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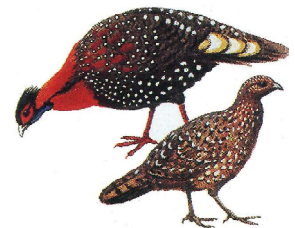
Newsletter of World Pheasant Association - India



Indian Peafowl
Pavo cristatus
National Bird
&
Odisha State Bird



Himalayan Monal
Lophophorus impejanus
Uttarakhand State Bird



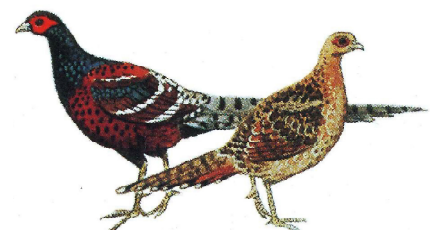
Western Tragopan
Tragopan melanocephalus
Himachal Pradesh State Bird



Blood Pheasant
Ithaginis cruentus
Sikkim State Bird



Blyth's Tragopan
Tragopan blythii
Nagaland State Bird



Hume's Pheasant
Syrmaticus humiae
Manipur and Mizoram
State Bird

***Pheasants as
National & State Birds***

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Editorial

Dear Readers,

In this issue we bring you interesting articles based on research studies on two endangered pheasant species of India. One deals with the breeding biology and behaviour of the White-crested Kalij Pheasant in Uttarakhand, and the other presents an overall status sketch of the Hume's Pheasant in Nagaland, with some references to poaching by the local communities. Both these species require greater protection and the studies throw more light on helping to plan conservation initiatives for them.

Also in this issue is a piece that provides information and handy hints for those interested in following the peafowls in Mumbai and gives a good glimpse of the areas around Raj Bhawan, Malabar Hill, Goregaon, and the Sanjay Gandhi National Park, Borivali.

Please continue to send your contributions in the form of articles, stories, notes, photos, cartoons, etc. This is your newsletter and we need you all to enrich it issue after issue.

President, WPA-India



a) A group of Kalij - adult male and female and two sub-adults



b) Female Kalij sitting on her nest

Photos by Dr. Sunit Kumar and Dr. M. S. Bisht

National Census on Indian Peafowl

The Salim Ali Centre for Ornithology & Natural History (SACON), Coimbatore, will soon begin a national census on the Indian peafowl, the national bird, its Director said here on Friday.

“Peafowl is our national bird but we don’t know its status and population in the country. So we are going to start an all-India coordinated ‘National Bird of India’ project. It will be the first, formal census. We will focus on distribution, population and the conflict issues,” K. Shankar, SACON Director, told IANS.

The organisation will co-ordinate with the Zoological Survey of India for the census. Earlier, the Wildlife Institute of India had conducted an initial survey.

Shankar, who was appointed as the Centre’s Director in March this year, said human-peafowl conflict in Tamil Nadu is a major issue with the farmers in the state.

Source: Kolkata July 1, 2016, Business Standard



Photo: Dr. John Corder

Breeding Biology of White Crested Kalij Pheasant

(Lophura leucomelana hamiltonii)

Abstract: The present paper provides information about breeding behaviour of White-crested Kalij pheasant. In district Pauri Garhwal, Uttarakhand, breeding activity of Kalij starts from February onward when pair formation between adult male and female was observed. Territorial fights between males and chasing between males were observed in the months of March and April. In May, four active nests with average diameter 23.1 and depth 9.54 centimetres were located in the open or in the burrows of tree trunks. All nests were made of dry leaves, grass and litter. The clutch size was 4-8 eggs from which 69.75% eggs were hatched. The total chick survival was recorded 56.25%. Sexual dimorphism appeared in the months of September and October.

Pheasants are forest dwelling birds. These are magnificently coloured birds known to mankind since prehistoric period for food and other values. Out of total 51 species of Pheasants reported so far in the world, 17 species are found in South-East Asia. Among all the pheasants, Kalij (*Lophura leucomelana*) is the most widely distributed, found in the Himalaya from river Indus in western Pakistan, eastward through northern India to Nepal (Ali and Ripley 1983). Of the 13 sub-species of Kalij, the White-crested Kalij (*L.I. hamiltonii*) is quite common and found from 400-3600m altitude in the subtropical deciduous forests and mixed temperate forests (Hermans 1986, Bisht and Dobriyal 2002, Bisht et al 2002). Within its distributional range, once this species was most common. But in the last few years, illegal hunting, trapping and wide scale habitat destruction has caused overall decline in its population. As a result, now Kalij has been categorised at 'Lower risk' by the IUCN. Apart from the studies conducted on its occurrence, distribution, habitat use, population, social behaviour (Kumar et al 2014), information on breeding biology would help in the management of the species.

