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Distribution and Population Status of Cheer Pheasant (*Catreus wallichii*) in Phalla Game Reserve, District Bagh, Azad Jammu and Kashmir, Pakistan

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Abstract: A study was carried out to collect the data on distribution and population status of Cheer Pheasant (*Catreus wallichii*) in Phalla Game Reserve, District Bagh. The study area comprised of four main localities, which in turn were sub-divided in to calling sites of Cheer Pheasant. Total of 49 adults were estimated during the study. The density indices showed three calling sites in Tranger and in Ban, Seree and Kathnar two calling sites for each. During present study number of calling sites and density indices at various area showed the maximum (2.40 km^{-2}) value of density index recorded at Tranger and minimum (1.33 km^{-2}) value at Ban. By documenting direct and indirect evidences the total adult population in these two localities were estimated be 13 and 12 birds, respectively.

Key words: Cheer Pheasants, distribution, population, Azad Kashmir, Pakistan

INTRODUCTION

The main habitats of Cheer Pheasant are distributed through Southern foothills of the Himalayas, from Pakistan to Nepal, occurring in Northern Pakistan, Azad Jammu and Kashmir, two states of India (Himachal Pardesh and Uttar Pardesh) and Nepal (Roberts, 1991a; Kalsi, 1999). The Cheer formerly ranged from Pakistan to the Kali-Gandaki River in Western Nepa (Ali and Ripley, 1968-1998; Delacour, 1977). An earlier account given by Hume and Marchall (1879-1881) suggested that the Cheer was always patchily distributed, although they describe it as common in Kumoan, Gorial and in Chamba. This appraisal is probably true today, its range being very patchy as a result of specialized habitat requirements and in increase of threats throughout its range (Kalsi, 1999). An unspecified numbers of Cheer were reported in Dhorpatan areas of Nepal and in West Central Nepal (Lelliott, 1981) during 1981. In India Cheer Pheasant was found in Himachal Pardesh (Kalsi, 1999; Whistler, 1926), Utter Pardesh (Garson *et al*., 1992) and five other localities including Chail, Kandaghat, Dranghati, Nadar and Parashar (Gaston and Singh, 1980). Earlier record (Rattray, 1905; Whistler, 1930) showed that the species was always difficult to find in locally common as revealed by the only 20 individuals flushed above Salkhala in December 1977 (Mirza, 1980) and no further sightings have been reported in this area. That indicates the species is possibly extinct there. The species is found sparingly at the fringes of Azad Jammu and Kashmir (Baker, 1921-1930), Kistwar valley (Ward, 1923; Osmaston, 1927).

It is scare in the Neelum valley (Roberts, 1991b), indeed possibly at the brink of extinction (Chaudhry, 1993). A small population of Cheer was confirmed in Pir Chanasi area of Jhelum valley during 1988 (Burt, 1988) and in Machiara area (Machiara National Park) during 1986 (Islam and Crawford, 1986). The general impression is that the Cheer Pheasant survive in very small numbers at a very few scattered sites in Pakistan and is probably in imminent danger of extinction given high hunting level and low success of re-introduction programmes (Ridley and Islam, 1982). The Cheer Pheasant occupied a wide altitudinal range, having been recorded from 1200-3000 m (Garson, 1983; Gaston, 1987). In Dara and Muri (Nepal) its altitudinal rang is 2200-2440 m (Lelliott, 1981) and in Uttar Pardesh it ranges upto 4550 m (Ghosh, 1997). In Pakistan, its altitudinal range lies between 600-3500 m (Kalsi, 1999; Roberts, 1991b). It was observed at Qazinag range (Baker, 1921-1930) and on the outermost flanks of Salkhala wildlife sanctuary at 1850-2300 m in December 1979 (Mirza, 1980; 1978). The altitudinal range in Machiara, Trakama pass, Salam Pura in Neelum valley and in Pir chanasi was 1400-3500 m (Roberts, 1991b;

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Burt, 1988; Young *et al*., 1987). Its lowest descent tends to occur during the period of extremely cold weather (Baker, 1921-1930). Although there is less seasonal altitudinal movement than in most other mountain galliform (Ali and Ripley, 1968-1998; Inskipp and Inskipp, 1991).

