

Status of Houbara Bustard *Chlamydotis undulata* in Five Important Habitats in Iran

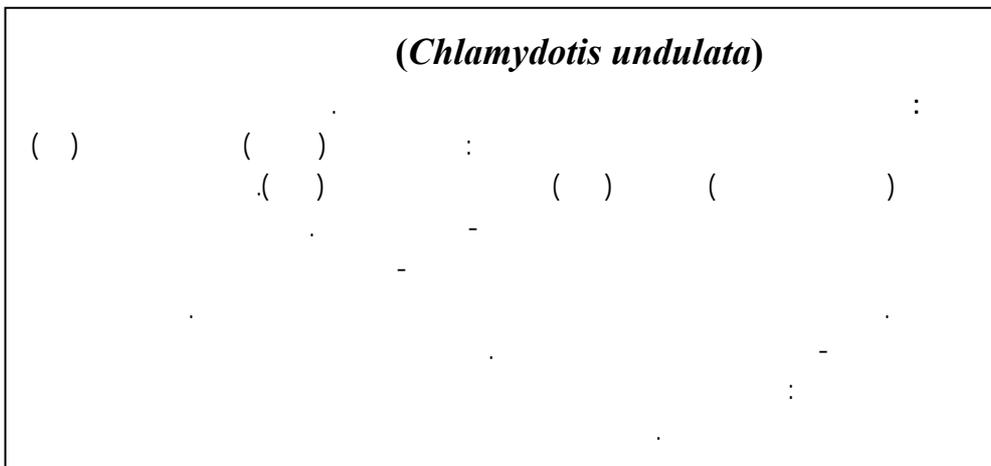
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Abstract: Houbara Bustard *Chlamydotis undulata* lives in large areas of remote desert in Iran. The five selected study areas, Ferdous, Herat and Marvast, Jazmoorian, Bahram-e-Gur and the Monde plains, were mostly large and were situated in remote areas that were very far from each other. The methodology of the study was mostly based on line transects to count the birds in each area. However, in some areas point counts were employed. Among these five habitats, Jazmoorian held the largest number of birds in 1994, but in 1998 and 1999, Herat and Marvast had the highest totals. Qareh Tappeh is an important habitat for the Houbara, supporting a good breeding population every year, successfully enough to support increasing numbers. Bahram-e-Gur is a very good habitat with a population of between 50-125 birds. The main causes of the severe decline of Houbara Bustard in recent years are habitat loss by grazing, habitat changes to agricultural lands, and trapping (and shooting adults) to export live birds illegally to Arab countries.

Keywords: Houbara Bustard, *Chlamydotis undulata*, habitat, population, trend, Iran.



INTRODUCTION

Houbara Bustard *Chlamydotis undulata* is a rare bird and according to the 2000 IUCN Red List, it is categorised as LR/nt (Lower Risk/ near threatened). The Houbara lives in large areas of remote desert in Iran. The bird is sparsely distributed over the central plateau desert region from the Kavir National Park in the north-west and the Turan desert in the north-east, south to the Sistan plain, central and southern Baluchistan, the low-

lying deserts of Khuzestan, Southern Fars, and the desert north of the Persian Gulf. There are only a few reports about the distribution, breeding and wintering of this species in Iran (Mansoori 1974, 1983, 1996, Mortazavi 1993, Scott 1975). Therefore serious fieldwork was still needed to identify the real status of this shy bird in its range. Various factors such as slope, gradient, exposure, plant cover, percent of plant species, soil conditions, water resources, threats to the species and how far

the locations were from human habitation were considered. This article is a part of a research project undertaken to identify the situation of the Houbara Bustard and the main threats affecting its populations throughout its range in Iran (Mansoori 2001, Mansoori & Kiabi 2003). I hope this study represents an appropriate step for the protection of this bird in Iran.

