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Ali, Salim, 2002. *The book of Indian birds*. 13th revised edition. Mumbai: Bombay Natural History Society.

Ali, Salim & S. Dillon Ripley, 2001. *Handbook of the birds of India and Pakistan, together with those of Bangladesh, Nepal, Bhutan and Sri Lanka*. 10 vols. New Delhi: Oxford University Press.

Grimmett, Richard, Carol Inskipp and Tim Inskipp, 1998. *Birds of the Indian subcontinent*. London: Christopher Helm.

Harrison, John, 1999. *A field guide to the birds of Sri Lanka*. Oxford: Oxford University Press.

Inskipp, Carol & Tim Inskipp, 1985. *A guide to the birds of Nepal*. London: Croom Helm.

Inskipp, Carol, Tim Inskipp & Richard Grimmett, 1999. *Birds of Bhutan*. New Delhi: Oxford University Press.

Kazmierczak, Krys, 2000. *A field guide to the birds of India, Sri Lanka, Pakistan, Nepal, Bhutan, Bangladesh and the Maldives*. New Delhi: Om Book Service.

Rasmussen, P.C. & Anderton, J.C. 2005. *Birds of South Asia. The Ripley Guide*. 2 vols. Washington D.C. & Barcelona: Smithsonian Institution & Lynx Edicions.

Roberts, T. J. 1991-92. *The birds of Pakistan*. 2 vols. Karachi: Oxford University Press.

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- To publish a newsletter that will provide a platform to birdwatchers for publishing notes and observations primarily on birds of South Asia.
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Preferential routes of bird dispersal to the Western Ghats in India: An explanation for the avifaunal peculiarities of the Biligirirangan Hills

Umesh Srinivasan & Prashanth N.S.

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Introduction

The Biligirirangan Hills, or BR Hills (77°–77°16'E 11°47'–12°9'N), in peninsular India (Fig. 1 & 2) are a part of the hill ranges that connect the Eastern Ghats and Western Ghats (Ganeshiah & Umashaanker 1998) with avifaunal elements derived from both these areas (Aravind *et al.* 2001). BR Hills comprises roughly four parallel hill ranges (600–1,816 m a.s.l.) running north–south, which support habitats ranging from wet evergreen to dry scrub. The major habitat types of BR Hills (Ramesh 1989) are—moist and dry deciduous (61.1%), scrub (28.2%), grassland (3.4%), evergreen (6.5%) and shola (0.8%). BR Hills receives rainfall from both the south-western and the retreating monsoon (north-eastern), with an average annual precipitation of c. 600 mm in the periphery and c. 3,000 mm in the higher elevations (Aravind *et al.* 2001).

This work examines the avifauna of BR Hills with reference to that of the Western Ghats. In doing so, we take into consideration bird distributions in peninsular India and the eastern Himalayas, with the premise that BR Hills is part of the area that links the Eastern and Western Ghats (Ganeshiah & Umashaanker 1998) and is a corridor for movement of taxa between the two ranges, and that Sichuan-Yunnan, *via* the hill ranges of the eastern Himalayas, is the source area for faunal dispersion to the peninsula (Hora 1949, Mani 1976).

Three species of hornbills, namely the Great Pied Hornbill *Buceros bicornis*, Malabar Pied Hornbill *Anthracoceros coronatus* and Malabar Grey Hornbill *Ocyrceros griseus* are restricted to the wet zone of the Western Ghats (Ali & Ripley 1987, Gupte *et al.* 2003). There is a noticeable absence of these hornbill species, as well as some other wet zone Western Ghats species in the avifauna of BR Hills, despite its habitat affinity with the Western Ghats (Ramesh 1989) and the occurrence of a majority of Western Ghats wet zone bird species.

Several hypotheses have been put forward to explain the dispersal of source species / taxa from the eastern Himalayas to the Western Ghats. The Satpura Hypothesis (Hora 1949, Ali 1949) envisages the Vindhya–Satpura range in central India as a 'corridor' for dispersal of taxa from the eastern Himalayas to the northern end of the Western Ghats. The route along the Eastern Ghats (Abdulali 1949, Mani 1976) proposes that some taxa dispersed from the eastern Himalayas along the Eastern Ghats to the southern tip of the Western Ghats. The 'southern route across the Indian Ocean' (Croizat 1949) hypothesizes that source taxa from the eastern Himalayas dispersed across what is today the Bay of Bengal to reach peninsular India. Karanth (2003) discusses the

various faunal dispersal routes (and the 'relict populations' hypothesis or vicariance model) in the background of disjunct populations of wet zone species in north-eastern India and the peninsula. The vicariance model holds that present species distributions are 'relict populations' of a formerly continuous range, with species having suffered extinction in the intervening areas. It may be noted that no hypothesis dealing with faunal dispersal is contradictory to the other—while one may hold true for the dispersal of particular taxa, another may satisfactorily explain the dispersal of others. Other taxa may have adopted more than one route simultaneously to disperse to the Western Ghats.

Methodology

Several methods were employed to determine the resident avifauna of BR Hills. A thorough review of the available information on the birds of BR Hills was undertaken. In addition to this, from May 2003 to February 2006, over 60 field visits to all parts of the sanctuary were undertaken, covering all habitat types in all seasons. Extensive interviews with over 100 members of the Sholaga tribe were conducted. The Sholagas, a tribe indigenous to these forests, were first reported in scientific literature in the early part of the nineteenth century (Buchanan 1807, Koppad *et al.* 1961). Their traditional ecological knowledge is rich and includes vernacular names for over 70 species of forest birds (Somasundaram & Kibe 1990, Prashanth *in prep.*).

Contemporary and historical distribution maps and data from Ali & Ripley (1987), Grimm *et al.* (1999), Kazmierczak (2000), Shyamal (2003) and, Rasmussen & Anderton (2005) were used to divide Western Ghats wet zone species *i.e.*, species restricted to the moist deciduous, semi-evergreen and evergreen habitats (Ali 1942–43, Ali & Ripley 1987) into several categories namely,

Eastern Ghats dispersers (EGd)

Species that appear to have dispersed to the Western Ghats exclusively along the Eastern Ghats

This category (Table 1) comprises species that are resident in the eastern Himalayas, the Eastern Ghats and the Western Ghats, but are not recorded from the Satpuras, indicating the likelihood that their dispersal to the Western Ghats was exclusively along the Eastern Ghats route. Species resident in the Eastern Ghats (but not the eastern Himalayas) and the Western Ghats with no records from the Satpuras have also been included in this category. Isolated records anywhere along the Eastern Ghats have been considered to form this category of species.

Satpura dispersers (Sd)

Species that appear to have dispersed to the Western Ghats exclusively along the Satpuras

This category (Table 1) comprises species that are resident in the eastern Himalayas and / or the northern Eastern Ghats, the Satpuras, and the Western Ghats, but not in the southern Eastern Ghats, indicating dispersal to the Western Ghats along the Satpuras exclusively. Isolated records along the Satpuras have been considered to form this category of species.

Eastern Ghats and Satpura dispersers (EG & Sd)

Species that appear to have dispersed to the Western Ghats along both the Eastern Ghats and the Satpuras

Species resident in the eastern Himalayas, Eastern Ghats, Satpuras and the Western Ghats (Table 1), indicating dispersal to the Western Ghats along both the Satpuras and the Eastern Ghats. Isolated records anywhere along the Eastern Ghats and the Satpuras have been considered to form this category of species.

Endemic Western Ghats Species (WG End) (Stattersfield et al. 1998, BirdLife International 2001)

Species known poorly from the Western Ghats e.g. Jerdon's Baza *Aviceda jerdoni* (Ali & Ripley 1987, Rasmussen & Anderton 2005) have not been included. Dry zone species of the peninsula, which may occur additionally in the wet zone of the Western Ghats, but primarily occupy scrub or dry deciduous or cultivation / garden habitats (Ali & Ripley 1987) e.g. the Purple-rumped Sunbird *Nectarinia zeylonica* have not been taken into account.

Western Ghats wet zone species resident in the only in the Western Ghats and eastern Himalayas with no populations in the intervening areas have not been taken into account, as they cannot be assigned clearly to one category of dispersers or the other.

Taxonomy and nomenclature follow Manakadan & Pittie (2001).

Results

A total of 254 bird species from 51 families have been reported from BR Hills till date (Morris 1927, 1936, Ali 1942–1943, Baskaran 1992, Karthikeyan et al. 1995, Srinivasa et al. 1997, Uttangi 2000, Aravind et al. 2001, Shyamal et al. 2003, Srinivasan & Prashanth 2005). These include a majority of Western Ghats wet zone species (Ali 1942–1943, Ali & Ripley 1987).

However, there are distributional peculiarities in the avifauna of BR Hills. These peculiarities pertain to the total absence of some species of hole-nesters, especially wet zone hornbills. This is evident from a review of the past literature on the birds of BR Hills as well as from comprehensive field surveys by the authors, and interviews with members of the Sholaga tribe belonging to the area. In every case, the interview revealed a complete lack of any traditional knowledge regarding wet zone hornbills.

Of the 19 species in category 'EGd' (Eastern Ghats dispersers), 17 occur in BR Hills (Fig. 3). The Blue-eared Kingfisher *Alcedo meninting* and the Malabar Trogon *Harpactes fasciatus*, both uncommon species (Kazmierczak 2000), are yet to be recorded from the area.

Of the ten species in category Sd ('Satpura dispersers'), only three have been recorded from BR Hills (Fig. 3). The Black Bulbul *Hypsipetes leucocephalus* occurs erratically in large flocks, suggesting local movement to and from the area, and the Chestnut-bellied Nuthatch *Sitta castanea* is uncommon in the area (authors' observations). The Scarlet Minivet *Pericrocotus flammeus* is the third species of this category to occur in BR Hills. The two wet zone hornbill species have not been recorded from BR Hills. The Great Pied Hornbill is included, as in the case of the Black Bulbul on the basis of a doubtful record in central India. The Malabar Pied Hornbill is well distributed in the Satpuras [several specimens in the Field Museum, Chicago, Illinois from Belwani-Kisli (Koelz 1946) and Kanha (Anon. 1946), Madhya Pradesh; a record of "several breeding pairs" from Pench Tiger Reserve, Madhya Pradesh (Pasha 1997) and four disjunct populations in central, southern and eastern Madhya Pradesh (Jayapal et al. 2005)]. The two woodpeckers, The Great Black Woodpecker *Dryocopus javensis* and the Heart-spotted Woodpecker *Hemicircus canente*, and the Crimson Sunbird *Aethopygia siparaja* have not been recorded from BR Hills. The Black-crested Bulbul *Pycnonotus melanicterus*, which has been reported from the Satpuras (Pench) (Sterndale 1887) and from north Betul Division, Satpura Range (Jayapal et al. 2005), has also not been reported from BR Hills.

Of the 20 species in category EG & Sd (Eastern Ghats and Satpura dispersers), 19 have been recorded from BR Hills (Fig. 3). Only one species, the Drongo Cuckoo *Surniculus lugubris*, has not been recorded from the area.

By looking at categories EGd, Sd and EG & Sd, it appears that almost all species that seem to have dispersed along the Eastern Ghats (exclusively, or in addition to other routes) occur in BR Hills, whereas most species that appear to have dispersed exclusively along the Satpura trend do not occur in BR Hills (Table 1 & Fig. 3). Of the 'Satpura dispersers', both the genera *Hypsipetes* and *Pericrocotus* are represented in the Andamans and / or Nicobars, and thus, a crossing of the Bay of Bengal (Croizat 1949), in addition to the Satpura route, to reach the peninsula and the Western Ghats, with the BR Hills area en route, cannot be discounted.

Of the 16 endemic Western Ghats bird species (Table 1), ten have been recorded from BR Hills. The Laughingthrushes *Garrulax* sp. (three species), White-bellied Shortwing *Brachypteryx major* and Broad-tailed Grass-warbler *Schoenicola platyura* have limited ranges in the southern Western Ghats and have not been recorded from BR Hills. The Malabar Grey Hornbill, despite being distributed along the Western Ghats, has not been reported from BR Hills. On the selective presence of the other Western Ghats endemics, more needs to be known to put forward a satisfactory explanation. However, the presence of certain endemic species in BR Hills may reflect the Eastern Ghats route of dispersal of ancestral species from the eastern Himalayas.

For instance, the Nilgiri Wood-Pigeon *Columba elphinstonii* has refugially speciated from its sister species, the Ashy Wood-Pigeon *C. pulchricollis* of the Himalayas (Beehler & Ripley 1990). The presence of the former in the Eastern Ghats, namely, Nandi Hills (Subramanya et al. 1994), may indicate the Eastern Ghats route of dispersal of ancestral stock from

the source area. Alternatively, the morphological similarity of *C. elphinstonii* with the Andaman Wood-Pigeon *C. palumboides*, may point to a southern and thence eastward route across the Bay of Bengal (Croizat 1949) to the peninsula, with the BR Hills area en route to the Western Ghats.

The Blue-winged Parakeet *Psittacula columboides* is treated as the sister species of the Grey-headed Parakeet *P. finschii* of north-eastern India (Beehler & Ripley 1990).

The White-bellied Treepie *Dendrocitta leucogastra*, being most similar morphologically to the congeneric Grey Treepie *D. formosa*, may be considered a sister species of the latter, following a dispersal mode of speciation from the Eastern Ghats to the Western Ghats.

The Small Sunbird *Nectarinia minima* may have refugially speciated from the Purple-rumped Sunbird *N. zeylonica*, the species to which it is morphologically most similar.

Discussion

Despite habitat affinity with the Western Ghats (Ramesh 1989), the avifauna of BR Hills is not strictly comparable with that of the former. The most striking peculiarity is the absence of wet zone hornbills and two woodpecker species (category Sd; Table 1) resident in the Western Ghats. The explanation for this may be ecological, especially with regard to breeding biology. These species are hole-nesters and prefer similar habitats (Ali & Ripley 1987). However, it must be noted that other hole-nesting genera e.g. *Chrysocolaptes*, *Megalaima* and *Picumnus* are well represented in BR Hills. A study into the possible ecological factors that prevent certain taxa from breeding in BR Hills may yield plausible explanations.

When seen from a zoogeographic standpoint, bird species appear to have taken two major routes to disperse to the Western Ghats.

- a. Along the Eastern Ghats and then northward along the Western Ghats, or
- b. Along the Satpura trend and then southwards along the Western Ghats

By looking at categories EGd, Sd and EG&Sd, it is evident that almost all bird species that appear to have dispersed along the Eastern Ghats route (exclusively or in addition to other routes) have been recorded from BR Hills (Table 1; Fig.

3). However, most species that appear to have dispersed along the Satpura trend exclusively have not been recorded from BR Hills. This conjecture, if true, indicates that the BR Hills area is indeed a 'link' between the Eastern and Western Ghats, at least regarding avifaunal dispersion. However, this link appears to be (or have been) an ornithological 'one-way' or 'valve', with species readily crossing over from the Eastern Ghats to the Western Ghats, but not vice versa, leading to the conclusion that the barrier to dispersal is more likely to be ecological in nature than physiographic. Thus, the probable ecological constraints that might have forced some hole-nesters to abandon the Eastern Ghats route and adopt the Satpuras to disperse to the Western Ghats may still be of relevance, preventing these species from crossing over eastwards into the BR Hills area. Alternatively, in view of the 'relict populations' hypothesis, and discounting the Satpuras and the Eastern Ghats as actual 'routes of dispersal' of avifauna, similarities in relict avifaunal populations of the Eastern Ghats and BR Hills would indicate a relatively greater ecological affinity between these two areas, than the Satpuras and BR Hills.

To go further, for species such as the Rufous-bellied Eagle *Hieraetus kienerii*, Mountain Imperial-Pigeon *Ducula badia*, Forest Eagle-Owl *Bubo nipalensis*, Great Eared-Nightjar *Eurostopodus macrotis* and the Oriental Dwarf Kingfisher *Ceyx erithacus* (which are resident only in the eastern Himalayas and the Western Ghats with no populations in the intervening area), it may be possible to retrospectively hypothesize which species adopted which route to disperse to the Western Ghats, based on their presence or absence in the BR Hills area. Thus, the Rufous-bellied Eagle and Mountain Imperial-Pigeon probably followed the Eastern Ghats route (it may be noted that other pigeon taxa appear to have done the same, as have the parakeets), whereas the Oriental Dwarf Kingfisher probably did not disperse along the Eastern Ghats. Furthermore, species such as the Yellow-breasted Babbler *Macronous gularis* (of the eastern Himalaya, Eastern Ghats and Nagarahole) may be expected in the BR Hills area but have not been conclusively recorded from the same (the authors have one doubtful sight record from bamboo and deciduous forest in May 2004).

