18.0 Status, Distribution and Management of Pheasants in Arunachal Pradesh

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Introduction

The Eastern Himalaya and hills of northeast India are well known for their rich biological diversity. Arunachal Pradesh represents eastern most section of the Eastern Himalaya and northern section of northeast hills. The state is part of one of the Global Biodiversity Hotspots namely Indo-Burma Biodiversity Hotspot (Myers, 1988). The State has largest geographical area among northeast Indian states due to which large populations of many species occur. It has large altitudinal range from plains (50m) to high mountains (>7,000 m) giving rise to habitats suitable for a whole spectrum of east-Himalayan and north-east Indian biological elements. Like other life forms, the state is known for avifaunal richness with more than 700 species of birds. The State forms a large part of the Eastern Himalaya Endemic Bird Area (Stattersfield *et al.* 1998). Arunachal Pradesh is largely forested state with 13 Protected Areas (PAs) covering 12.8 % geographical area of the state.

Importance of Arunachal Pradesh in Pheasant Conservation.

- The State is home to at least 10 species of pheasants. Of these, Blyth's Tragopan (*Tragopan blythii*) and Sclater's Monal (*Lophophorus sclateri*) are globally threatened (Fuller and Garson. 2000).

- Temminck's Tragopan (*Tragopan temminckii*) and possibly Tibetan Eared Pheasant (*Crossoptilon harmani*) also occur in this state. Three subspecies of pheasants (Western Sclater's monal (*Lophophorus sclateri arunachalensis*), Mishmi Blood Pheasant (*Ithaginis cruentus kuseri*) and possibly Western Blyth's Tragopan (*Tragopan blythii molesworthi*) also occur within the State.

- The state has large area under forest and many forest areas are still relatively free from biotic and other disturbances. For example, PAs such as Namdapha NP, Mouling NP and Dibang WS have large chunks of relatively undisturbed forests due to their remoteness. Many areas outside PA network especially remotely located forested areas in the hills and mountains, hold great survival potential for large number of species including pheasants.

Species and Area wise distribution

The information available is far from adequate, and is based on few survey reports and personal observations (Kaul and Ahmed, 1992; Kaul *et al.* 1995; Singh, 1994, 1999). In most cases, we do not exactly know distributional limits. The present information on the area wise distribution of pheasant species in the state is summarized in Table 2.

Gaps in information on pheasants of the state

Species and subspecies distribution limits are inadequately known thereby making prioritization of areas for conservation difficult. Information on the occurrence and status of most of the species are scarce and that too limited to a few localities only..

ii. Taxonomic status of many pheasant taxa remains unclear (Fuller and Garson, 2000). Taxonomic evaluation of subspecies and populations is necessary for prioritizing taxon based conservation. The state has quite a few subspecies of pheasants, and there may be many populations as well, which might be separated by geographical barriers such as rivers and mountain ridges. Possible genetic isolation among such groups may give rise to seperate biological entities. For prioritizing conservation, we need to know taxonomic distinctness of these subspecies and populations. As in the case of *Lophophorus sclateri arunachalensis* (Kumar and Singh, 2004) some of these may get elevated to higher taxonomic rank once the detailed field information and genetic details become available.

iii. There has been no ecological studies on the pheasants in the state. As per Conservation Action Plan (Fuller and Garson, 2000), ecological research with

conservation objectives should be designed to provide new information that relates directly to aspects such as habitat requirements, tolerance to disturbances, and use of secondary or degraded habitats by a threatened species. The basic ecological requirements of the species occurring in the state has not yet been studied. This information will be crucial, if plans to restore habitats for species recovery have to be carried out in the future. Such studies are needed urgently especially for the species occurring in the lower areas because foothill forests are under greater threat.

Conservation of Pheasants

(i) **Pheasant conservation and conservation of biodiversity**: Pheasants are in general quite sensitive to habitat disturbances, and therefore can be good indicators of habitat health. If there is habitat degradation and poaching threat to an area, pheasants are among the first species to be affected. Therefore, conservation of pheasants is nothing but biodiversity conservation of the state.

(ii) **PA network and Pheasant conservation**: Arunachal Pradesh has 9,897 km^2 area under PA network which forms about 12.8% of total geographical area. The details of the PAs in the state are given in Table 1. The size of PAs varies from about 55 km^2 (Kane WS) to 4,149 km^2 (Dibang Valley WS). The altitude range covered by PAs is also quite high from about sea level (50 m, D'Ering Memorial WS) to more than 5,000 m (Dibang Valley WS). But the present PA coverage may not be sufficient for long-term survival of the pheasants (Kumar & Singh, 1999). Some of the conspicuous inadequacies in coverage are given below.

