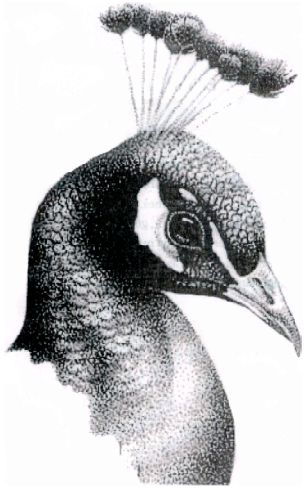
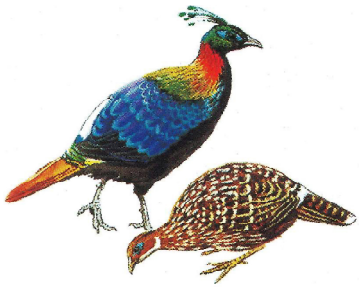
Mor

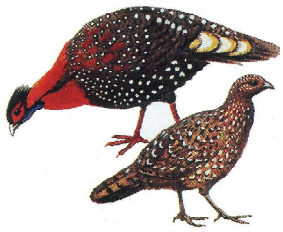
Newsletter of World Pheasant Association - India



Indian Peafowl
Pavo cristatus
National Bird
&
Odisha State Bird



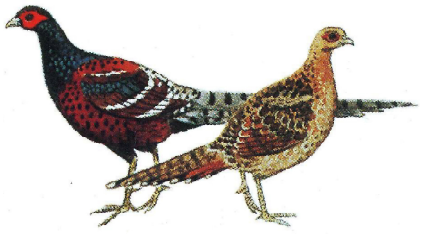
Himalayan Monal
Lophophorus impejanus
Uttarakhand State Bird



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

Mor *is the newsletter of WPA-India for private circulation. Its publication is being supported by the Duleep Matthai Nature Conservation Trust.*

