Mor

Newsletter of World Pheasant Association - India

Editorial

In July, with the monsoon playing hide and seek, we are anxiously awaiting the Mayur-Morani and the beautiful Peacock dance heralding the rainy season.

In this issue of MOR we are carrying items on the bibliography on Indian Galliformes, an interesting field study on the Status of Galliformes in the Agricultural Landscape of Uttar Pradesh, Galliformes of Jammu & Kashmir State and Priorities for future Research and Monitoring.

An interesting analysis on the bibliography of Indian Galliformes indicates 728 references by 333 authors over a span of 160 years, i.e. from 1848 to 2007. Peak documentation has been during the period 1991 to 2007.

Jammu & Kashmir have 14 species of Galliformes, of which the Western Tragopan and Cheer are globally threatened with extinction.

45 species of Galliformes are found in India but unfortunately we are data deficient for over 95 % of them. 160 years of sporadic information and yet today we are still at the ebb for sound ecological information. Good science and advocacy are most pertinent for evolving workable policies if we have to safeguard these beautiful birds.

Do we want to continue sighting these colourful species in the wild or do we want to see them merely as state symbols or live in captivity? Let's do our bit to conserve them in the wild!!

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Bibliography on Indian Galliformes

For the first time, a Bibliography on the Galliformes found in India has been put together recently at the Library and Documentation Centre of the Wildlife Institute of India (WII) based in Dehradun. The suggestion to prepare such a bibliography was made by the WPA-India following the International Symposium on Galliformes held at Dehradun in April 2004 and signing of a Memorandum of Understanding between WPA-India and WII.

Proper literature documentation is important for facilitating easy access to relevant literature on a given subject. In respect of the 45 species of Galliformes* found in India, a large volume of scientific information has been available, but this has remained widely scattered and never been collated and put together. Hence, the newly compiled bibliography is the result of an extensive literature survey undertaken for the first time and the WII deserves to be fully complimented for this. It fills a long awaited gap and should be welcomed by all concerned.

Altogether, the bibliography has 728 references (all in English language) by 333 authors and covers a time period of about 160 years, i.e. from 1848 to 2007. The most productive period, accounting for 438 references, relates to the period 1991 to 2007.

To make the bibliography user-friendly, indices have been included on the Authors, Subjects and Publication Years. Each paper / article has been categorized on the basis of 14 broad subjects, such as Status / Distribution, Conservation / Management, Behaviour, Breeding, Habitat, Natural History, Taxonomy, Captivity, etc.

The full bibliography is contained in the ENVIS publication titled *Galliformes of India* (Vol. 10 No.1 – 2007) brought out by the Wildlife Institute of India. It can be obtained also in database form by writing to the Director, WII.

The WII and WPA-India would welcome comments, reactions or suggestions for improving and enlarging this very valuable piece of work.

** Full list was included in the Mor issue of January 2009.*

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WPA-India Governing Board met on 15 June 2009 in New Delhi.

The President, WPA-India, has recently met the new Minister for Environment and Forests.

Annual Meeting of WPA-India General Body is scheduled to take place on 26 September 2009.

Status of Galliformes in the Agricultural Landscape of Uttar Pradesh: Preliminary results from surveys 2008-09)

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Much of Uttar Pradesh's landscape has been converted to agriculture. The question of whether this landscape can sustain biodiversity like some agricultural areas elsewhere in the world has received no attention. I am currently engaged in a study that aims to document the current bird diversity on this landscape in addition to determining factors related to maximal diversity. Ornithological studies in this landscape have been very limited. In my study, I documented seven Galliformes species, but provide preliminary results here for three of the commonest namely the Black Francolin *Francolinus francolinus*, Grey Partridge *Francolinus pondicerianus*, and the Indian Peafowl *Pavo cristatus*. Current distribution maps for these three species are coarse suggesting uniform and complete distribution in the state. In my ongoing study, I am surveying 40 10x10 km grids chosen randomly spread across 29 rice dominated districts along the River Ganga in Uttar Pradesh. I am using four systematically located 1-km transects in each grid to enumerate bird diversity and abundance. I use both visual and acoustic cues to confirm bird presence. Here I present preliminary results for the three species listed above for the winter (Nov 2008 – Feb 2009) and summer (Mar – May 2009) surveys.