The aim of the present study was to provide detailed information on the breeding biology including pairing, territory formation and courtship, nesting, clutch size, hatching success and appearance of sexual dimorphism of the White-crested Kalij Pheasant.

Materials and methods: The study was conducted from year 2007 to 2011 in district Pauri Garhwal (30° 15' N and 78° 30' E) of Uttarakhand State. In the local dialect of Garhwal, Kalij is called 'Kukhera', 'Kala murga or murgi'. The habitat where present study was carried out comprised mixed temperate forest (dominant trees were *Pinus*, *Quercus*, *Rhododendron*, etc) between 1600-2000m altitude range. Minimum and maximum daily temperature during the study period was 6.2° C and 18.5° C and 12.7° C and 22.7° C respectively. Annual average rainfall was 142.41 mm³, mainly brought by the south-west monsoon (June-September).

During the study, information was collected on group size, territory formation, pair formation, mating, and nesting, clutch size, hatching success, parental care and appearance of sexual dimorphism. Using the focal plot method (10 metre radius), information collected on vegetation cover (viz. canopy, shrubs, herbs, grass cover and height) and litter depth with in 10m distance of nests.

Each nest was visited at fixed interval of 2-3 days and records maintained on shape and size of nests, nesting materials used in the nest formation, number and colour of eggs, hatching success, chicks survival, breeding success, parental care, appearance of secondary sexual characters and associated behaviour.

Pairing and territory formation: White-crested Kalij is a social bird found in group of 2 to 12 or more birds. From February onward, Kalij was observed in pairs or small groups of 2 to 2.56 consisting one male and one female or one male, one female and one sub adult. After pairing, the territory formation was noticed in early spring when male to male chasing was observed. During this period drumming sound produced by male Kalij was also noticed. Courtship was observed in mid April (on 17 April). After a long chase the male mounts the female just like domestic fowl.

Nests and nest site characteristics: During the study, four active nests were located between 800 to 1900m altitude on north east, south east and south facing slopes of 25° inclination (Table 1). Nests were found in the open in shallow scrapes, under pits below hollow tree trunks. The vegetation cover around the nests was little. The median score for vegetation was: canopy cover 37.5%, shrubs 35.8%, herbs 27.7%, grass 12% and litter depth 2.8 cm. The grass height was recorded about 15 cms.

Average size of nests was recorded as follows: diameter 23.1cm and depth at centre was 9.5cm. All nests were made up of dry leaves and grass with average 82% and 9.5% respectively. Average distance of nests from nearest escape site (hiding cover) was 15.8 meter far.

Clutch size and breeding success: Mean clutch size of four nests was 6.5 eggs (consisting 8 eggs in 2 nests, 6 eggs in one nest and 4 eggs in one nest (Table 1, Fig. 1c and d). The eggs were pale cream or buffy white to warm reddish buffy, almost similar to the eggs of domestic fowl. Two eggs from one nest (IV nest) were picked up by the villagers in our absence who used the habitats for grazing their cattle. From remaining eggs of four nests, 69.75% chicks hatched. Since we had no data on date of egg laying, the incubation period was not recorded here. Chick survival and breeding success records were 42.7% and 56.25% respectively. All chicks were small, generally chestnut coloured (Figure 2).

Parental care and appearance/sexual dimorphism: After hatching, chicks were observed with the mother hen. Female keeps her chicks under her wings for few days and they remain near the breeding habitat. Once chicks become larger, female with her chicks cover large area for feeding. Initially all chicks had almost similar brown plumage but by September end few chicks were observed with black and white feathers and by October they completely turned to adult male black plumage with white feathers on crest, throat and rump. Some birds, most probably the females, remain with brown plumage.

