees were clustered in the four study sites. Suitable winter habitat, inferred from the intersect of resources distribution, was restricted to small (10–50 ha) discrete patches and was a reliable predictor of Hazel grouse occurrence in winter. Our results suggest that suitable winter habitat was a limiting factor for the species in winter and may have favoured the development of territoriality in our study area. Ongoing research make use of genetic analyses to identify individuals in the habitat patches and test the hypothesis that Hazel grouse overwinter in pairs in central Europe.

Keywords: Tetraonidae, winter territoriality, habitat selection, mixed forest, genetic identification

ACTIONS SPEAK LOUDER THAN WORDS: A NEW STRATEGY FOR WILD UNGULATES MANAGEMENT IN TUSCANY REGION

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1.S. Wildlife – human conflicts and its mitigation

Tuscany is the Italian region with a higher density of wild ungulates (wild boar, roe deer, red deer, mouflon, fallow deer). Since the 2000s, wild boar, roe deer and red deer significantly increased their populations, due to the national conservative laws, the abandonment of agricultural areas and the increase in wooded areas. In this context, in 2016 the Tuscany Region approved an ordinance to reduce the number of wild boars in three years and change the hunting management of ungulates in agricultural areas.

The core of the strategy applied was to give to a large number of hunters, without social relation among them, the possibility to hunt during all the year in agricultural areas with the opportunity to sell the meat of ungulates. At the same time, the Tuscany Region implemented the strategies for the transparency in the compensation of damages to farmers and the marketing of the meat.

The results were positive, beyond the expectations: In 2018 the hunting bags of wild boar in hunting districts with conservative management decreased of 17%, at the same time the hunting bag in areas with non-conservative management increased by 78%, and crop damage decreased by 62%.

Keywords: Wildlife management, wild boar, hunting bags, roe deer, red deer, ungulates.

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INTRODUCTION

In Italy Wildlife is a State Property with two main characteristics: Hunters are allowed to access into any private land, and hunting districts carries the obligation to compensate damage to private landowners caused by hunted species. In Tuscany, there are five species of ungulates (fig. 1). Wild boar and roe deer strongly increased their abundance in the last 15 years(fig.1). Ungulate damages to crops and traffic accident reached unacceptable levels (fig. 2,3). Causes of the increase are reported in Fig. 4. In 2016 Tuscany Region approved a law to reduce abundance of wild boar, crop damages and traffic accidents in three years (L.R. 10 - 9 February 2016).

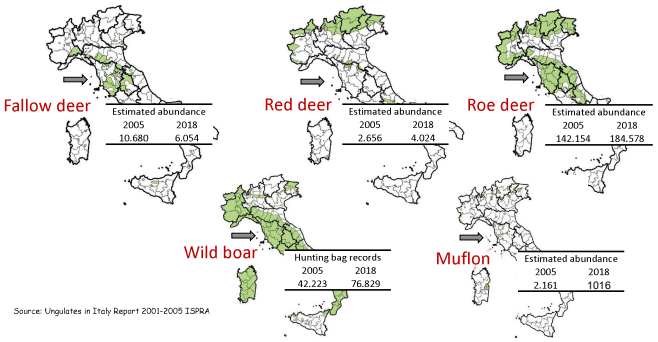


Figure 1. Distribution of ungulates present in Tuscany. Estimated abundance/hunting bar records refer only to the Tuscan region

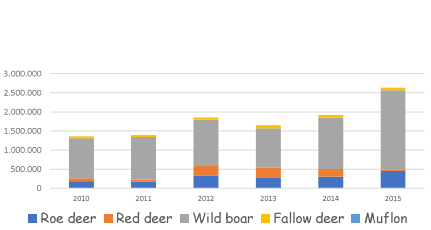


Figure 2. Ungulate damage to crops (in €)