Editorial

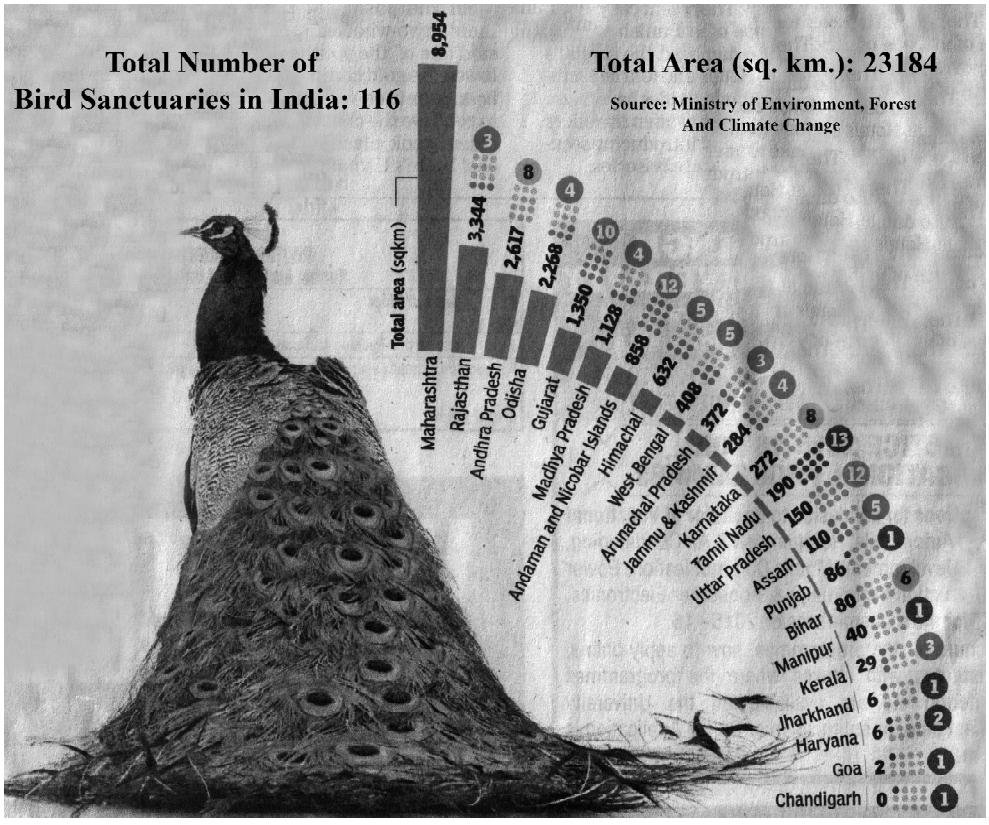
Dear Readers,

This is the last issue of the current calendar year. The new year is coming soon, so we extend greetings and good wishes to all WPA-India members, supporters and well wishers for 2016 and also thank them all for their support to the organization in various ways. In particular, WPA-India is very thankful to the Duleep Matthai Nature Consevation Trust for continuing to fund the publication of MOR.

In this issue, we carry interesting articles on the National Bird, the diet pattern of rare pheasants of the Himalaya, the potential of Najafgarh as a bird sanctuary and some others. Also of interest is a graphic given below depicting the state-wise number and area of bird sanctuaries in India. The total number of National Parks and Sanctuaries in the country is more than 600. Of these, 116 are known as bird sanctuaries. Needless to add that all other protected areas are also bird habitats and many of them provide refuge to rare and endangered bird species. Certain species of Galliformes, such as peafowl, patridges and quails, can be found in most of these protected areas.

While efforts to make this newsletter as informative and interesting as possible continue, it is necessary to receive more and more inputs from all concerned and we look forward to such contributions in the New Year.

Dr. M. Shah Hussain, Hon. General Secretary



Source: Ministry of Environment, Forests and Climate Change.

A morning in Najafgarh...

The Najafgarh drain or nullah in south-west Delhi is actually an extension of the Sahibi river, which is a tributary of the Yamuna river. Earlier, there was a fairly big wetland called the Najafgarh Jheel spread over about 300 sq kms, which was an excellent habitat for several species of water birds and also attracted lots of migratory birds during winters. From the 1960s, the government started flood control measures by widening the nullah that ultimately led to draining of the jheel. Now, it is the widened nullah or drain that provides refuge to the water birds and other local wildlife, including Galliformes such as patridges, peafowl and quails. The idea of declaring a bird sanctuary in this area has been under consideration.

For some time, I and Parkash Sheriya, Assistant Manager, WPA-India, had been planning to visit this area to get a first-hand idea about the present status of Galliform birds. Ultimately, we were able to do this on Saturday, the 31st October 2015. I left home very early in the morning on my Eterno scooter and picked up Parkash from his house in Dwarka. Then, Parkash guided me by a short route towards the Najafgarh drain.

The weather was a bit chilly and misty, so we stopped at a wayside dhaba for some tea, which refreshed us both. Then, we proceeded for about 2 kms and took the pushta (embankment) road along the drain. Just then we heard a Grey Francolin *(Francolinus pondicerianus)* calling quite nearby from a *Prosopis* patch. Another francolin called from the other side of the pushta. Sensing our close presence, the birds stopped calling and it seemed that they were still perched in their roosting places. We could not spot the birds and decided not to disturb them. So, we moved forward on the scooter and soon sighted a peahen that crossed the road ahead of us.

After moving half a kilometer or so, we spotted two Grey Francolins which ran across the road towards the drain. After stopping the scooter, I walked some distance and heard more birds calling from the side of Badu Sarai village. As I moved ahead towards the agriculture fields, 5-6 francolins rushed into the bushes and I could not take any pictures. Then we moved towards Jhatikara village, where we sighted three Grey Francolins just by the roadside about 3-4 metres from us. We also heard another group calling from some distance.

Thereafter, we drove up to Rawata village. While on the move, we heard Black Francolin *(Francolinus francolinus)* calling. So we stopped and soon realized that the calls were by three birds from different directions, but we were not able to spot the birds because of dense bushes and grass.

