WORLD PHEASANT ASSOCIATION INDIA

Mor

Newsletter of World Pheasant Association - India

Editorial:

The most important event of the past few months has been the ***11th Conference of the Parties to the Convention on Biological Diversity (1992)*** held at Hyderabad in India during October 2012, which was hosted by the Indian Government. All national governments that are Parties to the Convention were expected to review their Biodiversity Strategies and Action Plans. Though the focus was on wider and inter-sectoral issues that are central to the provisions of the Convention, biodiversity conservation necessarily includes species conservation and must receive the attention it deserves. It is hoped that the renewed emphasis on species conservation will also benefit the Pheasants and other *Galliform* species, many of which are rare and endangered.

The recent decision of the Ministry of Environment and Forests not to allow any reduction in the habitat of the very rare ***Nicobar Megapode*** in the Nicobar Islands is to be applauded. A full article on the species and related aspects is included in this issue of *Mor* in the hope that it would interest the readers and also lead to greater support for the fullest protection of this species which is found nowhere else in the world.

WPA India has been carrying on its ***Save the National Bird*** campaign. Sadly, reports of Peafowl mortality and decline in the habitat of the species continue. This issue carries items that highlight such incidents in Delhi NCR region, especially in Greater Noida. WPA India has been bringing these cases to the notice of the concerned authorities. However, the need for active public interest and support for the cause cannot be over-emphasised.

Another interesting piece in this issue is on the new book titled ***Of Birds and Birdsong*** containing the numerous writings on birds of M. Krishnan, famous naturalist and conservationist. It is not so well known that Krishnan had a special interest in birds and wrote on several Indian birds, including some *Galliform* species. If space permits, a few interesting pieces will be included in future issues of *Mor*.

While all efforts are being made to ensure that the issues of ***Mor*** are informative, interesting and useful to the readers, it would help greatly if feedback and reactions were received. The request for relevant news, views and articles from all those interested is once again reiterated.

Dr. M. Shah Hussain, Hon. General Secretary

Jayanthi cries fowl, blocks Navy Missiles

*AVISHEK G DASTIDAR, The Indian Express, New Delhi Saturday, October 6, 2012**

To save the habitat of an endangered species of bird, Environment Minister Jayanthi Natarajan has rejected the Navy's proposal to set up a missile testing site at Tillanchong Sanctuary in the Andaman and Nicobar Islands.

The Navy has said it would ask the ministry to reconsider.

Natarajan said on Friday that she had accepted the recommendation of the Standing Committee of the National Board of Wildlife that had said the missile testing project would destroy the habitat of the Nicobar megapode, also known as the Nicobar scrubfowl *(Megapodius nicobariensis)*.

"The habitat of the megapode should not be disturbed and the missile firing range should not come up in that area," the minister said in Delhi.

Only weeks ago, Natarajan had shot down a Coast Guard project to set up a surveillance radar in Narcondam, another island in the archipelago, to save the habitat of a rare endangered hornbill endemic to the region.

**The article appeared in The Indian Express, New Delhi, Saturday, October 6, 2012*

"It was a very difficult decision for me to reject the proposal for the temporary facility at the ecologically sensitive island as it involves security, and the missile range is important for the country's defence," she said on Friday.

The megapode — so called because of its large feet — "actually does not exist anywhere (else) and it is a very unique species", Natarajan said. "It is too sensitive to withstand any such installation over there and as environment minister it is my mandate to make sure that wildlife, flora and fauna of our country are protected. So, it is an extremely hard decision but I decided that it is my mandate and I should stay with it."

The scrubfowl, considered sacred by the Nicobarese people, was hit badly by the Indian Ocean tsunami that destroyed vast swathes of its habitat and nesting grounds.

Navy Chief Admiral D K Joshi said the firing range was critical to the force. "We will re-approach the MoEF and we know that they have their reservations. But the fact is we cannot do without our firing range," PTI quoted him as saying.

Welcoming the decision of the Central Ministry of Environment & Forests not to allow any loss of habitat of the very rare and unique Nicobar Megapode, former President of WPA-India, Samar Singh, points out that this bird is totally endemic to the Nicobar group of islands in India and is found nowhere else in the world. He adds that the status of the species is already precarious and it is included in Schedule I of the Indian Wild Life (Protection) Act, which means the highest degree of protection in law. The IUCN, Birdlife International and World Pheasant Association (WPA) have categorized the species as 'Vulnerable', which clearly indicates that it could become extinct in the future unless concerted efforts are made to check habitat destruction and hunting for meat and eggs. The tsunami that struck the Nicobar Islands in December 2004 caused widespread damage to the habitat and nests of the species and it has been estimated that about 70% of the population was wiped out by this natural calamity. The need to give the fullest protection to the remaining depleted population of the species is self-evident and any compromise in this regard must not be permitted. To know more about the bird, read on …

