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Population and Group Size of Cheer Pheasant *Catreus Wallichii* in Pokhari Valley, Garhwal Himalaya, India

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Abstract: ***Present paper reports population dynamics of Cheer pheasant Catreus wallichii in Pokhari valley, Garhwal Himalaya during January 2019 to December 2019. A total of 405 individuals with 145 groups were recorded. Overall individuals per sighting and group size (3.88±0.51 and 3.40±0.45) were also recorded during the study period respectively. Maximum value of individuals per sighting and group size were recorded in months of July and November (6.13±0.76 and 7.32±0.97), while minimum were recorded in May and April (1.75±0.27 and 1.17±0.26). Seasonal variation was also observed in population and group size. Maximum value of individual per sighting was recorded during the Monsoon season and minimum were recorded in spring season. While maximum and minimum group size were recorded in winter and spring Season.***
Key words: Seasonal variation, Population, Group size, Cheer Pheasant, Garhwal Himalaya

I. INTRODUCTION

The Cheer Pheasant *Catreus wallichii* is threatened species (Fuller and Garson, 2000, Bisht et. al. 2005), found in Chir Pine and Pine mixed forest in Garhwal Himalaya. It belongs to order-Galliformes and Family- Phasianidae. It is also distributed in North West Pakistan to west-central Nepal between the Indus and Kali-Gandaki River (Ali and Reply, 1981, Garson et.al. 1992, Kalsi 2001). In Garhwal Himalaya Cheer pheasant found in Chir pine and pine mixed forest with altitude between 1100M. to 2300M. (Phurilatapum, 2005). In this paper we describe findings of the study carried out on seasonal variation in population and group size of Cheer pheasant for year in Pokhari valley, Garhwal Himalaya.

II. MATERIALS AND METHODS

The study was carried out at Pokhari Valley in district Chamoli, Garhwal Himalaya, which lies between 30.4708 latitude and 79.2654 longitudes and covers approximately 5.60Km^2 area on northeast facing slops at 1350M. to 1560 M. altitude. Regular visit for 7-12 days were made to the study site. Data pertaining to population size, group number and group size for Cheer Pheasant were collected by monitoring them right from morning (before sunrise) to evening (till setting of dark) using transect/trail walk method (Javed and Kaul, 2002). Data were collected on total number of Cheer sighted, number of group, maximum number of individuals in a group, biotic pressure etc. In the study site, many trails were laid by local people who daily visit to fodder and fuel collection, cattle grazing etc. Data was analyzed statistically using‘t’ test and one way ANOVA (Fisher 1963).

III. RESULTS

Details of sightings and group size are presented in Table. During the study period (January 2019 to December 2019), a total 405 Cheer pheasant were recorded in 145 groups. The overall 3.88±0.51 (range from 1.75±0.27 to 6.13±0.76). Population size was found low from March to May but significant increase was observed by the month of July (6.13±0.76 individuals/sightings, $P<0.05$; May vs. July). Thereafter, a decline in population was noticed. Cheer pheasant is a threatened species and remain in a group of 4-6 birds. During the study, average group size 3.40±0.45 was recorded (range from 1.17±0.26 to 7.32±0.97). Maximum group size 7.32±0.97 was recorded in November while minimum 1.17±0.26 was recorded in month of April respectively. Records of sightings and group also showed seasonal variation (Figure), maximum individuals/sighing were recorded in Monsoon season and minimum was recorded in spring season. In group size, maximum group size were recorded in Winter season (November, December, January) while minimum group size were recorded in Spring season (February, March, April) respectively.

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IV. DISCUSSION

Records on sightings of Cheer pheasant collected for one year (from January 2019 to December 2019) in Garhwal Himalaya, Uttarakhand show seasonal variation. During monsoon and winter season (June to January), both population and group size were found quite high while decline was recorded in spring. Seasonal variation and group size of Cheer could be due to the biological and environmental factors. Less number of birds in population and group size as recorded from February to May (spring and summer seasons) could be due to reproductive behaviour. During the breeding period, where pairs are formed and territories are marked from February, birds disperse. After egg laying, females also become busy in incubation of eggs on her nests. As a result, sightings of birds reduced during this period. Since hunting activity was never observed in our intensive study site, decline in population and group size during breeding season could be related with predation as the potential predators (*Milvus migrans, Vulpus vulpus* etc.) were noticed on many occasions in the study area. During post monsoon and winter seasons (September to December), high number of individuals and relatively large group size seen due to merging of small coveys with newly hatched Juveniles as reported in game birds (Shah et.al.,2002; Kaul, 1990). With the arrival of monsoon, availability of food supply increases and becomes abundant in the form of seeds, grains, insects etc. These attract individuals and formation of the large groups takes place. During post breeding or winter season, flocking behaviuor has an advantage against predation pressure because with increasing number of individuals predation pressure decreases as observed in Cheer pheasant (Young et.al. 1987, Kaul, 1990), Ostriches (Bertron 1980), and domestic fowl (Marty and Liana, 1998) etc.

