

New Challenges to the Conservation and Management of the Endangered Persian Follow Deer (*Dama dama mesopotamica*) in Ashk Island of Lake Uromiyeh National Park, Iran

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Abstract : The Persian fallow deer was considered as a globally extinct species until 1956 when a small population was rediscovered from Dez Wildlife Refuge and Karkheh Wildlife Refuge in southwestern parts of Iran. After long species rehabilitation process, the species was transplanted to Dasht-e-Naz Wildlife Refuge in northern Iran, and from where, follow deer was introduced to the different selected habitats such as Ashk Island in Lake Uromiyeh National Park. During 12 years, (from 1978 to 1989) 58 individuals (25 males and 33 females) were transferred to Ask Island. The main threat to the established population was related to the freshwater shortage and existing just one single trough such as high mortality rate of adult males during rutting season, snake biting and dilutional hyponatremia. Desiccation of Lake Uromiyeh in recent years raised new challenges to the conservation process, as about 80 individuals, nearly one third of the population were died in 2011. Connection of Island to the mainland caused predators' accessibility (such as wolf and Jackal) to the Ask Island and higher mortality because of follow deer attraction to the surrounding mainland farms. Conservation team faced such new challenges that may cause introduction plan to be probably failed. Investigations about habitat affinities and carrying capacity are the main basic researches in the management and conservation of the species. Logistic regression analysis showed that the presence of the different fresh water resources as well as *Allium akaka* and *Pistacia atlantica* are the main environmental variables affect Follow deer habitat selection. Habitat carrying capacity analysis both in summer and winter seasons indicated that Ashk Island can support 240 ± 30 of Persian follow deer.

Keywords : carrying capacity, follow deer, lake Uromiyeh, microhabitat affinities, population oscillation, predation, sex ratio

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