(a) No PA in the state has presence of recently described pheasant taxon *Lophophorus sclateri arunachalensis*.

(b) Except for a few large PAs (e.g. Dibang Valley WS, Namdpha NP & Pakke WS) other PAs are small in area, and consequently cover only a very small portion of distributional range of the pheasants. The location of the PAs is also not uniform from east to west and north to south. For example we do not have any PA in the high altitudes of the north-west. In a state such as Arunachal Pradesh where large rivers provide dispersal barriers to fauna, there are likely to be distinct populations across the barriers, and therefore any meaningful conservation strategy has to take into consideration conservation of this variability. This can be achieved if conservation efforts go beyond PA boundaries.

The list of PAs, with their geographical area, altitudinal extent and potential pheasants species in them is given

Table 1 : Protected Areas of Arunachal Pradesh

S.No.	Name of PA	Year of Estb.	Area(km^2)	Altitudinal Range* (m)	District Location
1.	Mouling NP	1986	483.00	750-3064	Upper Siang
2.	Namdapha NP	1983	1807.82	200-4578	Changlang
3.	D'Ering Memorial WLS	1978	190.00	50 -150	Upper Siang
4.	Dibang WLS	1991	4149.00	2000-5356	Dibang Valley
5.	Eagle Nest WLS	1989	217.00	600-3200	West Kameng
6.	Itanagar WLS	1978	140.30	250-460	Papum Pare
7.	Kamlang WLS	1989	783.00	??	Lohit
8.	Kane WLS	1991	55.00	120-1500	West Siang
9.	Mehao WLS	1980	281.50	400-3560	Dibang Valley
10.	Pakhui WLS	1977	861.95	100-2000	East Kameng
11.	Sessa Orchid WLS	1989	100.00	500-2500	West Kameng
12.	Tale Valley WLS	1995	337.00	120-3000	Lower Subansiri
13.	Yardi-Rabe Supse WLS	1996	491.62	*c.* 1500-2500	West Siang
Total area			**9897.19**		

** source - Islam and Rahmani, 2004*

at Appendix A. Birdlife International has taken initiative to prioritize network of high conservation value bird areas under its Important Bird Area Programme (IBA) (Islam and Rahmani, 2004). Many of the IBAs are PAs and some of them are Reserved Forests. The list of IBAs with pheasant species known to occur in them is given in Table 2.

The limitation of IBA approach is that the IBAs themselves do not have legal status. Therefore protection of such IBAs which are not PAs or Reserved Forests is quite challenging.

(v) **Involving People in Conservation:** Conservation can not succeed without local people's support. This is especially true in the tribal areas where traditional dependence on forests has been high. In Arunachal Pradesh where large tracts of wilderness areas are outside PAs and legally protected forest categories, enlisting local support is *sine non-qua*. People's support will only be forthcoming if people see forests as source of sustained income to them. One of the activities that can generate substantial revenue without causing damage to the ecology of the area is eco-tourism. The state has very high potential for natural area based tourism, and if suitably planned eco-tourism can become major source of state revenue and local people's income. Neighbouring country Bhutan is an example for guiding tourism in the state. Recent initiatives in Eagle's Nest WS by Kaati Trust and the same model can be initiated in other parts of the State.

6. Survey and Monitoring of Pheasants

Surveys are the first steps towards understanding both a species' requirements and potential threats to its survival. Conservation action cannot be properly planned without such basic knowledge (Fuller and Garson, 2000). Surveys are all the more important where baseline information on the occurrence and status of pheasants from many areas in the state is lacking. Therefore, it is important to carry out systematic survey out for all pheasants.

References

Fuller, R.A. and Garson, P.J.(eds). (2000). Pheasants . Status Survey and Conservation Action Pan 2000-2004. WPA/Birdlife/ SSC Pheasant Specialist Group, IUCN, Gland. Switzerland and Cambridge, UK and the World Pheasant Association, Reading, UK, vii+68 pp.

Islam, M.Z. and Rahmani, A.R. (2004). *Important Bird Areas in India: Priority Sites for Conservation.*Indian Bird Conservation Network. Bombay Natural History Society and Birdlife International (UK).

Kumar, R.S. 2004. Survey of data deficient Important Bird Areas (IBA's) in Arunachal Pradesh, India. *A report to the IBCN, Bombay Natural History Society, Mumbai, India.*

Kumar, R.S. and Singh. P. (1999). A study on pheasant distributions in Arunachal Pradesh, Eastern Himalaya, India. Final report. Wildlife Institute of India, Dehradun

Kumar, R.S. and Singh, P. 2000. More news on the new monal discovered from Arunachal pradesh. *Oriental Bird Club Bulletin*. 32: 63-65.