The Black Francolin was the least abundant of the three species in both winter (too low to calculate density) and summer (0-1.67 birds/km^2), and was found to preferentially occur in areas with low intensity of rice cultivation (intensity measured as % area under rice cultivation) in the winter. The Indian Peafowl was the most abundant of the three species in both winter (1.92-3 birds/km^2) and summer (0.25-5.25 birds/km^2). The Grey Francolin had intermediate abundance in both winter (1.25-3.96 birds/km^2) and summer (0.42-2.29 birds/km^2). However, the Grey Francolin was the most widespread of the three species being found in 72 and 77% of the grids in winter and summer respectively. The Indian Peafowl was the next most widely distributed being found in 65 and 53% of the grids in winter and summer respectively. The Black Francolin was found in only 7.5 and 48% of the grids in winter and summer respectively. Preliminary analyses failed to detect any single habitat feature (e.g. wetlands, trees, or fallow field) that was correlated to abundance of any of the three species. Abundances were not adequate to determine habitat preferences of the three species. Pending work includes the monsoonal survey, detailed analyses to identify factors that determine Galliformes occupancy on this landscape, identify habitat features – if any – that may maximize Galliformes abundance, and determine farmer attitudes towards these species.

The preliminary results indicate seasonal differences in detection of the Black Francolin. Whether this is due to higher calling rates in summer or due to local movements is unknown. Finding this out is of conservation interest. Results also indicate that (1) distribution is patchy, and (2) Black Francolin abundance is very low likely requiring conservation intervention. The other Galliformes species that were located were the Common Quail *Coturnix coturnix*, Jungle Bush Quail *Perdicula asiatica*, Small Buttonquail *Turnix sylvatic*, and the Yellow-legged Buttonquail *T. tanki*. Their numbers were very low likely due to their skulking habits suggesting that other techniques may be required to survey them. These are the first standardized estimates of abundance and occupancy for Galliformes in Indian agricultural areas. Similar studies in other locations will be useful to obtain a holistic status assessment of these species in human-modified habitats. Given that agriculture is the dominant land use in India, finding out mechanisms to conserve Galliformes and other bids species here is a conservation priority.

Acknowledgments: This study is being funded by the International Crane Foundation, National Geographic Society's Conservation Trust, University of Minnesota, and the Waterbird Society, with additional support being provided by the Wildlife Protection Society of India.

Status, Distribution and Conservation of Galliformes in Jammu & Kashmir

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Introduction: Jammu and Kashmir is the northern most state of India and its location and the range of altitudes provides for three district biomes – the low land dry thorny scrub of Jammu, the mid level temperate evergreen forests of Kashmir and the cold arid climes of Ladakh, Therefore, along with the distinct vegetation types, the regions also exhibit distinct faunal assemblages.

There are no detailed studies on galliformes in Jammu and Kashmir, except for Lamba *et al* (1982), Kaul (1989) and Qadri *et al* (1990) who documented the distribution and status of pheasants in the Kashmir valley, and Scott *et al* (1989) in Kishtwar National Park (NP), the only area in Jammu region. Distribution of galliformes has been better documented in Ladakh region by travellers and ornithologists (Pfisher, 2001).

The State has 14 species of galliformes, which includes seven pheasants and the others are partridges, quails and francolins. Being divided into three clear biogeographic zones, the state has species of the Indian Peafowl (*Pavo cristatus*) and the Red Junglefowl (*Gallus gallus*), of the cold arid in Tibetan Partridge (*Perdix hodgsoniae*) and the Tibetan Snowcock (*Tetraogallus tibetanus*), and the temperate species such as the Koklass (*Pucrasia macrolopha*), Western Tragopan (*Tragopan melanocephalus*) and the Himalayan Monal (*Lophophorus impejanus*). Only two of the 14 species, the Western Tragopan and Cheer (*Catreus wallichi*) are threatened with extinction globally, although all are included in the Wildlife (Protection) Act of Jammu and Kashmir State.

