

Houbara Bustard Conservation Project,
Balochistan, Pakistan



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PROJECT TITLE

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SUMMARY

Chlamydotis undulata, commonly called Houbara Bustard, is a “Vulnerable” bird species (IUCN, 2012). Its distribution ranges from Middle East to Central Asia’s arid and semi-arid areas. This migratory bird arrives every year in Pakistan in November and December from Mongolia, Siberia and central Asian republics for wintering. In Pakistan, this precious bird species is called ‘the provincial bird’ of Balochistan.

This research was carried out to assess the existing population of Houbara in the eastern Balochistan province of Pakistan. Transect surveys were conducted in January and February of 2013 and 2014.

During the surveys conducted in 2013 and 2014, the number of Hobaras sighting totaled to 65 and 43 respectively. This means a decline of 33.8% in the year 2014. The direct sightings of Houbara in 2013 and 2014 were 52 and 31 respectively, whereas the indirect sightings for the above periods are 15 and 12 respectively.

Typical detection of Houbara accounted for 63% (n=41) and 51% (n=22) in 2013 and 2014 respectively. This means that Houbara is mainly a cryptic bird that inhabits low grasses and shrubs/herbs.

Maximum number of Hobaras was observed near shrubs and grasses viz 57% and 40%. This was followed by barren lands (26% & 40 %), water bodies (14% & 11%) and rocks/mountains (3% & 9%) respectively in the year 2013 and 2014. The Pearson’s correlation co-efficient ($r=0.8292$) shows a strong correlation which means that Houbara prefers vegetation grounds (shrubs & grasses) within its natural habitat.

The major threats identified during the survey were hunting, habitat destruction and over grazing. The weighted score for hunting, habitat destruction and over grazing was 371, 338 and 351 respectively. Hunting was found to be the 1st most important threat to Houbara, followed by over grazing and habitat destruction.

Collaborative and concerted efforts are required for the conservation of this precious bird from extinction

INTRODUCTION

Chlamydotis undulata, commonly called Houbara Bustard, is a “Vulnerable” bird species (IUCN, 2012). Its distribution ranges from Middle East to Central Asia’s arid and semi-arid areas (Cramp & Simmons, 1980). This migratory bird arrives every year in Pakistan in November and December from Mongolia, Siberia and central Asian republics for wintering (Gao et al, 2009). In Pakistan, this precious bird species is called ‘the provincial bird’ of Balochistan.

The cryptic, wary behaviour of the Houbara Bustard, the difficulties involved in capturing and marking birds and its existence at low densities throughout large parts of its range (Mian, 1989, Gubin, 1996).

Heezik & Seddon (1999) have recorded the 229 sightings of Houbara in Harrat al-Harrah (Saudi Arabia) from December 1991 and December 1994. Laghai et al (2012) recorded 75 sightings of Houbara in 2005 and it decreased to 59 in 2010. Batbayar et al (2011) encountered a total of 85 Houbaras (inclusive of direct & indirect sightings) in Galba Gobi. Alekseev (1985) reported that Houbaras’ population has decline by 75% from 1956 to 1979 in northwestern Uzbekistan. Nadeem (2003) estimated Houbara in Punjab and Balochistan provinces of Pakistan alongwith Uzbekistan. He estimated 4854, 4729 and 4746 birds in 1999, 2000 and 2001 respectively in Punjab. In Nag valley (Balochistan), the densities of Houbara was recorded as 0.141 (No./Sq.Km), 0.116 and 0.103 in 1999, 2000 and 2001. The decline was 17.92% in 2000 and 10.92% in the year 2001. The author further added that the local people of Nag valley were fond of hunting.

Habitat loss and destruction because of agriculture development, power lines and road construction, military activities, overgrazing, mine prospecting, over hunting including poaching, live catching and smuggling, and gathering of eggs, diseases, and the introduction and presence of alien predators in Houbara habitats are amongst the most important reasons of Houbara classification as a threatened bird (Mansoori, 2001). Population of Houbara is declining due to number of reasons, mainly habitat degradation, habitat loss, fragmentation and hunting (Gao et al, 2009; Nadeem, 2003).

Located between 31° 39' 42N and 68° 24' 5E, Wasta Lake is an important breeding ground for number of migratory birds. Currently, the area is “Un-protected” and lies in the largest (by area) province of Pakistan. Wasta Lake is the part of Kakar Khurasan Tehsil of District Zhob. It is an important wetland and a hot spot for both resident and migratory bird species. Houbara bustard is one of the migratory bird species, which according to locals, are found every year using this wetland. However, little information is available about the existing status and threats to Houbara in this part of the country.