The species generally frequents outer hill ranges of the Himalayas, typically avoiding dense forest and favoring very precipitous terrain with scrub, tall grass and stunted trees, particularly where interspersed with rocky crags (Ali and Ripley, 1968-1998; Garson *et al*., 1992; Roberts, 1991b). It also prefers the grassy hills, scattered oak forest and long grass (Murray, 1889). It is commonly found in flocks of 5-15 birds except in the breeding season (Finn, 1902), or may be found in the flocks of from half a dozen or more, probably only the family party of the last hatching (Baker, 1918). In April, particularly all appeared to be in pairs (Gaston and Singh, 1980), until the onset of winter when these family units combine with others to form larger flocks (Kaul, 1989). The species is thought to sit concealed during the day, only emerging to forage in early morning or late afternoon (Murray, 1889) and is extremely skulking, tending to run away through undergrowth when disturbed rather then taking wing (Ali, and Ripley, 1968-1998). The Cheer Pheasant diet is mainly vegetarian, but include some animal material (Kaul, 1989; 1990), with their strong down curved upper mandible, birds are well equipped to dig and feed on tuber, rhizome and roots to supplement their diet in winter (Baker, 1921-1930; Roberts, 1991b). In summer, seeds and barriers and earlier in the spring, young shoots and leaves are consumed (Roberts, 1991b).

One of the main threats to the species appears to be its distribution in small isolated population, the control and conservation of habitat is difficult even in protected areas as communities historically depends on natural recourses (Pandey and Wells, 1997). The only hunting, grazing and traffic factor appear to remain problematical (Ridley and Islam, 1982). Human population pressure, hunting and changing patterns of land use are resulting in its decline, qualifying it as vulnerable (Anonymous, 2001).

There are some local reports of presence of cheer pheasant in the study area where it is persecuted at the hand of locals. This precious bird is hunted and pouched ruthlessly that can lead to its extinction. Present study was conducted to find out the distribution and population status of this bird in the study area so that the data can be collected for taking conservation measures of this bird in future.

MATERIALS AND METHODS

A study was carried out in Phalla Game Reserve, District Bagh, Azad Jammu and Kashmir, from April to August 2004 in order to collect the data on distribution and population status of Cheer Pheasant (*Catreus wallichii*). The study area, comprised of 4 main localities which in turn were sub-divided into calling sites of Cheer Pheasant (Fig. 1). It was not feasible to study this bird directly in its natural habitat, however, every effort was made with the assistance of local hunters, shepherds and wildlife staff to get the required data on the basis of indirect evidences such as callings, foot prints, feathers, pellets, ground scratching and information gathered from knowledgeable persons.

The Cheer Pheasant calling is sporadic and irregular but in case of Pheasants the call count method is only reliable source for estimation of population (Gaston *et al*., 1981). During present study same method was followed to locate and estimate the population status of this bird. About six diurnal hours were spent daily in each potential habitat of Cheer Pheasant during the survey period. The call count census included four members, which were stationed at fixed sites at twilight and observation were taken for one to 2 h at early dawn and 60 min after sun rise. On return to camp, results were pooled. Calling at dusk were not included in results as for being less likely to be reliable time of observation (Garson *et al*., 1992).

For density indices estimation, each calling site was treated as an individual data point. At each point height, slope, number of villages within 1-2 km, their total population, livestock, presence of water bodies and cultivation within 600 m were all noted. Land use practices such as cutting, burning and grazing were also recorded.

Study area: The Phalla Game Reserve lies about 23 km away from famous town of Forward Kahuta, which lies about 65 km from Bagh city (Fig. 1).

The study area comprised of four main localities i.e. Ban, Seree, Trangar and Kathnar. A famous metalled road lead to the famous village Kalamola which was about 17 km away from Forward Kahuta. All these localities are situated at about 6 km distance, on the left side of Kalamola village.

Ban is 1st main locality having two calling sites at an elevation range of 2700 m above the sea level. The area is Himalayan sub-tropical pine forest with extensive east and north facing grassy steep slopes, having scattered blue pine (*Pinus wallichiana*) and *Abies pindrow* trees. The shrub species are *Berberis lycium, Rosa macrophylla* and *Indigofera heterantha*. The ground cover includes