Table 1. Suggested categorization of Western Ghats wet zone species (Ali 1942–43, Ali & Ripley 1987) based on probable routes of bird dispersal to the Western Ghats

Species	Categories			
	EGd	Sd	EG & Sd	WG End
Black Baza* <i>Aviceda leuphotes</i>	*			
Crested Goshawk <i>Accipiter trivirgatus</i>			*	
Besra Sparrowhawk <i>A. virgatus</i>	*			
Black Eagle <i>Ictinaetus malayensis</i>			*	
Mountain Hawk-Eagle <i>Spizaetus nipalensis</i>		*		
Nilgiri Wood-Pigeon <i>Columba elphinstonii</i>				*
Orange-breasted Green-Pigeon <i>Treron bicincta</i>	*			
Pompador Green-Pigeon <i>T. pompadora</i>	*			
Green Imperial-Pigeon <i>Ducula aenea</i>	*			
Indian Hanging Parrot <i>Loriculus vernalis</i>	*			

Species	Categories			
	EGd	Sd	EG & Sd	WG End
Blue-winged Parakeet <i>Psittacula columboides</i>				*
Banded Bay Cuckoo <i>Cacomantis sonneratii</i>			*	
Drongo Cuckoo <i>Surniculus lugubris</i>			*	
Brown Wood-Owl <i>Strix leptogrammica</i>			*	
Jerdon's Nightjar <i>Caprimulgus atripennis</i>	*			
White-rumped Needletail-Swift <i>Zoonavena sylvatica</i>			*	
Malabar Trogon <i>Harpactes fasciatus</i>	*			
Blue-eared Kingfisher <i>Alcedo meninting</i>	*			
Blue-bearded Bee-eater <i>Nyctyornis athertonii</i>			*	
Chestnut-headed Bee-eater <i>Merops leschenaulti</i>	*			
Malabar Grey Hornbill <i>Ocyroceros griseus</i>				*
Malabar Pied Hornbill <i>Anthracoceros coronatus</i>		*		
Great Pied Hornbill <i>Buceros bicornis</i>		*		
Speckled Piculet <i>Picumnus innominatus</i>	*			
Rufous Woodpecker <i>Celeus brachyurus</i>			*	
Great Black Woodpecker <i>Dryocopus javensis</i>		*		
Small Yellow-naped Woodpecker <i>Picus chlorolophus</i>			*	
Greater Golden-backed Woodpecker <i>Chrysocolaptes lucidus</i>			*	
Heart-spotted Woodpecker <i>Hemicircus canente</i>		*		
Nilgiri Pipit <i>Anthus nilghiriensis</i>				*
Scarlet Minivet <i>Pericrocotus flammeus</i>		*		
Pied Flycatcher-Shrike <i>Hemipus picatus</i>			*	
Large Woodshrike <i>Tephrodornis gularis</i>	*			
Black-crested Bulbul <i>Pycnonotus melanicterus</i>		*		
Grey-headed Bulbul <i>P. priocephalus</i>				*
Yellow-browed Bulbul <i>Iole indica</i>	*			
Black Bulbul <i>Hypsipetes leucocephalus</i>		*		
Gold-fronted Leafbird <i>Chloropsis aurifrons</i>			*	
Asian Fairy Bluebird <i>Irena puella</i>	*			
Malabar Whistling-Thrush <i>Myiophoneus horsfieldii</i>			*	
Eurasian Blackbird <i>Turdus merula</i>			*	
White-rumped Shama <i>Copsychus saularis</i>	*			
White-bellied Shortwing <i>Brachypteryx major</i>				*
Wynaad Laughingthrush <i>Garrulax cachinanns</i>				*
Nilgiri Laughingthrush <i>G. nilgiriensis</i>				*
Grey-breasted Laughingthrush <i>G. jerdoni</i>				*
Spotted Babbler <i>Pellorneum ruficeps</i>			*	
Indian Scimitar-Babbler <i>Pomatorhinus horsfieldii</i>			*	
Rufous Babbler <i>Turdoides subrufus</i>				*
Golden-headed Fantail-warbler <i>Cisticola exilis</i>			*	
Broad-tailed Grass-warbler <i>Schoenicola platyura</i>				*
Black-and-Orange Flycatcher <i>Ficedula nigrorufa</i>				*
Nilgiri Flycatcher <i>Eumyias albicaudata</i>				*
White-bellied Blue-Flycatcher <i>Cyornis pallipes</i>				*
Grey-headed Flycatcher <i>Culicicapa ceylonensis</i>			*	
Chestnut-bellied Nuthatch <i>Sitta castanea</i>		*		
Velvet-fronted Nuthatch <i>S. frontalis</i>			*	
Small Sunbird <i>Nectarinia minima</i>				*
Crimson Sunbird <i>Aethopyga siparaja</i>		*		
Little Spiderhunter <i>Arachnothera longirostris</i>	*			
Black-throated Munia <i>Lonchura kelaarti</i>	*			
Hill Myna <i>Gracula religiosa</i> & <i>G. indica</i>	*			
Bronzed Drongo <i>Dicrurus aeneus</i>	*			
Spangled Drongo <i>D. hottentottus</i>			*	
White-bellied Treepie <i>Dendrocitta leucogastra</i>				*

EGd: Species that appear to have dispersed to the Western Ghats exclusively along the Eastern Ghats.

Sd: Species that appear to have dispersed to the Western Ghats exclusively along the Satpuras.

EG & Sd: Species that appear to have dispersed to the Western Ghats along both the Eastern Ghats and the Satpuras.

WG End: Endemic Western Ghats species.

* Species recorded in BR Hills are indicated in bold type.

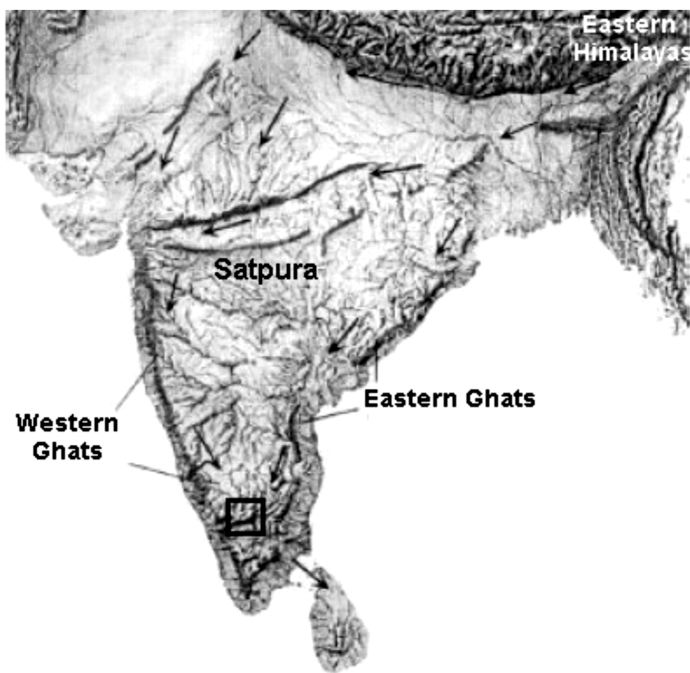


Figure 1. Map of India with major hill ranges and the BR Hills area (within the box) with probable routes of avifaunal dispersal to the Western Ghats indicated (after Karanth 2003).

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We are deeply indebted to M.B. Krishna, S. Subramanya and T.R. Shankar Raman for comments, criticisms and discussions (and re-discussions!). Our grateful thanks to all the Sholagas who sat through long (sometimes very long!) interviews for their patience. Shri Basappa of the Vivekananda Girijana Kalyana Kendra, BR Hills deserves special mention for his enthusiasm in the field.

References

Abdulali, H. 1949. Some peculiarities of avifaunal distribution in peninsular India. *Proceedings of the National Academy of Sciences* 15 (8): 387–393.

Ali, S. & Whistler, H. 1942–1943. The birds of Mysore. *J. Bombay Nat. Hist. Soc.* 43 (2): 130–147; 43 (3): 318–341; 43 (4): 573–595; 44 (1): 9–26; 44 (2): 206–220.

Ali, S. & Ripley, S.D. 1987. *Compact handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka*. 2nd ed. Delhi: Oxford University Press.

Ali, S. 1949. The Satpura Trend as an ornithological highway. *Proceedings of the National Academy of Sciences* 15 (8): 379–387.

Aravind, N.A., Rao, D. & Madhusudan, P.S. 2001. Additions to the Birds of Biligiri Rangaswamy Temple Wildlife Sanctuary, Western Ghats, India. *Zoos' Print Journal* 16 (7): 541–547.

Baskaran, S.T. 1992. Sighting of a Dusky Horned Owl. *Newsletter for Birdwatchers* 32 (9–10): 17.

BirdLife International 2001. *Threatened Birds of Asia: The BirdLife International Red Data Book*. (eds. Collar, N.J., Andreev, A.V., Chan, S., Crosby, M.J., Subramanya, S. & Tobias, J.A.). Cambridge, U.K.: BirdLife International.

Buchanan, F. 1807. A journey from Madras through the countries of Mysore, Canara and Malabar, for the express purpose of investigating the state of agriculture, arts and commerce; The religion, manners and customs; The history natural and civil and antiquities [3 vols] Vol. 1. pp. 72–74. *AES London: East India Company*.

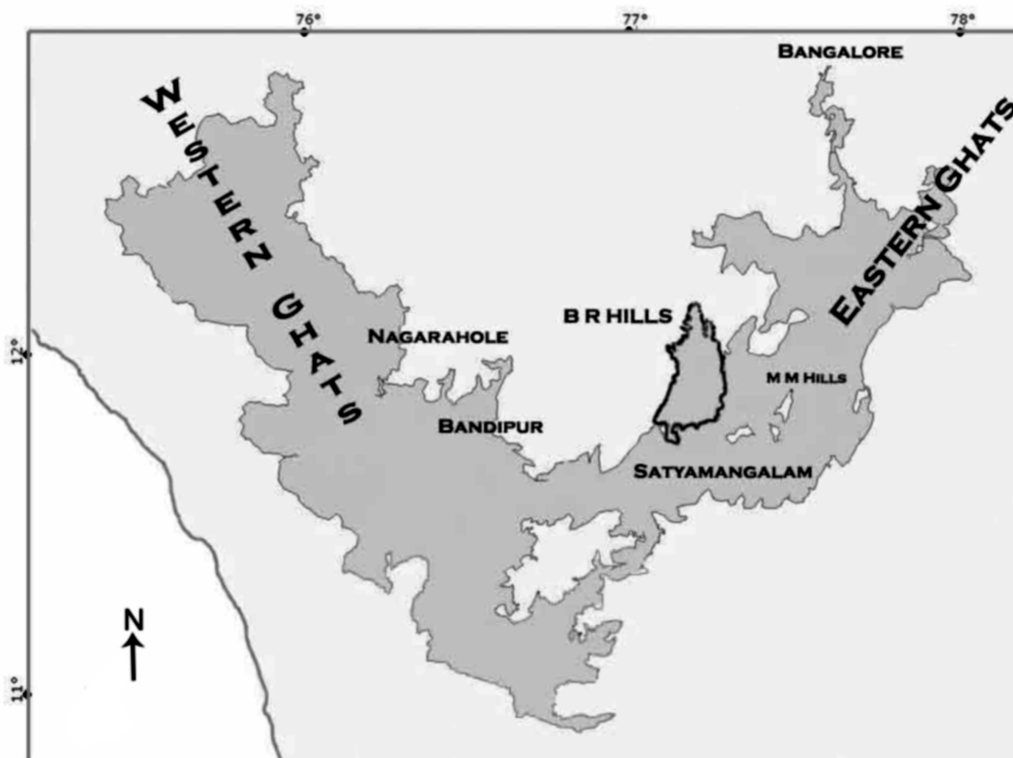


Figure 2. Enlarged view of box from Fig. 1 showing BR Hills in relation to the Eastern Ghats and Western Ghats

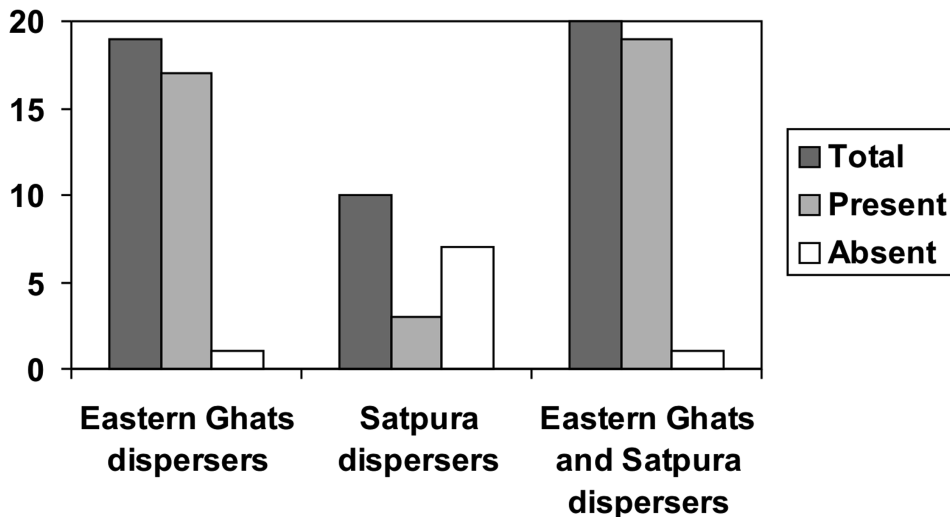


Figure 3. Proportion of species in Categories EGd (Eastern Ghats dispersers), Sd (Satpura dispersers) and EG & Sd (Eastern Ghats and Satpura dispersers) recorded or unrecorded from BR Hills.

- Croizat, L. 1949. The biogeography of India: a note on some of its fundamentals. In R. Mishra & R. Gopal (Eds.). *Proceedings of the Symposium for Recent Advances in Tropical Ecology*. Pt. II pp. 544-590. International Society for Tropical Ecology. Varanasi, India.
- Ganeshiah, K. N. & Uma Shanker, R. 1998. *Biligiri Rangaswamy Temple Wildlife Sanctuary: Natural history, biodiversity and conservation*. ATREE & VGKK, Bangalore.
- Grimmett, R., Inskipp, C. & Inskipp, T. 1999. *Pocket guide to the birds of the Indian Subcontinent*. New Delhi: Oxford University Press.
- Pande, S., Tambe, S., Francis, C.M. & Sant, N. 2003. *Birds of Western Ghats, Kokan and Malabar (Including birds of Goa)*. New Delhi: Oxford University Press.
- Hora, S.L. 1949. Satpura Hypothesis of the distribution of Malayan fauna and flora of peninsular India. *Proceedings of National Institute of Science of India* 15 (8): 309-314.
- Jayapal, R., Qureshi, Q. & Chellam, R. 2005. Some significant records of birds from the central Indian highlands of Madhya Pradesh. *Indian Birds* 1 (5): 98-102.
- Karanth, K. P. 2003. Evolution of disjunct distribution among wet zone species of the Indian subcontinent: Testing various hypothesis using a phylogenetic approach. *Current Science* 85 (9) 101-108.
- Karthikeyan, S., Prasad, J.N. & Srinivasa, T.S. 1995. Yellowthroated Bulbul *Pycnonotus xantholaemus* (Jerdon) at Biligirirangan Hills, Karnataka. *J. Bombay Nat. Hist. Soc.* 92 (1): 123-124.
- Kazmierczak, K. 2000. *A field guide to the birds of India, Sri Lanka, Pakistan, Nepal, Bhutan, Bangladesh and the Maldives*. New Delhi: OM Book Service.
- Koppad, K.D., Burman, B.K.R. & Kurup, A.M. 1961. Census of India Monograph Series Part V-B (IV), *Office of the Registrar General, India, New Delhi*.
- Manakadan, R. & Pittie, A.. 2001. Standardised common and scientific names of the birds of the Indian Subcontinent. *Buceros* 6 (1): 1-37.

- Mani, M.S. 1976. *Ecology and biogeography in India*. W. Junk. The Hague.
- Morris, R.C. 1927. A Junglefowl problem. *J. Bombay Nat. Hist. Soc.* 32 (2): 274.
- Morris, R.C. 1935. Vultures feeding at night. *J. Bombay Nat. Hist. Soc.* 38 (1): 190.
- Pasha, M.K.S., Jayapal, R., Areendran, G., Qureshi, Q. & Sankar, K. 2004. Birds of Pench Tiger Reserve, Madhya Pradesh, central India. *Newsletter for Ornithologists* 1: 2-9.
- Ramesh, B.R. 1989. Flora of Biligirirangan Hills. Unpublished PhD Thesis. Madras: Madras University.
- Rasmussen, P.C. & Anderton, J.C. 2005. *Birds of South Asia. The Ripley Guide*. 2 vols. Smithsonian Institution & Lynx Edicions, Washington & Barcelona.
- Ripley, S.D. & Beehler, B.M. 1990. Patterns of speciation in Indian birds. *Journal of Biogeography* 17: 639-648.
- Shyamal, L. 2003. A short trip in the Biligirirangans. *Newsletter for Birdwatchers* 43 (5): 66-67.
- Somasundaram, H. N. & Kibe, R. 1990. *Soliga - the tribe and its stride*. BR Hills: Vivekananda Girijana Kalyana Kendra.
- Srinivasa, T.S., Karthikeyan, S. & Prasad, J.N. 1997. Faunal survey of the Biligirirangan Temple Wildlife Sanctuary. Bangalore: Merlin Nature Club.
- Srinivasan, U. & Prashanth, N.S. 2005. Additions to the avifauna of the Biligirirangan Hills, Karnataka. *Indian Birds* 1 (5): 103-104.
- Stattersfield, A.J., Long, A.J. & Wege, D.C. 1998. *Endemic Bird Areas of the World: Priorities for biodiversity conservation*. Cambridge, U.K.: BirdLife International.
- Sterndale, R.A. 1887. *Seonee: Camp life on the Satpura Range*. Calcutta: Thacker, Spink & Co.
- Subramanya, S., Prasad, J.N. & Karthikeyan, S. 1994. Nilgiri Wood Pigeon *Columba elphinstonii* (Sykes) at Nandi Hills near Bangalore. *J. Bombay Nat. Hist. Soc.* 91 (2): 319-320.
- Uttangi, J.C. 2000. Ornithological tour of B.R. Hills Wildlife Sanctuary at K. Gudi. *Newsletter for Birdwatchers* 40 (4): 45-47.