V. CONCLUSION

The Present study reveals that Cheer pheasant is threatened species of Garhwal Himalaya variation in relation to time. In spite of these studies, no current data is available on population of Cheer pheasant in Garhwal Himalaya; our knowledge about Cheer pheasant of this habitat is little till date. Present investigation is an attempt which could serge benchmark for conservation point of view and future ground level research investigation.

VI. AKNOWLEDGMENT

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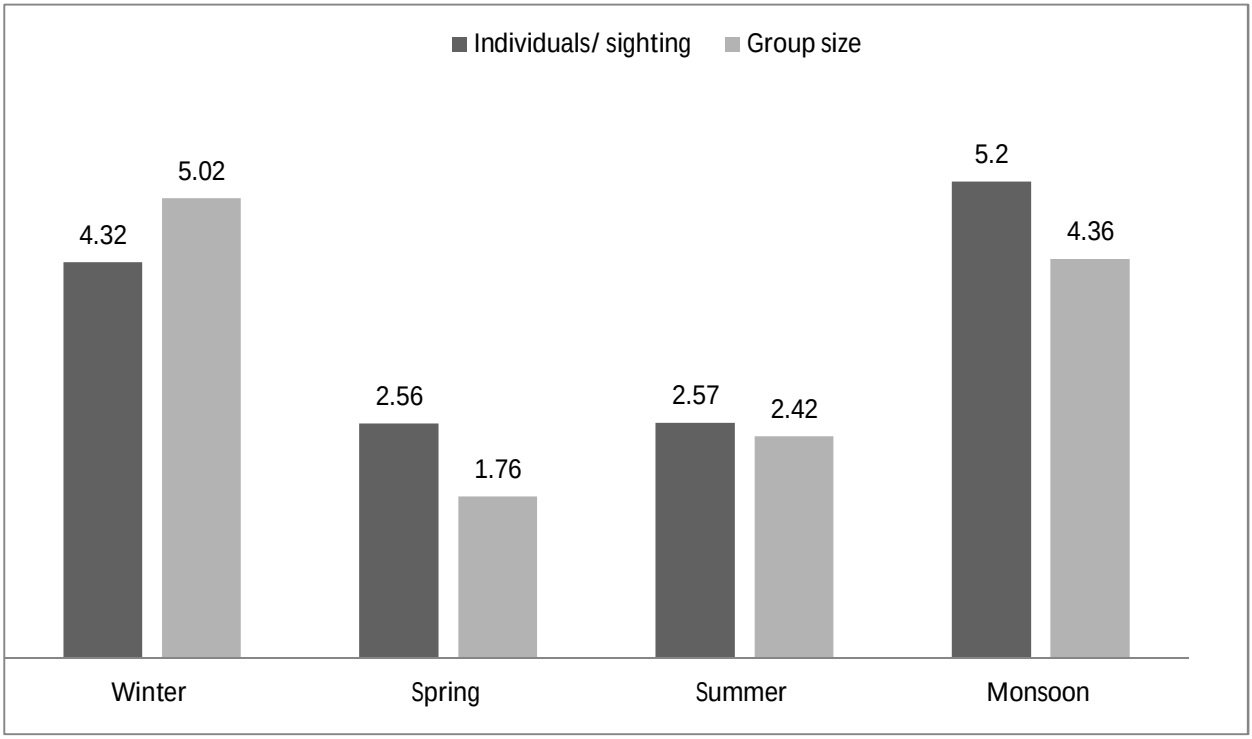
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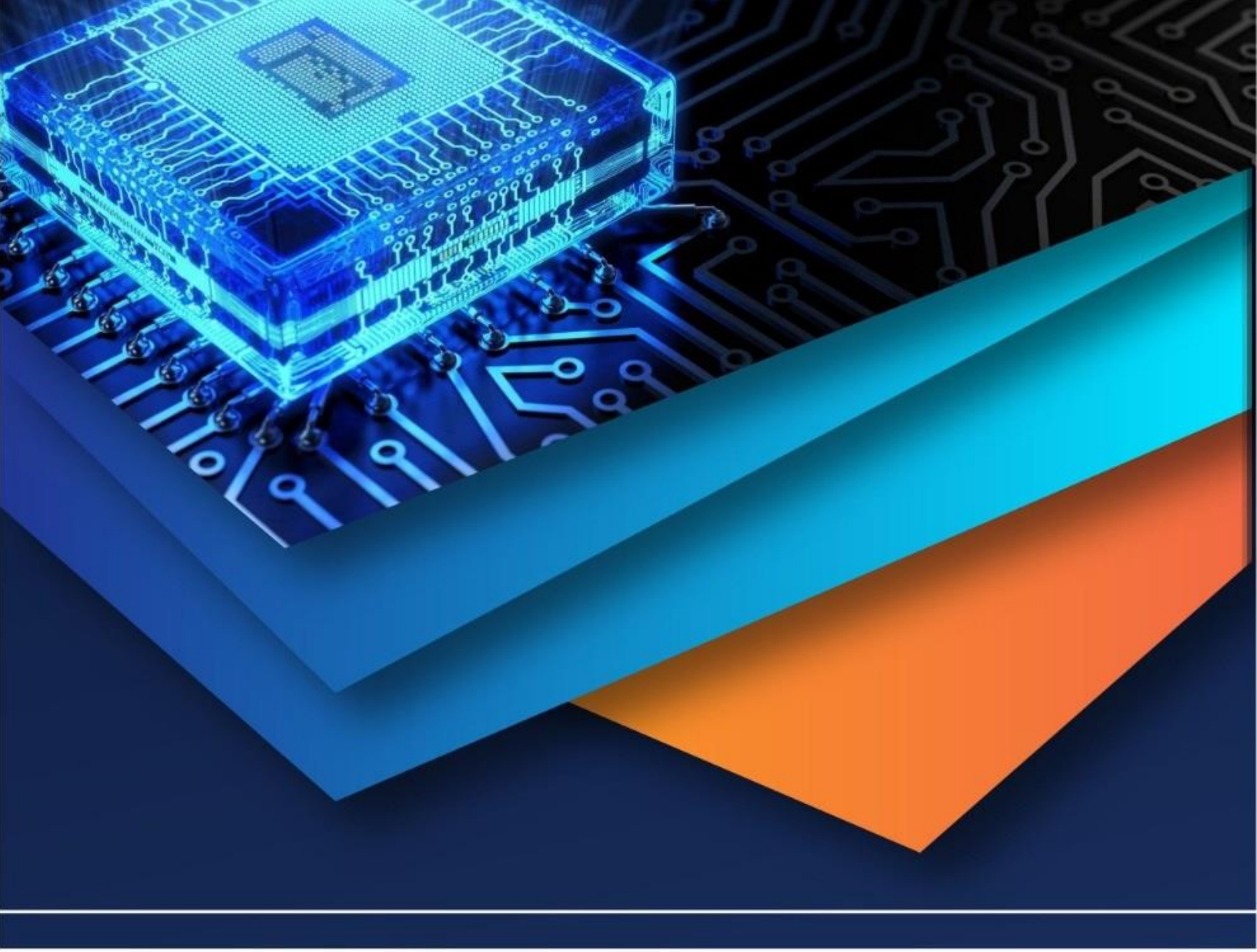
Table: Monthly records on Population and group size of Cheer pheasant *Catreus wallichii* at intensive study site Bingarh, Pokhari valley, Garhwal Himalaya

Months	No. of groups	Total individual sighted	Ind./sighting	Av. group size
January,2019	8	38	4.75 ± 0.57	4.75 ± 0.57
February	12	28	3.50 ± 0.43	2.33 ± 0.38
March	16	25	2.08 ± 0.23	1.77 ± 0.18
April	21	38	2.10 ± 0.17	1.17 ± 0.26
May	15	21	1.75 ± 0.27	1.59 ± 0.25
June	18	34	3.40 ± 0.54	1.60 ± 0.16
July	12	49	6.13 ± 0.76	4.08 ± 0.63
August	11	46	5.75 ± 0.47	4.19 ± 0.84
September	9	43	4.77 ± 0.81	4.77 ± 0.74
October	8	33	4.13 ± 0.63	4.13 ± 0.57
November	7	26	5.20 ± 0.78	7.32 ± 0.97
December	8	24	3.00 ± 0.43	3.00 ± 0.37
Total/ Av.	145	405	3.88 ± 0.51	3.40 ± 0.45

Figure: Seasonal variation on Population and group size of Cheer pheasant *Catreus wallichii* at intensive study site Bingarh,Pokhari valley, Garhwal Himalaya



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