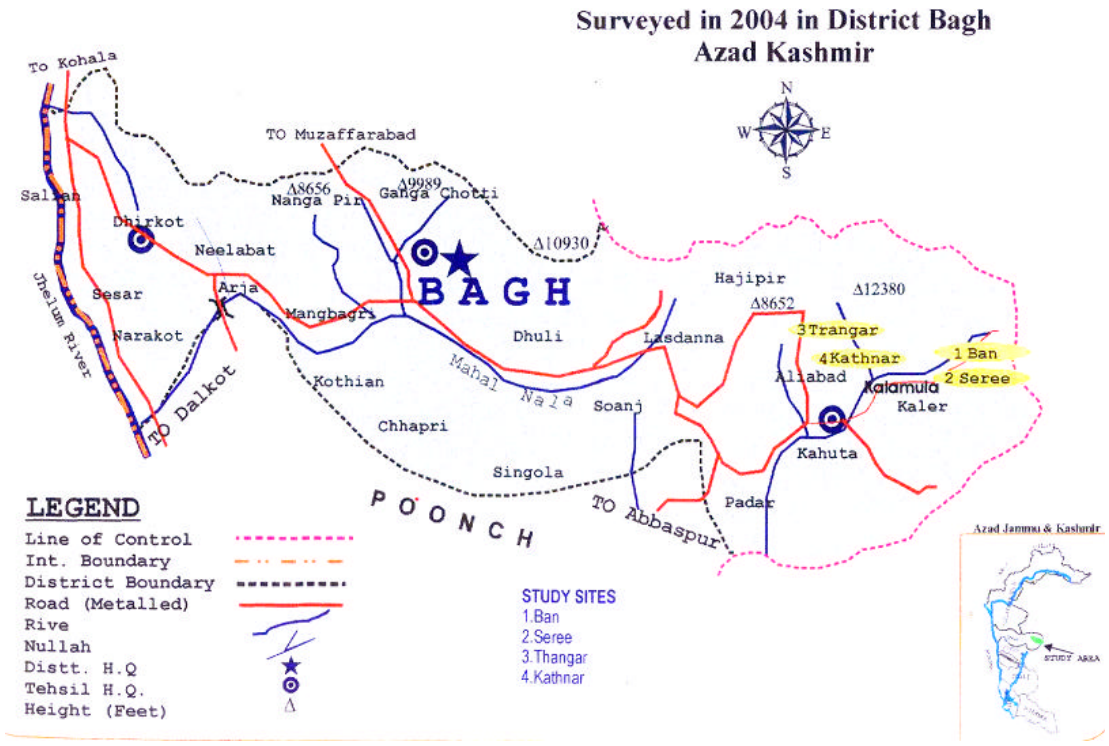

Fig. 1: Map of the study area showing the study sites of Cheer Pheasant

Cynodon dactylon, Polygonum ovata and *Euphorbia helioscopia.*

The 2nd main locality is Seree. It lies below the village Sarii and above Ban. It is located in forest compartment number 37 at an altitude of 2750 m. The habitat is steep grassy with patchy distribution of *Pinus wallichiana* and *Abies pindrow*. The under story includes the *Rosa macrophylla, Placteranthus rugosus* and *Vibernum nervosum with the* ground cover of *Heteropogan contortus, Cuscuta reflexa* and *Bistorta offinis.*

The 3rd main locality, Trangar, another potential habitat of Cheer Pheasant is located in forest compartment number 36 at an altitude of 2600-2650 m. The area is characterized by open rocky, very steep with patchy distribution of grasses and scattered trees of *Abies pindrow*. The shrub cover includes *Berberis lycium* and *Placteranthus rugosu* with the ground cover species of *Cynodon dactylon, Anaphalis nepalensis* and *Bistorta offinis.*

The 4th main locality is Kathnar in forest compartment number 37 at an altitudinal range of 2650-2750 m. It is an open sloppy and grassy area with moist temperate forest with *Abies pindrow* and *Fraxinus* sp. The under story includes *Berberis lycium* and *Ficus palmate* and herbs like *Heteropogan controtus, Euphorbia* sp. and *Adiantum capillus vaneris.*

RESULTS AND DISCUSSION

To study the distribution and population status of Cheer Pheasant in Phalla Game Reserve the study area was divided into four main localities comprising of the following calling sites.

- Ban (left of seree) comprised two calling sites
- Seree (below village sarii) comprised two calling sites.
- Trangar comprised three calling sites.
- Kathnar comprised two calling sites.

These were the main localities in which the Cheer Pheasant population was distributed and studied during 2004. During survey a total of 9 calling sites were solicited with the maximum density index of 2.40 km^{-2} at Tranger and minimum of 1.333 km^{-2} at Ban (Table 3). A maximum of 3 calling sites were recorded from Trangar and minimum of 2 from other three localities (Table 1).

Table 1: Number of calling sites and density indices at various surveyed area

Locality	Altitudinal range (m)	Calling sites	Area surveyed (km^2)	Density index (Calling sites/area surveyed) (km^2)
Ban	2700-2750	2	1.5	1.33
Seree	2750-2800	2	1.25	1.66
Trangar	2600-2650	3	1.25	2.40
Kathnar	2600-2700	2	1.25	1.66

Table 2: Total population estimation of Cheer Pheasant

Locality	Forest compartment No.	Estimated adult population
Ban	37	12
Seree	37	11
Trangar	36	13
Kathnar	37	13
	Total	49