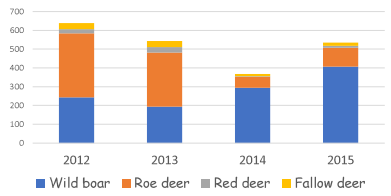


Figure 3. Traffic accidents caused by ungulates

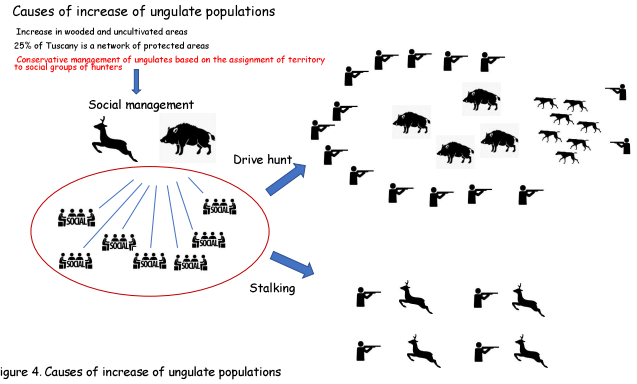


Figure 4. Causes of increase of ungulate populations

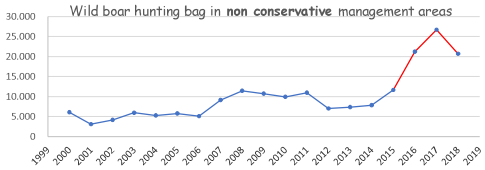
- Aim of the law:
  - Reduce the number of ungulates in non conservative management areas
  - Create the ungulate meat supply chain

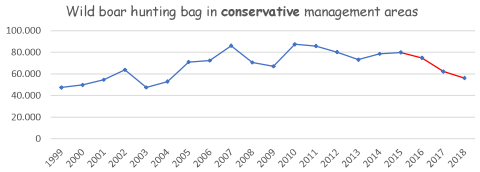
How?

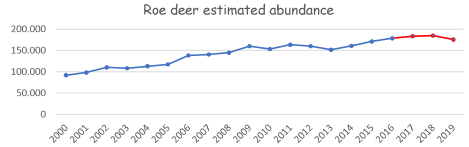
- Preventing the management of ungulate populations by social groups of hunters in non conservative management areas. Promoting individualism.

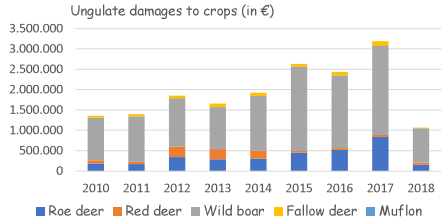
- No limits to the number of ungulates that can be shouted in non conservative areas
- Open hunting throughout the year in non conservative areas with the stalking techniques
- No limits to the number of hunters in non conservative areas
- Possibility for hunters to sell meat

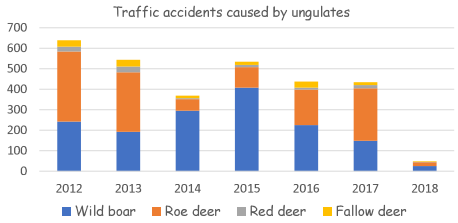
RESULTS

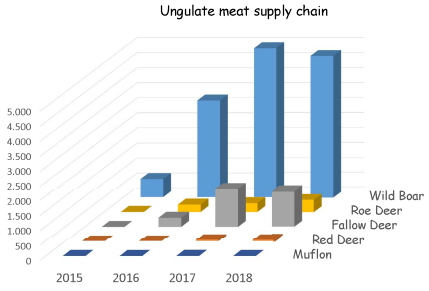












CONCLUSION

The individualistic approach, based on the law approved in Tuscany in 2016, can be considered a practical tool for population management in non conservative management areas. In fact, in three years:

- Reduced damage to crops
- Reduced traffic accidents caused by ungulates
- Reduced the abundance of Wild boar and stabilized the estimated abundance of Roe deer
- Increased the meat supply chain

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