Arunachal Pradesh, India: an ornithological diary from December 2005

Rishad Naoroji & Harkirat Singh Sangha

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Objectives

The state of Arunachal Pradesh (India) is extremely rich in bird life being located at the intersection of the Palaearctic, Indo-Malayan and Indian subcontinent regions. Its extraordinary avian diversity requires more intensive study. Most interesting birding areas are remote, ornithologically unexplored and difficult to get to. Logistics pose a major problem. The terrain is very steep and birds are difficult to spot through dense vegetation.

We visited the Siang Valley up to Mouling National Park in February 2004 and to Gelling during December 2005. Our objectives were to survey the altitudinal status and distribution of birds along the Siang Valley, in and around Gelling up to the Line of Control (LOC); also western Arunachal. Our team consisted of Rishad Naoroji, Harkirat Singh Sangha, Mehboob Alam and Tsering Norboo.

Over a decade, we plan to survey birds throughout the entire state of Arunachal Pradesh, including its major river valleys. Each area will need to be visited at least thrice during different seasons. The following is an extract from a diary that RN kept during the December 2005 survey. Scientific names have not been inserted in the body of the text to maintain fluidity of the narrative. A checklist with Latin names, covering both our visits over consecutive years, is provided as an Appendix.

6.xii.2005: Landed at Guwahati and proceeded to Kaziranga. Night halt at Kohora. Dinner with Niranjana Kumar Vasu (Field Director).

7.xii.2005: Dibrugarh.

8.xii.2005: Leave Dibrugarh at 08:00 hrs and reach Orium Ghat 17:00 hrs. No time to buy provisions.

Among other birds such as innumerable Brahminy Duck, Large Cormorants and a few Pallas's Gulls, the most notable sighting was of five Common Crane at 15:00 hrs at Silone Sapre. One Osprey seen.

9.xii.2005: Pasighat—supplies. Afternoon to Tuting. Got dark early so spent the night at Boling in a room provided by Border Roads Organisation (BRO).

10.xii.2005: Left for Tuting at 05:00 hrs. The Siang is a spectacular sight before dawn, throughout the hills. Clouds attracted to the river settle close along its surface following its every contour and forming a misty replica of the river snaking its way through the deeply carved river gorge. Then as the sun warms up the area by 07:30–07:45 hrs, the clouds rise, enveloping the surroundings in mist, which soon dissipates. A mesmerizing, pre-dawn sight. Before Riga village saw a Common Buzzard. Riga youths have given their village a bad reputation for stopping vehicles, hiding behind masks and intimidating passengers for cash, mainly at night. Soon saw another Common Buzzard and a Common Kestrel.

11:00 hrs: Brunch at Moying. Before Mossing saw Black Bulbul and Black-backed Forktail. Otherwise only Spotted Forktail. Mehboob saw a Brown Dipper. Along Niggong River near Mossing village—Plumbeous Redstart, Little Forktail, Bronzed Drongo.

Onward to Migging and thence to Tuting: saw Barking Deer (Red-brown type) en route. Reach Tuting at night. Hospitality with 17 Kumaon Battalion.

11.xii.2005: Tuting at a standstill due to the Siang Festival. Rahul Gandhi flagged off the International Rafting competition from Tuting to Pasighat (after a 40-minute ceremony and speech). Due to the festival, porters not ready to go to Gelling tomorrow, so will have to stay an extra day. At the food stalls, squirrels and bats were on the menu under 'Arunachal cuisine'. One old lady had a huge flowing headdress of matted grass studded with squirrels, two fish and 15 Rufous-necked Hornbill casques and bills (see back-cover for photograph)—and the locals complain that there are no more hornbills left to hunt! Today in Arunachal hornbills are seen as artwork only on state roadways buses. Pheasants and large birds are noticeably absent.

Saw a Grey-backed Shrike, which was calling incessantly. Harkirat saw a Common Snipe flying past at dusk.

12.xii.2005: Saw quite a few passerines but no large birds nor raptors.

11:25 hrs: Warm sun. Two pale, less rufous marked, Common Buzzard—*japonicus*.

Morning birds: White Wagtail, Little Forktail, Rufous-bellied Flycatcher, Silver-eared [Leiothrix] Mesia, Red-whiskered Bulbul, Jungle / Large-billed Crow, Large Niltava, Another Forktail-Slaty-backed ?, Yellow-[bellied] Fantail-Flycatcher, White-throated [Fantail-]Flycatcher, Plumbeous Redstart, Daurian Redstart, Rufous-necked Laughingthrush.

Harkirat off to Jiddu village across the [Siang] river. Saw Green-backed Tit, Common Stonechat—*przewalskii*, 7–8 White-rumped Munias, Common Kestrel female over army campus.

13.xii.2005: Tuting to Bona via Kapu by army jeep. From Bona to Gelling on foot. Red-vented Bulbul, Scarlet Minivet, Brown Dipper on stream before final climb. Also single Black Baza, Grey Treepie, Red-billed Leiothrix [Chestnut-throated], Black-eared Shrike-Babbler and Himalayan Whistling-Thrush. Final climb very steep. Glad when it was over. Gelling is a small village with a few Adis and resident Monpas (Buddhists). The inspection bungalow (IB) very cozy and clean. Night temperature in the room 9°C. Altitude 1,100 m, not really high; Point 2,073 m (along the LOC) one of the highest foothill peaks around Gelling.

14.xii.2005: By 05:00 hrs, quite bright. In the morning Harkirat spotted Rufous-breasted Accentor. Tsering and I visited the *Gompa* (Buddhist monastery). The Siang, and to

the south-east, snow covered hills on east bank clearly visible. These high hills were visible and photographed from Mouling National Park two years ago. Below the hills an area called Menchoka, where an army camp exists; worth visiting as Blyth's Tragopan reported and well worth checking out for raptors.

13:00 hrs: Scanning the slopes, Tsering spotted two Black Eagles over the ridge of Point 2,073 m. Later we saw a third and then a fourth.

14:50 hrs: From IB later saw a Common Buzzard—*japonicus*—soaring over the same slopes north of the IB. Walking in the town, see everyone very active, performing their daily chores. Arunachalis have taken to speaking Hindi—so it seems, unlike other north-eastern states that speak it out of compulsion. Hindi film music blares as I walk down the main and only road down to the helipad.

Plenty of Red-vented Bulbuls in the '*jhumed*', degraded areas.

15:30 hrs: Harkirat and Mehboob gone off birding in the morning after breakfast. Not yet back. Waiting eagerly for news—hopefully many new species.

Harkirat's observations: Near IB—Rufous-breasted Accentor, Green-backed Tit. After breakfast, harvested field—[Brown-eared] Ashy Bulbul, Great Barbet (Himalayan), unidentified falcon, White-naped Yuhina, Black-throated Sunbird, Yellow-bellied Fantail-Flycatcher, Red-tailed Minla, unidentified duck, Dusky Warbler.

15.xii.2005: Sun rises above the high ridges bathing Gelling in warm 'movement activating' sunshine. Below the IB, Gelling village and the deep gorge-river visible only if we climb higher on the opposite ridge behind Gelling. Today we go to Kepang La Right Pass overlooking Tibet. Only an hour-and-a-half's trek, we were told.

09:00 hrs: Common Buzzard *japonicus* takes the thermals over the slopes and river valley and then perches. Breakfast and ready for Kepang La Pass. Feeling good and eating well. Unlike in Mumbai, very hungry and large meals digested quickly.

11:45 hrs: Common Buzzard juvenile. Tail and wings finely streaked. Darkish dusky (not as prominent as in adult) trailing edge to secondaries and pale-ish head. Harkirat saw one juvenile Himalayan Griffon.

The going was especially tough when we crossed a stretch of logged huge trees (at least 25–30 m) and had to negotiate over and through them at a steep incline through the secondary growth. Unlike the western and central Himalaya, the available tracks used by locals go straight up; the shortest route. No meandering track to ease the climb. We went up to the LOC at Kepang La and looked down into Tibet / China.

List of non-raptorial birds: Red Junglefowl reported by Indo-Tibetan Border Police (ITBP) *jawans*. Must be very few due to severe hunting pressure as we didn't see or hear any. Great Barbet, Blue-throated Barbet, Chestnut-crowned [Flycatcher] Warbler, [Black spotted Yellow] Yellow-cheeked Tit, Chestnut-headed Tesia. Heard but couldn't see or identify obvious calls of Laughingthrushes.

The return was harrowing, steeply straight down and no track. Slipping, sliding with nothing to hold on to. Also the eternal fear of the problematic knees giving way. Made our way west to a stone *chorten* where Chinese offerings observed

in the form of cigarette packets, almost-empty beer cans, soft drink bottles and packets of biscuits labelled both in Chinese and English. This to 'show' their presence. Today was their day of patrolling. The Indians do the same. Take the Chinese 'artifacts' and replace them with their own to 'demonstrate' their presence.

From the *stupa*, the return was even more harrowing. Hardly a track and steeper. Nettles lined the track and we had to in many places link hands for support. Tsering was invaluable, carrying both camera bags and assisting me down the very narrow sloping track. One slip and a fall down the slope would have resulted in some injury. If I had to work in this area, in a few weeks I too would become more sure footed like the ITBP lads.

The Chinese patrol on well maintained tracks, very easy to walk on. They even patrol on horses. ITBP and the army have not bothered to even make or improve the natural trails available in the forest used by the local Tsanglas for generations. The walk turned out to be a three-and-a-half hour difficult trek.

Each day getting colder. Night temperature around 4°C.

16.xii.2005: 07:30 hrs: An *Accipiter* sp. near the IB. Against the light, facing away from us, but could make out dark brown back and upperparts thinly edged white; dark head and nape and jutting from the sides pure white visible extremities of the under tail-coverts. Hopefully we will see it again. Most likely a Shikra.

08:45 hrs: Common Buzzard *japonicus* (same individual as yesterday) observed soaring over the area. The only corvid here is the Jungle Crow. Too low for Choughs. One Common Kestrel.

14:50 hrs: Single Black Eagle quarters the ridge above IB. A large group of Green-backed Tits in the bamboo clump adjoining the IB where they roost.

Harkirat's observations in forests below Gelling on Bona road: Black-throated Sunbird, Common White-eye, Grey-backed Shrike, Jungle Crow, [Yellow-naped] Whiskered Yuhina, White-bellied Yuhina, Small Niltava, Bronzed Drongo, [Black-browed] Collared Treepie, Black Bulbul, [Brown-eared] Ashy Bulbul, Yellow-bellied Fantail-Flycatcher, Chestnut-headed Tesia, White-spectacled [Flycatcher] Warbler, Green Magpie, Whistling-Thrush, both Greater and Lesser Necklaced Thrushes, [Red-headed] Black-throated Tit, Nepal [Tit-Babbler] Fulvetta, Asian Barred Owllet.

Very cold at night though height comparatively less due to proximity to Tibetan Plateau.

17.xii.2005: Daurian Redstart in scrub near IB. Common Tailor Bird near IB.

Rufous-necked Thrush uttered harsh, grating calls, very different from normal calls.

Common Kestrel—a single individual seen everyday.

11:30 hrs: Harkirat gone down with Mehboob to the forest to seek out new birds. Saw [Beavan's Prinia] Rufescent Prinias. I've decided to walk to the forest edge beyond ITBP camp to watch for soaring raptors. While cresting the ridge above the *Gompa*—see the same *Accipiter*. Appears to be either Shikra or Eurasian Sparrowhawk. Just got a glimpse, not enough to confirm identity; under parts very pale with wing markings hardly discernable.

Higher foothill summit ridges covered with Larch *Larix griffithiana*.

12:30 hrs: At ITBP camp—a single Black Eagle quarters the ridge.

12:40 hrs: Immature Bonelli's Eagle quarters the slope. Dusky Warbler.

18.xii.2005: Dusky Warbler.

11:00 hrs: At ITBP camp to observe soaring raptors. Pair of *Accipiters* soars overhead. One, largish, appears to be female Sparrowhawk. Long tail and white under tail-coverts clearly visible. At long range underbody appears white, reflecting light. Common Buzzard *japonicus* (pale type) flies overhead.

12:30 hrs: Then the *Accipiter* pair soars over the ridge.

Harkirat's observations: Little Grebe, [Red-headed] Black-throated Tit, Nepal [Tit-Babbler] Fulvetta, Black Eagle, Rufous-faced [Flycatcher] Warbler (new), Grey-[headed] hooded [Flycatcher] Warbler (new), Chestnut-headed Tesia, [Rufous-bellied] Mountain Bulbul (new), [Black-browed] Collared Treepie, Grey-throated Babbler (new), Yellow-bellied Fantail-Flycatcher, [Streaked] Striated Laughingthrush, [Brown-eared] Ashy Bulbul, Silver-eared [Leiothrix] Mesia, White-naped Yuhina (new), [Pied] Barwinged Flycatcher-Shrike (new), Collared Owllet (new) spotted after alarm calls of Black-throated Sunbird directed at it, Common Rosefinch (new).

19.xii.2005: Early morning Harkirat, Tsering, and Mehboob off to Point 2073. Tsering has taken my 400 mm lens to take photos (close-up) of Tibet, Namche Barwa and Gyala Peri. After reaching Kegang La (c 1,425 m) they turned right and walked along the ridge line (c 1,600 m) leading to Point 2073; the track being the McMahan Line. After crossing an extensive ringal (bamboo) covered area (c 1,850 m) they reached Point 2073. It was extremely cold due to very strong winds blowing south from the Tibetan Plateau; even holding binoculars was uncomfortable. They took shots of the two peaks about 40 km away and Chinese Battalion Headquarters below. There were many birds to watch but they could stay only half an hour as the *jawan* escorting them did not allow them to stay longer. A good decision, as Indian and Chinese patrols come face to face on this track. In fact the day we left Tuting for the plains, Brigadier Rai informed us at Along that Indian and Chinese patrols came face to face on this very track. On way to ITBP camp I left the main track and took a side trail that I thought to be a short cut. Ended up on a very steep track going vertically straight up to Point 2073. I knew I was on the wrong track and shouted to the ITBP camp which I could see. I carried on till I reached the tree line (bottom half '*jhumed*') where the Liaison Officer was waiting for me and guided me back on a foot wide path (which I would have missed) to the camp. On the track I happened to look up and saw a juvenile Mountain Hawk-Eagle circling low above me. Light excellent and if the camera had not been sent to Point 2073, I would have got excellent identification pictures. Every detail visible, including the dark cheeks.

12:45 hrs: Black Eagle pair performs a spectacular undulating display; half in India, half in Tibet / China. The courtship of this species has commenced. One individual flies straight from LOC ridge across the Siang Valley to the

hill opposite the IB. The other quarters the LOC slope. A few days ago two pairs were observed on the LOC ridge. One pair probably breeds on the Tibetan side.

Tsering, and later, the others descend. Tomorrow Tuting.

On way and on Point 2073 Harkirat saw: [Common] Hill Partridge (new), Green Magpie, Striated Bulbul (new), [Bar-throated] Chestnut-tailed Minla (new), Rufous-vented Yuhina (new), Chestnut-bellied Nuthatch (new) race *cinnamoventris*, [Austen's] Streaked-throated Barwing (new), Crimson-breasted [Pied] Woodpecker (new).

20.xii.2005: Women porters barged in at 06:00 hrs to take the luggage. We were not packed and were still in bed. Two coffees later I was invigorated and packed and dressed in record time. The women were eager to move (rightly so) as they had to get back to Gelling. Left at 08:00 hrs and after four hours of walking reached the road-head beyond Bona where the army vehicles were waiting. Reached Tuting at 13:00 hr. Between Gelling to Bona saw Common Kestrel, Common Buzzard—*japonicus*, Black Eagle near Bona, Lesser Racket-tailed Drongo, [Black-browed] Collared Tree Pie, Black Bulbul, Red-whiskered Bulbul in a field, [Lloyd's] Coral-billed Scimitar Babbler (approximately seven birds feeding on or digging out insects on wild banana stems; a spectacular sighting even for a raptor aficionado), [Gold-headed] Golden Babbler, White-naped Yuhina, [Yellow-naped] Whiskered Yuhina, White-throated Fantail-Flycatcher (nominated race), Chestnut-headed Tesia, Grey-[headed] hooded [Flycatcher] Warbler, Plumbeous Redstart, Green-backed Tit, White Wagtail, Black-throated Sunbird.