Status and distribution of galliformes in Jammu and Kashmir State

1. **Himalayan Monal:** It is a commonly occurring pheasant found in almost all Protected Areas (PAs) within the State. It can be sighted in good numbers in Limber Wildlife Sanctuary (WS), Dachigam NP, Overa-Aru WS and Kishtwar NP besides other territorial forest areas. No population estimates are available. Main threats were hunting in the past but much of that appears to have been controlled now, although they are still trapped in pit-fall traps.
2. **Western Tragopan:** This threatened species is found at a handful of locations. The largest population is perhaps in the Limber – Lachipora area of the Kazinag range. Also found in Kishtwar NP and are reportedly present in Sud Mahadev area of Jammu province. Abundance estimates are available from Limber area only, which suggests a population of over 45 males. They appear to be fairly secure in Limber area although nothing is known about their status from Kishtawar NP.
3. **Cheer Pheasant:** The Cheer has a limited distribution in the State. In Jammu area, it is confirmed from Trikuta area while in Kashmir it is found in the Limber WS and Lachipora WS. Southern slopes of the Pir Panjal range need to be surveyed to locate more sites. The species appears to adapt to disturbed habitats and therefore may not be as threatened as thought to be.
4. **Koklass Pheasant:** This is a relatively common pheasant (as in other parts of the western Himalaya) and is found in most forested areas of the State. Most significantly, it is found in Overa-Aru WS, Limber WS, Lachipora WS, Gulmarg WS, Dachigam NP and Kishtwar NP. Old records of the presence of this species from Boniyar area of the Kashmir valley (Lamba *et al*.1982) are available. Population estimates for this pheasant are lacking.
5. **Red Junglefowl:** This species is mainly found in the Jammu and Ramnagar WS, Jasrota WS and Nandini WS. They are also found in some Reserve Forests of Kathua. This species is largely absent from the valley.
6. **White-crested Kalij (*Lophura leucomelanos*):** This is also largely confined to the Jammu region and is not found in any significant numbers in the valley, although some reports indicate that they may be present in the lower parts of Jhelum valley. However, this need to be ascertained. The distribution largely follows that of the Red Junglefowl within the State.
7. **Indian Peafowl:** This species occupies the areas adjacent to the Indian plains and is found in the

Rannagar WS, Nandini WS and Nagrota WS besides near agricultural farmlands in Sambha and Kathua areas of Jammu. It is not found in the Kashmir Valley or in Ladakh region.

8. **Himalayan Snowcock (*Tetraogallus himalayensis*):** This is a high altitude species found in the higher reaches of Ladakh region and also some high altitude areas of the Kashmir valley. It is also found in the higher reaches of Kishtawar NP. However, no estimates of abundance are available for this species.
9. **Tibetan Snowcock:** The Tibetan snowcock is found in only some parts of northern and eastern Ladakh and is thus limited in its distribution within the State.
10. **Snow Patridge (*Lerwa lerwa*):** This species is found in Ladakh and the higher reaches of the Kashmir valley. It may also occur in the Kishtwar NP, but there was no report to suggest this.
11. **Chukar (*Alectoris chukar*):** This species is spread across all the three provinces of the State and is relatively common in Ladakh and the Kashmir Valley, migrating from upper reaches to the valley floor in Dachigam NP. They are also found in other PAs of the state.
12. **Black Francolin (*Francolinus francolinus*):** This species is predominantly found in the Jammu province. Its recent distribution within the Kashmir Valley is not known.
13. **Tibetan Patridge:** This species is confined to some parts of Ladakh region. Its distribution and status remains largely unknown.
14. **Common Quail (*Coturnix coturnix*):** This species is believed to occur in the State, but no recent records exist. This is perhaps a reflection of less ornithological work being carried out in the State.

Conservation Issues: There are only two species threatened with extinction in the State. The Cheer Pheasant is confined to the Kazinag range where it survives in the Limber WS and Lachipora WS. As apparent from surveys in other areas, Cheer survives well outside PAs also. Thus, we do not perceive any major threats to their population in the State. However, lack of surveys has meant that our knowledge about Cheer is restricted to only the two sites in Kazinag (Kashmir) and Trikuta (Jammu) areas.

The Western Tragopan is, on the other hand, more dependent perhaps on the protection to its habitat and is thus safe in Kazinag range (Limber WS and Lachipora WS area). Their status is unknown in Kishtwar NP, though the potential habitat here is larger than in Limber WS and Lachipora WS. More surveys are required to establish this.

Local hunting must take a toll of pheasant numbers near villages, especially when they are driven down in winters by bad weather. Impacts of such local hunting are not known but since there appears to be no trade in pheasants for meat in the state, this level of hunting should not pose too much of a problem although efforts should be made to stop this, as any form of hunting is illegal under the Jammu and Kashmir Wildlife (Protection) Act.

With the security situation in the state improving, it is expected that more surveys will now be undertaken and a more meaningful assessment of distribution and status of galliformes of the state will be available. Without such information, it is difficult to prepare better conservation plans.

Recommendations: The State is rich in galliformes and it is time that a concerted survey be undertaken to map the distributions of all the species. The State harbours a significant population of Western Tragopan and thus has an important role to play in its conservation globally and also in the national context. The main populations of this species need to be identified and protected from threats of habitat loss and hunting. Creating public awareness about galliformes by establishing state of the art display facilities could be one of the main tasks of the Department of Wildlife Protection in the coming years. Keeping colourful aviaries with proper information could generate some awareness about this group of birds. The Department of Wildlife Protection could also join the conservation breeding efforts of the Western Tragopan initiated by the Department of Forest and Wildlife, Himachal Pradesh and the Central Zoo Authority.

