

Factors affecting Ibex (*Capra ibex* L.) reproductive success in Veglia-Devero Natural Park (Central-Western Italian Alps) at population and subpopulation level.

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I analysed the relationship between the reproductive success of Devero-Veglia Natural Park ibex population and some habitat variables by means of multiple regression analysis. Reproductive success was calculated as kids/females older than 1 year counted in December over an 11-year period (6-year for Veglia subpopulation). Analyses were performed both on the whole population and on the 2 main wintering colonies, which showed different colonization dates, densities and reproductive success. Kids/females ratio was related to population density of previous year and to some climatic variables assessed during gestation, parturition and lactation. Because of sample size only two variables were tested simultaneously: each variable was tested against the other and the one that entered the model was retained. The reproductive success of the whole colony was negatively affected only by late june to mid july rainfall, which explained a moderate fraction of variance (49%). For the subpopulation wintering in Devero, density of previous year and rainfall explained 86,7% of variance (0.025 significance level). Veglia subpopulation showed lower density, higher growing rate and reproductive success, though differences were not statistically significant. In this case, no variable entered the model at the significance level of 0.025, but rainfall did so at the 0.029 level. These results suggest a negative effect of rainfall just after births and show that different subpopulations within the same colony may be affected in different ways by environmental variables.