At Bona photographed a hunter with a freshly killed Himalayan Palm Civet (see backcover for photograph). Everything that walks or flies is snared or shot. We observed many people carrying guns.

Night halt Tuting.

21.xii.2005: To Along. Extremely misty. Mist cleared only by 13:00 hrs. Five Black Eagles seen totally. One Eurasian Sparrowhawk, Plumbeous Redstart, Slaty-backed Forktail, White-capped Water Redstart, Brown Dipper, Bronzed Drongo, Common Kestrel, Spotted Forktail.

Two years ago at Mouling National Park, we had regularly observed two pairs of Crested Serpent-eagles in February. On this trip not a single sighting of the species throughout the Siang valley, possibly indicating some seasonal movement.

22.xii.2005: Along to Silapather via Likabali. Heavy mist again. After breakfast a very interesting half hour visit with our host, Brigadier Rai. He promised us logistics for a visit to the Subansiri valley next year. The journey was overcast till 14:00 hrs but a much better drive than traveling along the south bank from Dibrugarh to Tezpur. After leaving Along our first halt was at Ego and while our driver lunched we watched birds on the river. A shop / smelting unit at Ego was making / selling Daos (Kukri-like knife carried by nearly every one). Daos of different sizes and quality were available at prices ranging from Rs 100/- to Rs 1,200/-. Habitat interesting with mix of '*jhumed*' and original forest. A pleasant six-hour drive produced: Himalayan Swiftlets over Along, Red-vented and Whiskered Bulbuls, Streaked Spiderhunter.

13:30 hrs: Two Black Eagles.

13:00 hrs: One adult Rufous-bellied Eagle, Common Kestrel (relatively common), Bronzed Drongo, Scarlet Minivet, Grey-back Shrike, Brown Dipper at Ego, Slaty-backed and Spotted Forktails.

Along the route good views of the Brahmaputra from certain high points. Night halt circuit house in N. Lakhimpur.

23.xii.2005: Lakhimpur to Eco Camp–Nameri. Buffer zone (important elephant corridor W to E) deforested and planted with mustard. Politics are the bane of habitat protection and the Assam government did not take a firm step in favour of conservation. At Borolli River, Pallas's and juvenile Peregrine. Rafters have had good sightings of as many as five to eight Ibisbill while rafting down from Bhalukpong to bend of river nearest to Eco Camp.

Other birds seen around Eco Camp: Brown-capped Woodpecker, Hill Myna, Lineated and Blue-throated Barbets among others.

24.xii.2005: Up at 04:00 hrs, left Eco Camp at 05:15 hrs for the long haul to Tawang which we reached at 17:40 hrs. The road between Bomdila and Dirang mostly devoid of natural vegetation ('*jhumed*' or plantations) no birds and no scenic value; very monotonous. Saw three Common Buzzards and one being mobbed high on the Sela Pass 4,152 m by as many as 10–15 Jungle Crows. One Common Kestrel observed hunting on the way up to the pass. No Choughs seen. Sela Pass barren, high and forbidding. Very little bird life. Sela Pass frozen and also the lake at the beginning of the downward stretch. Very, very, very, cold. No other raptors seen and extremely few birds. Stopped at Jaswant Garh. A temple commemorating Jaswant Singh of Garhwal Rifles stands here. In 1962 the site witnessed bloody action. A cordoned off area adjacent to the temple contains the buried remains of 100 Chinese who died fighting. At Tawang enjoying the hospitality of the 190 Mountain Brigade. Surprisingly, at this altitude, no Choughs—only Jungle Crows.

25.xii.2005: Very cold at night, "4°C. Next morning visited Tawang Gumpa. Not as impressive as I thought it to be. At one time the Tawang area was covered with pristine deodar forests. Only a remnant good patch of forest around the Gumpa where we saw: Jungle Crow performing aerial aerobatics similar to Choughs, Black-faced Laughingthrush, White-throated Laughingthrush, [Cinnamon Tree] Russet Sparrow—altitude record.

On way to Bum La (where invading Chinese first entered Arunachal). While gaining altitude could see Sela Pass on the opposite side of the valley. White-throated Redstart, Common Buzzard – *japonicus* on the plateau 4,000 m, Alpine Accentor.

Very interesting Tundra-like habitat on the plateau. Completely frozen-zero or in the minus even in the strong sun. The numerous lakes frozen with some dare-devil tourists walking on them at their own risk. Like Sela Pass—jagged rocky peaks (not mountains) up to 6,061 m. Bleak and forbidding. Could actually feel the altitude slightly, but not as much as Ladakh. A large flock of [Hodgson's] Plain Mountain Finch (40-50 birds) just before Bum La. A gurdwara visited by army personnel stands here. At the pass, a platoon of 1st Sikh under Joginder Singh held

a position on 1B Ridge when the Chinese attacked in 1962. For his gallantry and leadership he was awarded the Param Vir Chakra.

26.xii.2005: Early start for Nameri. Throughout the journey Blue Whistling Thrushes very common. In the valley below Tawang saw 8–9 Spotted Nutcrackers on Chir Pine feeding on cone nuts at Depustrik. Black-faced Laughingthrush just after passing Jaswant Garh on the ascent to Sela Pass. Before reaching top of Sela Pass flock of Spot-winged Rosefinch at 3,750 m. One splendid male and two females. Five to six White-throated Redstarts including one male. Just before Bomdila a Mountain Hawk-Eagle. Habitat around Bomdila heavily degraded. Rest of the journey uneventful. Reach Eco Camp at 20:00 hrs.

27.xii.2005: 09:45 hrs: Nameri National Park. At the Potasali Rest House. Not disappointed. Adult Peregrine on look-out on the topmost branches of a very tall Bhelo tree. Many years ago in a single day saw Changeable Hawk-Eagle, Peregrine, Black Eagle, Pallas's, Crested Serpent Eagle and Rufous-bellied Eagle perched on and in flight around this tree.

10:45 hrs: Peregrine takes off purposefully in level flight across the river and out of view after circling high for 5–7 minutes.

11:45 hrs: No soaring raptors or calls. Even the common Crested Serpent Eagle and Oriental Honey-buzzard not seen or heard. No wintering Himalayan Griffon or Slender-billed Vultures.

15:30 hrs Leave by early afternoon as nothing of interest.

28.xii.2005: Harkirat and Mehboob went rafting down Bhoroli to see the Ibisbill. Saw four Ibisbill soon after they started at 08:05 hrs. Also saw Plumbeous Redstart, White-capped Water Redstart, Crested Serpent-eagle, Common Mergansers—8, Mallard—2, Greenshank—2, Green Sandpiper, Common Sandpiper, Greater and Little Cormorants.

At Eco Camp in the morning before rafting: four Greater Flamebacks, one Daurian Redstart female, two Oriental Honey-buzzards soon after leaving Eco Camp.

Drive from Eco Camp. Up to 13 miles at least four Common Stonechats indicating forests have now disappeared.

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Table 1. Birds recorded in West Siang and West Kameng districts, Arunachal Pradesh-February 2004 & December 2005.

S.No.	Species	Habitat	Gelling, Tuting	Tawang Bum La Sela Pass	Other sites	No.	Comments
1	Little Grebe <i>Tachybaptus ruficollis</i>	Waterbody in F	Dompo Cho, G			1	Three birds. A recent record from Mehao (Katti <i>et al.</i> 1992)
2	Little Cormorant <i>Phalacrocorax niger</i>	R			Kameng R, Tura	1	
3	Black Baza <i>Aviceda leuphotes</i>	Fe	G			1	One in the evening. Namdapha record (Birand & Pawar 2004)
4	Oriental Honey-Buzzard <i>Pernis ptilorhyncus</i>	Degraded F			PG	1	
5	Himalayan Griffon <i>Gyps himalayensis</i>	F	Kepang La, G			1	One juvenile. New record for Arunachal Pradesh
6	Crested Serpent-Eagle <i>Spilornis cheela</i>	F	T			1	
7	Common Buzzard <i>Buteo b. japonicus</i>	Fe/OAs/C	G T	SP TA	Bona	4	CO
8	Black Eagle <i>Ictinaetus malayensis</i>	F	G		Bona Along	4	Up to 4 in a day at G. CO
9	Bonelli's Eagle <i>Hieraaetus fasciatus</i>	F	G			1	One seen regularly along McMahon Line
10	Booted Eagle <i>H. pennatus</i>	Degraded F area			65 Mile	1	Between PG & Moying
11	Rufous-bellied Eagle <i>H. kienerii</i>	F with pockets of C			Near Along	1	
12	Mountain Hawk-Eagle <i>Spizaetus nipalensis</i>	Degraded hill F			Near Bomdila	1	
13	Common Kestrel <i>Falco tinnunculus</i>	J hillsides / C	G T		Bona	4	Fairly CO
14	Common Hill-Partridge <i>Arborophila torqueola</i>	F hills	G			–	Heard frequently
15	Red Junglefowl <i>Gallus gallus</i>	F	G			–	Reported by ITBP soldiers
16	Common Snipe <i>Gallinago gallinago</i>	-	T			1	Seen in flight
17	Pin-tailed Green-Pigeon <i>Treron apicauda</i>	F			MNP	1	

S.No.	Species	Habitat	Gelling, Tuting	Tawang Bum La Sela Pass	Other sites	No.	Comments
18	Spotted Scops-Owl <i>Otus spilocephalus</i>	F			MNP	-	Regularly heard at night.
19	Collared Owlet <i>Glaucidium brodiei</i>	F	G			1	Mobbed in the day by Black-throated Sunbird
20	Asian Barred Owlet <i>G. cuculoides</i>	Sec F	G, T		PG	2	
21	Himalayan Swiftlet <i>Collocalia brevirostris</i>	F hillside F			Along, MNP	1 1	c. 35
22	Small Blue Kingfisher <i>Alcedo atthis</i>	R			Ego	1	
23	Great Barbet <i>Megalaima virens</i>	F	G T		Bona, BP	4	
24	Lineated Barbet <i>M. lineata</i>	F	G			1	
25	Blue-throated Barbet <i>M. asiatica</i>	F	G			1	
26	Fulvous-breasted Pied Woodpecker <i>Dendrocopos macei</i>	F			MNP	1	
27	Crimson-breasted Pied Woodpecker <i>D. cathpharius</i>	Moist F	G			1	
28	White Wagtail <i>Motacilla alba</i>	Grassy areas around army camp	T G		Along	4	Quite CO at T & G helipad
29	Yellow Wagtail <i>M. flava</i>	As above	T			4	As above
30	Oriental Tree Pipit <i>Anthus hodgsoni</i>	OA/C			Bona	1	
31	Scarlet Minivet <i>Pericrocotus flammeus</i>	F F	G		BP, MNP	2	
32	Pied Flycatcher-Shrike <i>Hemipus picatus</i>	F F	G		MNP	3	
33	Red-whiskered Bulbul <i>Pycnonotus jocosus</i>	J areas / Sec F F	G T		 MNP	2	

S.No.	Species	Habitat	Gelling, Tuting	Tawang Bum La Sela Pass	Other sites	No.	Comments
34	Red-vented Bulbul <i>P. cafer</i>	Sec F / J area / scrub. F	G		Along, PG. MNP	4	
			T			4	
35	White-throated Bulbul <i>Alophoixus flaveolus</i>	F F	G		MNP	1	
36	Brown-eared Bulbul <i>Hemixos flavala</i>	F	G		MNP	2	
						1	
37	Rufous-bellied Bulbul <i>Hypsipetes mccllellandii</i>	F	G			2	
38	Black Bulbul <i>H. leucocephalus</i>	Mature F / J areas	G		Near Boling	3	
39	Orange-bellied Chloropsis <i>Chloropsis hardwickii</i>	F F	G		Bona, MNP	2	
						2	
40	Asian Fairy-Bluebird <i>Irena puella</i>	F	G			1	
41	Grey-backed Shrike <i>Lanius tephronotus</i>	C/scrub	T		BP	4	
42	Brown Dipper <i>Cinclus pallasii</i>	S	G		Ego	2	Snow covered area with pockets of exposed cliffs & scree slopes
43	Alpine Accentor <i>Prunella collaris</i>	[See last column]		Klemta (near BL)		1	
44	Rufous-breasted Accentor <i>P. strophiatea</i>	Scrub	G			1	
45	Blue Whistling-Thrush <i>Myophonus caeruleus</i>	F, near water F	G T	TA	Bona PG, MNP	4	
						3	
46	Oriental Magpie-Robin <i>Copsychus saularis</i>	Sec F / garden			PG	2	
47	White-throated Redstart <i>Phoenicurus schisticeps</i>	Alpine scrub open F		Ptso near TA & SP		2	Bomdilla & Mayodia (Singh 1994)
48	Daurian Redstart <i>P. aureus</i>	Sec F, scrub, C F	G		MNP	3	
						2	
49	White-capped Redstart <i>Chaimarrornis leucocephalus</i>	R/S			Ego	1	

S.No.	Species	Habitat	Gelling, Tuting	Tawang Bum La Sela Pass	Other sites	No.	Comments
50	Plumbeous Redstart <i>Rhyacornis fuliginosus</i>	R/S	G		Ego Mossing	3	
51	Little Forktail <i>Enicurus scouleri</i>	Rocky torrent	T		Mossing	2	
52	Black-backed Forktail <i>E. immaculatus</i>	R in moist F			Mossing	1	
53	Slaty-backed Forktail <i>E. schistaceus</i>	S			Ego	1	
54	Spotted Forktail <i>E. maculatus</i>	F S F			PG–T road MNP	4 3	CO throughout journey along Brahmaputra (Siang) River.
55	Common Stonechat <i>Saxicola torquata przewalskii</i>	Scrub/grassy area	G T			2	
56	Grey Bushchat <i>S. ferrea</i>	F			MNP	3	
57	White-throated Laughingthrush <i>Garrulax albogularis</i>	Light F on slope		TA		1	
58	Lesser Necklaced Laughingthrush <i>G. monileger</i>	F/bamboo F	G		MNP	3 2	
59	Greater Necklaced Laughingthrush <i>G. pectorlis</i>	As above F	G		MNP	3 2	
60	Striated Laughingthrush <i>G. striatus</i>	F			Dirang	1	
61	Rufous-necked Laughingthrush <i>G. ruficollis</i>	Scrub, Fe	G T			3	
62	Black-faced Laughingthrush <i>G. affinis</i>	Light F/ shrubs		TA SP		2	
63	Red-faced Liocichla <i>Liocichla phoenicea</i>	Degraded F area			Near Moying	1	
64	Coral-billed Scimitar Babbler <i>Pomatorhinus ferruginosus</i>	F			Near Bona	1	Seven birds

S.No.	Species	Habitat	Gelling, Tuting	Tawang Bum La Sela Pass	Other sites	No.	Comments
65	Gold-headed Babbler <i>Stachyris chrysaea</i>	F under-growth F	G		MNP	2	
						2	
66	Grey-throated Babbler <i>S. nigriceps</i>	As above	G			2	
67	Rufous-bellied Shrike-Babbler <i>Pteruthius rufiventer</i>	Degraded F area			Near Moying	1	
68	Silver-eared Leiothrix <i>Leiothrix argentauris</i>	F F	G		Bona, MNP	2	
						2	
69	Red-billed Leiothrix <i>L. lutea</i>	F/C	G			1	
70	Cutia <i>Cutia nipalensis</i>	Degraded F area			Near Moying	1	
71	Chestnut-throated Shrike-Babbler <i>Pteruthius melanotis</i>	F	G			2	
72	Rusty-fronted Barwing <i>Actinodura egertoni</i>	Sec F	G			3	
73	Austen's Barwing <i>A. waldeni</i>	F	G			3	
74	Bar-throated Minla <i>Minla strigula</i>	F	G T			3	
75	Red-tailed Minla <i>M. ignotincta</i>	F F	G T		MNP	4	
						4	
76	Nepal Tit-Babbler <i>Alcippe nipalensis</i>	F under-growth F	G		MNP	3	
						3	
77	Striated Yuhina <i>Yuhina castaniceps</i>	F			MNP	2	
78	White-naped Yuhina <i>Y. bakeri</i>	F/Sec growth F	G		MNP	3 2	This restricted range species was not uncommon in G
79	Yellow-naped Yuhina <i>Y. flavicollis</i>	F / Sec growth. F	G		MNP	3	
			T			3	
80	White-bellied Yuhina <i>Y. zantholeuca</i>	F / Sec growth. F	G		MNP	1	