Nicobar Megapode *Megapodius nicobariensis*

The Megapodes, also known as incubator birds or mound-builders, are stocky, medium-large chicken-like birds with small heads and large feet in the family *Megapodiidae*. Their name literally means *large foot* (Greek: *mega* = large, *poda* = foot), and is a reference to the heavy legs and feet typical of these terrestrial birds. Megapodes are found in the broader Australasian region, including islands in the western Pacific, Australia, New Guinea, and the islands of Indonesia east of the Wallace Line. The Nicobar Megapode *Megapodius nicobariensis* is confined to the Nicobar group of islands in the Bay of Bengal. The polytypic

Nicobar Megapode has two subspecies, viz *M.n. nicobariensis* distributed in the Nancowry group of islands north of the Sombrero channel, and *M.n. abbotti*, distributed in the Great Nicobar group of islands lying south of the Sombrero channel (Hume and Marshall 1878, Abdulali 1964, Ali and Ripley 1983).

The bird inhabits forest and secondary growth, with greater concentration in the coastal forest areas. For mound nesting, flat coastal tracts are preferred.

Description: The Nicobar Megapode is a terrestrial brown or reddish-brown bird with a pinkish-red bare patch around the eye and a greyish crown; the dorsal side of the leg is blackish-brown and the ventral side is yellowish. Newly-hatched chicks have the crown, upperparts, and upper wing rufous brown, and the under parts a full cinnamon-brown, sometimes with slight grey tinge, and the lower back inconspicuously rufous and black.

Scientific classification

Kingdom	**:**	***Animalia***
Phylum	**:**	***Chordata***
Class	**:**	***Aves***
Order	**:**	***Galliformes***
Family	**:**	***Megapodiidae***
Genus	**:**	***Megapodius***
Species	**:**	***M. nicobariensis***
Sub-species:		***M.n. nicobariensis***
		M.n. abbotti

Behaviour: Usually seen in pairs in forest areas close to the beach. The sexes look alike. They do not incubate their eggs with body heat, but bury them by building large nest-mounds of sand and humus. The eggs incubate by the heat of decaying vegetation. Chicks use their claws to break out of the egg, and then tunnel their way up to the surface of the mound. They hatch feathered, active and ready to lead an independent existence. There is no parental care; the chicks simply wander away and fend for themselves.The Nicobar Megapode has an omnivorous diet. They forage mainly by scratching and raking debris on the ground using their feet.

The species is primarily monogamous, although extra-pair copulations have been observed. Male gives loud territorial calls, rising in pitch and grading into a staccato series. Feeding birds give noisy, cackling contact calls. In a pair, both the male and female contribute to mound maintenance. Unpaired mature males build and defend mounds to attract a partner. Several pairs often share nest-mounds, with a strong hierarchy apparent during egg-laying. Annual hatching success fluctuates widely.

Distribution: Historically, the Nicobar Megapode occurred on most Nicobar Islands (Hume 1874; Dekker 1992; Sankaran 1995b) barring Car Nicobar (Butler 1899), Chaura (Abdulali 1967) and Bati Malv (Sankaran 1995). There were a few records from the Andaman group of islands (Hume 1874) and from the Coco islands further north (Abdulali 1964). None of the records from the Andaman group are of recent origin and the species is now believed to be absent there (Sankaran 1995a&b). It may have existed on Car Nicobar a century ago but no traces of mounds were found there (Sankaran 1995 a&b).

Population status: Of the total 687 km long coastal line of the Nicobar Megapode lands, 328 km long coastal forest is identified as the 'Potential Coastal Habitat for Megapode' and remaining 359 km long coastal forests are identified as 'Non-conducive coastal habitat for megapodes' (Sivakumar, 2007). Presently, about 800 breeding pairs of the Nicobar Megapode occur on the coastal habitat of the Nicobar islands after tsunami, which is nearly 70% less than what was reported a decade before by Sankaran (1995).

Source: Galliformes of India - ENVIS Publication by Wildlife Institute of India.

Conservation of Red Junglefowl *Gallus gallus* in India

The Red Junglefowl (RJF) is believed to be the wild ancestor of all domestic chicken in the world. There still exists a strong ethno-cultural bond where the wild males are used to invigorate the domestic stock in order to enhance the first generation individuals that are used in the context of cultural and religious relevance. Concerns were raised on the genetic endangerment of RJF due to introgression of domestic genes into the wild population. It is necessary to address these concerns and maintain uncontaminated RJF population in wild and captivity. Keeping this in view, the Wildlife Institute of India carried out a research project from 2006 to 2011 in two phases that dealt with the status, distribution, genetic diversity, interactions between wild RJF and domestic chicken and introgression of domestic genes into the wild and captive stocks.

