
(*Circus aeruginosus*)

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(*Pelecanus crispus*)

(*Anser erythropus*)

(*Aquila heliaca*)

(*Oxyura leucocephala*)

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(*Circus aeruginosus*)

(Accipitridae)

(Aves)

(Falconiformes)

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(

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(

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(Dr)

(

(Wdf)

(Wds)

(Graz)

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) (()
 ()
 ()
) (Dam) ()
 ()
 (Wuse) ()
 () ()
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() Smith Hill

Smith Hill
 ADE-4 ()

Smith Hill

Total Inertia= (Inertia MCOA × Nb Var. Qualitative / NBVar.Tot.) + (Inertia PCA / NBVar.Tot.)

Inertia

Standardized Principal Component Analysis
 Ordination
 3 Multiple Correspondence Analysis

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Smith Hill

1	+ ,625	+0.469	+0.469
2	+ ,625	+0.192	+0.661
3	+ ,625	+0.140	+0.802

() R² R²
:

Smith Hill

R ²				

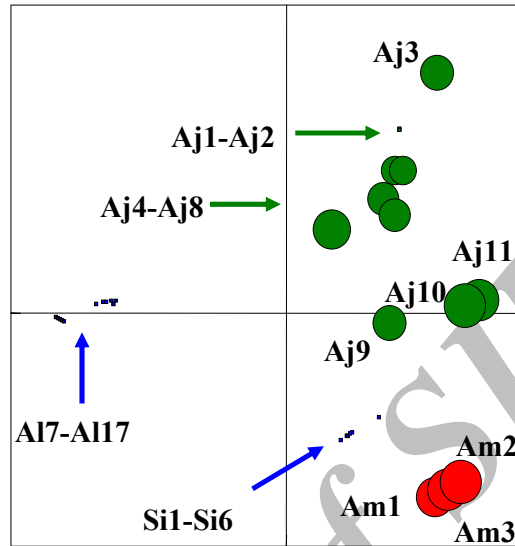
() Smith Hill
(Dr)
(Wds Wdf)
()

(Wuse)
)

(Dam

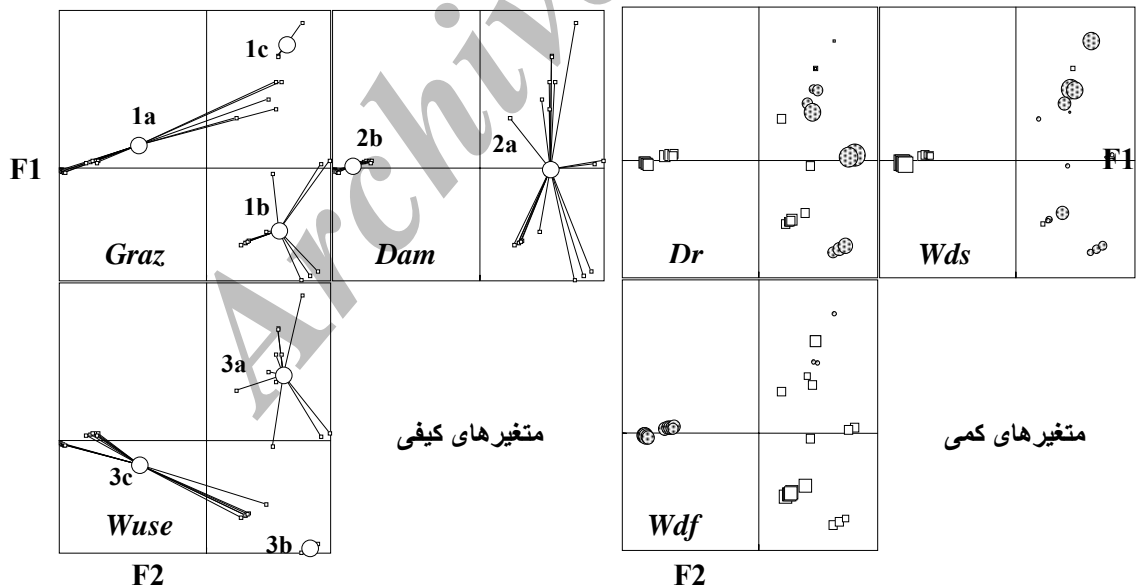
(Am1-Am3)

(Graz)



.Smith Hill

Al = Aj = Am = ()
 .Si = ()



.Smith Hill

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(A17-A117)

()

Wdf)

(Dam

(Dr)

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(Si1-Si6)

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(Dr Wdf

Aj1)

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(Aj2

(Aj3 – Aj11)

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(Graz

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P.)

(*Podiceps cristatus*)

(*Fulica atra*) (*ruficollis*)

... (*Gallinula chloropus*)

(*Vulpes vulpes*)

(*Canis aureus*) (*V. corsac*)

(*Felis catus*)

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A Study of the Factors affecting the Breeding Success of Marsh Harrier (*Circus aeruginosus*) as an Umbrella Species in Aji-gol, Ala-gol and Alma-gol International Wetlands of Turkmen Steppe

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Abstract

This study was conducted to evaluate the problems and threats of Aji-gol, Ala-gol and Alma-gol international wetlands of Turkmen steppe in Golestan province, taking the Marsh harrier (*Circus aeruginosus*) as an umbrella species. Monitored were 31 nests, 131 eggs, 62 nestlings and 28 juveniles during two breeding periods, from late winter 1997 to late spring 1999. Factors affecting the nests and the nestlings were also regularly monitored. The three areas considered together, the breeding success of Marsh harrier was estimated to be about 21.37 %, a proportion much lower than that normally observed in Europe. Flooding of breeding habitats through construction of dams in the north-west of Ala-gol, and on the contrary, drying up of these habitats through drainage for aquaculture activities in the northern part and as well impact of livestock grazing are responsible for this breeding failure and consequently, the most important threats for the wetlands and their wildlife. In total, the current overexploitation of the areas with no due consideration of the seasonal needs of wildlife represents the principle threat to the biodiversity of the wetlands.

Keywords: International wetlands, Aji-gol, Ala-gol, Alma-gol, Marsh harrier, Umbrella species, Breeding success, Threats.

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