

Effects of cohorts on body measurements of *Capra ibex* in Belledonne mountains.

Michallet J.¹, Toigo C.², Lembke M.^{1,3}

¹ ONCFS, CNERA Faune de Montagne, France, ² ONCFS, CNERA Cervidés - sanglier, France, ³ LECA-TDE, Univ. de Savoie, France.

Cohort effects (the influence of the year of birth) on life history traits have largely been highlighted in ungulates. Environmental conditions encountered during the year of birth affect not only the juvenile stage (birth weight, juvenile survival, age at first reproduction), but cohort may also have long-lasting effects (adult body size, adult survival, reproductive success). We studied here cohort effects on horn and body development of Alpine ibex in the Belledonne-7 Laux reserve, from 1986 to 2003. When cohort effects were detected, we tested whether they could be taken into account by meteorological variability. We found that body development decreased from 1992 onwards for males, whereas it remained quasi-constant for females. As population size is suspected to have increased throughout the study period, density-dependence may account for the results obtained for males. Sexual selection and the inter-sexual differences in energy allocation to maintenance and reproduction could explain the contrasting results obtained for males and females.