The RJF is listed in the "Least Concern" category of IUCN with an extent of occurrence of about 5,100,000 km^2. One of the subspecies *Gallus gallus murghi* has its distribution within India. In order to address the issues of status and distribution, we resorted to using presence-only models. These models overcome the cost and time constraints when dealing with a large ranging species. Species site locations were all collated by using primary field data, network of field biologists, literature records, museum specimens and archived databases. A total of 500 geo-rectified data points were used along with predictable variables such as bio-climatic factors, digital elevation model and forest cover. These variables were used to run maximum entropy models using the product function. The test data has an AUC score of 0.979, the jackknife test for variable importance was annual precipitation and precipitation of the driest quarter that contributed 46% to the model. The total predicted probability suitable area in India is approx 354,978 km^2. There are three distinct landscapes within India - namely, north (12%), central (52%) and northeastern (36%).The central landscapes are isolated and does not connect either to the north or northeastern landscape. The north and northeastern landscape is connected to each other through the forest patches in Bhutan and Nepal. The PA network accounts for nearly 13% of the area, with the National Parks (34) representing 4.32% and the Wildlife Sanctuaries (135) representing 8.52%, while nearly 90% of the area lies outside the purview of the PA network. The species is still reported from 205 districts out of the 270 districts in 21range states.

Genetic diversity, population differentiation and phylogenetic analysis of RJF populations were assessed in 19 RJF range states of India. In total, 385 samples (306 RJF & 79 domestic chickens) were collected and genotyped with 26 microsatellite markers. Altogether, 628 alleles were observed across five RJF and one domestic chicken population. Observed and effective number of alleles ranged from 9 to 49 and 2.96 to 12.40 with mean (± s.e.) number of alleles 24.15 (± 8.31) and 6.50 (± 2.71), respectively. Effective number of alleles was less than the observed number of alleles for all the loci. The overall observed heterozygosity ranged from 0.23 and 0.79, with mean value of 0.52 ± 0.13, while expected heterozygosity ranged 0.62 to 0.92 with mean value of 0.82 ± 0.08. PIC value ranged from 0.56 to 0.91 with mean value 0.80 (±0.09) and therefore all microsatellite markers were informative in the present study. Mean observed number of alleles & mean observed heterozygosity was highest in northern RJF population, i.e. N_a 21.12 ±7.14 & Ho 0.61 ±0.17 and lowest in central RJF population, i.e. N_a 1.92 ±0.89 & Ho 0.35 ±0.42. The analysis of molecular variance (AMOVA) revealed a total of 6% variation among populations while 94% variance was within population. The minimum population differentiation or maximum gene flow was between northern and eastern RJF population (Nm 10.846) while maximum population differentiation or minimum gene flow was between central and eastern RJF population (Nm 0.911). The overall Nm values were quite high, suggesting high gene flow among RJF populations. Nei's genetic distance indicated that the central RJF population is least similar or most distant (D_A= 0.942) with domestic chicken, while the northeastern RJF population is most identical or least genetically distant (D_A = 0.255) with domestic chicken. The UPGMA dendrogram was generated based on Nei's genetic distance. The RJF populations in India formed three clusters: (i) central

and southeastern, (ii) northern and eastern, and (iii) northeastern and domestic chicken. The multi-factorial correspondence analysis also revealed similar pattern of clustering the RJF populations.

In order to study interactions, observations were recorded from 13 sites with mixed groups. All observations were in the pre-dawn hours. A total of 51 encounters were recorded. The interest was to elucidate whether an interaction between the wild and domestics fowls was mutualistic or agnostic during the breeding and non-breeding seasons. From 10 observations recorded during the breeding season, there were no interaction between the wild and feral population suggesting that there might be a spatial segregation between these two populations. While interactions during the non-breeding season suggest that males are intolerable to each other when in close proximity, while the females are tolerated and move about freely within the groups.

Genetic characterisation and maintaining studbooks is the key step towards formulating management action plan for conservation breeding or release program for any captive species. We collected 220 RJF samples (blood/feathers) from 14 captive centers and investigated population genetic structure and admixture analysis of RJF with domestic chicken using 23 highly polymorphic microsatellite markers. Bayesian clustering analysis revealed three distinct groups that indicated genetic integrity among the birds of 14 centers. We presumed genetic integrity would have resulted due to exchange of birds between zoos or the founders would have been introduced from the same wild population. The global performance of STRUCTURE assigning individuals was 169/220=76.81%, while 8.63% individuals remained unassigned to any of three clusters. Each RJF stock was independently investigated for admixture analysis with a pooled domestic chicken population and ten birds were found to be hybrids out of 220 birds collected from 14 captive centers.

