



Apollonio M., Brivio F., Rossi I., Bassano B., Grignolio S. (2013) Consequences of snowy winters on male mating strategies and reproduction in a mountain ungulate, *Behavioural Processes*, 98:44-50.

Abstract

Alternative mating tactics (AMTs) are intrasexual variants in mating behaviour of several species ranging from arthropods to mammals. Male AMTs coexist between and within populations. In particular, male ungulates rarely adopt just one tactic throughout their lifetime. Tactics commonly change according to internal factors (age, body size, condition) and external conditions (weather, resources, predation, animal density). However, the influence of weather has not yet been investigated in upper vertebrates. Such influence may be relevant in species whose rutting period occurs late in fall or in winter, when environmental conditions and the snow cover in particular may vary considerably. We detected two AMTs in Alpine ibex (*Capra ibex*) males: older and full-grown males mainly adopted the tending tactic, while younger males usually pursued an alternative one (coursing tactic). Weather was found to influence the use of AMTs by males: in snowy mating seasons, the coursing tactic was no longer used due to difficulties in moving through deep snow. In snowy rutting periods, males appeared to delay or even avoid mating activities and a decrease of births was reported in the second part of the following birth season. Snow cover may have a negative effect on population dynamics by reducing the recruitment and on population genetic variability, as a consequence of poorer mating opportunities. Studies on factors affecting mating behaviour and leading to a reduced availability of mates and a decrease in female productivity are especially relevant in species, like Alpine ibex, whose genetic variability is low.

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