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[*Editor's note: This critique represents a call to academic accountability.*]

CRITIQUE OF THE COLTMAN ET AL. 2003 LETTER TO NATURE

ERIC M. ROMINGER, New Mexico Department of Game and Fish, P. O. Box 25112
Santa Fe, NM, 87504

The conclusions of Coltman et al. (2003) in their recently published NATURE article contradict nearly 20 years of analyses published primarily by two co-authors of the manuscript (i.e. Jorgenson and Festa-Bianchet). After asserting, in a series of refereed scientific publications (e.g. Jorgenson et al. 1984, 1993, 1998, Festa-Bianchet et al. 1997, LeBlanc et al. 2001), that reductions in body mass and horn size of rams from the Ram Mountain population were the result of density-related decreases in forage availability, these authors have either chosen to ignore or recant their previous work. They have not acknowledged their apparent changes in perspective. Apparently these authors now conclude that, in fact, trophy hunting has induced the declines observed in ram body mass and horn size on Ram Mountain. In confusing contrast, a paper published in BEHAVIORAL ECOLOGY shortly after their NATURE article reports that 77.2% and 86.8% of the variance in body mass and annuli base circumference were explainable by a liner mixed effects model describing the effects of resource availability and age (Festa-Bianchet et al. 2004).

During the course of the Ram Mountain experiments bighorn sheep density in the Ram Mountain population was raised to a level as high as any ever reported in North America. The effect of density-dependence has been reported for many other ungulate species, and this sudden exclusion of the Ram Mountain bighorn population as represented in the NATURE article is enigmatic. Reports analyzing the results associated with high population densities, including the reduction of body mass and horn size, in multiple publications and presentations by the co-authors in the Coltman *et al.* (2003) manuscript simply don't match their present conclusions.

Consequently, an important question arises, "Are these authors now prepared to publish an *Errata/Corrigendum* for each of their previous publications that stated declines in body mass and horn length were a function of density-dependent factors?"

I suggest an analysis of horn-size of rams born to ewes transplanted from Ram Mountain into low-density sheep habitats would be an appropriate test of the prediction inferred from the NATURE article. If these rams do not exhibit continued diminution of horn and body sizes reported for rams remaining on Ram Mountain, the hypothesis that the reduction in horn size and mass were genetically-driven functions of hunting mismanagement rather than density-driven nutritional insufficiency must be rejected.

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[Editor's note: The following "Letter to NATURE" was prepared and submitted to NATURE by Dr. Valerius Geist. It is in the format required by NATURE, and contains relevant lessons learned through trophy management for deer in Europe. NATURE chose not to publish this letter.]

TROPHY MALES AS INDIVIDUALS OF LOW FITNESS (DRAFT)

VALERIUS GEIST, Professor *emeritus*, Faculty of Environmental Design, The University of Calgary, Calgary, Alberta, Canada

While wildlife trophies get a lot of attention in modern times in North America and Europe, such infatuation has a long and instructive history. Already in the Upper Paleolithic, cave painters invariably chose to paint large, complex antlers on male deer and long horns in ibex, bison, and woolly rhinos¹. The trophy mania hit its high point in medieval central Europe when huge red deer antlers were used as gifts of state, when