Based on the study, we recommend the following:

- As this study could not survey all areas within RJF's distribution range, there is a need to increase efforts to understand whether the species is prevalent within forested tracts outside the PA network, especially in Bihar, Haryana, Punjab, Sikkim and Uttar Pradesh where the present distribution is highly fragmented.
- Similarly, in Andhra Pradesh, Jammu & Kashmir and Maharashtra, extensive field surveys should be carried out to ascertain the presence/absence and exact distribution limits of RJF as these states encompass the limits or edges of the distribution range of this species.
- Special focus surveys/studies are required at range overlaps between *G.g. murghi* and *G.g. spadiceus* (northeastern states) and also between RJF and Grey Junglefowl (central India).
- Based on our samples collected from zoos/captive centres, admixed birds were identified. These admixed individuals (hybrids between RJF and domestic chicken) that are kept in zoos/captive centres should be removed to avoid any further hybridisation. They should not be exchanged with other zoos/captive centres and should not be released back into the wild. The list of individual birds in the zoos/captive centres that have been identified as 'not admixed' have been provided to these centres.
- For RJF individuals in zoos/captive centres that were not sampled during the study or born or added after the sampling, similar genetic analysis should be carried out. Such individuals should not be used /exchanged for any breeding programme.
- As there are chances of silent breeding between RJF and domestic chicken, the use of domestic hens as foster parents should be avoided.

by: Principal Investigator - S. Sathyakumar, WII,
Co - Investigators - Rahul Kaul, WTI and Rajiv S. Kalsi, MLN College, Yamuna Nagar,
Senior Research Fellows - Merwyn Fernandes and Mukesh, WII.

Phasianids of Guru Ghasidas and Kangerghati National Parks

Guru Ghasidas and Kangerghati National Parks, covering areas of 1471 sq. kms. and about 200 sq. kms. respectively, are situated in the state of Chhattisgarh in Central India. Guru Ghasidas National Park is in Korba district. The hilly terrain of the park with an average altitude of 486 mts. is covered with deciduous forest and interspersed with rivers and ravines. Though it covers a large area and has favourable ecological conditions, the species diversity of Phasianids is restricted to seven only. Earlier, Chakraborty (2008) reported six species except *Francolinus pondicerianus*.

Kangerghati National Park is situated in the southern part of Bastar district, 26 kms. south of Jagdalpur. The moist peninsular Sal forest and the south Indian tropical moist deciduous forest are seen in their finest form in this national park. It is situated in the transition zone where southern limit of Sal and northern limit of Teak overlap, hence both Sal and Teak are seen in the valley. In 1982, the reserve forest of Kanger Valley was declared as a national park, not only for the protection and conservation of rich floral and faunal diversity but also for its pristine ecology, including the splendid waterfalls and astonishing limestone caves. Perhaps, Kangerghati is the last pocket of virgin forest still left in the peninsular region (Krishna, 1993). The ancient and verdant forest of Kangerghati has bagged the recommendation to be declared as a Biosphere Reserve (Chakraborty, 2008). Though having all favourable characters, this national park is only having four species of Phasianids.

Except Indian Peafowl and Red Junglefowl, all other Phasianids were met in the forest either on the forest roads or at the outskirts or in the clear area and a few in the bamboo thickets also. Except peafowl, all the species were seen in the forest during dawn and dusk.

			Status	
Name of Species	**KAN**	**GGD**	**IUCN**	**/ IWPA**
Black Francolin *Francolinus francolinus*	-	+	LC	Sch. IV
Grey Francolin *Francolinus pondicerianus*	-	+	LC	Sch. IV
Rain Quail *Coturnix coromandelica*	+	-	LC	Sch. IV
Jungle Bush-Quail *Perdicula asiatica*	-	+	LC	Sch. IV
Painted Bush-Quail *Perdicula erythrorhyncha*	+	-	LC	Sch. IV
Red Spurfowl *Galloperdix spadicea*	-	+	LC	Sch. IV
Painted Spurfowl *Galloperdix lunulata*	-	+	LC	Sch. IV
Indian Red Junglefowl *Gallus gallus*	+	+	LC	Sch. IV
Indian Peafowl *Pavo cristatus*	+	+	LC	Sch. I

KAN- Kangerghati National Park, GGD- Guru Ghasidas National Park, LC-Least Concern, Sch - Schedule

As per IUCN Red Data List, all these Phasianids are placed under 'Least Concern' (LC) category. Except for Peafowl, all other Phasianids found in Kangerghati NP and in Guru Ghasidas NP are enlisted under Schedule IV of Indian Wildlife (Protection) Act (IWPA). The Peafowl is India's National Bird and is placed under Schedule1 of IWPA. However, it has to be kept in mind that the pheasants which are least concern today may become threatened tomorrow and hence these species deserve full protection.