S.No.	Species	Habitat	Gelling, Tuting	Tawang Bum La Sela Pass	Other sites	No.	Comments
81	Beavan's Prinia <i>Prinia rufescens</i>	Harvested paddy field, grassy area at Fe	G			1	Seven birds near G
82	Chestnut-headed Tesia <i>Tesia castaneocoronata</i>	Under-growth F	G T		MNP	4	
83	Brown-flanked Bush-Warbler <i>Cettia fortipes</i>	Scrub	G T			3	Fairly CO at G & T
84	Common Tailorbird <i>Orthotomus sutorius</i>	Scrub / C	G			2	
85	Dusky Warbler <i>Phylloscopus fuscatus</i>	Scrub	G			2	Itanagar (Singh 1994)
86	Gold-spectacled Flycatcher-Warbler <i>Seicercus burkii</i>	F under-growth	G			3	
87	Grey-headed Flycatcher-Warbler <i>S. xanthoschistos</i>	F F	G		MNP	3 2	
88	White-spectacled Flycatcher-Warbler <i>S. affinis</i>	F F	G		MNP	3 2	
89	Grey-cheeked Flycatcher-Warbler <i>S. poliogenys</i>	F			MNP	2	
90	Chestnut-crowned Flycatcher-Warbler <i>S. castaniceps</i>	F F	G		MNP	1 1	
91	Rufous-faced Flycatcher-Warbler <i>Abroscopus albogularis</i>	F			MNP	1	
92	Small Niltava <i>Niltava macgrigoriae</i>	F understorey	G			1	
93	Rufous-bellied Niltava <i>N. sundara</i>	Sec growth	T			2	
94	Yellow-bellied Fantail-Flycatcher <i>Rhipidura hypoxantha</i>	F F	G		MNP	4 3	Very common

S.No.	Species	Habitat	Gelling, Tuting	Tawang Bum La Sela Pass	Other sites	No.	Comments
95	White-throated Fantail-Flycatcher <i>R. albicollis</i>	Sec F	T			3	
		F			MNP	2	
96	Red-headed Tit <i>Aegithalos concinnus</i>	F / Sec F	G			3	
97	Rufous-fronted Tit <i>A. iouschistos</i>	F / Sec growth	G			1	
98	Great Tit <i>Parus major</i>	F			MNP	1	
99	Green-backed Tit <i>P. monticolus</i>	Sec F / scrub As above	G		MNP	4 2	
100	Black-spotted Yellow Tit <i>P. sibilotus</i>	Sec F / C F	G		MNP	2 2	
101	Chestnut-bellied Nuthatch <i>Sitta castanea cinnamoventris</i>	F	G			2	
		F			MNP	1	
102	White-tailed Nuthatch <i>S. himalayensis</i>	Mossy F	Area around 2073, G			1	2,000 m.
103	Bar-tailed Tree-creeper <i>Certhia himalayana</i>	F	G			2	
104	Green-tailed Sunbird <i>Aethopyga nipalensis</i>	F			MNP	3	
105	Black-throated Sunbird <i>A. saturata</i>	F/ Sec F	G T			4	
106	Streaked Spiderhunter <i>Archnothera magna</i>	F			BP	1	
107	Oriental White-eye <i>Zosterops palpebrosus</i>	F / Sec F	G		BP	4	
		F	T		PG, MNP	4	
108	Hodgson's Mountain-Finch <i>Leucosticte nemoricola</i>	Grassy / stony ground		BL		1	
109	Common Rosefinch <i>Carpodacus erythrinus</i>	Scrub / C	G			3	Only one or two records from Arunachal Pradesh (Singh 1994)
110	Spot-winged Rosefinch <i>C. rodopeplus</i>	Dwarf rhododendron / shrubbery		SP		2	Earlier recorded from Mayodia (Singh 1994)

S.No.	Species	Habitat	Gelling, Tuting	Tawang Bum La Sela Pass	Other sites	No.	Comments
111	White-rumped Munia <i>Lonchura striata</i>	Scrub / grassy area Fe	T		Jiddu village, T. MNP	2 1	Recorded only from Mouling (Birand & Pawar 2004).
112	Cinnamon Tree Sparrow <i>Passer rutilans</i>	Village / C		TA		1	
113	Eurasian Tree Sparrow <i>P. montanus</i>	Village / C			Bona, between T & G	3	Recorded from Yingkiang (Newton 2002)
114	Black Drongo <i>Dicrurus macrocercus</i>	F			MNP	3	
115	Bronzed Drongo <i>D. aeneus</i>	F / Sec F	G T		BP	3	
116	Lesser Racket-tailed Drongo <i>D. remifer</i>	F/Fe F	G		Bona, MNP	2 2	
117	Common Green Magpie <i>Cissa chinensis</i>	F F	Kepang La. G		MNP	2	
118	Grey Treepie <i>Dendrocitta formosae</i>	Fe / C	G T			3	
119	Black-browed Treepie <i>D. frontalis</i>	F F	G		MNP	2 2	
120	Spotted Nutcracker <i>Nucifraga caryocatactes</i>	Light F & C			Depustrik	1	Between TA & SP
121	Large-billed Crow <i>Corvus [macrorhynchos] japonensis</i>	Human habitations/ Also barren OA	G T	TA SP	Bona along PG	4	10+ soaring above SP

Abundance ranking (Nos): 1=one, 2=two–three, 3=four–ten, 4=ten+.

Abbreviations

BL=Bum La.
BP=Brahmaputra Point.
C=Cultivation.
CO=Common.
F= Forest.
Fe=Forest edge.
G=Gelling.
J=*Jhumed*.
MNP=Mouling National Park.
No=Number of sightings.
OA=Open area/s.
R=River.
S=Stream.

Sec=Secondary.
SP=Sela Pass.
TA=Tawang.
T=Tuting.

References

- Birand, A. & Pawar, S. 2004. An ornithological survey in north-east India. *Forktail* 20: 15–24.
Katti, M., Singh, P., Manjrekar, N., Sharma, D. & Mukherjee, S. 1992. An ornithological survey in eastern Arunachal Pradesh. *Forktail* 7: 75–89.
Newton, P.N. 2002. Bird records from the Siang River valley, Arunachal Pradesh, India. *Forktail* 18: 156–157.
Singh, P. 1994. Recent bird records from Arunachal Pradesh. *Forktail* 10: 65–104.

The dates of six taxa described by A.O. Hume (*Puffinus persicus*, *Ephialtes brucei* and *Ninox obscurus*) and W.E. Brooks (*Cyornis poliogenys*, *Phylloscopus sindianus* and *Calandrella tibetana*)

Aasheesh Pittie

Pittie, A. 2006. The dates of six taxa described by A.O. Hume (*Puffinus persicus*, *Ephialtes brucei* and *Ninox obscurus*) and W.E. Brooks (*Cyornis poliogenys*, *Phylloscopus sindianus* and *Calandrella tibetana*). *Indian Birds* 2 (5): 132–136.
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The validity of a scientific taxon and its authorship may depend upon its date of publication, following the Principle of Priority laid down in Article 23 of the International Code of Zoological Nomenclature—henceforth known as ‘the Code’ (ICZN 1999). Therefore establishing such a date is of considerable importance.

In this paper I deal with the dates of some taxa described in *Stray Feathers*. An appendix contains a table with the imprint date, pagination and dates of publication of all twelve volumes of *Stray Feathers*.

Taxa described by Allan Octavian Hume

A.O. Hume described 11 new taxa (pp. 1–19) in Volume I, No. 1 of *Stray Feathers*—his 18th century ornithological journal. Of these, the dates of three taxa (see below) are discussed here, as various authorities (Table 1) have recorded their dates of publication inconsistently.

“*Puffinus Persicus*, Sp. Nov.” (p. 5). [at sea between Guadar and Muscat.]

“*Ephialtes Brucei*, Sp. Nov.” (p. 8) “Rahuri, Ahmednuggur”.

“*Ninox Obscurus*, Sp. Nov.” (p. 11) near “Camorta” in the “Nicobars”.

Ephialtes brucei retains its specific status and is now treated as *Otus brucei brucei*; *Puffinus persicus* is sometimes treated as a subspecies *Puffinus lherminieri persicus* and *Ninox obscurus* is usually considered to be a race of *Ninox scutulata*.

This volume of *Stray Feathers* had a title page dated “1873”. However, the “Contents of Vol. I. 1872–73” (pp. i–iii) state clearly that the six numbers that comprised it, were not all published in that year. “No. 1. – November,” was published in 1872 with the remainder in 1873—“No. 2, 3, & 4. – February,” “No. 5. – July,” and “No. 6. – December”. Despite the imprint date (or ‘specified date’) of “November, 1872” on the first page of Volume I No. 1 (p. 1), several authorities seem to have erred in dating these taxa, probably due to the title page date of “1873”. The specified date of November 1872 must be applied under the Code (Art. 21.2) unless that can be shown to be incorrect. No suggestion to this effect is known to the author. If necessary to date this more precisely Art. 21.3.1 of the Code should be applied and the actual date of publication of this part (Volume I, No. 1, November 1872) should be taken as 30th November 1872.

Table 1. Taxa described by Hume (1872)

Author	<i>Puffinus persicus</i>	<i>Otus b. brucei</i>	<i>Ninox s. obscura</i>
Blanford 1895	—	1873	1873
Blanford 1898	1873	—	—
Baker 1922	—	1873	1873
Baker 1923	1873	—	—
Baker 1927	—	1873	1873
Baker 1929	1873	—	—
Baker 1930a	—	1873	1872
Baker 1930b	1875	—	—
Peters 1931	1873	—	—
Peters 1940	—	1873	1873
Ripley 1961	1873	1872	1872
Jouanin & Mougouin 1979	1873	—	—
Ripley 1982	1873	—	—
Ali & Ripley 2001	1873	1872	1872
del Hoyo et al. 1992	1873	—	—
del Hoyo et al. 1999	—	1873	1873
Dickinson 2003	1873	1873 ¹	1873

Following the evidence of the actual date of publication given above, it is suggested that in future, these taxa be cited as follows, with the actual date after the author and the parenthesized imprint date after the relevant pagination:

1. *Puffinus persicus* Hume, 1872, *Stray Feathers* I (1): 5 (1873). The recommended short citation (to be used within the body of an article) is *Puffinus persicus* Hume, 1872.
2. *Otus brucei brucei* (Hume, 1872), *Stray Feathers* I (1): 8 (1873). The recommended short citation (to be used within the body of an article) is *Otus brucei brucei* (Hume, 1872).
3. *Ninox scutulata obscura* A.O. Hume, 1872, *Stray Feathers* I (1): 11 (1873). The recommended short citation (to be used within the body of an article) is *Ninox scutulata obscura* Hume, 1872.

Taxa described by W. Edwin Brooks

W.E. Brooks described three new taxa (see below) in *Stray Feathers*, volume eight number six. The first two taxa retain

¹ Dickinson (2006) emends the date to 1872.

their specific status until today whereas the third is treated as *Calandrella acutirostris tibetana*.

“*Cyornis poliogenys*, N. Sp.” (p. 469) from “Salbaree” in the “Sikhim Terai” (=Salbari, Sikkim, India).

“*Phylloscopus sindianus*, Sp. Nov.” (pp. 476) from “Sukhur” (=Sukkur, Sind).

“*Calandrella tibetana*, Sp. Nov.” (p. 488) from “Thibet, beyond Sikhim” (=Tibet).

Volume VIII of *Stray Feathers* had a title page date of “1879”. The first five parts were published in that year—“No. 1” in “April” and “No. 2–5” in “October”. The last part, “No. 6”, had an imprint date of “December 1879” on its first page (p. 423). However, on the last page of this part (p. 503) is a “Note” from “The Editor” dated “March 23rd, 1880”, which states:

“That this number, which should have appeared in December 1879, and a great part of which was printed in November of that year, has, owing to circumstances beyond the Editor’s control, remained unpublished for several months, and will only actually issue in May.”

Though Hume included a correction to the volume’s title page date, it is incomplete and at best a prediction of a supposed publication date in May 1880. It is therefore recommended that Art. 21.3.2 of the Code should be applied and the date of publication of this part (Volume VIII, No. 6, December 1879) be taken as 31st December 1880.

Various authorities have treated the dates of publication of these three taxa as either 1879 or 1880 (Table 2).

Table 2. Taxa described by Brooks (1880)

Author	<i>Cyornis poliogenys</i>	<i>Phylloscopus sindianus</i>	<i>Calandrella a. tibetana</i>
Oates 1889	-	Not given	-
Oates 1890	1879	-	1879
Baker 1921a	1879	-	1880
Baker 1921b	-	1880	-
Baker 1924	1879	1880	-
Baker 1926	-	-	1879
Baker 1930a	1879	1880	1879
Peters 1960	-	-	1880
Ripley 1961	1879	1879	1879
Ripley 1982	1879	1879	1879
Watson 1986 a,b	1879	1879	-
Ali & Ripley 2001a,b,c	1879	1879	1879
Roberts 1992	-	1879	-
Baker 1997	-	1879	-
Dickinson 2003	1879	1879	1880
del Hoyo et al. 2004	-	-	1880

Following the evidence of the actual date of publication given above, it is suggested that in future, these taxa be cited as follows, with the actual date after the author and the parenthesized imprint date after the relevant pagination:

1. *Cyornis poliogenys* W.E. Brooks, 1880, *Stray Feathers* 8 (6): 469 (1879). The recommended short citation (to be used within the body of an article) is *Cyornis poliogenys* W.E. Brooks, 1880.
2. *Phylloscopus sindianus* W.E. Brooks, 1880, *Stray Feathers* 8 (6): 476–480 (1879). The recommended short citation is *Phylloscopus sindianus* W.E. Brooks, 1880.
3. *Calandrella acutirostris tibetana* W.E. Brooks, 1880, *Stray Feathers* 8 (6): 488 (1879). The recommended short citation is *Calandrella acutirostris tibetana* W.E. Brooks, 1880.

Changing the dates of these taxa does not affect their priority under the Principle of Priority as no new names were suggested for any of them between 31.xii.1879 and 31.xii.1880 (Baker 1930a).

Acknowledgements

I would like to thank Edward C. Dickinson and Stephen Gregory for improving this note with their suggestions.

References

- Ali, S. & S.D. Ripley. 2001. *Handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Ceylon. Divers to Hawks*. 2nd ed. Vol. I. Delhi: (Sponsored by Bombay Natural History Society.) Oxford University Press [Oxford India Paperbacks].
- Ali, S. & S.D. Ripley. 2001. *Handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Ceylon. Stone Curlews to Owls*. 2nd ed. Vol. III. Delhi: (Sponsored by Bombay Natural History Society.) Oxford University Press [Oxford India Paperbacks].
- Ali, S. & Ripley, S.D. 2001a. *Handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Ceylon. Larks to Grey Hypocolius*. Vol. 5. 2nd ed. Delhi: (Sponsored by Bombay Natural History Society.) Oxford University Press [Oxford India Paperbacks].
- Ali, S. & Ripley, S.D. 2001b. *Handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Ceylon. Laughing Thrushes to the Mangrove Whistler*. Vol. 7. 2nd ed. Delhi: (Sponsored by Bombay Natural History Society.) Oxford University Press [Oxford India Paperbacks].
- Ali, S. & Ripley, S.D. 2001c. *Handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Ceylon. Warblers to Redstarts*. Vol. 8. 2nd ed. Delhi: (Sponsored by Bombay Natural History Society.) Oxford University Press [Oxford India Paperbacks].
- Baker, E.C.S. 1921a. Hand-list of the “Birds of India”, Part II. *J. Bombay Nat. Hist. Soc.* XXVII (3): 448–491.
- Baker, E.C.S. 1921b. Hand-list of the “Birds of India”, Part III. *J. Bombay Nat. Hist. Soc.* XXVII (4): 692–744.
- Baker, E.C.S. 1922. Birds of the Indian Empire. [Hand-list of the “Birds of India”]. Part VI. *J. Bombay Nat. Hist. Soc.* XXVIII (3): 576–594.
- Baker, E.C.S. 1923. Birds of the Indian Empire. [Hand-list of the “Birds of India”]. Part VIII. *J. Bombay Nat. Hist. Soc.* XXIX (1): 9–22.
- Baker, E.C.S. 1924. *The fauna of British India, including Ceylon and Burma. Birds*. Vol. II. 2nd ed. Shipley, A.E. (Ed.) London: Taylor and Francis.
- Baker, E.C.S. 1926. *The fauna of British India, including Ceylon and Burma. Birds*. Vol. III. 2nd ed. Shipley, A.E. (Ed.) London: Taylor and Francis.
- Baker, E.C.S. 1927. *The fauna of British India, including Ceylon and Burma. Birds*. 2nd ed. Vol. IV. Shipley, A.E. (ed.) London: Taylor and Francis.

