

## STATUS AND CONSERVATION OF PHEASANTS IN KAGHAN VALLEY

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### ABSTRACT

Pheasants are the most beautiful birds in the world. Out of 49 species of pheasant found in the world five species i.e. Monal, (Lophopus impejanus) koklass (Pucrasia macrolopha), Kalij (Lophura leucomelana) and western horned (Tragopan melanocephalus) are found in Pakistan while four (4) species i.e. Monal, Koklass, Kalij and Western horned Tragopan are found in the study areas of Kaghan valley.

This study was conducted in the Kaghan valley to know about the status and conservation of pheasants. A questionnaire was designed and the villages were selected which were located near the reserve forest. Samples of 60 persons were detailed interviewed.

The study revealed that the climate and topography of target area provides good habitat to pheasants, but impediments such as illegal hinting, poaching and human interference are the main causes for the decline in population. However after declaring some areas of the Kaghan valley as National park and wildlife sanctuary has considerably contributed in the increase of pheasant population. The major earthquake in 2005 in the area had considerably decreased the population of pheasants as well as it has damaged the habitat of pheasants.

It is recommended that there should be control on deforestation, habitat improvement and awareness raising campaign should be carried out.

### INTRODUCTION

Pheasants are the gallinaceous birds with beautiful, brilliant, multicolored and highly ornamental species plumage. (Agha Tahir, 1987). There are similarities and variations in body color among the male and female members of the same species and the species belonging to other genera. Pheasants belong to a family that include some of the most beautiful birds in the world, Birds such as the golden pheasant famous in the Chinese art, have delighted and benefited man for centuries (McGowan 1995, Howman, 1993).

Within the order Galliformes the pheasants comprise a very huge family with over 16 Genera amongst which there are 49 distinct species and sub species (13) occurring on this sub continent. The layman would recognize most of these a "game birds" because of their extremely palatable with flesh generally large size short rounded wings with swift and often noisy flight and so forth. Not all the phasianides are brightly colored, for example the genus Lerwa to which the mountain partridges belongs include three species occurring in Pakistan and all characterized by such drab cryptic coloration as to be almost invisible against the rocky terrain which they inhabit. However, the only the true pheasants of the tribe phasianini, that is the western horned Tragopan, Monal, Kalij, Koklass and the Cheer. Though these are not closely related and infect belong to 5 separate Genera. All these pheasants are forest dwellers but occupy distinct ecological niches (which correspond roughly to altitudinal zones).

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Monal Pheasant



Western Horned Tragopan



Kalij Pheasant



Koklass Pheasant



Cheer Pheasant

All but one of the 49 species comes from Asia these birds can be split in to 2 group, high altitude species which are totally hardy to snow and frost, living mainly in the Himalayas or the higher mountain areas of China, Japan, Taiwan and low altitude species (mainly from Malaysia, Indonesia and Philippines). Which in certain cases need heat and protection to survive winters with below freezing temperature? (IUCN, 1998).

Some true pheasants are the resident species of Himalayas, mainly Hazara, Swat, Chitral, Murree Hills, Kashmir and some part of Northern Areas of Pakistan. They inhabit an altitudinal range of 1,000 meters to 4,000 meters and shift their zones according to the seasons i.e. they go higher up with the increase in temperature and snow melt and come down with the decrease in temperature and snowfall. Coniferous forests are the natural abode of the species.

Most of the pheasant roost on trees at night. As pheasants spend much of their time on the ground, therefore they walk and run well and also use their strong feet and bills to scratch and dig the ground in search of food. They are omnivore's feeder but seeds and berries are basic diet of majority, out of breeding seasons (Delacour, 1951).

All pheasants species are either threatened or vulnerable due to habitat disturbances in most of their native range, according to the IUCN Red data book over one third of total species of pheasants are officially listed as endangered of extinction from their native habitat (Howman 1993, IUCN, 2006). Pheasants have always been a source of attraction for human beings the reason behind this attraction and interest is their protein (IUCN, 1998) Pheasants therefore yield significant importance and economic benefits to human population (IUCN), 1998)

## REVIEW OF LITERATURE

Phasianidae is a large family that contains most of the gallinaceous birds of the world, including the ancestral chicken and the ancestral peacock. Ornithologists and taxonomists established the relationship of pheasants with old world partridges, quail and francolin species. Peter (1934), Johnsgard (1973, 1986 and 1999) suggested that the phasianinae should be split into two tribes, Phasianini and perdicini, quail and francolin should be placed in perdicine tribe (IUCN 1994 and 1998). Sibley and Monroe (1990 and 1993) classified the pheasants and old world partridge, quail and francolin species as the family Phasianidae and they excluded grouse and New World quails from this family (IUCN, 1994).