In India, eco-tourism is flourishing, but due to improper management the forest ecosystem is getting damaged. In Kangerghati national park, particularly during winter, hundreds of vehicles with visitors ply for visiting the stalactite and stalagmite caves, leaving a thick precipitate of red dust on vegetation cover all

around, which keeps the pheasants and partridges away from their foraging ground. Since the area of Kangerghati is very small, practically the whole ecosystem of the forest is affected by this problem. For the sake of revenue earning, the biodiversity of a national park should not be spoilt. Hunting pressure on phasianids still exists since tribal rituals as well as their empty stomach often demand a supply of these birds from the remaining wild stock. Practically, no status survey has been conducted so far for estimating their actual population in the national parks. During my visit to both the national parks, it was never felt that the population of pheasants and partridges is high and, at the same time, the human interference is very high. Once the habitat gets polluted or lost, it is practically impossible to regain. Thus, it is high time to think about the ecology of national parks as well as the actual status of their inhabitants, particularly the non-charismatic species. For mitigating the above problems, the entry of visitors has to be controlled. Special protection has to be ensured for these birds, particularly in the breeding season and the habitat of the birds should be restored.

by: Rina Chakraborty, former Jt. Director, Zoological Survey of India, Kolkata

Black Francolin in the backyard

Black Francolin *Francolinus francolinus* is considered as of 'Least Concern' in IUCN Red Data List but it is a rare bird in the context of the urban environment of Delhi. Dwarka, a developing subcity of Delhi covering an area of 56 km², is situated in southwest of Delhi touching the northeastern border of Haryana. Earlier this area used to be agricultural fields. North and east portions of Dwarka are fully developed whereas the south and west areas are yet to be developed as per Delhi Development Authority's master plan. Agricultural practices adjacent to this portion of Dwarka are still functional and a big drain (Najafgarh drain) is also passing nearby.

Being a resident of Dwarka, I have been monitoring the buffer areas of the subcity. For the last four years, Black Francolin has been encountered in the nearby agricultural fields and in the vacant areas of nearby cooperative housing societies where construction work has not been started yet. The maximum sightings were during May to August. This was the time when calls of the birds were also heard. The vacant spaces were full of plants such as *Lantana camara, Acyranthes aspera, Cleome viscosa, Cassia occidentalis, Cassia tora*. This foliage provides shelter and food to the Black Francolin.

Recent survey shows a declining trend in Black Francolin sightings. Eight to nine individuals were encountered during 2008, but in 2012 only 2-3 individuals were encountered. This decline can be attributed to loss of habitat and heavy traffic movement due to the opening of the Dwarka Expressway. Besides, construction work has also been started in the vacant areas. Another threat to the Black Francolin is by the pastoral community. Cattle come from adjacent states of Haryana and Rajasthan every year and graze freely. The pastoralists bring dogs with them. These dogs hunt and predate eggs and chicks/fledglings of the Black Francolin and other ground nesting birds. Unless such pressures are checked, soon sighting of the Black Francolin in the urban landscape will become a rarity. This would be sad indeed, for we do need to provide some space to this beautiful bird.

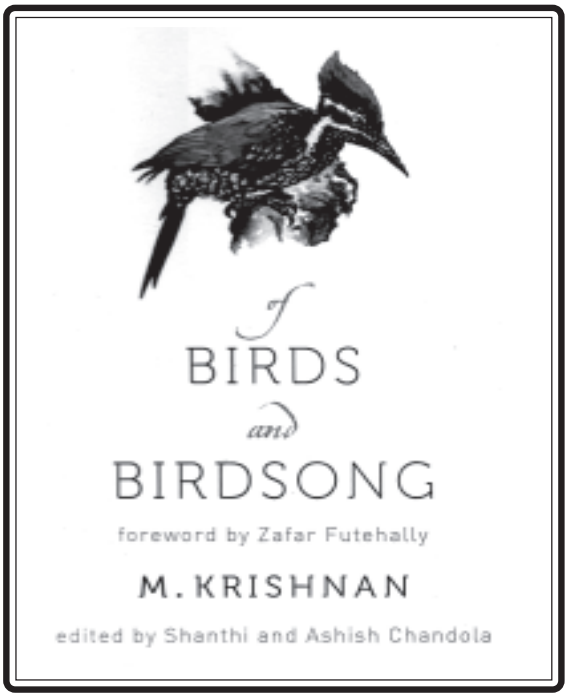
by: Dr. M. Shah Hussain, Hon. General Secretary, WPA-India