- Baker, E.C.S. 1929. *The fauna of British India, including Ceylon and Burma. Birds.* 2nd ed. Vol. VI. London: Taylor and Francis.
- Baker, E.C.S. 1930a. *The fauna of British India, including Ceylon and Burma. Birds.* Vol. VII. 2nd ed. London: Taylor and Francis.
- Baker, E.C.S. 1930b. *The fauna of British India, including Ceylon and Burma. Birds.* Vol. VIII. 2nd ed. London: Taylor and Francis.
- Baker, K. 1997. *Warblers of Europe, Asia and North Africa.* London.: Christopher Helm, A & C Black.
- Blanford, W.T. 1895. *The fauna of British India, including Ceylon and Burma (Birds).* 1st ed. Vol. III. London: Taylor and Francis.
- Blanford, W.T. 1898. *The fauna of British India, including Ceylon and Burma (Birds).* 1st ed. Vol. IV. London: Taylor and Francis.
- Brooks, W.E. 1880. Ornithological observations in Sikhim, the Punjab, and Sind. *Stray Feathers* VIII (6): 464–480 (1879).
- del Hoyo, J., A. Elliott & J. Sargatal. 1992. *Handbook of the birds of the world. Vol. I. Ostrich to Ducks.* Barcelona: Lynx Edicions.
- del Hoyo, J., A. Elliott & J. Sargatal. 1999. *Handbook of the birds of the world. Vol. V. Barn-owls to Hummingbirds.* Barcelona.: Lynx Edicions.
- del Hoyo, J., Elliott, A. & Christie, D. 2004. *Handbook of the birds of the world. Vol. IX. Cotingas to Pipits and Wagtails.* 1st ed. Barcelona: Lynx Edicions.
- Dickinson, E.C. (Ed.) 2003. *The Howard and Moore complete checklist of the birds of the World.* 3rd ed. London: Christopher Helm.
- Dickinson, E.C. 2006. Howard & Moore Edition 3 (2003): Corrigenda 5 (31.01.2006). Pp. 1-69. Unpublished pdf file downloaded on 10.ix.2006 at 19:00hrs. from: www.naturalis.nl/asp/page.asp?alias=naturalis.en&view=naturalis.en&id=i000256&frameurl=http%3A%2F%2Fwww.naturalis.nl%2Fnaturalis.en%2Fnaturalis.en%2Fi000000.html.
- Hume, A.O. 1872. Novelties. *Stray Feathers* I (1): 1–19.
- ICZN. 1999. *International Code of Zoological Nomenclature.* 4th ed. London: The International Trust for Zoological Nomenclature.
- Jouanin, C. & Mougou, J.-L. 1979. Order Procellariiformes. 48-121. In: Mayr, E. & Cottrell. *Check-list of birds of the World.* Cambridge, Mass.: Mus. Comp. Zool.
- Oates, E.W. 1889. *The fauna of British India, including Ceylon and Burma (Birds).* Vol. 1. 1st ed. Blanford, W.T. (Ed.) London: Taylor and Francis.
- Oates, E.W. 1890. *The fauna of British India, including Ceylon and Burma (Birds).* Vol. 2. 1st ed. Blanford, W.T. (Ed.) London: Taylor and Francis.
- Peters, J.L. 1931. *Checklist of the birds of the World.* Vol. 1. Cambridge, Mass.: Harvard University Press.
- Peters, J.L. 1940. *Checklist of the birds of the World.* Vol. 4. Cambridge, Mass.: Harvard University Press.
- Peters, J.L. 1960. Family Alaudidae. 3–80. In: Mayr, E. & Greenway Jr., J.C. *Check-list of birds of the world.* Cambridge, Mass.: Mus. Comp. Zool.
- Ripley, S.D. 1961. *A synopsis of the birds of India and Pakistan together with those of Nepal, Sikkim, Bhutan and Ceylon.* 1st ed. Bombay: Bombay Natural History Society.
- Ripley, S.D. 1982. *A synopsis of the birds of India and Pakistan together with those of Nepal, Sikkim, Bhutan and Ceylon.* 2nd ed. Bombay; Oxford: Bombay Natural History Society; Oxford University Press.
- Watson, G. E., 1986a. In: Watson, G.E., Traylor Jr., M.A. & Mayr, E. 1986. Family Sylviidae. 3–294. In: Mayr, E. & Cottrell, G.W. *Check-list of birds of the world.* Cambridge, Mass.: Mus. Comp. Zool.
- Watson G. E., 1986b. In: Watson, G.E., Traylor Jr., M.A. & Mayr, E. 1986. Family Muscicapidae (*sensu stricto*). 295–375. In: Mayr, E. & Cottrell, G.W. *Check-list of birds of the world.* Cambridge, Mass.: Mus. Comp. Zool.

Appendix

The dates of publication of Stray Feathers volumes 1-12 (1872-1899).
The dates in column five apply the requirements of Article 21 of The Code (ICZN 1999).

Year	Volume	Part	Pages	Date of publication	Notes
1872	I	1	1 l (title), i-iii (contents), 1 l (preface), 1-50 (text)	30.xi.1872	Volume title page dated "1873". Preface dated 1.xii.1873. Imprint date on p. 1 is "November, 1872".
1873		2, 3 & 4	51-323 (text)	28.ii.1873	Imprint date on p. 51 is "February, 1873".
1873		5	325-427 (text)	31.vii.1873	Imprint date on p. 325 is "July, 1873".
1873		6	429-496 (text)	31.xii.1873	Imprint date on p. 429 is "December, 1873".
1873		Index	i-xiv (text)		
1874	II	1, 2 & 3	1 l (title), 1-4 (preface), i-iii (contents), 1 l (insert),	31.i.1874 1-336 (text)	Volume title page dated "1874". Preface is undated. Imprint date on p. 1 is "January, 1874".
1874		4 & 5	337-466 (text)	31.v.1874	Imprint date on p. 337 is "June, 1874".
1874		6	467-536 (text)	31.x.1874	Imprint date on p. 467 is "October, 1874".
1874		Index	i-xix (text)		
1875	III	1, 2 & 3	1 l (title), i-iv (contents), 1-2 (preface), 1-268 (text)	31.i.1875	Volume title page dated "1875". Preface dated 2.xii.1875 (p. 2). Imprint date on p. 1 is "January, 1875".
1875		4	269-333 (text)	31.v.1875	Imprint date on p. 269 is "May, 1875".
1875		5	335-431 (text)	30.xi.1875	Imprint date on p. 335 is "November, 1875".
1875		6	433-500 (text)	31.xii.1875	Imprint date on p. 433 is "December, 1875".

Year	Volume	Part	Pages	Date of publication	Notes
1875		Index	i-xxiii (text)		
1876	IV	1, 2 & 3	1 l (title), i-iii (contents), 1 l (preface), 1-230 (text)	10.ii.1876	Volume title page dated "1876". Preface dated 25.xi.1876. Imprint date on p. 1 is "January, 1876". Letter dated 10.ii.1876 (p. 228).
1876		4, 5 & 6	231-512 (text)	31.xii.1876	Imprint date on p. 231 is "December, 1876".
1876		Index	i-xviii (text)		
1877	V	1	1 l (title), i-v (contents), 1 l (preface), 1-63 (text)	30.iv.1877	Volume title page dated "1877". Preface dated 1.xii.1877. Imprint date on p. 1 is "April 1877".
1877		2	64-140 (text)	30.vi.1877	Imprint date on p. 64 is "June 1877".
1877		3 & 4	141-354 (text)	31.viii.1877	Imprint date on p. 141 is "August 1877".
1877		5 & 6	355-504 (text)	31.xii.1877	Imprint date on p. 355 is "November 1877". Editorial note on p. 504, "Note that the publication of this number has been delayed, and, although intended to appear on the 1st of November, will not actually issue until December."
1877		Index	i-xxi (text)		
1878	VI	1-6	1-6 (title, contents, preface), i-viii (text), 1-524 (text)	30.vi.1878	Volume title page dated "1878". Preface undated. Imprint date on p. i is "June 1878".
1878		Index	i-xxii (text)		
1878	VII	1 & 2	1 l (title), 1-3 (preface), i- v (contents), 1-172 (text)	31.viii.1878	Volume title page dated "1878". Preface undated. Imprint date on p. 1 is "August 1878".
1878		3, 4 & 5	173-470 (text)	31.xii.1878	Imprint date on p. 173 is "December 1878".
1879		6	471-528 (text)	31.iii.1879	Imprint date on p. 471 is "March 1879".
1879		Index	i-xxxii (text)		
1879	VIII	1	1 l (title), i-iii (contents), 1 l (preface), 1-150 (text)	30.iv.1879	Volume title page dated "1879". Preface dated 23.iii.1880. Imprint date on p. 1 is "April 1879".
1879		2-5	151-421 (text)	31.x.1879	Imprint date on p. 151 is "October 1879".
1880		6	423-503 (text)	31.xii.1880	Imprint date on p. 423 is "December 1879". No index is present at the end of this volume. Dating based on facts stated earlier in this paper.
1880	IX	1-3	1 l (title), i-iii (contents), 1 l (preface), 1-238 (text)	31.viii.1880	Volume title page dated "1880". Preface undated. Imprint date on p. 1 is "August 1880".
1880		4	239-300 (text)	30.xi.1880	Imprint date on p. 239 is "November 1880".
1881		5 & 6	301-508 (text)	30.ix.1881	Imprint date on p. 301 is "September 1881".
1881		Index	i-xxvii (text)		
1881	X	1, 2 & 3	2 ll (title & preface), i-iv (contents), 1-174 (text)	31.xii.1881	Volume title page dated "1887". Preface undated. Imprint date on p. 1 is "December 1881".
1882		4	175-328 (text)	31.vii.1882	Imprint date on p. 175 is "July 1882".
1883		5	329-434 (text)	31.iii.1883	Imprint date on p. 329 is "March 1883".
1887		6	435-531 (text)	31.xii.1887	Imprint date on p. 435 is "December 1887".
1887		Index	532-560 (text)		
1888	XI	1-4	1 l (title), i-v (text), 1-353 (text)	31.xii.1888	Volume title page dated "1888".
1899	XII		i-iv (title & preface), 1- 167 (text)	22.xi.1899	Volume title page dated "1899". Preface by Charles Chubb dated 22.xi.1899 (p. iv).

Notes to the Appendix

The 'Year' in column one is the imprint year on the first page of the concerned part (s).

In the fourth column, '1 l' signifies an unnumbered leaf (2 ll = 2 leaves).

Eggs

Michael Walters

Walters, M. 2006. Eggs. *Indian Birds* 2 (5): 136–138.

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Eggs were something that had never particularly interested me until I came to work at The Natural History Museum (NHM). But when I joined the Museum staff, the then egg curator, Colin Harrison was far more interested in fossils, and was trying to find an assistant to pass the egg collection on to. The NHM egg collection was built up largely in the late nineteenth and early twentieth centuries. But parts of it date back before that. The original collection was on display in the public galleries, the eggs being glued to wooden boards. This collection was dismantled in 1837, and a system of registration or cataloguing begun. The eggs dating from before 1837, are almost all without information, and are termed the Old Collection. In view of the way they were treated a surprising number still survive. They include two Great Auk eggs, badly broken on the side where they were glued to the wood. Only one of these eggs is dated. It is a Gannet's egg collected on the Bass Rock, off Scotland, in 1807 and was probably collected by William Bullock who was on the Rock in that year. This is the oldest datable egg in the collection. A collection from Colonel Montagu, received in 1816, is probably of eighteenth century vintage, but none of the eggs are dated.

When I first came to the Museum in 1970, the birds were still housed in London, and much of my first two years were spent packing them up to be sent to Tring. But I was able to spend some time on eggs. In South Kensington, the eggs were stored in two separate locations owing to problems of space. The main series was in the basement of the Entomology block, while the overflow was in a separate area called the egg corridor.

The catalogue cards would be annotated either "Sy" to indicate that that clutch was in the systematic series, or "Eg" to indicate that it was in the egg corridor, which meant that it was not so easily accessible. The systematic series consisted of a series of mahogany cabinets, on top of which had been placed a similar series of cabinets of wood painted cream-colour, and the collections expanded upwards from the mahogany cabinets into the cream ones. Within these cabinets the eggs were laid out in glass-topped boxes of variable sizes. When the egg collection was moved to Tring, it was moved in the cabinets in the boxes.

[When we got the collection to Tring, it was stored temporarily in what is now the spirit area, the spirit collection hadn't yet been moved, partly because the dexian racking to accommodate it had not been installed. Each of the cabinets had to be lifted, placed on a light trolley and wheeled down

the link corridor and up the bumpy ramp to the egg area. Getting trolleys up this slope without the egg cabinet falling off, or the trolley running away from you, was not a science, but an art. Once the cabinets were safely in the egg area, the boxes were transferred to the standard Tring cabinets, which are in two sections. The contents of the mahogany cabinets going into the bottom halves, and the contents of the cream cabinets into the top halves].

The collection is world wide in its coverage, but is particularly rich in eggs from the Indian sub-continent; indeed it probably contains the finest collection in the world from this area. These include the huge collections of A.O. Hume and Stuart Baker, as well as those of many other Army officers and civil servants stationed there. The collection had been last completely catalogued in 1895, by Henry Seebohm who at the same time wrote a manuscript catalogue. This formed the basis of the published Catalogue of Eggs by Eugene Oates during the years 1902-1912. In the intervening years, a great many eggs had been added, either catalogued or un-catalogued. It was decided that I should go through the collection and do a total re-cataloguing. This was necessary because since Seebohm's time, nomenclature and taxonomy had changed a great deal, and many of the boxes were labelled with obsolete names. As well as card-indexing everything that had not already been catalogued, I also checked Seebohm's manuscript catalogue and Oates' Catalogue, and in a considerable number of cases extra information could be added from these catalogues to that which had previously noted as accompanying the eggs. Perhaps not surprisingly, a large number of eggs listed by Oates were not to be found in the collection, and more surprisingly, a considerable number of eggs listed by Seebohm were not listed by Oates. I found it astounding that in the space of a decade so many eggs could have disappeared or been discarded. Most lamentably, I discovered that there were a few instances (though happily not many) where the loss of eggs listed in Seebohm and/or Oates, meant that there are no eggs of that species currently in the collection.

I was actually taught very little about the egg collection and the catalogueing problems it presented. I learned this as I went along. It revealed to me that my predecessors Colin Harrison and the late Shane Parker had made quite a lot of errors through failure to correctly interpret data written on eggs. For example the collection numbers on the eggs in Tristram's collection consist of a number followed by a Greek letter. These refer to page numbers and egg numbers on the

page, in Tristram's own manuscript catalogue. This had not been realised. Many, but no means all of the eggs in Henry Seebohm's Collection had numbers of up to three digits followed by a dot and then another figure of one or two digits. They were all consistently written in the same hand. It was quite a long time before I discovered that these referred to the collection of Edward Hargitt, whose collection Seebohm had obtained and incorporated. Moreover, these referred to Hargitt's own manuscript catalogue and once again, quite often, extra information about the sets could be added by reference to this. This, again, was a point that my predecessors had not realised. So I started to check all the entries in Hargitt's catalogue as well, and found that a lot of eggs were not present in the collection, nor had they been listed by Seebohm. It transpired that many of the missing eggs had been used, before catalogueing, in the displays in the public galleries. Some of these eggs were recovered when the various public displays were dismantled and returned to the collection. These were of course, readily identifiable (to me, but they probably wouldn't have been to anyone else) by their Hargitt numbers. A lot of the Hargitt eggs were not recovered, and one must presume that they were lost on the various occasions when the public displays were broken into and eggs stolen. There are many other manuscript catalogues in the egg library which would repay a similar checking, but unfortunately, I never had the time to do this.

As well as re-catalogueing the main collection, I had to catalogue and incorporate many collections which came in over the years, and deal with a backlog of existing but unincorporated collections. Many of these had their own problems. The Davidson collection, for instance, had eggs identified only by a species number, a date and a locality all written in just about the worst writing I have ever encountered. James Davidson spent many years in the Indian forestry commission and was based in the area inland from Bombay though he made several expeditions to Kashmir. Over the years, I became used to his writing, and to the names of the localities he habitually frequented, so was able to decipher the names, but not always with a hundred per cent certainty, and a number have been appended with a query. The species numbers were either those of Hume or Oates, authors of the two main numerical species lists of Indian sub-continent birds. There is no way of knowing at the outset whether the number is a Hume number or an Oates number, but fortunately, the two are so distinctive that it is quite easy to tell by identification. In other words if you have eggs of what are obviously a bulbul, you will find that the number on the eggs refers in one list to a species of bulbul, but in the other list to something completely different. Of course you have to know your eggs! Davidson's colleague T.R. Bell also had eggs identified only by species numbers and by dates - no localities in this instance. Bell collected insects as well as birds eggs, and his detailed field diaries are held in the Entomology library in South Kensington. When working out his collection, it was necessary to type out a series of cards identifying the species, and indicating the date. I would then take a bundle of cards (enough to give me a day's work) up to the Entomology library and go through the Bell diaries looking for information. Having found a date, it was often necessary to read back several days or even weeks to find out where Bell

was at any particular time. Entries like "went nowhere" were singularly unhelpful. Bell, like Davidson, travelled from one forestry commission villa to another, inspecting timber and collecting as he went. He was the first to discover the nest of the Spotted Creeper *Salpornis* and all the eggs in our collection, though received from a number of collections, seem to have originated from Bell. Even when he is not credited as the collector, his neat writing on the eggs is quite distinctive.