A finding of the present study is that the White-crested Kalij is an early breeder. Like other galliformes and many passerine birds (Ali and Ripley 1963), egg laying occurs before arrival of the monsoon in the month of May. This could be a reproductive strategy because chances of fungal infection (in eggs) and predation

Table -1

Parameters	Nest No.				Mean \pm
Months	I	II	III	IV	
	May	June	June	July	
1 Habitat characteristics					
Altitude (m)	1900	1850	1800	810	
Aspects	SE	S	NE	SE	
Slope angle (degree)	22	38	15	24	24.7 \pm 4.8
Distance of nest from hiding Cover/escaping habitats (m)	25.0	10.5	10	18.0	15.8 \pm 3.5
2 Vegetation characteristics around nests					
Habitat types	MTF	MTF	MTF	MDF	
Canopy cover (%)	50.0	25.0	50.0	25.0	37.5 \pm 7.2
Shrub Cover (%)	44.4	36.4	27.2	35.2	35.8 \pm 3.5
Grass Cover (%)	16.4	12.1	14.6	17.2	15.0 \pm 1.1
3 Nests location, size, and composition					
Location with respect to ground	In a shallow scrape	In a pit below shrub stem	In a pit below tree stem	In a shallow scrap	
Diameter (cm)	22.0	21.0	28.1	20.4	23.1 \pm 1.7
Depth (cm)	9.7	10.2	10.9	7.5	9.5 \pm 0.7
Leaves (%)	98.0	65.0	92.0	75.0	82.5 \pm 7.5
Rubbish (%)	2.00	55.0	8.00	25.0	22.5 \pm 11.8
Litter depth (in cm)	3.4	2.3	4.1	1.6	2.8 \pm 0.5
4. Reproductive success					
Cluth size	8	6	4	8	6.50 \pm 1.10
Hatching success	87.50	66.44	50.00	75.00	69.75 \pm 7.87
Chick survival (%)	75.00	50.00	25.00	75.00	56.25 \pm 11.96
Breeding success (%)	50.00	33.00	25.00	62.00	42.70 \pm 8.39

MTF – Mixed temperate forest, MDF – mixed deciduous forest.

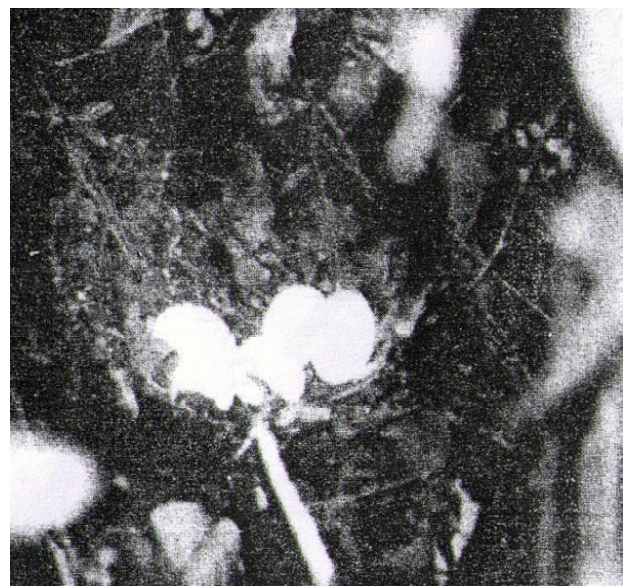
pressure increase several times (Chandola-Saklani et al 1983) during the monsoon time. Breeding hen and eggs could be easily detected by predators in green background colour (Jimenez and Canover 2001, Bisht et al 2005). Data on nest site characteristics indicate that the vegetation cover is least concerned for nesting whereas role of litter observed is important. The brown plumage of nesting hen easily camouflage with a brown background litter.

The clutch size of 6.5 (4-8) eggs found in the present study is comparatively lower than 6-9 and upto 15 eggs reported by Hume and Marshal (1879), Singh and Singh (1995). In Chanttikhal reserve forest (750-1200m) in Pauri Garhwal, an average clutch size of 11.12 with chick survival (37.09%) has been reported by Sharma (1992). Change in the clutch size and breeding success can be attributed to various factors like invertebrate abundance (Hill 1985).