Of Birds and Birdsong

M. Krishnan

Edited by Shanthi & Ashish Chandola

This volume, published earlier this year, is a delightful collection of several very interesting and insightful writings of Madhaviah Krishnan on the Indian birds. Krishnan was a born naturalist and was aptly described by E.P. Gee as "one of the best naturalists of present day India" (1964). A prolific writer and an excellent artist as well as photographer, Krishnan was creative, original and in a class by himself. He took to writing quite early in life and developed a style and diction of his own. He wrote on a wide variety of topics, but it was his passion for nature and the natural world that always stood out. He attached great importance to the understanding and knowledge of nature, as is clear from the following in his article titled 'Nature Study' written in 1953:



One of the chief defects of our education is that it fails to stir or inform the natural curiosity of every child in the life around. This failure is so sustained, so gradually asserted and insidious, that no one notices it – and then one *is through with school, through with college, and wholly preoccupied with a life that is blind to the rest of creation. Few people realize how complete this lack is, for it is a lack not only in our education but in our culture as well.*

It is noteworthy that in 1950 Krishnan started writing a fortnightly column called 'Country Notebook' for *The Statesman* (Calcutta edition), which became very popular and continued without a break for 46 years, i.e. till his death. He was an active member of the Indian Board for Wild Life and the Steering Committee of Project Tiger. This is how I came in contact with him, as I was Member Secretary of these bodies, both headed by the Prime Minister, from 1980 to 1985. Krishnan came well prepared for meetings and his proposals or suggestions were invariably backed by meticulous homework and study. He was outspoken and did not mince words in putting across his point of view. Interacting with him was usually a learning experience and I enjoyed receiving his neatly typed or handwritten letters or notes in his inimitable style.

Somehow, Krishnan had a special fondness for birds and wrote extensively on several different bird species, including the very common ones. His articles appeared regularly in various newspapers and magazines such as *The Hindu, The Statesman* and *The Illustrated Weekly of India*. This was all outstanding stuff that could easily do credit to any reputed ornithologist. But, no one earlier took the trouble of putting all this together for a publication on Krishnan's insights on birds. Hence, the editors of this volume, Shanthi and Ashish Chandola, deserve all praise for undertaking this task and bringing out this very interesting and valuable volume containing the choicest writings and sketches of Krishnan on Indian birds. In all, 87 articles selected carefully from the large number of his writings have been included and arranged in eight sections in this rather substantial book of about 300 pages.

In their introduction, the editors rightly mention that Krishnan's work "stands out as uniquely original, combining acute and systematic observation, depth of knowledge and understanding of nature." In his foreword to the book, Zafar Futehally writes: "Every piece in this collection has something original even for the seasoned naturalist, and even his description of common events holds your interest because of the writing." The editors have added that "Krishnan's prose transcends age and is timeless. It is natural history, literature, wit and humour, all rolled into one."

For those interested in *Galliformes,* the book has six articles. At the very start, there are two articles on Partridge keeping and cock fighting, which highlight the importance of indigenous breeds. Then, there are two articles on the Indian Peafowl, one of which is titled 'The National Bird'. The other two articles are on Junglefowl and Quails. Each article makes interesting reading and reveals original thinking and acute observation skills.

by Samar Singh, former President, WPA-India

Painted Spurfowl *Galloperdix lunulata* in Sariska Tiger Reserve, Rajasthan

The Painted Spurfowl *Galloperdix lunulata* is a less studied Galliform species. It is an endemic resident bird and distributed from east Rajasthan to West Bengal and towards the south through the peninsula. The species occurs in the foothills upto 1000 m. To know the status and distribution of the species in Sariska Tiger Reserve, field visits were conducted during 2007-2011.

Sariska Tiger Reserve (STR) lies (79° 17'- 76° 34' E, 27°05'- 27° 33' N) in the Alwar district of Rajasthan. The total area is 881 km² with 497.8 km² as core area and consists of undulating plateaus and wide valleys of the Aravallis (Kidwai et al., 2011). The forest is tropical dry deciduous type (Rodgers & Panwar 1988), whereas the topography supports semi deciduous riparian forest, scrub-thorn arid forests, dry deciduous forest, rocks and grasses. *Anogeissus pendula* is the dominant tree species covering over 90 per cent area. *Boswellia serreta* and *Lannea coromandelica* grow in rocky patches. The valley vegetation includes *Acacia catechu*, *Butea monosperma*, *Zizyphus mauritiana*, *Z. mummularia*, *Capparis separia*, *C. decidua*. Besides, some noteworthy tree species are *Terminalia arjuna*, *Commiphora wightii*, *Sterculia urens, Emblica officinalis, Terminalia bellerica.*

Ten sites were selected for Spurfowl counting in core and buffer zones of the STR: Sariska, Siliserh Lake, Kanakwari, Karanakawas, Indradhauk village, Kalighati, Pandupole, Bara, Kushalgarh and Kiraska. Painted Spurfowl was found only in Pandupole core zone area. It was sighted during each monitoring but group size was limited to 2-3 individuals. Spurfowl was mostly sighted in dry rocky habitat on the stony hills of the Pandupole area.