One of the most controversial collections was that of E.C. Stuart Baker. He actually built up two collections, one of "Indian Eggs" and the other of "Cuckoo Eggs". The first of these covered former British India, the present day India, Pakistan, Bangladesh, Sri Lanka, Burma, Nepal, Sikkim, and the southern parts of Tibet. It was the most comprehensive egg collection ever assembled for this area. I can think of no species for the area for which the eggs are known, for which Baker did not have eggs. And there are species for which he had the only eggs known. The other collection, of Cuckoo's eggs, was scarcely less comprehensive. Needless to say it is based on the same area, where Baker spent most of his collecting life, but he also had eggs sent to him from other parts of the Old World—indeed everywhere where parasitic Cuckoos occur. He did not collect eggs of non-parasitic cuckoos. The problem with his collection is that his data is often suspect. His handwriting is difficult, but I got used to it. When I began to curate the Baker collection, I discovered that in lots of clutches there were single eggs which did not seem to match the rest of the clutch. The difference was subtle, but, when one had got used to it, distinctive. If you examined the writing on these eggs, sometimes one found that the date was slightly different from that on the rest of the clutch. But then again, sometimes one found the same anomaly on eggs which didn't perceptively differ from those of the rest of the clutch. The question was always: is this a genuine clerical error, or is it an attempt to deceive? Baker lived in an era when egg collecting and the buying and selling of eggs was perfectly legal and indeed big business. Large clutches were more collectable and therefore more valuable than smaller ones. The temptation in front of dealers (and Baker "dealt" in eggs in a BIG way) was to add eggs that sort-of matched to existing clutches to make them into larger ones. A story is told of Baker, though it may be apocryphal. A visitor called to see Baker one day and the door was answered by one of his children, who said "Oh Daddy's upstairs making up clutches". Like I said, I have no proof that this story's true, but it inevitably raised doubts as to Baker's integrity. There were a number of suggestions over the years, by, I think, Charles Vaurie—among others—that the Baker collection was so unreliable that it should be destroyed. But the Collection is so vast and so well written-up that it cannot be ignored. All one could do was to go through it with a tooth comb and note carefully every little thing that seemed to be doubtful, which is exactly what I did. Future workers must take it from there.

The Venning collection exhibits an example of potentially publishable data that has never been exploited. F.E.W. Venning worked mainly in Iraq, Pakistan and Burma, in which areas he was probably one of the most important collectors of all time. He was exceptionally meticulous. The collection was accompanied by detailed notebooks containing a wealth of data on each clutch, mainly relating to nest site and nest

construction, incubation, etc. I retired as curator of the egg collection in 2003, after 33 wonderful years.

Received 12.iv.2005

[Michael P. Walters was the Curator of the Egg Collection in The Natural History Museum (Tring, U.K.) for 33 years. This is a

greatly pared and edited version of a talk the author gave at a conference in Leiden, a couple of years ago. Here he has tried to restrict himself to what he said about eggs from the Indian subcontinent.]

Do Great Cormorants *Phalacrocorax carbo* displace other colonial nesting waterbirds at Kumarakom heronry (Kerala)?

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Narayanan, S.P., Raju, D.V., Unnikrishnan, N., Vasam, S. & Sreekumar, B. 2006. Do Great Cormorants *Phalacrocorax carbo* displace other colonial nesting waterbirds at Kumarakom heronry (Kerala)? *Indian Birds* 2 (5): 138.

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The 112 acre Kumarakom heronry (9°37'–93°8'N 76°25'–76°26'E) is situated in Kerala Tourism Development Corporation's 'tourist complex' of Kumarakom in Kottayam district, 14 km west of Kottayam town. The primary vegetation of the heronry consists of mangroves such as *Avicennia officinalis*, *Bruguiera gymnorrhiza*, *Rhizophora mucronata*, *Sonneratia caseolaris*, besides marshy mangrove associates, non-mangrove species, and hydrophytes (Ravi 2002). Some of the native vegetation was converted to plantations of coconut and rubber.

The discovery of two nests of Great Cormorant *Phalacrocorax carbo* at Kumarakom heronry on 18.v.2005 has increased the number of colonial nesting waterbirds at the site from ten (Narayanan 2004) to 11. During the current (2006) breeding season ten nests of Great Cormorants were located at the heronry and the number of birds increased from six (2005) to more than 25. The nests were found in a mangrove-associate, *Terminalia catappa*, at a height of about 12.2 m. Nesting of Great Cormorants at this heronry were first discovered by the second author (DVR) and later the third (NU) and fourth (SV) authors, successfully photographed the nesting birds. The location and height of their nests are similar to those of the Darter *Anhinga melanogaster* and Indian Shag *Phalacrocorax fuscicollis*, except that they are larger. Whenever Brahminy Kites *Haliastur indus* flew close to brooding birds, the latter produced 'threatening' postures and made high-pitched sounds. The vocalizations made by Great Cormorants are distinct, being buzzy and loud, and can be easily differentiated from those of other cormorants and darters. Narayanan (2004) did not spot any Great Cormorants at this heronry during the 2004 breeding season.

Great Cormorants are reported from Vembanad Lake and adjacent areas (Sreekumar 2003), but their status there varies from 'uncommon' to 'fairly common', according to the season. Neelakantan (1996) and Sashikumar & Palot (2002) reported that the Little Cormorant *Phalacrocorax niger* and Darter

populations in the Periyar Tiger Reserve declined due to the 'invasion' of and competition from Great Cormorants at the heronry. According to Narayanan (2004) 2.76% of the Darter's estimated world population is found in the Kumarakom heronry. Now, with the Great Cormorant nesting in Kumarakom heronry, it may compete with Indian Shag and Darter for nesting trees and other nesting 'requirements'. The selection of a nesting tree, height of the nest, and social factors influence nesting (Donzar et al. 1993). We wonder whether this will gradually lead to a reduction of Darters in the Vembanad and adjacent areas. Narayanan (2004) mentions about the Great Cormorant and its possible impact on the nesting of Darter population. But in the same instant we suspect that large colonies of nesting wetland birds attract other colonially nesting species such as Open-billed Stork *Anastomus oscitans* and Grey Heron *Ardea cinerea*, two large colonially nesting species, have started visiting Kumarakom heronry. It is possible that they will nest here in the future.

Reference

- Ali, S & Ripley, S.D. 1983. *Handbook of the birds of India and Pakistan*. Compact ed. New Delhi: Oxford University Press.
- Donazar, J. A., Ceballos, O., Travaini, A., Rodriguez, A., Funes, M. & Hiraldo, F. 1994. Breeding performance in relation to the nest site substratum in Buffbacked Ibis *Theristicus caudatus* population in Patagonia. *Condor* 96: 994–1002.
- Narayanan, S. P. 2004. Status and ecology of the breeding wetland birds in the KTDC tourist complex, Kumarakom, Kerala. M.Sc. Thesis submitted to Mahatma Gandhi University, Kottayam, Kerala.
- Neelakantan, K.K. 1996. *Keralathile pakshikal*. Trichur: Kerala Sahithya Academy. (In: Malayalam.)
- Ravi, N. 2002. Flora of Kumarakom tourist complex. In: *Vembanad water bird count 2002*. Sreekumar, B. (Ed.) Kottayam: Department of Forests and Wildlife, Government of Kerala.
- Sreekumar, B. 2003. *Vembanad water bird count 2003*. Department of Forests and Wildlife, Government of Kerala, Kottayam.

Food-sharing among passerines at Lava, eastern Himalaya

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Mitra, R., Pal, D.C. & Basuroy, A. 2006. Food-sharing among passerines at Lava, eastern Himalaya. *Indian Birds* 2 (5): 139.
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The eastern Himalayan region lies between 26°40'–29°30'N 88°05'–97°05'E and covers a total area of 93,988 km² comprising the states of Arunachal Pradesh, Sikkim and West Bengal. The eastern Himalaya is also designated as an Endemic Bird Area (EBA) (BirdLife International 2003).

We visited Lava (c. 2,200 m), in eastern Himalaya region of West Bengal, for a training programme in August 2005. It has rich sub-tropical and temperate forests dominated by species of *Quercus*, *Castanopsis*, *Magnolia*, *Michellia*, Birch, etc. Chatterjee & Ghose (2004) have recorded c. 280 species of birds from Lava.

In this note we describe what seems to be a food-sharing behaviour among small passerines. Our observations were made in an area of fringe forest, where shrubs of the *Cestrum* sp. (Solanaceae) were abundant and flowering / fruiting in profusion. The bright red flowers attracted a host of insects. Tits (Paridae) usually fed on these insects. The flowering season begins from mid-May onwards, with fruit (berries) maturing within the next seven to eight weeks. The matured berries are 1–1.5 cm long, oval shaped and dark red in colour. In the last week of August 2005 a few flowers were present along with mature berries. Therefore, it was assumed that the earliest fruiting started in mid-June and the last fruit would be ripe by November. It was seen that fruits were available to the birds like Green-backed Tit *Parus monticolus* and Black-spotted Yellow Tit *P. spilonotus* from June till the

end of October. We observed that these birds fed on the fruits in a particular style. Berries were eaten from the side that was unexposed to the sun and from the closest point to the stem, which caused the residual part to dry up early. Significantly, the tits left the berries half eaten, exposing the seeds inside, leaving the bottom of the fruit intact, which later became an anchor for the seeds. During monsoon, the common finches of this area, namely Yellow-breasted Greenfinch *Carduelis spinoides* and Red-headed Bullfinch *Pyrrhula erythrocephala*, fed on these exposed seeds. The residual part of the fruit and the seed which were of ovoid shape were left for the other birds, Dark-breasted Rosefinch *Carpodacus nipalensis*, Hodgson's Mountain-Finch *Leucosticte nemoricola*, Red-headed Bullfinch. Both, altitudinal migrants and resident finches fed on the exposed seeds. Finches that arrive in winter, from the Himalayas, also feed on these berries, whenever the area is prone to rain and dense fog in the month of October.

References

- BirdLife International. 2003. *BirdLife's online World Bird Database: the site for bird conservation*. Version 2.0. Cambridge, UK: BirdLife International.
Chatterjee, S. & D. Ghose. 2004. Bird Survey at Lava and Lolegaon. *Naturalist* 3: 54–64.
Grimmett, R., Inskipp, C. & Inskipp, T. 1998. *Birds of the Indian subcontinent*. New Delhi: Oxford University Press.

Sighting of Green-billed Malkoha *Phaenicophaeus tristis* along Alaknanda River, Uttaranchal, India

Vidyadhar Atkore & Tamo Dadda

Atkore, V. & Dadda, T. 2006. Sighting of Green-billed Malkoha *Phaenicophaeus tristis* along Alaknanda River, Uttaranchal, India. *Indian Birds* 2 (5): 139–140.

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Green-billed Malkoha *Phaenicophaeus tristis* is a non-parasitic cuckoo (family Cuculidae). It is distributed along the Himalayan foothills, the terai, bhabar, and duars in the north and the east, south to Chota Nagpur Plateau and northern Eastern Ghats (Ali & Ripley 1981). However, its western-most limit in the northern part of the subcontinent is unclear. While Ali & Ripley (1981) state that

the bird is distributed west to Garhwal Himalayas in Uttaranchal, Grimmett et al (1998), Kazmierczak (2000) and Rasmussen & Anderton (2005) have curtailed its western-most limit to Kumaon. Here, we report its occurrence in Upper Bhagirathi valley in Garhwal, which is nearly 150 km west of Kumaon, corroborating the distribution range given in Ali & Ripley (1981).

On 4.i.2006, the bird was sighted at 16:15 hrs amidst thick undergrowth on the left bank of Alaknanda River at Swait village (550 m m.s.l.), near Srinagar town (Uttaranchal). The dense thicket of vegetation was mainly composed of *Lantana camara* and *Cordia myxa*. We were surveying the area for birds along the Ganges, Alaknanda, and Bhagirathi rivers as part of an ecological study organized by HNB Garhwal University, Srinagar (Atkore 2005).

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References

- Ali, S. & Ripley, S.D. 1981. *Handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Ceylon*. Volume 3. 2nd ed. Bombay: Oxford University Press.
- Atkore, V.M. 2005. Bird survey along the Bhagirathi and Alaknanda rivers, Uttaranchal, India. Report submitted to H.N.B. Garhwal University, Srinagar, Uttaranchal, India. Pp. 22.
- Grimmett, R., Inskipp, C., & Inskipp, T. 1998. *Birds of the Indian Subcontinent*. Delhi: Oxford University Press.
- Kazmierczak, K. 2000. *A field guide to the birds of India, Sri Lanka, Pakistan, Nepal, Bhutan, Bangladesh and the Maldives*. New Delhi: OM Book Service.
- Rasmussen, P.C. & Anderton, J.C. 2005. *Birds of South Asia: The Ripley guide*. Vols 1 & 2. Washington D.C. & Barcelona: Smithsonian Institution & Lynx Edicions.

The fate of a small population of Indian White-backed Vultures *Gyps bengalensis* in Vadodara (Gujarat, India)

Raju Vyas

Vyas, R. 2006. The fate of a small population of Indian White-backed Vultures *Gyps bengalensis* in Vadodara (Gujarat, India). *Indian Birds* 2 (5): 140–141.

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Since 1985, I have regularly observed a small population of Indian White-backed Vultures *Gyps bengalensis* roosting and breeding, in and around Sayaji Baug Zoo & Garden in Vadodara (Gujarat, India). Sayaji Baug Zoo is one of the oldest zoos in India, developed in 1879 by Maharaja Sayaji Rao Gaikwad III, on the banks of Vishwamitri River (22°19'N 73°13'E). The entire complex encompasses 110 acres and contains about 80 species of large trees. The vultures might have selected this area, for their activities, due to availability of tall palms and other species of trees, and the undisturbed riverside area. The vultures selected only high, straight trees that were above 15 m tall, and preferred only those palm trees, which are located in the zoo areas.

My data indicates that the vulture breeding population is crashing and will perhaps vanishing from the area (Table 1). During 1986 I counted over 36 roosting vultures of which 16 pairs bred on various tree species in the garden area (Table 2). The number gradually decreased to 11 birds and 5 nests within a period of 10 years. During 1996 only 5 nests were present of which 3 were at new locations—the 'traffic center' and opposite the third gate in the garden. A vulture's nest was also spotted on an *Ailanthus excelsa* ("vilayati arduso") in the EME school compound in 1996, which is about 1.5 km from the zoo. After that no vultures nested in the area. All that is now left of this colony, since the last seven years, is a single bird that stays in zoo area and feeds on the garbage

of the zoo. It has been known to disappear for a few days but has always returned—alone.

Some of the threats noticed during this period were the loss of large trees, especially those that were used by the birds. The birds were also deliberately disturbed by the garden management—with the view to prevent nesting and roosting. But the main threats for the cause of the vulture population decline seem to lie outside Sayaji Baug. The first is feeding on contaminated food in the area surrounding Vadodara city. And the second possibility is the expansion of the city airport. Earlier there was a small domestic airport at Vadodara, but after 1988 the Indian Air Force started new airbase and the domestic airport has been upgraded. The airport management began awarding an annual contract for scaring / shooting birds that were found in the vicinity of the airport—to prevent birds-related accidents.

At present (April 2005) the entire vulture population has vanished from the Sayaji Baug Zoo & Garden.

References

- Ali, S., 1954. The birds of Gujarat. *J. Bombay Natural History Society* 52: 374–458.
- Ali, S. & S. D. Ripley 1987. *Compact handbook of the birds of India and Pakistan*. Oxford University Press, Bombay.
- Grimmett, R., Inskipp, C. & Inskipp, T. 1998. *Birds of the Indian Subcontinent*. Mumbai: Oxford University Press.
- Walker, Sally. 1992. Status and management report on vulture species in Indian zoos: Sayaji Baug Zoo, Baroda, Gujarat. *ZooZen* 7 (8): 34–37.

Table 1. The Indian White-backed Vulture *Gyps bengalensis* population in and around Sayaji Baug Zoo & Garden

No.	Location	Tree species	Number of Vulture Nest			
			1986	1991#	1996	2004
1	Sambar enclosure	'Haldarvo'	1 (R)	TF	---	
2		Palm	1	1	0 (TF)	0
3		Palm	1	1	0	0
4		Palm	1	1	0	0
5	Blackbuck enclosure	Palm	1	1	1	0
6		Palm	1	1	0	0
7	Primate section	Palm	1	1	0	0
8		Palm	1	1	0 (TF)	0
9		Palm	1	1	0 (TF)	0
10		'Ambali'	0 (R)	0 (R)	0 (R)	0
11	Bear section	Palm	1	1	1	R
12	Tiger section	Palm	1	1	0	0
13		Palm	1	0	0	0
14		'Peepal'	1	1	0 (R)	0
15	Nursery	'Naliyeri'	1	1	0 (D)	0
16	Garden	Palm	1	1	0 (D)	0
17		Palm	1	1	0 (D)	0
18	Traffic center	(?)	0	0	1*	0
19		'Haldarvo'	0	0	1*	0
20	Opposite gate 3	'Kanazo'	0	0	1*	0
		Total	16 (36)	14 (16)	5 (11)	0 (R)

R=Roosting; TF=Tree-felling; D=Tree dead; *=Nesting pairs shifted; #=Source: Walker 1992.

Table 2. List of trees used by Indian White-backed Vultures *Gyps bengalensis* for nesting and roosting at Sayaji Baug Zoo & Garden (1985–2004)

No	Species	No. of trees	Activity [No. of nests / Roosting]
1	Palm or "Pankha Tad" <i>Borassus flabellifer</i>	13	13 / Roosting
2	"Naliyeri" <i>Cocos nucifera</i>	1	1 / Roosting
3	"Peepal" <i>Ficus religiosa</i>	1	1 / Roosting
4	"Kanazo" <i>Holoptelea integrifolia</i>	1	1 / Roosting
5	"Ambli" <i>Tamarinus indica</i>	1	0 / Roosting
6	"Haldarvo" <i>Adina cordifolia</i>	2	2 / Roosting
7	Unidentified	1	1 / Roosting
8	"Shankar Jata" <i>Caryota urenus</i>	1	0 / Roosting
	Total	20	

A visit to Nandi Hills, Karnataka, India

Nick Lethaby

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As a keen birder who gets to visit Bangalore each year, I like to visit some of the local birding hot spots when I come. The morning of 8.iii.2006, I decided to take advantage of the fact that all my meetings were after lunch and head up to Nandi Hills, which are about 60 km north of the city. Of course, being Bangalore, I subsequently managed to work a ten-hour day despite the late start!

