

# Hunting of avifauna in proposed Tsangyang Gyatso Biosphere Reserve, Western Arunachal Pradesh

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## Abstract

The Monpa tribe living in the higher altitude of Arunachal Pradesh practices age old transhumance practices and livestock till date remain the major source of income for these people. Transhumance in this part of the world is seasonal instead of nomadic and they mostly return to their respective villages during winter. During this period of time these livestock herders tend to hunt avifauna along with other faunal species. This paper documented more than 60 species of avifauna mostly hunted during transhumance along with the conservation priorities and traditional belief associated with some species.

## Introduction

Wildlife hunting among different tribe of the world is associated with the sustenance of tribes, their customs and festivals. While in most of the cases these hunting practices are being governed by non-codified system of



Pasturelands are being traditionally managed- a view of Pasture land at Lubrang village, West Kameng District (photo: K. Mazumdar)

management of faunal resources. Wildlife hunting is a global issue and is on the raise across the tropical forests of South America, Africa and parts of South East

Asia. There is a growing body of literature that demonstrates the significant impact of hunting on wildlife in tropical forests (Robinson and Bennet 2000). Some people debate that both the resources and exploitation of those resources are part of this tribal cultural heritage. The Himalayas is one of the most important regions in the world due to rich biological diversity and contains many endemic and threatened animal species (Baille and Groombridge 1996; IUCN 2003). The wild animals are utilized by various ethnic people to maintain their rich cultural traditions (Borang 1996; Sethi & Hilaluddin 2001; Kumar & Solanki 2004; Harit 2002; Solanki 2002; Solanki & Chutia 2004; Solanki *et al.* 2005; Chutia, 2010).



Hunting of Birds with Catapult is one of the chief modes adopted by the local community in Western Arunachal Pradesh (photo: K. Mazumdar)

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In forests throughout northeast India, almost every type of wild animal is being hunted. Hunting is regarded as a serious threat to wildlife in Arunachal Pradesh, one of the biodiversity hotspots of India. The state of Arunachal Pradesh has several indigenous communities who hunt for various reasons (Aiyadurai, 2007; Aiyadurai, 2008). Hunting and bushmeat utilization are integral parts of the sociocultural traditions of many rural and tribal communities of the forest zone (Bennett and Robinson, 2000).

Hunting is still central to the culture of the people of Arunachal Pradesh; many of them are still hunter gatherers, e.g. among tribes of Eastern Arunachal Pradesh, hunting is integral to shifting cultivation and its associated culture since time immemorial. Whereas in western part, though the shifting agricultural practices does not hold good to that extent, hunting is considered as nutritional tallying along with part of their culture. And this East-west cultural similarity in terms of hunting still carries some weight today. Addition to this various animal parts features prominently in their indigenous life in the form of decorative and ritual objects; they include skins, feathers and bones. Though it is the accepted rationality that traditionally the Monpas do not hunt to that extent, but during grazing period it is reported by the young grazers that they do hunt avifauna along with other species of fauna during grazing period on their way to the high altitude rangelands.

The tribal population of the state practice hunting of mountain ungulates for meat, hide and trophies. Moreover, due to use of firearm for hunting instead of bows and arrows, traps and snares which were used earlier, hunting intensity has increased. The traditional conservation ethics amongst the local tribal



**Interview with the herder at Potok grazing area under West Kameng district (photo: K. Mazumdar)**

communities included taboos on hunting of wild animals with younger calves or pregnant females.

#### **Study area & methodology**

A questionnaire survey was conducted during the month of October 2010 to July 2011 within the jurisdiction of West Kameng district, Arunachal Pradesh. The survey adopted a methodological approach to interview the yak herders, local youths to collect information on the hunting of birds in the area in four selected villages of yak herders viz. Chander (10 herders), Sangti-phudung (4 herder), Namshu (3 herder) and Lubrang (5 herders) of West Kameng district. A total 22 herders from these four villages were interviewed for the purpose of collection of primary data. Livestock herders were also accompanied to collect information from their temporary shelters in the high rangelands. Interestingly these traditional grazing grounds also constitute the major part of the core zone of the proposed Tsangyang Gyatso Biosphere Reserve. It is primarily observed

that youth section of the yak herders are mostly involved in hunting of avifauna along with the other herders. Considering this factor into account youth herders of the five villages were interviewed systematically with the help of bird field guides documents the species of birds. Few field trips along with the herders were also made to their grazing ground during the hunting period to document the hunted species of avifauna. The traditional grazing grounds like Potok, Lap, Suljap etc. were visited during grazing period to document the avifauna that are being hunted all along the grazing route.