Altogether, we travelled around 14 kms from Chawala bridge to Sarangpur bridge. During the drive, we also spotted many other birds including Spot-bill Duck *(Anas poecilorhyncha)*, Common Coot *(Fulica atra)*, Moorhen *(Gallinula chloropus)*, White-breasted Waterhen *(Amaurornis phoenicurus)* and Little Cormorant *(Phalacrocorax niger)*. Also saw some Pariah Kites *(Milvus migrans)* and

several Black Ibis *(Pseudibis papillosa)*, Cattle Egrets *(Bubulcus ibis)* and Rose-ringed Parakeets *(Psittacula krameri)* were plentiful. The winter migration having just started, we saw a pair of the Northern Shoveller *(Anas clypeata)* . Also spotted the Lesser White-throat *(Sylvia curruca)*, a male Blue-throat *(Luscinia svecica)*, a pair of Spotted Owlet *(Athene brama)* and a White Throated Kingfisher *(Halcyon smyrnensis)*. On our way back, we also saw Ashy Prinias *(Prinia socialis)* and about a hundred House Sparrows *(Passer domesticus)*. Other common birds sighted were the Common Myna *(Acridotheres tristis)*, Asian Pied Starling *(Gracupica contra)*, Rock Pigeon *(Columba livia)* and Collared Dove *(Streptopelia decaocto)*.

While coming back, we sighted a peacock perched on a keekar tree and I was lucky to photograph three Grey Francolins on another keekar tree. We also heard the calls of Grey Francolins on at least three occasions. Overall, in about three hours, we sighted 13 Grey Francolins and 3 Peafowl. During the visit, we heard the calls of Grey Francolins at 11 different places and also heard the call of Black Francolins from three different directions. However, we were disappointed not to see any Quails and it was a bit surprising that we did not see more Peafowl.

Altogether, it was an enjoyable and fruitful trip. The Najafgarh drain in the rural area is certainly good for bird watching and provides variable habitat suitable for a bird sanctuary. A proper study can be made to take this idea forward with the government.

by: Yasser Arafat, WPA-India Life Member and Wildlife Photographer Nature educator, Biodiversity Parks Programme, CEMDE, University of Delhi.

PEAFOWL: Family life

One day in 2014 I saw a peacock, a peahen and a chick sitting on a tree branch in a relaxed mood and it set me thinking about peafowl family life. The literature on the subject is silent except for the fact that a peacock has a harem consisting of 4 - 5 females, i.e. peahen. A male tiger also has 4 - 5 females in his territory with whom he mates. It is not easy for any other male tiger to come and mate with a tigress in his area unless the opponent tiger fights and defeats the tiger controlling the area.

Once again I happened to observe the same peafowl trio foraging in the grassland in Sundernagar nursery in New Delhi. My curiosity then increased and I started following the trio. I saw them basking in the sun in morning hours. On 27 June 2015, I was blessed with a shot wherein the peafowl is in a dancing pose and the peahen with her 3 chicks of hardly 20 days is standing in front of the peacock. This is my first family photograph on the subject of this article.

On 15 July I saw a peahen with a chick coming on the road and then going towards the Delhi zoo-side hedge. The peahen flew leaving behind the small chick. Immediately a peacock came and gave solace to the chick. The chick then made efforts to fly and cross over the hedge. Only when the chick crossed the hurdle the peacock left the place, having done its duty.

On 21 July 2015, I observed a peahen with 3 chicks crossing the road towards the wall which separates the nursery with the zoo. A peacock came and took them away as if not to go over to the zoo. The peacock led them to a certain point and then he went in a different direction.

On 10 August 2015, I saw a peahen with 2 grown-up chicks and a peacock following them as if indicating HUM DO HAMARE DO! I also observed that the two chicks left by their mother were caring of each other and then a peacock came from behind and showed affection towards them - an unusual behaviour.

19 August is celebrated as the World Photography Day as on this day the first camera came into existence. On 19 August 2015, I too was in the field to witness something new. A sub-adult peacock was hovering around a bill board in Sundernagar nursery as if awaiting for somebody to turn up. After about 10 minutes, I saw a peahen with 2 chicks coming to the same location. They met and the male started dancing so as to attract the female. The chicks made themselves comfortable on the raised platform as if sitting in a gallery. The chicks were looking at the male and their mother danced before them. it was such a delightful sight!

