

**6TH WORLD CONGRESS ON MOUNTAIN UNGULATES AND
5TH INTERNATIONAL SYMPOSIUM ON MOUFLON**

BOOK OF ABSTRACTS

SECOND EDITION - ebook

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5TH INTERNATIONAL SYMPOSIUM ON MOUFLON

Cleopatra Hotel, Nicosia (Lefkosia) Cyprus,



Male Cyprian mouflon, Pafos Forest. Photo: © E. Hadjisterkotis

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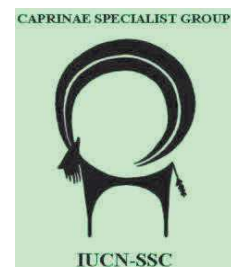
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SEXUAL DIMORPHISM IN HIMALAYAN TAHR

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In Himalayan tahr *Hemitragus jemlahicus*, adult males are 110-120% larger than adult females (Forsyth *et al.* 2005; Garel *et al.* 2011). They have a prominent neck ruff, ranging in colour from golden to dark brown, as a rank signal. Colour patterns have been suggested to be homologous to ritualised weapons: paler ruffed younger adults dominate over darker, older ones. Conversely, horn size and body mass do not seem so important in male tahr competition with respect to other *Caprinae*. Here we report on differences in horn size and body mass of male and female tahr, in relation to age, in the Mt. Everest Nat. Park (Nepal).

Horn length and horn girth were greater in males than in females (39%, 31%, respectively). We used the “horn length/horn girth” ratio as an approximate index of horn shape. Tahr showed no sexual dimorphism as to horn shape. Yet, body mass dimorphism is at least *c.* 3 times greater than that concerning horn size. Horn length, horn shape and body mass showed a non-linear trend over age, both in males and females, whereas horn girth varied little through age. Yet, while variation of horn shape and horn length showed the same trend in males and females, body mass grew significantly faster in males than in females.

Our results suggest that Himalayan tahr is mildly dimorphic as to horn size, but monomorphic-horned as to horn shape (i.e. “horn length/horn girth” ratio). In the Himalayan tahr, intrasexual male competition does not appear to have changed weapon shape, as in most other *Caprinae*, but ruff colours are apparently used to signal rank and dominance. Moreover, the different rate at which body mass grows between sexes may suggest it to be more important in male tahr competition than to females. The unritualised fight manner of male tahr may explain the relevance of body mass: a heavy weight may be harder to push over a ledge and it may also help to lift up an opponent.