Considering the group as a whole, the Galliformes or fowl like birds, are unquestionably low in the scale of avian evolution (Beebe, 1936). DNA hybridization analysis is a more reliable tool to classify species on the basis of their genetic composition and affinities. Recent molecular evidence shows that both the grouse and turkey lineages are embedded within the larger pheasant/partridge assemblage (Dimcheff et al. 2002). There are 49 species of pheasants and peafowl (McGowan 1995, Howman, 1993). Pheasants generally occur from Flores, which is in the east of Java, at about 8 degrees south, through the equatorial forests of the Thai-Malay peninsula, to northeastern China at about 50 degrees North. Pheasants also occur all along the Himalayan chain and extends as far east as Taiwan at 121 degrees East and Japan at

145 degrees East (IUCN, 1998). This group is Asian in their native distributions, except Congo peafowl, which is endemic to the Democratic republic of Congo in central Africa (Crowe et al. 1986; Howman, 1993, IUCN, 1994). Pheasant species range from sea level to 4,200 m and can be easily divided into two groups, high elevation species, which inhabit the snow-bound habitats of the Himalayas and the higher mountain ranges of China, Japan and Taiwan, and low elevation species, which need heat and protection to survive winter with below freezing temperatures. Low elevation species are found mainly in Malaysia, Indonesia and Philippines (Howman, 1993). Red jungle fowl is another important member of family phasiidae which inhabit the middle of the upper extreme of the altitudinal profile. The incredible variety of domestic poultry, such as polish bantams, millefleurs, brahmas, battery hens and fighting cocks are all derived from the Red jungle fowl (Howman, 1993).

Almost all pheasant species are exploited in their native habitat by local communities and visiting hunters. This exploitation intensity ranges from simply local provision of food and eggs to using pheasants as a tool for economic and social improvement through sustainable use programs (Simiyu, 1998, IUCN, 1998). Sixteen species have been introduced outside of their natural ranges for ornamental purposes, hunting, eggs and meat collection, or for feathers (Long, 1981). Several species have been introduced into various parts of Europe and North America, as a game bird (Bump, 1941, Pokorny and Pikula, 1987, Hill and Robertson, 1988a). The most important among these introduced species is ring-necked pheasant which was introduced to Europe from Asia minor and later from China and Japan, over 1,000 years ago (Long 1981). Today the ring-necked pheasant has become a major hunted species in Europe and North America. In Europe alone over 22 million birds are harvested annually, whereas in North America about 9.5 million birds are killed by the small game hunters and hence generate revenue and employment that benefits landowners and local communities (Aebischer, 1997a). Pheasants have a vast range of habitat preferences. Most pheasant species inhabit dense, wooded forests. These habitats range from lowland tropical rainforest and mountain tropical forest to temperate coniferous forests. Examples of some of the pheasant species which are found in these forests are Mountain Peacock Pheasant and Western Horned Tragopan. Some pheasant species prefer open habitats such as sub-alpine scrub (e.g. blood pheasant), alpine meadows (Chinese Monal) and grasslands.

All pheasant species are either threatened or vulnerable due to habitat disturbances in most of their native range. According to the (International Union for Conservation of Nature and Natural Resources) Red Data Book, over one-third of total species of pheasants are officially listed as in danger of extinction from their native habitat (Howman, 1993, IUCN, 2006). Pheasants have always been a source of attraction for humans. The reason behind this attraction and interest is their beautiful feathers. They are also easy to trap or shoot and they are a rich source of protein (IUCN, 1998). Pheasants therefore yield significant importance and economic benefits to human populations (IUCN, 1998).

All pheasant species in their natural habitat face a number of threats (IUCN, 1998). These threats are generally related to habitat loss, poaching and disease. In KPK the following are some the problems which are common in almost all habitat types for all pheasant species and in all geographic areas.

- a. Habitat loss and degradation.
- b. poaching and over exploitation.
- c. Human interference and disturbance in natural habitat.
- d. Genetic drift, hybridization in released stock and change in social and biological behavior in captivity.
- e. Predation and disturbance.
- f. Diseases in the wild and in captivity.

These threats are getting more severe with the passage of time and this should lead to the development of a comprehensive management strategy with the help of all stake holders to initiate conservation awareness and population monitoring programs for pheasants in their habitat.

Current knowledge on the ecology, social behavior and biology of pheasants is minimal with the exception of the ring-necked pheasant. Opportunities are available for research and studies for biologists and avian scientists. Answering questions regarding their behavior, ecology and population biology would help to develop a better understanding among wildlife manager, students and the general public (Hill and Robertson, 1988a, Hudson and Rands, 1988, Robertson et.al. 1993a, 1993b, IUCN 1998).