STUDY AREAS

The study areas were mostly large and were situated in remote areas all were very distant from each other. Several sites were surveyed and five important sites among them were selected for more detailed work as follows:

1. Ferdous plains

The plains are situated south-west of Meshed (33°50'-34°50'N, 56°50'-58°50'E) and run south-east to Kavir-e-Lut, comprising a total area of about 100,000 ha over three separate adjacent locations, Dasht-e-Ferdous, Dasht-e-Abkhorak and Dastgardan Plains. The area is mostly under wheat, barley and cotton farming, and is irrigated by water-wells. The areas in the desert with saline soils have as native vegetation plants such as *Seidlitzia rosmarinus*, *Salsola* sp., *Atriplex* sp., *Haloxylon ammodendron* and some dominant herbs from the Graminae, Fabaceae (Leguminosaceae) and Convolvulaceae.

2. Herat and Marvast (Qareh Tappeh Plain)

The Qareh Tappeh Plain is about 90,000 ha (29-30°N, 54-55°E) in area, due south of Yazd province, close to another important area (Bahram-e-Gur) in Fars province. It is likely that the Houbaras move between these two regions. The area is basically desert with sand and saline soils. Some parts of this area are under cultivation. The native vegetation consists of *Salicornia* species, with scattered bushes of *Artemisia* sp. and *Zygophyllum* sp. throughout the

area. There are about 70 water-wells at farms in the area, each farm occupying 25-100 ha.

3. Jazmoorian Plain

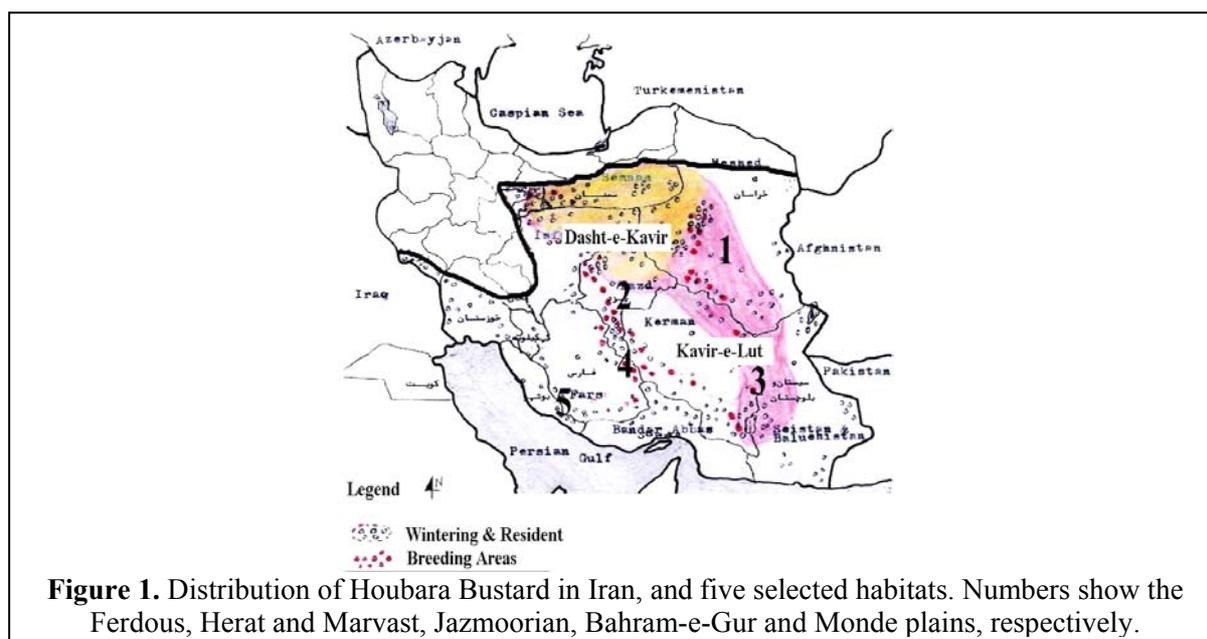
Jazmoorian is a vast and remote area of about 400,000 ha (26.5-28°N, 58-60°E), situated southeast of Kavir-e-Lut, at the border between Kerman and Baluchistan provinces. Formerly the area was a swampy complex with natural pasture-land, which was used by local people for their sheep. After the construction of a dam on the Jiroft river, which was the main water supply for the wetland, the area changed greatly, and the reduction of water through the wetland caused considerable water shortages in the area. Most of the pasture deteriorated and dried up completely. There are some river beds and eroded lands at the eastern part, the vegetation consisting of Chenopodiaceae (*Salsola* sp.), *S. rosmarinus*, and some scattered bushes of *Calatropis* sp., *Tamarix* sp., *Artemisia* sp., and *Zygophyllum atriplicoides*. Precipitation is less than 100 mm annually.