Sariska Tiger Reserve plays an important role in conserving galliformes due to its topography that provides different habitat types such as water bodies, dense forest, scrub forest, open land and surrounding agricultural fields. After relocation of tigers, the situation has improved here but the area is still under varying degree of threats (Sankar et al., 2010). Painted Spurfowl was recorded in Sariska from a confined area called Pandupole. The temple at Pandupole attracts thousands of vistors during June – September. It is in this area that maximum Painted Spurfowl and other quail species were recorded. Kidwai et al. (2011) also recorded maximum Galliform species from this area. Some surveys are still required in the buffer zone of the tiger reserve.

by: Dr. Aisha Sultana, Biodiversity Parks Programme, CEMDE, University of Delhi, Delhi

'Mystery' disease killing peacocks in Greater Noida

Vinod Rajput, Hindustan Times, New Delhi, Wednesday, 08/08/2012

ALARMED Villagers claims 40 peacocks have died in the last 30 days; admin delays action

Villagers from Noida Extension in Greater Noida have claimed a mysterious disease is killing peacocks in the area. Forty peacocks have been reported dead in the last one month at Patwari, Vedpura, Milak and other villages of Noida Extension. Jitendra Agarwal, a villager from Patwari, claimed, "They first turn blind and then stop having food and water. They also suffer from a paralysis-like attack before succumbing to the illness. I informed the local block veterinary officer about the deaths three weeks ago."

He said the administration didn't do anything. The villagers also alleged that local authorities did not pay heed to their repeated complaints about peacocks falling prey to an unknown disease.

The administration took notice only after this correspondent accompanied Agarwal, who went to complaint once again, on Monday. They sent four sick peacocks to a forest range in Greater Noida for treatment by a government veterinary doctor. But bird experts said peacocks should be treated only by bird specialists and not by a veterinary doctor.

Recently, cases of peacock deaths were reported from Gurgaon as well. In June and July this year, nearly two dozen peacocks were found dead at Hasanpur village in the Aravalis and Kasan village in Manesar.

ENDANGERED

** Peacocks come under Schedule 1 of the Wildlife Protection Act – 1972 and can be buried only by Wildlife officials after ascertaining the circumstances that led to their deaths.*

** Villagers in Noida Extension and Gurgaon have buried several dead peacocks on their own as they feared the carcasses would be eaten by dogs and cats.*

** In Haryana, 400 peacocks have died in the last 3 months. No one knows why the birds are dying.*

** Fertilizers, contaminated water and pesticides are suspected to be the reason for the deaths.*

** Noida Extension villagers have started sheltering sick peacocks in their houses now.*

Some Noida Extension villagers also claimed that one or two peacocks were dying in their villages every day. They have started sheltering sick peacocks in their homes fearing that stray dogs might kill them.

"Since sick peacocks cannot fly, dogs and other animals can harm them. So, we have sheltered them but we can't save them," said Suresh Yadav, another villager.

B. Prabhakar, divisional forest officer (DFO), Gautam Budh Nagar district, said, "Four peacocks are suffering from a water-borne disease due to contaminated water. They also have high fever. We have sent blood samples to a lab in Bareilly to identify the disease. Carcasses have been sent for post-mortem examination."

"Excess use of fertilizers and other forms of chemicals by farmers might have contaminated the food peacocks eat. Domestic waste and environmental changes also could have affected these birds," said Rupak Dey, chief wildlife warden of UP.

The article appeared in Hindustan Times, New Dellhi, Wednesday, 8 August 2012

Peafowl in NCR face Ranikhet virus threat

NOIDA: The survival of peafowl in Delhi-NCR is becoming grimmer by the day. There have been at least 60 deaths reported in the last three months, with 20 birds found dead near Gurgaon and another 40 in Noida. All the deaths have been attributed to the Newcastle disease, an acute rapid-spreading respiratory disease caused by a virus for which there is no cure. At least 40 peacocks died in August in Greater Noida. The Noida forest department confirmed that the deaths were caused by Newcastle disease or Ranikhet disease after the blood samples returned from a lab in Bareilly. A similar string of deaths were seen in and around Gurgaon. In Hasanpur village 11 peacocks were found dead and 10 peafowl were found dead in Kasan village adjoining the Industrial Model Township (IMT) in Manesar. Doctors at the Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar, have confirmed that the birds in the area died due to Newcastle disease.

by: Aniruddha Ghosal, TNN Sep 3, 2012

Peacocks take flight from Greater Noida

NOIDA: The satellite townships adjoining the national capital may be witnessing a lot of development, but environmentalists point out that this has also upset the local ecology. What was once a haven for the national bird, the Indian peafowl, has slowly turned into a nightmare for the feathered kind. Rampant development activity in areas near villages like Patwari and Bisrakh has resulted in complete disappearance of peafowl that once used to flock the region.