It is a nationally protected species (first class) in China and its biology and conservation will be intensively studied during a forthcoming four-year project (Zhang Zheng-wang, 1999).

There are many protected areas in or near its range, but most of these reserves are relatively small and isolated and it is not clear how many of them contain large enough areas of suitable forest to support viable populations. Guanshan Nature Reserve in Jiangxi appears to support a significant population (Stevens et al. 1993).

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**RESULT AND DISCUSSION**

In order to achieve the objectives 60 respondents were interviewed to know the perception of the people about the species of pheasants found in the Kaghan valley. The data has been collected via questionnaire and meeting with wildlife watchers, supervisors, deputy rangers, nomad and local community members.

Table 1. Profession of Respondents in the study area

<b>Profession</b>	<b>Frequency</b>	<b>% age</b>
Teacher	7	11
Agriculture	12	20
Shepherd	4	7
Shopkeeper	11	18
Wildlife employees	8	13
Owners of hotel	4	6
Hunters	5	9
Government servants	6	10
Students	3	6
Total	60	100

Table 1 shows that 11% of the people of Kaghan valley are associated with the profession of teachers, 20% agricultural, 4% are shepherd, 11% shopkeeper, 8% wildlife employees, 4% owners of hotel, 5% hunters, 6% government servant, 3% students.

Table 2. Education level of respondents in the study area

<b>Education level</b>	<b>Frequency</b>	<b>% age</b>
Illiterate	36	60
Up to metric	10	16.67
Above metric	8	13.33
Graduate	6	10
Total	60	100
Students	3	6
Total	60	100

The table 2 shows that 60% of the people in the study area are illiterate, 16.67% people have education up to metric and 13.33% above metric and 10% of respondents are graduated.

Table 3. Forest visit by people

<b>Forest visit by people</b>	<b>Frequency</b>	<b>% age</b>
Forest visit	58	96.67
Not visit	02	3.33
Total	60	100

Table 3 reveals that 96.67% of the respondents to into the forests and have some knowledge about wildlife and pheasants, while the remaining 3.33% have no visit to the forests.

Table 4. Observation of pheasant

Observation of pheasant	Frequency	% age
Pheasant seen	23	38.33
Pheasant not seen	37	61.67
Total	60	100

The above table 4 shows that majority of the respondents 61.67% have not seen pheasants in the forest, whereas 38.33% of the respondents have seen pheasants in forest.

Table 5. Heard voice of pheasant

Have you heard voice of pheasant	Frequency	% age
Pheasant heard	3	5
Call not heard	57	95
Total	60	100

The above table 5 reveals that majority 95% of the respondents have not heard the voice of pheasant while on the other hand 5% of he respondents have witnessed pheasant by hearing voice.

Table 6. Observation site

Observation	Frequency	% age
Forest floor	14	32.33
Near water points	07	11.67
On tree	02	3.33
Not seen	37	61.67
Total	60	100

The above table 6 shows that majority 61.67% of the respondents have not seen pheasant by naked eyes whereas 23.33% of the respondent have seen pheasant on forest floor, furthermore 11.67% and 3.33% have seen pheasant near water point and on tree respectively.

Table 7. Identification of pheasant

Identification	Frequency	% age
Sound	12	20
Eyes	1	1.67
Crown head	10	16.67

By photographs	37	61.67
Total	60	100

The above table 7 reveals that majority 61.67% have seen pheasants by photographs, on the other hand 20%, 1.67%, and 16.67% of the respondents have identified pheasant by voice, eyes and crown head respectively.

Table 8. Observation of eggs and chicks

Observation of eggs & chicks	Frequency	% age
Egg	4	6.67
Chick	3	5
No	53	88.3
Total	60	100

Table 8 shows that majority 88.3 have not seen the chicks and eggs of pheasant in forest whereas only 5% have seen chicks and 6.67% have seen eggs of the pheasant in forest.

Table 9. Mostly found species

Mostly found species	Frequency	% age
Koklass	30	50
Monal	17	28.33
Kalij	13	21.67
Tragopan	0	0
Total	60	100

The above table 9 shows that 50% of the respondents have seen Koklass pheasant while on the other hand 28.33%, 21.67% have seen Monal and Kalij pheasant whereas on one have seen Tragopan pheasant in the area.

Table 10. Population of pheasant increasing or decreasing

Population of pheasant increasing or decreasing	Frequency	% age
Increasing	21	35
Decreasing	39	65
Total	60	100

The above table 10 shows that 65% of the respondents were in opinion that population of pheasant is decreasing while on the other hand 35% thought that the population of pheasant is increasing.