All the above mentioned behavior observed from time to time in nature indicates family life. This is somewhat like what has been observed in Tigers. In Ranthambore Tiger Reserve a male tiger reared his cubs after the death of the tigress. This was observed for the first time in the wild and even surprised the naturalists.

by: Vinod Goel, retd. senior Civil Servant, Wildlife Writer & Photographer.

The above joint stamp issues were released simultaneously by India and France in 2003. The French stamp (left) depicts a colourful Gallic Rooster (Gallus gallus), which is the National Bird of France. Interestingly, this emblem dates back to the French Revolution of 1789 and the bird is actually a domesticated variety of the Red Junglefowl, an endemic Indian species. The Indian stamp (right) depicts the colourful Peacock, male of the Blue Peafowl, which is India's National Bird (Pavo cristatus). Every year, the Indian Department of Posts brings out joint stamp issues to mark India's bilateral relations with other countries.

A Study of Food and Feeding Habits of Blue Peafowl *(Pavo cristatus)* in District Kurukshetra, Haryana

The study was conducted to determine the food and feeding habits of the Blue Peafowl in three study sites viz. Saraswati Plantation Wildlife Sanctuary (SPWS), Bir Sonti Reserve Forest (BSRF) and Jhrouli Kalan village (JKAL). Point count method (Blondel *et al.*, 1981) was followed during periodic fortnightly visits to all the three study sites. The peafowl were observed to feed on flowers, fruits, leaves of plant species. These were sighted to feed on *Brassica compestris* (flowers, leaves), *Trifolium alexandarium* (flowers, leaves), *Triticum aestivum* (flowers, leaves, fruits), *Oryza sativa* (flowers, leaves, fruits), *Chenopodium album* (flowers, leaves, fruits), *Parthenium histerophoresus* (flowers, leaves), *Pisum sativum* (flowers, leaves, fruits), *Cicer arientum* (flowers, leaves, fruits), *Pyrus pyrifolia* (flowers, fruits), *Ficus benghalensis* (flowers, fruits), *Ficus rumphii* (flowers, fruits). They were also observed feeding on insects in all three study sites and on remains of the snake bodies at the BSRF and JKAL study sites. The findings revealed that the Indian peafowl, on one hand, functions as a predator of agricultural pests but, on the other hand, is itself a pest on agricultural crops.

by: Girish Chopra, Tarsem Kumar Department of Zoology, Kurukshetra University, Kurukshetra-136119. (Source: International Journal of Research Studies in Biosciences (IJRSB) Volume 2, Issue 6, July 2014, pp. 11-16).

Impact of modern agricultural practices on population density of Indian Peafowl (*Pavo cristatus*) in Haryana

Impact of changing cropping pattern, increased pesticide usage and mechanized farming on the population density of the Indian Peafowl was studied in Ambala, Kurukshetra, Karnal and Yamuna Nagar districts of Haryana. The study area selected is dominated by agricultural lands under the cultivation of rice, wheat and sugarcane. Density of Indian Peafowl was quite low in wheat and paddy fields but was high in orchards. Peafowl in orchards was found in microhabitat Cyonodon whereas in sugarcane it preferred Cenchrus. Pesticides used in orchards had less effect on the population density while those used in wheat and paddy decreased the population density immensely. In mango orchards, where harvesting was done manually, both eggs and fledglings were found while in wheat fields, where combine harvesters were used, occurrence of eggs and fledglings was nil. Maximum covey size of Indian Peafowl was observed in orchards, whereas no coveys were found in paddy or wheat. Habitat loss due to rapid urbanization, decreasing number of orchards as well as use of pesticides and mechanized farming pose serious threat to peafowl in the study area.

by: Sarita Rana and Divya Jain, Department of Zoology and Botany, Sanatan Dharma College, Ambala Cantt- 134 003. (Source: Agricultural Science Digest - A Research Journal, Year : 2013, Volume : 33, Issue : 3).

