

SEX- AND AGE-SPECIFIC SURVIVAL IN THE WEAKLY DIMORPHIC ALPINE CHAMOIS

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Summary: Many polygynous ungulates show higher mortality of males than of females, because of the intense male-male competition during the rut and the costs associated with the development of sexual-size dimorphism. In the weakly dimorphic Alpine chamois *Rupicapra rupicapra* the occurrence of differential sex-specific survival strategies is controversial. Until today, only two studies investigated the survivorship of males and females in this species, producing conflicting results: these works, based on the use of life tables, require confirmation from researches carried out on living populations. We assessed the survival pattern of a protected Alpine chamois population in the Swiss National Park, where 116 individuals were marked and monitored over 13 years (1996-2008). We tested for sex-, age- and year-dependence of survival by means of capture-mark-resight models. Resighting probabilities were sex-dependent, and survival rates were time-dependent. Females had higher resighting probabilities (0.84) than males (0.74). All over the time periods, sex had a weak influence on survival probability (males = 0.91; females = 0.92) and survival rates remained surprisingly high until late age (1 year = 0.90; 2-7 years = 0.91; 8+ years = 0.92). The growing evidence for a high adult survival and a weak differential mortality of the two sexes, together with the highly seasonal sexual-size dimorphism observed for Alpine chamois, might indicate the occurrence of a unique conservative survival strategy in both sexes and a low-risk mating strategy by males.

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