Table 11. Reason of decrease



Reason of decrease	Frequency	% age
Hunting	33	55
Habitat destruction	13	21.67
Population expansion	09	15
Naturally	05	8.33
Total	60	100

Above table 11 reveals that majority 55% of the respondents were in opinion that hunting was main cause of pheasant decrease whereas 21.67%, 15% and 8.33% of the respondents gave opinion that habitat destruction, population increase and natural calamities are the reasons of pheasant decrease in the area.

Table 12. Professional skills regarding conservation of pheasant

Professional skills regarding conservation of pheasant	Frequency	% age
Yes	7	11
No	53	89
Total	60	100

Many of the teachers of the study area educate their students about the conservation of natural resource. They were trained by wildlife department having exposure through seminar, workshops, etc.

Table 13. Project for pheasants conservation in the study area

Whether project implemented	Frequency	% age
Yes	20	33.33
No	40	66.67
Total	60	100

The above table 13 shows that majority of the respondents 66.67% have not heard the name of any project while 33.33% were aware of the two projects, inventory, conservation and development launch in the study area.

## THREATS TO WILDLIFE

Wildlife is a natural renewable resource in order to maintain biodiversity the conservation of wildlife need of today. There are so many threats to wildlife reported during the course of study are as follows.

- Encroachment
- Use of modern technology in Agriculture sector. (insecticide, pesticide)
- Lack of awareness among peoples for conservation of wildlife
- Limited resources
- Insufficient inventories and data

- Lack of research
- Poaching
- Indiscriminate hunting
- Natural calamities

## **MATERIAL AND METHOD**

### **QUESTIONNAIRE METHOD**

In order to study the status of pheasant in Kaghan valley different methods were adopted including review of literature. A questionnaire (Annexure) was developed to collect the information about the status, conservation and distribution of different number of Galliformes. Field visits of Shogran, Malakandi, Manshi and Kaghan villages were carried out to collect data about the population status of different pheasant species different target groups of localities belonging to different professions e.g. wildlife officers, conservation community members and other non governmental organizations were consulted 60 questionnaire were filled in and data analysis was carried out.

### **CONCLUSION**

Research study has shown estimate that 65% of pheasant population has decreased in the recent times due to hunting pressure, secondly encroachment is the main cause of loss of habitat which is interlinked with the decline in the population of pheasants species, besides this other factors are the natural calamities like earth quake in 2005 has caused great destruction to the population of these spp. to conserve these spp. strict action are necessary. The wildlife statuses among the pheasants found in the area are endangered and is near to extinction. The Khyber Pakhtunkhwa wildlife departments have declared species of pheasants protected under the wildlife act of 1975. There are lacks research facilities and adequate funds to conduct mega research in this regard. Due to high prices of LPG most people depend on fuel wood which is causing great damage to local habitat.

### **RECOMMENDATION**

1. Hunting of such species which are on the verge of extinction should be controlled and strict action should be taken against those who violate the wildlife rules.
2. Habitat has a great impact on wildlife so their habitat (food, water, shelter) must be conserved.
3. Deforestation also disturb the wildlife because the forest area particularly the habitat of these species. So there is a great pressure on our forest that peoples of the areas fulfill their domestic requirements from this forest, they have a very much role in destruction and disturbance of wildlife. The Govt. should provide the best alternative to the peoples of these regions to shed the pressure from these forests to ensure the biodiversity.

4. Awareness should be created among the peoples through school conservation clubs.
5. Communities organizations play key role in conservation and sustainable development of natural resources. The initiative to well support meeting and workshop at community level to enlist the support of local community for wildlife management.
6. Spiritual leader/Pesh Imam should involve in the awareness raising campaign. Islamic values and religious approach may also affect attitude of the peoples and may influence on communities.
7. Publicity boards carrying conservational notes, slogans and information related to wildlife may be prepared and erected at various sites.
8. Awareness material such as brouchers, charts, stickers and planning diaries and calendars etc will be designed and printed under project.
9. Conservation of wildlife may be done at community level by constructing and organizing the conservation and development works through village conservation fund.
10. A strong print and electronic media campaign or derive may play sublime role regarding the conservation of pheasants in these areas. If possible constant awareness programmes may be launched through local media from time to time.
11. New potential sites may be indentified and they may declared as protected areas this will not only bring more area under protection but will also conserve wildlife resources in the respective areas on sustainable basis.
12. Syeds in the area are land owner; therefore they collect Malia of Tax from the herdsmen who bring their herds of livestock for grazing in the area. The Govt. should dialogue with the Syeds that certain patches of habitat may not be leased to bakarwals.
13. System of rotational grazing should be adopted to ensure proper management of rangelands.
14. Routes may be identified and fixed for the movement of livestock in the study area.
15. Education campaigns should be carried out in order to educate masses about the importance and conservation of natural resource.
16. Eggs picking should be discouraged.

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