Source: ENVIS Publication, Galliformes of India

Priorities for future Research and Monitoring

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India has made huge strides in understanding the conservation status of its Galliformes and their habitats in the last 30 years and some of this research is reviewed by Kaul (2005). In the mid-1970s, very little was known about even the basics of distribution and status for most species and the information that was available was rarely used for conservation planning. Now the situation is so different and there are many active fieldworkers (see for example the papers in Fuller and Browne, 2005) and the state of the environment increasingly recognised as a mainstream political agenda item. However, despite these crucial strides there that are simply not the scientists or funds to undertake all of the scientific work that, in an ideal world, should be carried out to guide conservation decision making and management. Therefore, every effort should be made to ensure that future work is as useful and well targeted as possible.

Priority species: The World Pheasant Association (WPA) has developed a scheme that is used in the prioritisation of work on Galliformes species (Figure 1). As a simple rule, we wish to move down this chain as quickly as possible, but only when we have enough information to be sure that it is possible to draw satisfactory conclusions at each stage. Even this scheme, suggests a huge amount of work in India, which is home to so many species.

IUCN (2006) states that 48 species of Galliformes in India have been evaluated for inclusion on the IUCN Red List and that 34 are currently considered Least Concern, four are Near-threatened, nine are vulnerable and one is Critically Endangered. Therefore, these 10 species are clear global priorities and there is a need to ensure that scientific research is at least at stage 4 and preferably at stages 5 and 6 for all of them. For some of these species there is good quality information, but it is not yet widely available in the public domain. For example, the Cheer Pheasant (*Catreus wallichi*) and Western Tragopan (*Tragopan melanocephalus*) were two of the most high profile species amongst Galliformes conservationists anywhere in the world during the 1970s and 1980s. As a result, a considerable amount of research has been carried out on both species, but much has not been published in peer-reviewed journals and so, very regrettably, remains of very limited (if any) use. In due course, this lack of dissemination of results may well mean that the research has to be undertaken all over again and this would be a great shame given the scarce resources that have already been spent gathering information so far.

Figure 1. Steps in conservation from taxonomic ignorance to measurable conservation benefit (based on Fuller *et al*. 2003):- 1. Define species & distribution limits 2. Measure population status 3. Research ecology & threats 4. Develop and advocate action 5. Implement management or policy 6. Monitor effects of action

Species that are not on the Red List should also be assessed periodically to ensure that they are listed in the correct category. Arguably the Red List is biased towards species that have small populations and/or small geographic ranges. Therefore, species that are commonly thought to be widespread may be overlooked or inadequately assessed. Consider for example, the Grey Jungle fowl (*Gallus sonneratii*) or Himalayan Monal (*Lophophorus impejanus*). Can we be confident that their areas of occupancy, habitat use and population trends are all well enough known for their Least Concern listing?

Priority Areas: Clearly, gathering species by species information on all of India's Galliformes is not practical simply because of the resources needed to accomplish this for all 48 species. Therefore, areas of the country where there are high concentrations of species or large numbers of threatened species provide the opportunity for multi-species studies. One such area is obviously North East India, where our knowledge of Sclater's Monal (*Lophophorus scalten*), Blyth's Tragopan (*Tragopan blythii*) and Hume's Pheasant (*Syrmaticus humiae*) remains inadequate for systematic conservation management. There are also large parts of India south of the Himalaya where there is considerable scope for assessing the ecology and conservation prospects of Galliformes assemblages. Considering the spatial scale at which conservation management is typically carried out, however, we should be identifying management and monitoring needs at the state or Protected Area (PA) level. Table 1 shows National Parks and Wildlife Sanctuaries in India that were considered

globally important in 1999 for ensuring that Galliformes on Asia are adequately represented in the network of PAs (McGowan *et al.* 1999). This analysis should be revised incorporating new distributional data and information on the status of PAs. Crucially it should go further than the previous analysis and seek to determine whether there is sufficient suitable habitat within each PAs to sustain populations in the long-term. This may see some of the sites listed in Table 1 replaced by other PAs as their log-term viability is called into question. A further analysis should be undertaken at the national level to ensure the best management for Galliformes in a subset of the country's impressive number of PAs.

