



Mating behaviour of wild sheep in captivity (Case study: Laristan Mouflon, *Ovis orientalis laristanica*)



Paarungsverhalten von Wildschafen in Menschenobhut (Fallstudie: Laristan-Mufflon, *Ovis orientalis laristanica*)

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Abstract

The Laristan mouflon (*Ovis orientalis laristanica*) is considered as the smallest wild sheep in the world and a vulnerable species. This study analysed the mating behaviour of 30 individuals including nine rams, 13 ewes and eight lambs in captivity in the Chitgar woodland Tehran, Iran. In general, the main behaviours comprised ewe-ram and ram-ram positive and negative interactions, consisting of ram fighting and ewe's stimulation. Moreover, ewe-ewe interaction, ranking and defining the territory was recorded for further researches. The study also focused on weather conditions and its connection to the harshness of the mating behaviour.

Keywords: Laristan mouflon; Mating behaviour; Ram-ewe interactions; Captivity; Weather conditions

Introduction

Captive-rearing animals as a foundation of reintroduction programs should be followed by assessing important elements such as behaviour, genetics, physiology, nutrition,

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reproduction and pathology. In such a program, demographic management of the studied population, regular censuses of size, and distribution of the wild population, should be considered as well (Kleiman, 1989). Reproductive strategies have been chosen under natural selection to increase the reproductive success and may be hindered by different environmental conditions and pressures from the surrounding area (Rubin, Boyce, & Bleich, 2000). Inhabiting under intensive anthropogenic effects, habitat degradation, massive illegal hunting and wild life mismanagement, might result in reverse reproduction success and consequently decrease in population density and geographic ranges.

Amongst mammals, wild sheep is counted as one of the most requested species for its flesh and highly prized trophy which placed some of them as endangered or vulnerable species on the IUCN red list. Wild sheep populations and geographical ranges have decreased all over the world specifically in developing and semi-developed countries where inaccessible authentic data, inadequate knowledge of ecology of species, lack of scientific knowledge at the time of decision making and wildlife policy are major issues, (Nowak, 1999; Bashari & Hemami, 2013). Evaluation and assessment of breeding criteria and mating behaviours has rarely been done for captive mammals specifically endangered wild sheep (Ostermann, Deforge, & Edge, 2001), thus in this study we tried to analyse the mating behaviours of the Laristan mouflon (*Ovis orientalis laristanica*) in captivity during rutting season. The Laristan mouflon is a vulnerable species in the hilly areas of the Persian plateau with its main habitat located in the Laristan region, the Fars province, Iran (Ziaei, 2008). This subspecies is the smallest wild sheep in the world; which has adapted to the arid-semiarid region of southern Iran. According to Valdez and DeForge (1985) the estimated population of this species was a wild population of 2500 individuals within the Bamou national park in south-western Iran. The latest study shows that the wild population of this species increased by 20% in the same province by the year 2014 (IRANA, 2014). From morphological characteristics, short black ruff on the lower neck and breast also an unclear brown line which begins behind the hand and elongated through a whitish belly ended up to rump have marked this species. White saddle-patches exist on both sides of the flank (Groves & Grubb, 2011). Its brown tail has a maximum of 15 cm length and its horn looks like the horn of Argali sheep (*Ovis ammon*) but is lighter and smaller with an average of 50 cm in length (15 cm circumference at the base). Ewes have short horn up to 15 cm and are sometimes seen hornless (Etemad, 1985). More scientists and researchers such as Ellerman and Morrison-Scott (1951) who studied arctic mammalians species, nominated this wild sheep as a species (*Ovis laristanica*) while Nasonov considered it as a subspecies *O. o. laristanica*. Dr. Charlz Nadler and Raul Valdez, who had done some research on wild sheep of Iran, approve the Nasonov statement. Because of few populations and also insufficient researches and studies about this subspecies, there is no adequate and comprehensive information about their sexual behaviours (Valdez, 1982; Sushkin, 1925; Shackleton, 1997; Firouz, 2000).

The objective of this research was to understand and highlight the status and mating behaviour of the Laristan mouflon under captivity and also to assess the reproductive strategy which has been chosen under intense group pressures and unbalanced population sex ratio.

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