Habitat destruction, specially through forest fires takes place during spring and summer seasons (when egg laying, incubation and hatching of chicks occur) and has become a regular phenomenon. Forest fire is mostly man-made due to intentional or reckless acts committed by human beings and is caused primarily to obtain good growth of grasses.



c) A clutch of four eggs

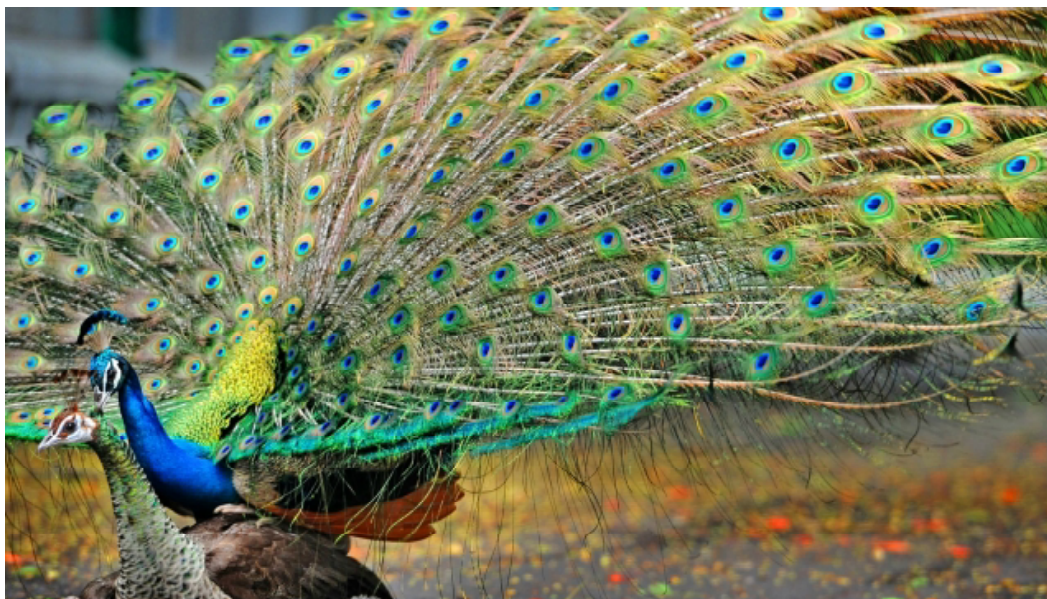


d) A clutch of five eggs

Photos by Dr. Sunit Kumar and Dr. M. S. Bisht

by: Dr. Sunit Kumar and Dr. M.S. Bisht, Department of Zoology, H.N.B. Garhwal University (A Central University) Campus Pauri Garhwal, Uttarakhand. (CHEETAL , Journal of The Wildlife Preservation Society of India, Vol. 53, No.2 (2016).

Where Peacocks roam free in Mumbai



Peacock and peahen seen at the Raj Bhavan in Mumbai (DNA - Salman Ansari)

Amidst skyscrapers, malls and the new metro line, our burgeoning city still has some places where peacocks thrive. Pooja Bhula goes on a hunt and puts together three trails where you can watch the dance of the peacock.

Merry in Malabar Hill: Sun, sand, sea and even peacocks, some places have it all! Start at the stretch where Girgaon Chowpatty ends and the Walkeshwar road begins. Your left offers one of the most stunning views of the Queen's Necklace, especially at night when the streetlights come on. And to your right are buildings such as Rahul that peafowl regularly visit from the forested patches in their backyards (connected to Malabar Hill). Friendly watchmen may allow you a peek.

Continue onto Teen Batti right till the dead end, home to the back gate of Raj Bhavan, famous for housing a good number of India's national bird. At morning and noon, peafowl often fly to nearby trees, lamp posts and onto the road. Sometimes, it is rumoured, they go as far as Ban Ganga, accessible from a parallel lane. Next, turn towards Malabar Hill, enjoy the foliage (a rare sight in our city) and curtains of aerial roots of peepal trees that have witnessed at least a century of history. Raj Bhavan's main entrance will soon arrive on your right. Peafowl like to escape and make their presence felt in the vicinity. If you plan in advance, you can combine this trail with Raj Bhavan's tour, which offers great views of the sun rising over the Arabian as well as lessons in history, architecture. Spot the majestic bird amidst mongoose, diverse flora and more. A little ahead is the Hanging Garden, though peafowl don't frequent it, they sometimes party in the lane to the left, past Cathedral and John Connon School.

Now retrace your steps to the garden and continue downhill towards Kemps Corner. This slope's foliage, formed by remnants of the forest where several peafowl live, is even more picturesque. Take the left. The

lane just before OM Chambers leads to the Tower of Silence and Godrej Baug. It's a private property, but if you have friends living in the colony, you can catch peafowl at play, jumping onto car roofs and perching on people's window sills.

