



Fig. 1: Chamois trophy exhibitions contain valuable data on the structure of the surviving population. Foto: C. Miller

# Hard facts or just folklore? What trophy exhibitions tell us about chamois and humans

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## BACKGROUND

In some federal states of Germany there is an obligation to issue hunting trophies once a year in trophy exhibitions. The trophy exhibitions in Bavaria contain a valuable source of data: both sexes of the chamois carry a trophy, which can be used to determine the exact age and sex of the hunted individual. By determining age and sex, conclusions can be drawn about the structure of the harvested population and, in the medium term, also about the surviving population and trends in population development. They also offer the possibility of monitoring and evaluating the favorable conservation status, to which Germany has committed itself by listing chamois in Appendix V of the EU Habitats Directive.

## INTERIM RESULTS

Since 2016 and with the exception of the years 2020 and 2021, almost 13,000 trophies of at least one-year-old chamois have been examined at the Bavarian trophy exhibitions.

Overall, significantly more male than female chamois were shot in the Bavarian Alps: In the hunting grounds of the Bavarian State Forest Enterprise (BaySF), which manages around 80 % of the chamois population in Bavaria, the sex ratio was male-biased (1.6 :1). In the remaining hunting grounds the ratio was 1.4 :1.

Young and middle-aged individuals predominate in the hunting bag, especially in the BaySF hunting grounds. A particularly striking example of this is the Ruhpolding forest enterprise: In 2019, the average age of shot chamois >12 months was 2.5 years. In contrast, in the communal or private hunting grounds the average age of chamois shot in 2019 was 5 years.

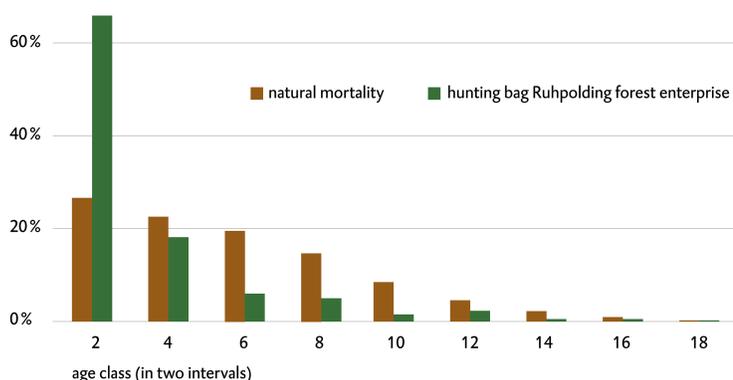


Fig. 2: Proportion of age classes (in two year intervals) of harvested chamois in the Ruhpolding forest enterprise (2015 – 2021) in comparison to the natural mortality of unharvested populations according to BOCCI et al. 2010

The chamois hunting bags in the Bavarian State hunting grounds also show a clear change in the age-structure between 2015/16 and 2018/19: The number of middle-aged and old individuals continues to decrease, while the structure of the hunting bag shows increasing use of young and youngest age groups (see Fig. 3; from MILLER et al. 2020).

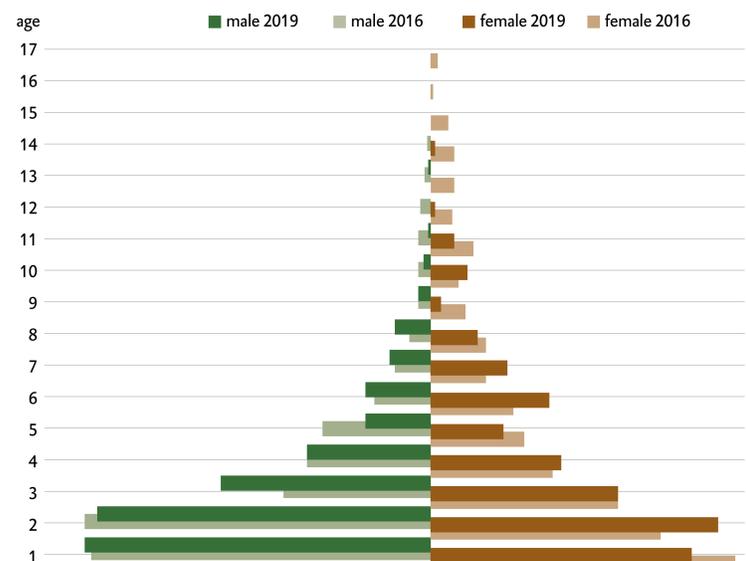


Fig. 3: Distribution of age of all harvested chamois in the hunting years 2015/16 (light) and 2018/19 (dark) in the hunting grounds of the Bavarian State Forest Enterprise (from MILLER et al. 2020)

## DISCUSSION

In order to maintain a natural age structure, the hunting of each age group should mimic the natural mortality of unharvested populations. The model of such a life table in chamois developed by BOCCI et al. (2010) on the basis of found cadaver (see Fig. 2). At the same time, with the liberal release for shooting chamois in the Bavarian Alps, it can be assumed that the structure of the hunting bag provides a rough image of the structure of the living population. From the results of the trophy exhibition analysis, it can therefore be assumed that the chamois stocks in Bavaria have hardly any socially mature animals and are therefore destabilized. The youth classes are heavily overused. A solution to this could be wildlife resting areas or non-hunting areas, in which the species could at least locally develop natural age and social structures as well as behavior (KINSER et al. 2021). Last but not least, in the light of the obligation to monitor species listed in Annex V of the EU Habitats Directive, Bavaria is obliged to collect further data in order to ensure the favorable conservation status of the species and allow a sustainable harvest strategy.



Fig. 4: BaySF trophy tag for chamois (Foto: V. Klimke)

## ANECDOTE

After reports on the data recording of chamois trophies, the BaySF changed their trophy tags in 2017: The new trophy tags do not give any information such as species, sex and age of the animal, only the forest enterprise and the area.

## LITERATUR

BOCCI A et al. (2010) J Zool 280: 379–386.  
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