Diet of Threatened Pheasant Species in Himalayas - A Faecal Analysis Approach

This study is on the feeding ecology of Kaleej *(Lophura leucomelana)*, Koklass *(Pucrasia macrolopha)*, Himalayan Monal *(Lophophorus impejanus)* and Satyr Tragopan *(Tragopan satyra)* in the in district Bageshwer, Uttarakhand, India (30° 08' N and 79° 57' E) in the Kumaon Himalaya encompassing an area of 58.25 sq. km. These studied pheasants are protected under Schedule I and III (hunting is prohibited) in Wildlife Protection Act, India, 1972 so killing of these birds is neither permissible nor practicable for crop and gizzard analysis. Hence, faecal matter analysis was adopted as an alternative method to determine the diet of four pheasant species and to find out the seasonal variation in diet among them.

Himalayan Monal

Kaleej

Koklass

Satyr Tragopan

Faeces were identified through direct sighting of defecating species. The collection was made for both seasons (pre monsoon; March – June and post monsoon; September – December, the rest of the year is inaccessible in the study area) in 1997 and 1998 for food items comparison. Sixty faeces of each pheasant species for each season per year were collected. They were air dried, labelled and sealed in plastic packets and stored in an airtight container with camphor. Reference slide of each plant species was prepared micro histological and each showed unique epidermal characteristics that allowed easy identification. A total of 50 reference slides of different plant species were prepared.

Total 38 food items were identified from the faecal matter of Kaleej, Koklass, Himalayan Monal and Satyr Tragopan. Out of these 36 food items were plant materials and the rest were grit and invertebrates. Invertebrates were found to be a major food item in the diet of Kaleej and Monal during post monsoon season whereas grit was a major food item of Satyr during pre monsoon season. Some of the food items fluctuated between seasons such as *Viola* sp., invertebrates, *Geranium wallichianum*, *Rubus biflorus* and *Myrcine africana* in Kaleej and likewise in other pheasant species.

Some plant species such as *Nordostachis jatamansi*, *Eulophia compestris* and *Gaultheria nummularioides* were found only in Monal's faeces. *Potentilla fulgens* and *Skimmia laureola* are highly medicinal value plant and were commonly found in the droppings of Koklass, Monal and Satyr. Monal emerged as a specialist feeder on plants which were not eaten by other species. The Satyr and Koklass were more similar in terms of diet composition in both seasons while Kaleej and Monal were least similar, only invertebrates and grit were common in the diet of these species.

The food items identified from the faecal matter of studied pheasants reflected the general if not exclusive diet of these species in the wild because many of the plant species consumed by these species may have undergone complete digestion or may have been reduced to such small fragments that they were not identifiable. The study revealed that the main diet of all pheasant species was plant matter although invertebrate matter was also present but in low percentage. In this study, we analyzed only adult droppings of all pheasant species; however analysis of chick droppings might have revealed a much higher invertebrate content in the diet of the species. In pre monsoon, the evergreen shrubs such as *Rubus biflorus* and *Rubus ellipticus* were the major source of food where as perennials like *Geranium wallichianum*, *Boeninghausienia albiflora* were also present in faecal matter but in minor composition. Such as in Koklass the major food items were *Nerium* sp. Moss and *Fragaria* sp. *Pteris biaurita* and *Polystichum* sp. (fern) were also present but in traces as they were available in the middle or end of the season. The *Arundinella nepalensis* formed the major portion of the food in Satyr. It had a very high content of indigestible fibre and was loaded with abrasive siliceous compounds, which were difficult to eat and digest.

The invertebrates formed the major portion of the diet of Kaleej in post monsoon season. After monsoon the insect availability increases so as in the diet of Kaleej. Other species were *Geranium wallichianum* and *Viola* sp., which were in full bloom after monsoon. The *Eulophia compestris*, *Nordostachis jatamansi*, *Picrorhiza kurroa* and *Achonitum heterophylum* were absent or present in minor composition in the diet of Monal during post monsoon season as these herbs were annual. The *Arundinella nepalensis* again formed the major component of the diet other than the *Cotoneaster acuminata*, *Rubus biflorus*, *Ariseama flavum*, *Pilia* sp. in Satyr Tragopan.