The final stop of this long walk is at Grand Paradi's garden. Again, you'll need a resident-friend to enter. With a sandy path alive with earthworms, snails and even squirrels, surrounded by a variety of trees, it's a delight in itself. Peafowl like it too. Sometimes as many as six strut in from the woods, call out to their mates, take a stroll, pose at balconies or frolick on the slides and other rides in the kids section. Their fearlessness is proof of Malabar Hill's friendliness, adding one more feather to its cap.

Peachicks in Goregaon: "Cheetah aaya, cheetah aaya" wouldn't be an unusual warning in Aarey Milk Colony, which has nine leopards that prowl its 12 sq. km area at night. But peacocks here seem more elusive than their predatory friends. Visitors may have never spotted them, but sightings aren't uncommon for residents. They say though that summers are better, the wild undergrowth in monsoons makes it tough to see them. Start at Panchavati gardens, not the most promising site, but worth chancing. Walk on under the dense canopies towards areas around the nearby Students Dairy and New Zealand Hostel. In recent time residents have been spotting a peahen strutting behind her three peachicks in the evenings. Then continue on this path till the main road and go right across to the lane leading to the VIP guest house. You can't enter, but peafowl flock here often and fly out to meet the passers-by. Some also say peafowl are seen at the Powai Lake end of Aarey.

Movie buffs, trek inside Film City—or drive, ride, take a bus tour—and while admiring the sets, studios and actors sharing nature's bounty, look out for the colourful feathers of our native blue peafowl. Sighting is common at the stretch near BNHS's Conservation Education Centre (CEC).



Wild in Borivali: A remarkable case of a tropical forest within a megapolis, Sanjay Gandhi National Park (SGNP) requires no excuse for a visit. Yet, if you've never set foot on it, Naturalist and Vice Principal, Bhavan's College, Andheri, Dr Parvish Pandya, suggests the perfect start to the trail – the Nature Information Centre (NIC). Besides offering peafowl spotting opportunity, it depicts the park with a clay model, illustrations, photographs and interactive media, making for a great lead-in to this green lung of Mumbai.

Once you have your fill, head to park and take a tiger or lion safari. You may find the big cats working out on exercise balls they've been given to keep fit—yes, it's bizarre—and the peafowl in all their glory. The buffer zone in which the Forest Department's office (1km from the main gate) lies, is also a good bet. The last leg of the trail is at Kanheri caves. Cycle the 7km or walk, drive, take a bus. Enjoy the Buddhist sculptures, tune-in to bird calls and keep your eyes open. As per Dr Pandya's bird survey, the 103 sq km park should have about 100 peafowl. So you're likely to meet them on other trails too. But given SGNP's dense forest cover, be ready for a game of hide-and-seek with the winged fellows. It's better to go on weekdays, when there's no crowd and peacocks are less afraid to move about. With initial guidance from Siddhesh Surve, BNHS.

Did you know?

- *While we tend to refer to both the male and female as peacocks, the female is the peahen and the species as a whole is called peafowl.*
- *Peafowl are omnivores, who feed on even small insects and snakes.*
- *It is a myth that peafowl only mate during the rains. They mate throughout the year, but because it's at its peak between March and June, which coincides with the Indian monsoons, we mistakenly attribute their mating to the rains.*
- *In Mumbai or even Maharashtra no scientific peafowl census has been done.*
- *They are found in a wide diversity of habitats from the wildest forests to degraded ones as well as villages.*



by: Pooja Bhula, Monday, 8 August 2016, Mumbai , Daily News & Analysis (DNA).

Hume's Pheasant in Nagaland

Hume's Pheasant *Syrnaticus humiae* is listed as 'Near Threatened' in the IUCN Red List. The major threats to the species are habitat loss and hunting pressure. I conducted a preliminary survey of local people to ascertain the distribution of the species in Nagaland during November and December 2013. The local name for the species is 'Phuluve'. Ninety respondents, mostly active hunters, were interviewed in 25 villages across 4 districts (Peren, Mokokchung, Tuensang and Kiphire). However, Hume's Pheasant was only reported in Khongsa village (71.4%, n=10) and Penkim village (28.6%, n=4) in the Kiphire district on the Indo-Myanmar border (Figure 1). The species is also reported from VothÜvoo, Lothor, New Vongti, Longkhim, and Moya villages, but I could not visit them on this trip.

Though patchily distributed, it does appear that suitable habitat still remains in the surveyed area. Khongsa village, where hunting individuals were reported, is a new settlement located in the middle of suitable habitat for the species.