The villagers allege that labourers working on construction sites are also killing peafowl. The district veterinary staff suspect a virus is infecting the birds in the area. The villages of Greater Noida, like Bisrakh, Patwari, Ithera and Milak (now better known as Noida Extension), were known as the richest habitat of the peafowl, but in the last few years this is no longer true.

"A team of doctors that visited Greater Noida is treating three peafowl which are in a critical state," said chief veterinary officer, Dr Harpal Singh. "Preliminary investigation suggests they have been infected with a virus that could be due to heavy pollution in the area. Large scale construction and pollution is outside the comfort zone of peafowl," Singh added.

"At least four peacocks have died in the past couple of days in Patwari and Bisrakh villages. We approached the veterinary hospital in Bisrakh, but doctors took the issue casually and the peacocks could not get proper treatment on time and died," said Dr. Harpal Singh of Bisrakh.

TOI first had reported about how the habitat of national bird is widely neglected. Later, farmers had also written to the central and Government saying that haphazard construction of high-rise residential towers has caused serious environmental concerns in Noida Extension villages. The Gramin Panchayat Morcha (GPM) had written a letter to Union environment minister Ms. Jayanthi Natarajan, besides other authorities in the state and central governments, seeking action "against the culprits".

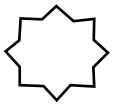
"Projects of over 25 small and big private builders have collectively wreaked havoc on the environmental heritage in Noida Extension. Rapid construction activities coupled with increased human activities around a dozen villages in Greater Noida has led to the mass extinction of peafowl. This area once had peafowl numbering thousands, but now has reduced to a minimal," said environmentalist Vikrant Tongad.

"Our peafowl have died. The green area has reduced from 22% to 19%. The Noida Extension area was highly fertile with rich biodiversity — lush green fields, canals, ponds and palm trees. Local management committees (LMCs) of gram panchayats have been maintaining them. But the whole system has been damaged with the passage of time," said farmer leader Dushyant Nagar.

by: Purusharth Aradhak, TNN Aug 10, 2012

Corrigendum

In the July 2012 issue of Mor in the article of Dr. John Corder titled "The Pheasant Aviary Designs Around The World" the shape of the Aviary in diagram D (page 2) was incorrectly shown. The correct diagram is given below:



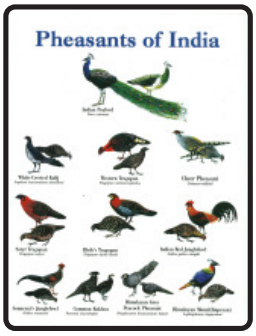
D

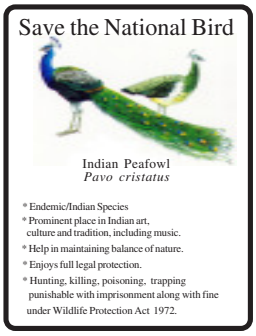
The error is regretted.

Resource Material - *available on request*

Posters

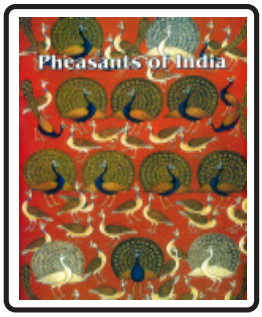
- Pheasants of India
- Pheasants of Arunachal Pradesh
- Pheasants of Himachal Pradesh
- Pheasants of Uttarakhand
- Pheasants of Assam
- Pheasants of J&K
- Pheasants of Sikkim
- Pheasants of Nagaland
- Pheasants of West Bengal
- National and State Birds
- Save the National Bird
- Himalayan Monal

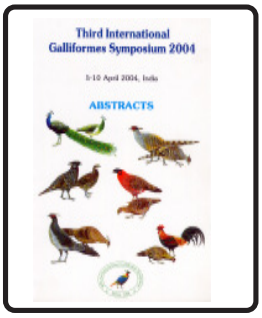


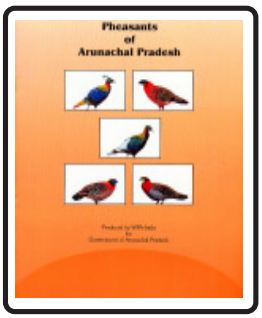


Booklets

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







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Join WPA-India -- --only national organization wholly devoted to the cause of galliformes conservation in India. Membership involves a nominal fee.

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