Another very significant component found in the diet of all pheasant species was grit fragments. The presence of grit in such high percent composition of the diet of the pheasant species around the year may be attributed to the fact that being mainly vegetarians these fragments helped in the grinding of the vegetative matter in the gizzard for proper digestion. The information on diet items of these pheasants will help to conserve habitat having rare and threatened plant species in general and pheasants of this area and of Central Himalayas in particular.

by: Mohammad Shah Hussain and Aisha Sultana, Biodiversity Parks Programme, CEMDE, University of Delhi (The paper has been published in Ecologia Balkanica 2013 Vol 5 (1).).

Most attractive male birds don't have best genes

Attractive' male birds that mate with many females aren't passing on the best genes to their offspring, according to new research that found promiscuity in male birds leads to small, genetic faults in the species' genome. Although minor, these genetic flaws may limit how well future generations can adapt to changing environments.

The study, published in Proceedings of the National Academy of Sciences and funded by the European Research Council, shows for the first time the power of sexual selection — where some individuals are better at securing mates than others — in shaping broad patterns of genome evolution.

Study author, Professor Judith Mank, (UCL Genetics, Evolution & Environment), said: "We've found that promiscuous birds that have to fight others for mating rights have a genome that evolves faster than birds which are monogamous and pair for life. What's interesting is that this evolved genome includes mildly negative mutations. So a male may be attractive to a female and fight hard to mate with her but he doesn't deliver at the genetic level. As a result, his descendants will be less fit."

The researchers studied a 90 million year old group of birds called the Galloanserae which including the mallard duck, swan goose, wild turkey, helmeted guineafowl, **Indian peafowl and common pheasant**. The birds all share similar genomes, but the way genes are expressed between males and females varies considerably across the group, as does their sexual selection.

The team analysed genetic material from the spleen and gonads of male and female birds and the information was used to assess the relationship between the features of sex-biased genes and the visual characteristics used by the birds when choosing mates.

First author of the study, Dr Peter Harrison (UCL Genetics, Evolution & Environment), said: "We chose a particular group of birds which differ in how they display male and female traits, and the extent to which males compete for mating. It very difficult to tell a male and female goose or guineafowl apart by their visual characteristics but the differences are obvious with peafowl. Similarly, the birds vary in their sexual selection with a dominant peacock mating with up to 50 females, compared to the swan goose which pairs monogamously for life. This dramatic variation allowed us to critically test the connection between sex-biased gene expression and sexual selection."

Professor Mank, said: "We found a significant association between the turnover of male-biased genes and the extent to which birds use physical ornaments to attract mates. We predicted a link between gene expression evolution across species and the degree of sexual selection, but this is the first statistical evidence for it and shows how powerful sexual selection can be in leading to major changes in how a gene is expressed."

The authors are now working to understand how selection acts differently on males and females, and how this leads to differences in gene expression between the sexes.

Source: Science Daily (Your source for the latest research), March 23, 2015

- University College London.

Endangered Cheer Pheasant loses its protection

Even as the Forest Department (Wildlife Wing) has started captive breeding of Cheer Pheasant to increase its population, indiscriminate development and a new rationalisation policy might fail its efforts to save the endangered bird.

Surveys in the late 1970s had counted 1,000 pairs of the bird across the state, distributed sparsely in the catchments of the Sutlej, Beas, Yamuna and Ravi, where hydroelectric projects have now come up on not only these major rivers but also the tributaries. The road and building projects could also trigger local extermination of the bird.

Redefining the boundaries of many protected forests in June 2013 has also left the pheasants vulnerable to hunting. "The rationalisation process excluded from the forest areas some villages that were important habitats of cheer pheasant nearby," said additional chief secretary (forest) Tarun Shridhar, adding: "It implies that the excluded cheer pheasant habitats now cease to be under the protected area network."