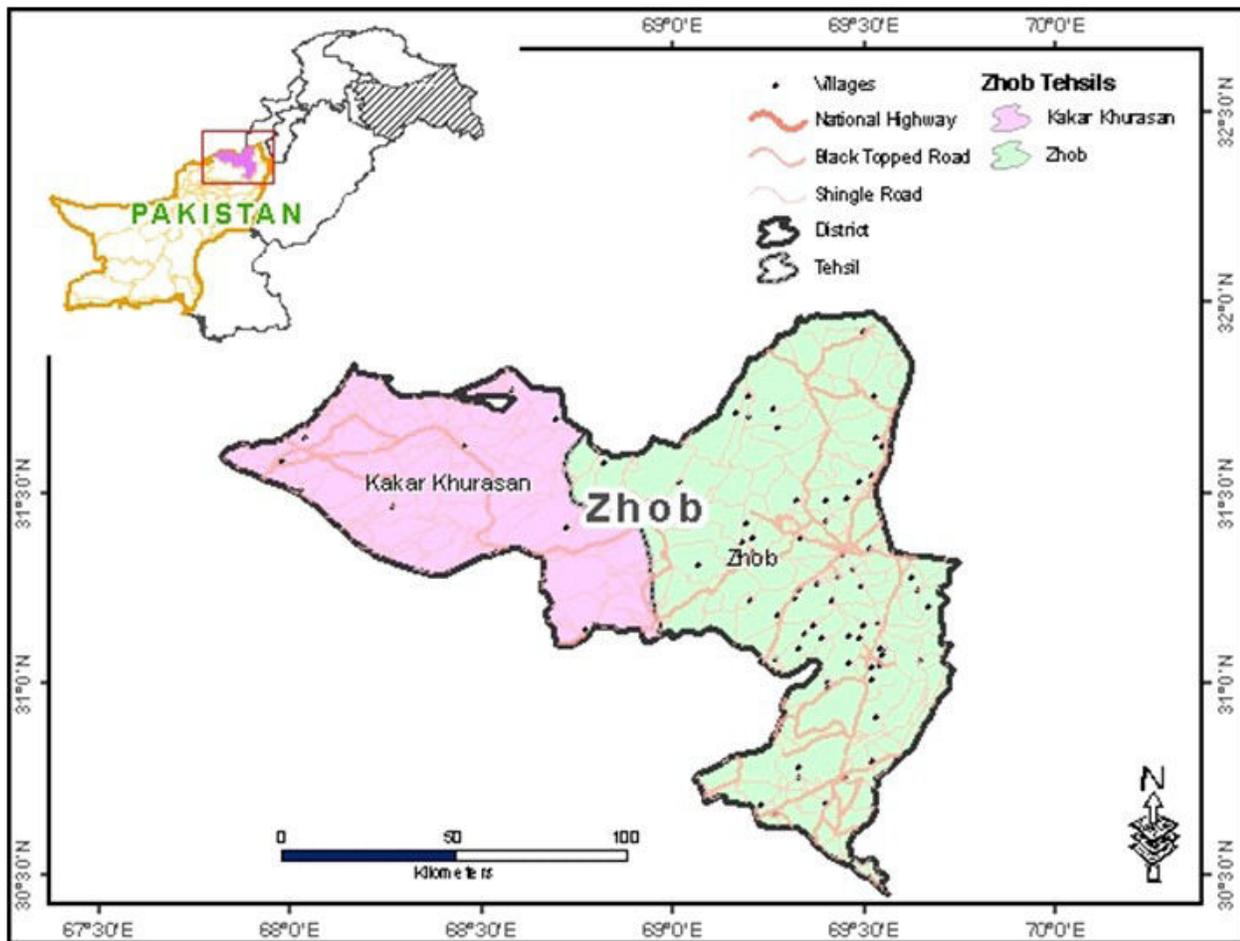


Fig 1. Map of the study area

Source: District Development profile of District Zhob, 2011. Developed by Planning and Development Department, Balochistan in collaboration with UNICEF

The climate of the study area is pleasant in summers and extreme cold in winters. In autumn season, the weather becomes very dry. Rainy season is mostly in the months of June, July and August accompanied by thunder storms from July to September as a result of diversion of monsoon winds westward from Punjab. The hilly areas at higher altitude receive heavy snow fall and snow storms during winters; however, dust storms blow in summer and winter.

The custodian communities residing in the study area are Pathans. The socio-economic conditions of the rural communities are characterized by an increasing population, low level of human development, persistent poverty and a tribal culture that is both distinctive and traditional. Lack of awareness regarding natural resources conservation among the community is one of the conservation dilemmas to visiting birds.