Table 3: Habitat and population estimation of Cheer Pheasant

Locality	Forest comp. No.	Height (m)	Date	No. of calls	No. of calling sites	Surveyed area (km)	Physically seen	Total adult estimated population	Habitat
Ban	37	2700	14.4.2004	1	1	2	--	11	Open steepy area dominated by *Pinus wallichiana* and *R. macrophylla*
Ban	37	2700	11.8.2004	6	2	2	--	13	Open steepy area dominated by *Pinus wallichiana* and *Rosa macrophylla*
Seree	37	2750	14.4.2004	2	2	1	2	12	Grassy steepy area dominated by *Pinus wallichiana, Rosa macrophylla* and *Plactranthus rugosus*
Seree	37	2750	10.8.2004	3	2	2	--	10	Grassy steepy area dominated by *Pinus wallichiana, Rosa macrophylla* and *Plactranthus rugosus*
Trangar	36	2650	9.8.2004	3	2	2	--	14	Dominated by *Abies pindrow, Plactranthus rugosus* and *Berberis lycium*
Trangar	36	2600	9.8.2004	3	2	2	--	12	Dominated by *Abies pindrow, Plactranthus rugosus* and *Berberis lycium*
Kathnar	37	2700	18.4.2004	3	2	2	1	12	Dominated by *Abies pindrow, Fraxinus* sp. and *Ficus palmata*
Kathnar	37	2650	9.8.2004	6	2	2	--	14	Dominated by *Abies pindrow, Fraxinus* sp. and *Ficus palmate*

The first main locality of the study area was Ban. It is an open steep area affected by grazing and cutting activities. This locality has the density index of 1.33 km^{-2} with two calling sites (Table 1). The total estimated population of adult Cheer in this locality was 12 birds (Table 2). Other evidence like ground scratching (n = 2) and feathers (n = 1) were also recorded.

Seree, another potential habitat of Cheer Pheasant had the density index of 1.66 km^{-2} with two calling sites (Table 1). The total estimated population in this locality was eleven birds (Table 2). Two birds were physically seen in this locality and flushed away (Table 3). The evidences like feathers (n=1) fresh droppings (n=4) and ground scratching were also observed. Other indirect evidences included the information gathered from local shepherds (n=3) and hunters (n=3).

The 3rd potential habitat of Cheer was Trangar, having density index of 2.40 km^{-2} with three calling sites (Table 1). The total population in this locality was estimated to be 13 birds (Table 2). Other evidences like ground scratching (n=1) was observed and fresh dropping (n=5) collected. The information was also gathered from the shepherd (n=3) and hunters (n=4).

The 4th main locality Kathnar was another potential habitat of Cheer Pheasant, having density index of 1.66 km^{-2} with two calling sites (Table 1). The total estimated adult population in this locality was 13 birds (Table 2). Other evidences like feather (n=2) and fresh dropping (n=3) were also collected. One bird was physically seen during the survey (Table 3).

According to Osmaston (1927) the Cheer Pheasant was a rather local bird in Kashmir, perhaps not uncommon towards the Kishan Ganga (River Neelum) and on the outer slopes of Pir Punjal Rnage but Qadri *et al.* (1990) failed to find any in Kashmir. Qureshi *et al.* (1999) observed eight pairs of Cheer Pheasant in Sangar Bari. During present study seven pairs were recorded from Trangar.

By judging earlier record, the species was difficult to find in Pakistan (Chaudhry, 1993). However it was nevertheless locally common as, reveal by the 20 individuals flushed above Salkhala in December 1977

(Mirza, 1978). During present study two birds were flushed at Seree and one in Kathnar during April 2004.

During present study, number of calling sites and density indices at various areas showed that the maximum value of density index i.e. 2.40 km^{-2} recorded at Trangar and minimum 1.33 km^{-2} at Ban (Table 1). By documenting direct and indirect evidence it is concluded that total adult population in these two localities was 13 and 12 birds, respectively (Table 2).

Kalsi (1999) reported a total of 17 calling position km^{-2} and one of the highest population density was recorded from Majothal wildlife sanctuary where Garson (1983) reported 24 pairs km^{-2}. During present study maximum 3 calling sites were recorded from Trangar and from Ban, Kathnar and Seree two calling sites for each. Kalsi (1999) also reported two sites in Tunda wildlife sanctuary and three sites in Thathana Reserve forest.

In all these areas the population of the Cheer is badly affected by the people of nearby areas especially during summer. All these areas have a very little human population during the winter due to high snowfall, but during summer season these areas are densely populated. The local residents settle down in these areas along with their livestock. The over grazing by livestock and cutting of trees for meeting energy requirements lead to the degradation of cheer habitat that badly effect the Cheer Population. Although currently the area is supporting the cheer population but unless these practices are checked and conservation measures taken the population decline will continue that ultimately would lead to the extirpation of this precious bird

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