The realigned sanctuaries include Majathal, Chail and Kalatop Khajjiar. In 1980, Majathal was reported to have the highest population density of cheer pheasant at 24 pairs per kilometre. In the 2008 and 2009 surveys, the figure had declined to 5 pairs per km.

The rationalisation process further took away 8.53 sq. kms from the sanctuary. Even though the excluded area had degraded because of human use, almost 40% of it is still potential habitat of the threatened bird. A significant portion of the Majathal sanctuary has submerged under the Kol dam reservoir. "The compromise (excluding some areas) was necessary to meet the demands of the sanctuary's human inhabitants for basic facilities they couldn't have because of restrained development on account of the wildlife laws," says forest department deputy secretary Satpal Dhiman.

Source: Gaurav Bisht, Hindustan Times, Shimla, Aug 08, 2015.

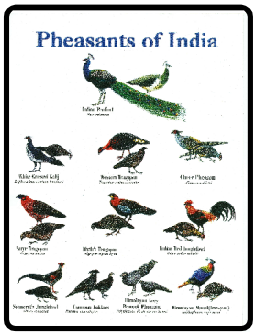
Good news

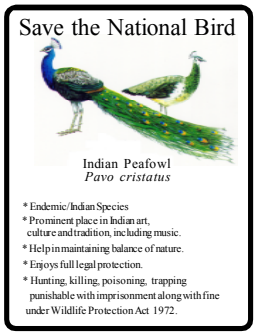
At Chail Pheasantries, with the support of the Central Zoo Authority of India, 79 Cheer Pheasants are being managed under a conservation breeding programme (CBP) in Himachal Pradesh. In the current breeding season, 11 chicks hatched naturally, which if required in future, can be released into the wild. The bird breeds on steep cliffs.

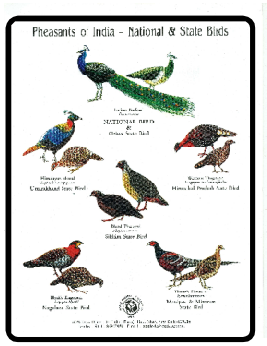
Resource Material - *available on request*

Posters

- Pheasants of India
- Pheasants of Arunachal Pradesh
- Pheasants of Himachal Pradesh
- Pheasants of Uttarakhand
- Pheasants of Assam
- Pheasants of J&K
- Pheasants of Sikkim
- Pheasants of Nagaland
- Pheasants of West Bengal
- National and State Birds
- Save the National Bird
- Himalayan Monal

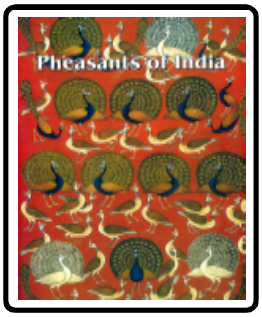


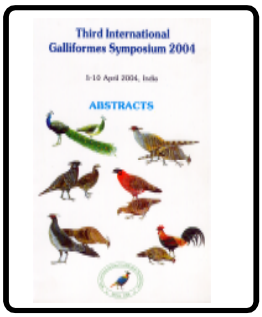


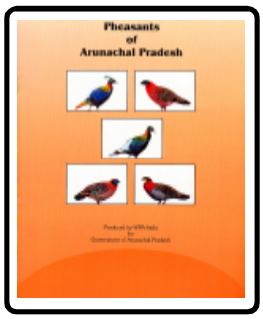


Booklets

- Pheasants of India
- Pheasants of Arunachal Pradesh
- Third International Galliformes
- Symposium Abstracts
- Pheasants of Himachal Pradesh







Join WPA-India -- --only national organization wholly devoted to the cause of galliformes conservation in India. Membership fees: Life Rs. 2000/-, Annual Rs. 200/- or Rs. 500/- for three years, Institutional Rs. 1000/- p.a. and Student Rs. 50/-p.a..

For application form or any other purpose, contact: phone nos. 8010752143 & 9891059970, (email- wpaindia@gmail.com).

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