Flagships and awareness: It is not only immediate threat that should drive attention to species research. There are at least two Indian Galliformes that have exceptional potential to be emblematic for the conservation of the whole group and their habitats. These are the Indian Peafowl (*Pavo cristatus*), the National Bird, and the Red Junglefowl (*Gallus gallus*) because of the cultural and religious importance of the former and its ancestry of the domestic chicken of the latter. Therefore, research that will best position our ability to capitalise on conservation opportunities that may arise outside the usual narrow confines that Galliformes researchers work within would be very timely. Some of this is underway, but results need to be communicated accurately, succinctly and quickly to a wide audience.

Developing approaches and methods: Even when trying to identify a suite of priorities as above, it is very easy to end up with a long 'wish list' of activities that should be carried out to underpin conservation policy and management. Whilst these are all needed and would add substantially to our ability to make better conservation decisions, it is also necessary to continually seek new approaches and methods to Galliformes research and conservation. There are increasingly sophisticated methods available to researchers for activities such as monitoring populations at various spatial scales. These should be pursued wherever possible as it will allow increasingly efficiency in research efforts. One example of this is the current Wildlife Institute of India-World Pheasant Association project entitled *Key areas for long-term conservation of Galliformes in north-west India* (See Ramesh *et al*.2006). This project seeks to provide an overarching assessment of the status of Uttakhand's 22 species of Galliformes and identify the key conservation needs. It is doing this through an innovative combination of a landscape-level sampling of the species' distribution within the state and extensive field surveys. These can then be combined to produce assessments of key sites and management needs.

Table 1: List of Protected Areas in India considered in 1999 to be important for the most efficient representation of Galliformes in the World's Protected Area network (from McGowan *et al.* 1999).

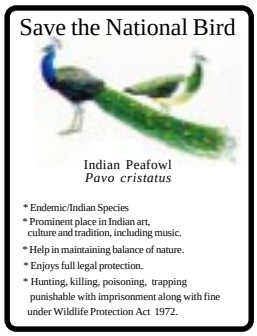
Protected Area	**State**
Dibang Wildlife Sanctuary	Arunachal Pradesh
Intanki National Park	Nagaland
Mehao Wildlife Sanctuary	Arunachal Pradesh
Melghat Wildlife Sanctuary	Maharashtra
Murlen National Park	Mizoram
Pakhui Wildlife Sanctuary	Arunachal Pradesh
Phwangpui National Park	Mizoram
Singhalila National Park	West Bengal
Wynad Wildlife Sanctuary	Kerala
Bandhavgarh National Park	Madhya Pradesh
Corbett National Park	Uttarakhand
Dudhwa National Park	Uttar Pradesh
Govind Pashu Vihar Sanctuary	Uttarakhand
Great Himalayan National Park	Himachal Pradesh
Karera Wildlife Sanctuary	Madhya Pradesh
Manali Wildlife Sanctuary	Himachal Pradesh
Manas Wildlife Sanctuary	Assam
Pench (Priyadarshini) Wildlife Sanctuary	Madhya Pradesh

Source: ENVIS Publication, Galliformes of India

Resource Material - *available on request*

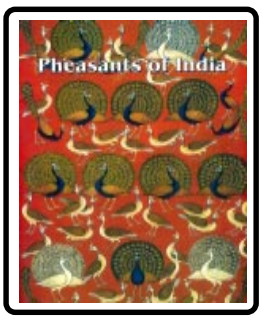
Posters

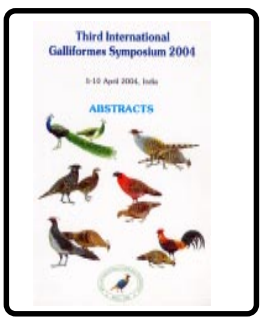
- Pheasants of India
- Pheasants of Arunachal Pradesh
- Pheasants of Himachal Pradesh
- Pheasants of Uttaranchal
- Pheasants of Assam
- Pheasants of J&K
- Pheasants of Sikkim
- Pheasants of Nagaland
- Pheasants of West Bengal
- National and State Birds
- Save the National Bird
- Himalayan Monal

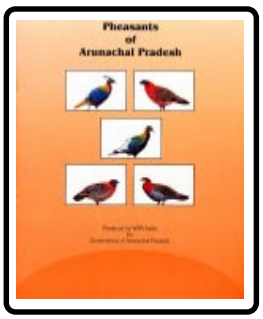


Booklets

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







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Contributions to MOR may be sent to WPA-India.

Renewal of Membership

All those who have not renewed the membership of WPA-India are requested to do so and pay the due subscription at the earliest. Kindly note that the next Annual Meeting of the General Body will be held on 26 September 2009 and, as per rules, only members who have renewed their membership will be able to participate in the meeting.