PROJECT AIMS AND OBJECTIVES

With the overall aim to conserve the Houbara bustard in Pakistan, the proposed project activities will focus initially on the following main objectives.

Project Objectives:

1. Assess the existing number of Houbara visiting the area;
2. Find out threats to Houbara and its underlying causes;
3. Develop an action plan for the conservation of Houbara based on the findings of the study

METHOD AND MATERIAL

To assess the existing number of Houbara Bustard visiting the area, point count method was adopted. The distance between 02 point count stations was at least 150 m. Counting was done since early morning till late afternoon.

At each station, the counts themselves were conducted in a 5-minute span. Every bird detected was recorded in one of four categories:

- Typical detection 0 to 50 m: birds up to top of vegetation/canopy, <50 m from the station center point.
- Typical detection >50 m: birds up to top of vegetation or canopy, >50 m from the station center point.
- Fly-over associated: birds above top of vegetation or canopy, and associated with the local habitat.
- Fly-over independent: birds above top of vegetation or canopy, and unassociated with the local habitat.

The data was recorded on the standard data form.

To find out threats to Houbara and its underlying causes, the proponent was adopted Participatory Rural Appraisal (PRA) technique. This included Focus Group Discussion and key informants interviews on specifically designed questionnaire. Besides this, personal observations was also be a key tool in identifying the threats and their underlying causes.

To develop an action plan for the conservation of Houbara based on the findings of the study, we followed multi-stakeholder approach. Key stakeholders like WWF-P, Balochistan Wildlife Department and community members were taken on board to devise a strategy for the conservation of Houbara.

RESULTS AND DISCUSSIONS

Population of Houbara Bustards

During the surveys conducted in 2013 and 2014, the number of Houbaras sighting totaled to 65 and 43 respectively. This means a decline of 33.8% in the year 2014. The direct sightings of Houbara in 2013 and 2014 were 52 and 31 respectively, whereas the indirect sightings for the above periods are 15 and 12 respectively.

Table 1 reveals that typical detection of Houbara accounted for 63% (n=41) and 51% (n=22) in 2013 and 2014 respectively. This means that Houbara is mainly a cryptic bird that inhabits low grasses and shrubs/herbs.

These findings are in general agreements with Mian, 1989, Gubin, 1996 who reported that Houbara is a cryptic bird and it prefers grasses, herbs and shrubs.

Table. 1: Sighting Record of Houbara Bustards

Year	Direct Sightings				Indirect Sightings			Total
	Typical Detection		Flyovers		Fresh Foot Prints	Droppings	Feather	
	0-50 m	> 50 m	Assoc	Ind				
2013	10	31	7	4	8	3	2	65
2014	7	15	7	2	9	2	1	43

Habitat Preference

Maximum number of Houbaras was observed near shrubs and grasses viz 57% and 40%. This was followed by barren lands (26% & 40 %), water bodies (14% & 11%) and rocks/mountains (3% & 9%) respectively in the year 2013 and 2014. The Pearson's correlation co-efficient ($r=0.8292$) shows a strong correlation which means that Houbara prefers vegetation grounds (shrubs & grasses) within its natural habitat.

Table 2. Habitat Preference by Houbara Bustard

Habitat	Population Census 2013		Population Census 2014	
	No.	%	No.	%
Shrubs & Grasses	37	57	17	40
Water Bodies	9	14	5	11
Barren Lands	17	26	17	40
Rocks/Mountains	2	3	4	9
Total	65	100	43	100

These results are in corroboration with Coles & Collar (1980) who deliberated that Houbara Bustards inhabit undulating flat arid plains, steppes and semi-deserts. Similarly, Porter et al., (2005) reported that Houbara inhabits arid plains, stony or sandy steppes, and desert or semi-desert areas. Batbyar et al (2011) also reported that the Houbara Bustard was found throughout the shrub-dominated, desertified steppe, semi-desert, and desert habitat.



Fig 2. Habitat of Houbara



Fig 3. A view of Houbara Bustard

Threats to Houbara

The major threats identified during the survey were hunting, habitat destruction and over grazing. The weighted score for hunting, habitat destruction and over grazing was 371, 338 and 351 respectively. Hunting was found to be the 1st most important threat to Houbara, followed by over grazing and habitat destruction.

Hunting is done by two category of people, one by local people and other by Arabs of Gulf countries particularly Emeritus. The local people belonging to Zhob, Qilla Saifullah and Quetta city hunt Houbara for meet, whereas the Arabs hunt Houbara for sports using Saker Falcon. According to locals, Arabs camped Wasta Lake for 30 days in Jan-Feb, 2013 and hunted c. 70 birds (Houbaras).