Kaul, R. and Ahmed, A. 1993. Pheasant surveys in Arunachal Pradesh. Unpublished report. Peter Scott Trust, Gujarat, India

Kaul, R., Raza, R. and Kalsi, R. 1995. Pheasant surveys in Arunachal Pradesh, India. IN: Jenkins, D. (ed.). 1995. Annual Review. WPA 1993/94. World Pheasant Association, Reading, U.K. p. 28-34.

Myers,N. Threatened biotas (1988): hotspots in tropical forests. *Environmentalist* 8, 178–208.

Kumar, R. S. and Singh, P. (2004). A new subspecies of Sclater's Monal *Lophophorus sclateri* from western Arunachal Pradesh, India. *Bull. B. O. C.* 124 (1): 16-28.

Singh, P.(1994). Recent bird records from Arunachal Pradesh, India. Forktail 10:65-104.

Singh, P. (1999). Bird Survey in Selected Localities of Arunachal Pradesh, India. An unpublished report.Wildlife Institute of India.

Stattersfield, A.J., Crosby, M.J., Long, A.J. and Wedge, D.C.(1998). Endemic Bird Areas of the world: Priorities for Biodiversity Conservation. Birdlife International, Cambridge, U.K.

IUCN 2006. *2006 IUCN Red List of Threatened Species.* <www.iucnredlist.org>. Downloaded on 19 July 2007.

Table 2 : Important Bird Areas and Pheasants in Arunachal Pradesh

PAs	Important Bird Area (IBA)	Pheasant Species
1.	Chaglagam-Denning-Walong	Himalayan Monal
2.	Chayang Tajo - Khenewa - Bameng	Temminck's Tragopan, Kalij, Grey Peacock, Sclater's Monal
3.	Déring Memorial WS	Red Junglefowl
4.	Dibang Reserve Forest and adjacent areas	Not known
5.	Dibang WS	Blyth's Tragopan, Himalayan Monal, Sclater's Monal,
6.	Ditchu Reserve Forest	Blood Pheasant, Grey Peacock Pheasant, Himalayan Monal, Kalij , Tibetan-eared Pheasant,
7.	Eagle Nest WS and Sessa WS	Blyth's Tragopan, Satyr Tragopan, Grey Peacock Pheasant
8.	Itanagar WS	Red Junglefowl, Kalij, Peacock Pheasant
9.	Kane WS	Red Junglefowl, Kalij, Peacock Pheasant
10.	Koloriang - Sarli - Damin	Blood Pheasant, Sclater's Monal, Kalij , Temminck's Tragopan
11.	Magu Thingbu	Satyr Tragopan, Sclater's Monal
12.	Manabum and Tengapani Reserve Forests	Red Junglefowl, Kalij, Peacock Pheasant
13.	Mechuka-Monigong-Jorgging	Blyth's Tragopan, Sclater's Monal
14.	Mehao WS	Blyth's Tragopan
15.	Mouling NP	Blyth's Tragopan
16.	Nacho - Limeking - Taksing-Majha	Sclater's Monal
17.	Nafra - Lada Area	Blyth's Tragopan, Sclater's Monal
18.	Namdapha-Kamlang	Grey Peacock Pheasant, Blyth's Tragopan, Mrs Hume's Pheasant, Red Junglefowl
19.	Namsangmukh-Borduria	Red Junglefowl, Kalij, Peacock Pheasant
20.	Pakhui or Pakke WS	Grey Peacock Pheasant, Kalij, Red Junglefowl
21.	Papum Reserved Forest	Red Junglefowl, Kalij, Peacock Pheasant ?d
22.	Sangti Valley	Blyth's Tragopan, Temmick's Tragopan
23.	Shergaon, Mandla-Pudhung, Kalaktang	Blyth's Tragopan, Satyr Tragopan
24.	Talley Valley WS	Blyth's Tragopan?, Temmick's Tragopan?
25	The Chapories of Lohit Reserve	Red Junglefowl, Kalij
26	Thungri-Chaglang-Poshingla Complex	Blyth's Tragopan, Satyr Tragopan,Temmick's Tragopan, Sclater's Monal
27	Yardi-Rabe Supse WS	Red Junglefowl, Kalij ??
28	Zemithang-Nelya	Satyr Tragopan

Appendix A : Distribution of Pheasants in Arunachal Pradesh