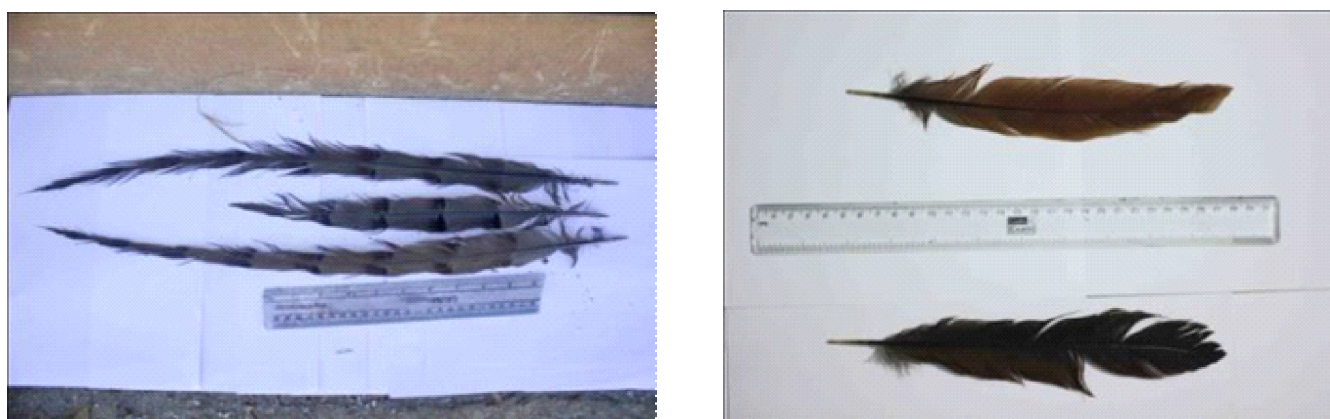


Figure1: Tail feathers of recently hunted male *S. humiae* (left) and feathers of a female *S. humiae* (right) found at Khongsa village (© Lansothung Shitiri)

The local hunters claimed that “though this pheasant is a very shy bird, it is easy to hunt as it leaves a trail behind wherever it goes” (due to its long tail feathers). It does not fly too far away (about 50-100 m) from its roost and usually uses only one water source. The most common method used to hunt the bird in the survey area is the use of traps set along its regular trails. Guns are also used opportunistically.

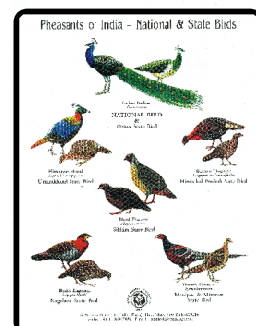
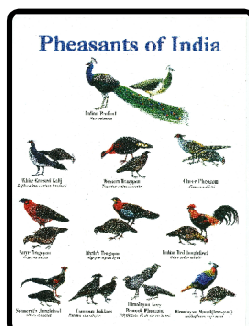
The meat of Hume's Pheasant is preferred over other wild birds due to its delicacy. Other important bushmeat in Nagaland includes Indian Muntjac *Muntiacus muntjak*, Wild Boar *Sus scrofa*, Sambar *Rusa unicolor*, Asiatic black bear *Ursus thibetanus* and Red Junglefowl *Gallus gallus*. Hume's Pheasant is hunted for consumption. Occasionally though, some villagers use its tail feathers in traditional head-gear. There are no taboos associated with the hunting of the bird in the survey area, although hunting is seasonally banned (there is a six months closed season). Initial analysis suggests that the species remains under threat from hunting and habitat loss, however further survey is needed in this region.

Source: G@llinformed 8, Newsletter of the Galliformes Specialist Group, Issue 8, April 2014
(Lansothung Shitiri, lansothungshitiri@gmail.com)

Resource Material - available on request

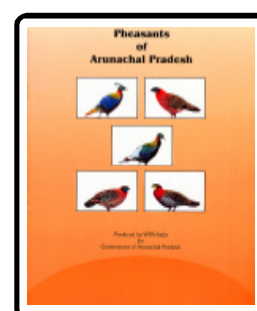
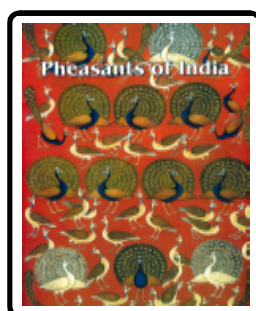
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