These results in agreement with Gaucher et al. (1996) who reported that high profile of the Houbara Bustard *Chlamydotis (undulata) macqueenii* as the preferred target for Arab falconry, and its ongoing decline due largely to hunting and increasing habitat disturbance.

Table 3. Threats to Houbara

Threat	Extent of Threat				Weighted Score	Rank Order
	4	3	2	1		
Hunting	77	17	6	0	371	1 st
Habitat Destruction	63	22	10	5	338	3 rd
Over Grazing	69	17	10	4	351	2 nd

CONCLUSION

The existing population of Houbara in this part of the world is declining at an alarming rate due to hunting, habitat destruction and over grazing. If timely conservation efforts are not made, the valuable species will extinct soon from the area.

RECOMMENDATIONS

- Regular population monitoring should be carried out to assess the spatial and temporal trends of Houbara population.
- Hunting being the major threat to Houbara should be stopped by law enforcing agencies. The community should also be sensitized about the value of Houbara and allied biodiversity.
- Collaborative and concerted efforts are required to be in place for the conservation of Houbara. NGOs, local people, Wildlife Department and Law enforcing agencies should develop conservation action plan.
- Environmental education strategy should be worked out at all levels and be implemented in letter and spirit to bring out positive change in their attitudes towards conservation.
- More research is required like habitat preference; distribution pattern and biology of Houbara.

REFERENCES

- Alekseev, A. F. (1985). *The Houbara Bustard in northwest Kyzikum*. Bustard Studies, 1985, 3: 87–92.
- Batbayar, N., Batsukh, B., and Bräunlich, A. (2011). *Key endangered species in Galba Gobi: status and provisional impact assessments of regional development scenarios*. Birdlife International and Wildlife Science and Conservation Centre, Mangolia.
- Coles, C.L. & Collar, N.J. 1980. (eds). Symposium Papers on the Great Bustard, Sofia, 1978; the Houbara Bustard, Athens, 1979. Poole: Sydenham Printers.
- Cramp, S. & Simmons, K.E.L. (1980). *Handbook of the Birds of Europe, the Middle East and North Africa*, Vol. 2. Oxford: Oxford University Press. 695 pp.
- Gao, x., Combreau, o., Qiao, j., Yang,w., Yao,j., and Xu, k. (2009). *Distribution and migration of houbara bustard (chlamydotis undulata) in china*. Journal of arid land, 2009, vol. 1, no. 1, 74–79
- Gaucher, P. & Combreau, O. (1995). *Restoration of houbara populations in Saudi Arabia: developments and future directions*. Oryx29: 136-142.
- Government of Balochistan (2011). *District Development profile of District Zhob, 2011*.
- Gubin, B. M. (1996). *Houbara bustards in Kazakhstan: distribution, numbers, seasonal movements, degree of investigation and protection*. In van Heezik, Y.M., & Seddon, P.J. (eds) Restoration of Houbara Bustard Populations: Captive Breeding, Release, Monitoring and Habitat Management: 15-19. Publication No.27, English series. Riyadh: National Commission for Wildlife Conservation and Development.
- IUCN (2012). *IUCN Red List of Threatened Species*. Version 2012.1. <www.iucnredlist.org>. Downloaded on **11 September 2012**
- Laghai, H.A., Moharamnejad, N., and Bahmanpour, H. (2012). *An overlook to Houbara Bustard (Chlamydotis undulata) status in center of Iran (Case study: Shahrood County)*. European Journal of Experimental Biology, 2012, 2 (4):1337-1345.
- Mansoori, J (2001). *An ecological study of Houbara Bustard in Iran*. PhD Dissertation, Islamic Azad University.
- Mian, A. (1989). *A contribution to the biology of the houbara bustard: 1983-84, population levels in western Baluchistan*. J. Bombay Nat. Hist. Soc.86:161-165
- Nadeem, M.S. (2003). *Ecology of Houbara Bustard Chlamydotis undulata macqueenii in Punjab, Balochsitan (Nag Valley) and Unbekistan*. Ph.D Thesis. University of Punjab.
- Porter, R. F., Christensen, S and Schiermacker-Hansen, P. (2005). *Field guide to the Birds of the Middle East*. T & ADPOyser, London.460 pp.
- Van Heezik & P.J. Seddon (1999). *Seasonal changes in habitat use by Houbara Bustards Chlamydotis [undulata] macqueenii in northern Saudi Arabia*. British Ornithologists' Union, Ibis, 141, pp. 208-215.