4. Bahram-e-Gur

Bahram-e-Gur is a large area of about 420,000 ha, situated in the north-east of Fars province at 20-32°N, 54-55°E. The area comprises desert lands, saline regions, steppes, and is surrounded by two mountain ranges. Vegetation in the lowlands consists mainly of *Artemisia herba-alba*, *Z. atriplicoides* and some *Salicornia* sp. Characteristical of the area are its very deep ground water table and its low annual precipitation (less than 100 mm). There is some scattered farming activity around the villages, usually cultivation of wheat and barley.

5. Monde Protected Region

The Monde area consists of flat lands, some eroded, beside the Monde river. The area of some 46,000 ha lies about 150 km south of Bushehr (27-28°N, 50-53°E). The soil is saline, with silty clay loam, and the vegetation is largely sparse *Artemisia*



scoparia, *H. ammodendron*, *S. rosmarinus*, *Juncus glaucus*, *Salicornia* sp., *Capparis* sp., *Salix* sp., and some Papilionaceae and Fabaceae (Leguminosaceae) species. Annual precipitation is less than 150 mm.

METHODS

The methodology of the study was mostly based on line transects to count the birds in each area. However, in some places, point counts were employed. Due to nature of the surveyed areas it seems that the latter method is more feasible and resulted in better estimation. All the observations undertaken using binoculars (10x40 Zeiss) and a telescope (15x60 Bushnell).

RESULTS AND DISCUSSION

Trends of bustard numbers (1993-99) at the five important habitats in Iran are shown in Table 1. Among these five habitats, Jazmoorian held the largest number of birds in 1994, but in 1998 and 1999, Herat and Marvast had the highest totals. Qareh Tappeh is an important habitat for the Houbara, supporting a good breeding population every year, successfully enough to support increasing numbers. Bird numbers are increasing at this area (Table 1).

The main threat to the area is changing land-use – natural lands are being converted to agriculture. Bahram-e-Gur is a very good habitat with a population of between 50 and 125 birds, and it is likely that the Houbara breeds in the area. Surprisingly, a flock of 514 birds is reported between Darab and Haji-Abad, in the south of the area in the late 1990s (H. Farhadpour *per* M.E. Sehhatiasabet, pers. comm.). The Jazmoorian plain sometimes holds a sizeable wintering Houbara population; probably some of them are resident breeders, but numbers are very variable, from as few as 5 up to 170. A good wintering population is recorded each winter in the Monde area, but breeding has not been found here. Table 1 shows a rapid drop in Houbara numbers between 1995 and 1997. Although the Ferdous plains have very saline soils and some bare and uncultivated lands, the native vegetation cover when combined with the cultivated land will support good wintering and breeding Houbara populations, with the result that the number of birds on these plains is increasing.

Table 1 shows a logical fluctuation that correlates exactly to the pursuit and hunting of Houbara in 1997. During that year, two groups of Arab Sheiks received permission to hunt Houbaras with their falcons in those

Table 1. The Houbara populations in the study areas.

Name of site	Year							Aver. in 2001
	1993	1994	1995	1996	1997	1998	1999	
Ferdous Plain	0	0	79	0	85	87	70	110
Herat & Marvast	73	61	81	61	35	116	120	194
Jazmoorian	35	170	99	131	5	22	11	115
Bahram-e-Gur	77	85	125	95	21	101	56	90
Monde P.A.	61	100	50	220	9	11	64	100
Total	246	416	434	507	155	337	321	609

areas. In 1993 and 1994, populations were estimated as low mostly because of the lack of information. Although some illegal hunting still occurs, good records are available for 1998 and 1999.

The main threats responsible for the severe decline of the Houbara in recent years are as follows:

1. Habitat loss as a result of increased grazing, which deplete the plant cover and species diversity.
2. Habitat changes to agricultural lands, mainly the planting of Pistachia, a profitable farming crop, in natural lands.
3. Local people are employed to shoot or to catch birds for illegal live export to Arab countries in the southern Persian Gulf.

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