The remnant forest in the fort here holds a few Nilgiri Wood-Pigeons *Columba elphinstonii*, which I hoped to see better views of than in my previous visits. In addition, the Nandi Hills have a record of attracting interesting wintering and migrant species such as Pied Thrush *Zoothera wardii* and Ultramarine Flycatcher *Ficedula superciliaris*. It seems likely that the isolated hill-top forest concentrates migrants

from quite a wide area and since birds should likely be on the move by March, I was hopeful something of interest might show up.

On arrival I headed straight into the fort to check out the forest there. There was no sign of any Nilgiri Wood-Pigeons and initially I saw just some of the typical residents and winter visitors: Spotted Babbler *Pellorneum ruficeps*, Blue-headed Rock-Thrush *Monticola cinclorhynchus*, Ashy Drongo *Dicrurus leucophaeus*, and Asian Paradise-Flycatcher *Terpsiphone paradisi*. I decided to head into a somewhat more open glade with smaller trees where I had seen a Verditer Flycatcher *Eumyias thalassina* on a previous visit. This 'glade' is behind the back of the reservoir and contains a small nursery. I didn't have any luck with interesting flycatchers on this visit, but the 'glade' still turned up some nice birds. After viewing singles of 'Nilgiri' Blackbird *Turdus simillimus*—birds here are of the 'black-capped' form rather than the 'black-headed' form found in the real Nilgiris—and Tickell's Blue-Flycatcher *Cyornis tickelliae*, both local residents, I enjoyed cracking views of a male Indian Blue Robin *Luscinia brunnea* sitting right out in the open—a few of these handsome birds winter at Nandi Hills—and saw a total of three on this visit.

The smaller trees in the glade offer the opportunity to get some close views of *Phylloscopus* sp. warblers. Although I've only seen the regularly wintering Greenish Leaf-Warbler *Phylloscopus trochiloides* and Tickell's Warblers *P. affinis* at the Nandi Hills on previous visits, I always check close birds because there are several other species that winter in SW

India that might be expected to show up on migration occasionally. This time my luck was in as I noticed a 'phylloscopus' low down in the small trees. It was a Tytler's Leaf-Warbler *P. tytleri*—a lifer for me. I had very good views and saw the long, all-black bill, black legs, and the lack of wing bars. Incredibly, while looking at this I kept seeing another warbler that was obviously a 'Yellow-browed' type. After the Tytler's disappeared, I relocated this bird and had good looks at it. Hume's Warbler *P. humei* and Yellow-browed Warbler *P. inornatus* can be very tricky to ID, but the call, a slightly slurred 'too-it', was a bit different from the clear 'tsueet' of a Yellow-browed Warbler. And the bird was pretty dull with a slight buff tinge to the supercilium. Based on this, I believe it was a Hume's Warbler.

About ten minutes after seeing these warblers, I had incredible looks at an Indian Pitta *Pitta brachyura* (also a lifer) that obligingly fed right by the path, in the open, for as long as I wanted to look. Subsequently on a visit to Kerala, I learned that Indian Pittas are primarily active at night and to see one there we had to look for them in the half light at dawn and then spotlight one perched in a bush. It was only then I realized how lucky I was to see one feeding openly in broad daylight.

Checking the open woodland at the very top of the hill proved somewhat anticlimactic, with just a group of Oriental Tree Pipits *Anthus hodgsoni* to add to the list. A last look around the woods in the lower part of the fort produced a somewhat out of place Hoopoe *Upupa epops*, which I tracked down after mistaking its call for some kind of cuckoo.

Recoveries from the Newsletter for Birdwatchers (1967)—14

Zafar Futehally

Futehally, Z. 2006. Recoveries from the Newsletter for Birdwatchers (1967)—14. *Indian Birds* 2 (5): 142–143.

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1967 was a particularly good year for the *Newsletter* and for me as these notes will show. The "AGM" was held on 17th December 1966 and "there were a large number of people present...undoubtedly (due) to the attraction provided by the showing of E.P. Gee's films later on." The annual subscription was retained at Rs 5 per annum.

The January issue was dominated by the article "From a Train" by the evergreen KS Lavkumar. He overcomes the problem of the shaking train, and hence the ineffectiveness of the binoculars by, "the compensation (provided) by the great area covered..." A total of a hundred species were listed, seen from trains, starting from the common house crow and ending with bar-headed geese. "The slower trains are an advantage in the greater opportunity they give to identify the bird. I have watched a pair of Sarus Cranes caring for their young, and another pair...standing over an egg on a heaped nest of rushes, Pied Kingfishers hovering over a lily-choked lake near Hyderabad, Whiskered Terns skimming edges of a tidal mud (bank) near Bombay, Blue-cheeked Bee-eaters rising in hundreds one early September morning from

an acacia in Marwar, solitary Kashmir Rollers buoyantly flying south on their autumn migration to Africa." In short, Lavkumar misses no bird even without his binoculars and even reported seeing "a migration flight of White-eyed Buzzards."

The *Newsletter*, being the only one of its kind in those days, was an effective tool for motivating amateurs to write about their experiences. I did not realise though that I was such a dreaded creature as E.D. Avari seems to suggest. "A psychological dread of appearing in print has enabled me to live happily, alas, until the letter arrived from the Editor of the *Newsletter*..." '...a long article / short article / review / letter, etc...' "I still shudder as I frantically type this after a hurried consultation of my moth-eaten notes."

But like many shikaris of the old days Avari was deeply interested and well informed as these extracts will show. "Two trips to Tibet during my school days come to mind. By and large I have found that the bird life of the hill areas is common to Bhutan, Sikkim, Nepal and this district, which spreads its dense tropical foliage throughout the base of the

four regions I have mentioned above. In similar Savannah-like riverine forests are found the Lapwings, Ibisbills, Nightjars, Herons, Mergansers (Goosanders), Fairy Bluebirds, both species of the Himalayan Hornbills, the Great and the Lesser, the doves including the flashy Emerald, the Spotted, and the Rufous Turtle...”

“Among my best friends in the bird world can be counted the fearless little Sikkim Black Tit (*Parus rubidiventris beavani*) which kept up its cheerful little song, rather like the common Darjeeling Green Backed Tit, throughout a fearful thunderstorm with lightning striking the neighbouring Silver firs and Junipers, accompanied by the most awesome thunder only heard at the heights of Sandakhphu and Phallelung (Phajut) the tri-junction of Nepal, Sikkim and Darjeeling district at about 12,000 feet. While I stood cowering before this display of nature’s wrath, the little fellow called away merrily, “*whiwee, whiwee, whiwee,*” as if telling me not to worry. His lower altitude cousins would have probably died of heart failure on the spot as I nearly did during that frightful experience which lasted over an hour.” Avari concludes his article by saying, “For a person interested in birds, there are very few places like our environments here in the whole wide world...”

Tea plantations and coffee estates have been accused of cutting down forests in the Western Ghats and north-eastern India, and interfering with the migratory corridors of elephants and other wildlife. This cannot be denied but as R.E. Hawkins used to say, “Half a loaf is better than nothing.” Tea and coffee luckily both require shade trees to soften the light, and these native trees (*Erythrina* and the like) seem to have played a part in the survival of birds. The owners of these estates were often good naturalists, and I quote from the article, “A terai tea garden in March” by Maureen Thom. “Bare shade trees and well pruned tea bushes are a perfect background for birdwatching at present though the lack of shade and cover must be anything but a joy to the birds themselves. Fortunately for them some of the sections are only lightly pruned and they make full use of this. Already on March 18th, I saw a Common Mynah carrying caterpillars busily into a particularly thick patch, and the Magpie Robins who built last year in the tea to the east of the bungalow are hard at it again. In these still leafy sections, a few winter visitors still linger. Brown Shrikes, and Red-breasted Flycatchers are still with us, and Collared Bushchats were, up to about the 9th. There were at least two pairs of Tree Pipits around this month, who, disturbed from their investigations under the tea, fly up into the shade trees with their plaintive “peeping”, there to wag their tails slowly until all is quiet again when they drop straight down into the tea. I have not seen Grey-headed Flycatchers at all this month, but the sound of hedge-clipping still indicate the presence of Blyth’s Reed Warbler in the heart of a tea bush, and a little patience will be rewarded by seeing it emerge at the top “clipping” and jerking its tail.”

Another English lady, Sarah Jameson, continued her association with the *Newsletter* even after moving over to Coonoor later. But in 1967 she wrote from West Bengal for the October issue, “I have seen 4 winter migrants already. I noticed a couple of Brown Shrikes in the garden on September

11th and have seen them daily since. It would be interesting to know if they are the same two who were with us last winter. Just outside our garden is a small plot of ground that was used as a bed for paddy seedlings, and here standing in shallow water, I was surprised to see a couple of snipe on the evening of September 6th. 3 days later in the same place I saw two waders nodding their heads and wagging their tails up and down till suddenly they rose calling *dee-dee-dee-dee*. I identified them as Common Sandpipers. The next day I saw there a solitary Green Sandpiper the white on its tail showing very conspicuously as it flew away low over the paddy. The locally migratory Green Bee-eater arrived in the garden on August 28th. I am glad that this attractive bird with its cheerful *tree-tree* is back again. I have not seen or heard it here since April.”

I said earlier that 1967 was a good year for the *Newsletter* and for me. In September I was invited to attend the Third International Short Course on Management of National Parks and Equivalent Reserves organized by IUCN in the USA. We had a wonderful time wandering in the Parks—Yellowstone, Grand Teton and others in the Rocky Mountains. I wrote an account in the November issue and I quote a para, “...the course was organised as a travelling seminar commencing at the Grand Teton National Park on August 27 and ending at Grand Canyon in Arizona on September 22...To live intimately with so many conservationists from all over the world is in itself an education, it is quite unlike any other political or economic conference for among conservationists the words mine or thine have no meaning. The natural assets of the earth, its scenery, wildlife, and historical monuments belong to everyone and destruction or erosion of these anywhere is felt to be a common loss of the human race...”

The December issue had an unusual article by young V. Ravi, President, Nature Study Club, Guntur. I quote from the abstract, preceding the article, “In this note we are giving an outline...of the nesting behaviour of the House Sparrow. Dr Salim Ali’s appeal for a thorough study of this very common and important bird of the human environment, as well as D. Summers-Smith’s interesting monograph on it stimulated us to make the attempt.” The attempt was very worthwhile and much was learnt about selection of the nest site, construction of the nest, mating, egg laying, feeding the chicks, partnership, and “other social activities” as well.

The year ended with a question from Sudhir Vyas, then a young man, now a prominent diplomat yet deeply involved in bird watching. In the correspondence of December he says, “Today morning I saw a kite which appeared different from the Pariah Kite. It was soaring in company with two Pariah Kites so the differences were quite clear. It appeared slightly longer and had a curious pale head. The upper surface of the tail appeared bright chestnut when the bird banked in flight. The tail also appeared more deeply forked. Its flight was similar to the Pariah Kites. I think it was the Common Kite (*Milvus milvus*). Please let me know if my identification was correct and whether it has been recorded from Pune before.” Could it have been? Let someone from Pune respond.

Correspondence

How is 'Liocichla' pronounced?

I was asked recently how the generic name *Liocichla* is pronounced. It is not a classical Latin word, but it is now part of scientific (Latin) nomenclature in accordance with the arbitrary and complex rules of the International Code of Zoological Nomenclature.

The name has the components "leio", from the ancient Greek leioV [smooth] taken from the generic name *Leio[thrix]*, and the Greek noun kiclh [thrush]. When Latinized within the context of scientific nomenclature, leio became *lio*, and kiclh became *cichla*, thus yielding *Liocichla*.

As a Latin word, *Liocichla* is pronounced liokikla: 'li'—as in lid (not as in life), 'o'—as in know (not as in now), 'ki'—as in kit (not as in kite), and 'cla'—as in clap (not as in clay or claw).

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H9R 5M4

Bugun Liocichla

Thanks for the July–August 2006 *Indian Birds*. As usual it is a very well brought out publication and I must, as usual, complement you of a very dedicated effort.

Regarding the acceptance of the new species of *Liocichla*, I recollect the day I had informed the late Dharmakumarsinhji on recording the White-bellied Minivet in the Hingol Gadh jungle: the first record for Saurashtra. He promptly wanted proof by way of a specimen. Instead, I did the very next thing which was far, far better; I put up a hide at a nest and when he dropped in on his seasonal monsoon visit, I put him in it. Of course, extension of range and the establishing of a new species are two quite different matters, but then, does it really matter whether scientists accept the new species as valid or not when the birds are happily foraging around with all visitors to see and admire?

As far as I am concerned, we have a new species whether ornithologically accepted or not. For example, there is the yellow bulbul with a black head and upright crest in NE India and a yellow bulbul with a crestless black head and ruby red throat considered as subspecies by ornithologists! As far as I am concerned, we have two species. I hope permission will not be granted for "collecting" a type specimen of Bugun *Liocichla*.

My congratulations to Ramana Athreya.

Lavkumar Khacher

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24.ix.2006

Red-necked Falcon *Falco chicquera* in Ahmednagar, Maharashtra, India

On 20.i.2006 at about 20:30 hrs I had a call from an industrial worker, that an uncommon bird had been found injured on the Nagar–Arangaon road (c. 5 km from Ahmednagar city). The area is interspersed with roadside trees, cultivation and residential colonies. As January is a month of 'Makar Sankranti', the sky is always full of colourful kites and there were many injuries to birds because of the sharp thread (locally called 'manja') used to fly kites. I requested him to keep the bird for the night collected it in the morning to keep it in a cage at the forest

department. When I saw the bird I found that it was a Red-necked Falcon *Falco chicquera*. I had never seen this bird in this area (Kurahde 1996).

The Red-necked Falcon is a fairly uncommon resident of the Deccan and the ghats of Maharashtra and probably breeds in Ahmednagar district (Prasad 2003). Though it is common in some districts of Maharashtra, this might be the first record from Ahmednagar city.

References

Kurahde, S.M. 1996. Avifauna of Ahmednagar city, Maharashtra, India. *Pavo* 34 (1&2): 53–59.

Prasad, A. 2003. Annotated checklist of birds of western Maharashtra. *Buceros* 8 (2&3): 1–174.

Sudhakar Kurhade

Honorary Wildlife Warden,

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Short-toed Eagle

Forgive me for a grandfatherly indulgence but I think this is a rather good birdy joke. We went to Kings Lynn (Norfolk) for my grandson's sixth birthday, bearing gifts of course. To keep his four-year-old brother happy we also took him a gift or two. He is into raptors (true) so we had bought him a little book of stick-on pictures. He asked me where to put the sticker of the Short-toed Eagle. I showed him and asked him what he thought this eagle ate. He looked at me with wide eyes and said promptly "Short Toads?" (He is also into amphibia).

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Errata

Indian Birds 2 (4) July–August 2006.

Page 101 col 1 line 2 from bottom: change scientific name to *Anser fabalis*.

Page 101 col 2 line 3 from top: change scientific name to *Anser anser*.

Page 101 col 2 line 5 from top: change scientific name *Branta ruficollis*.

Page 101 col 2 line 20 from top: change scientific name to *Anas penelope*.

Page 101 col 2 line 38 from top: change scientific name to *Aythya baeri*.

Page 102 col 2 line 14 from bottom: change scientific name to *Larus brunnicephalus*.

Page 102 col 3 line 15 from top: change scientific name to *Psittacula eupatria*.

Page 103 col 1 line 16 from top: change scientific name to *Alcedo hercules*.

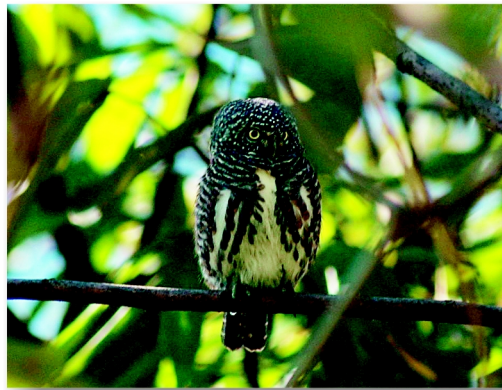
Page 103 col 2 line 14 from top: change scientific name to *Chrysocolaptes lucidus*.

Page 103 col 2 line 18 from top: change scientific name to *Serilophus lunulatus*.

Page 103 col 3 line 16 from top: change scientific name to *Monticola rufiventris*.

Back Cover photographs (clock-wise from top):

Hunter with Himalayan palm civet; Lady with Rufous-necked Hornbill head-dress, White-throated redstart *Phoenicurus schisticeps*; Collared Owlet *Glaucidium brodiei* (all above photos by R. Naoroji); Berry eaten by birds at Lava.



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