#### **Traditional Transhumance practices in the proposed reserve**

The traditional transhumance pastoralists are different from nomads as they return to the village after few months of grazing in a year and it is a common phenomenon in the Himalayan region (Misri 1998). With onset of monsoon or the summer season these migrations take place from low to higher altitudes and the

**Table 1. List of avifaunal species being hunted by the local Brokpas (livestock herders) of West Kameng, during grazing/non-grazing period**

SN	Common Name	Scientific Name
1	Alpine Accentor	<i>Prunella collaris</i>
2	Ashy-throated warbler	<i>Phylloscopus maculipennis</i>
3	Black bulbul	<i>Hypsipetes leucocephalus</i>
4	Black Drongo	<i>Dicrurus macrocercus</i>
5	Black faced laughingthrush	<i>Garrulax affinis</i>
6	Black Redstart	<i>Phoenicurus ochruros</i>
7	Blendsford's Rosefinch	<i>Carpodacus rubescens</i>
8	Blue fronted redstart	<i>Phoenicurus frontalis</i>
9	Blue Whistling-thrush	<i>Myophonus caeruleus</i>
10	Brown Dipper	<i>Cinclus pallasii</i>
11	Brown-throated Fulvetta	<i>Alcippe ludlowi</i>
12	Buff-barred warbler	<i>Phylloscopus pulcher</i>
13	Chestnut-tailed Minla	<i>Chrysominla strigula</i>
14	Dark breasted Rosefinch	<i>Carpodacus nipalensis</i>
15	Duskey Warbler	<i>Phylloscopus fuscatus</i>
16	Eurasian Blackbird	<i>Turdus merula</i>
17	Eurasian Tree Sparrow	<i>Passer montanus</i>
18	Eurasian Treecreeper	<i>Certhia familiaris</i>
19	Gold Napped Finch	<i>Pyrrhoptectes epauletta</i>
20	Golden Bush Robin	<i>Tarsiger chrysaeus</i>
21	Golden spectacled warbler	<i>Seicercus burkii</i>
22	Grandala	<i>Grandala coelicolor</i>
23	Green-backed tit	<i>Parus monticolus</i>
24	Greenish warbler	<i>Phylloscopus trochiloides</i>
25	Grey backed shrike	<i>Lanius tephronotus</i>
26	Grey Bushchat	<i>Saxicola ferreus</i>
27	Hill Prinia	<i>Prinia atrogularis</i>
28	Long tailed shrike	<i>Lanius schach</i>
29	Nepal House Martin	<i>Delichon nipalense</i>
30	Olive backed pipit	<i>Anthus hodgsoni</i>

SN	Common Name	Scientific Name
31	Oriental Turtle Dove	<i>Streptopelia orientalis</i>
32	Oriental white eye	<i>Zosterops palpebrosus</i>
33	Plain backed Thrush	<i>Zoothera mollissima</i>
34	Plumbious water redstart	<i>Rhyacornis fuliginosa</i>
35	Red billed Chough	<i>Pyrrhocorax pyrrhocorax</i>
36	Red Collared Dove	<i>Streptopelia tranquebarica</i>
37	Rufous- bellied Niltava	<i>Niltava sundara</i>
38	Rufous vented Yuhina	<i>Yuhina occipitalis</i>
39	Rufus breasted Accentor	<i>Prunella strophciata</i>
40	Rufus ramped bush Robin	<i>Cercotrichas galactotes</i>
41	Rufus Sibia	<i>Heterophasia capistrata</i>
42	Rufus vented Tit	<i>Periparus rubidiventris</i>
43	Scarlet Minivet	<i>Pericrocotus flammeus</i>
44	Speckled Wood Pigeon	<i>Columba hodgsonii</i>
45	Spotted Nutcracker	<i>Nucifraga caryocatactes</i>
46	Streak Rosefinch	<i>Carpodacus rubicilloides</i>
47	Striped throated Yuhina	<i>Yuhina gularis</i>
48	Stripped laughingthrush	<i>Garrulax virgatus</i>
49	Whiskered Yuhina	<i>Yuhina flavicollis</i>
50	White browed Rosefinch	<i>Carpodacus thura</i>
51	White capped water redstart	<i>Chaimarrornis leucocephalus</i>
52	White Collared blackbird	<i>Turdus albocinctus</i>
53	White throated warbler	<i>Gerygone olivacea</i>
54	White wagtail	<i>Motacilla alba</i>
55	Winter Wren	<i>Troglodytes troglodytes</i>
56	Yellow bellied Fantail	<i>Rhipidura hypoxantha</i>
57	Yellow bellied warbler	<i>Abroscopus superciliaris</i>
58	Yellow billed Chough	<i>Pyrrhocorax graculus</i>
59	Yellow breasted Greenfinch	<i>Carduelis spinoides</i>
60	Yellow browed warbler	<i>Phylloscopus inornatus</i>

livestock owners & herders take their livestock to the high altitude grazing land and retreat during winter. During winter season they come down and graze near their settlement areas. The herder family is patrilineal and patriarchal with the father heading the family although the women play a significant role in

the family and have the social status almost equal to men. The grazing ground spreads over an altitudinal range of 2000-5000 m MSL in the higher altitude of West Kameng and Tawang district. There is a system of Grazing taxation prevailing in these rangelands which is collected from the herders of other villages

by the members of the four Monpa clans of Thembang village (known as *Bapus*) who have traditional ownership rights over the grazing areas.

### Result and Discussion

The mid- and high-elevation areas of western Arunachal Pradesh are inhabited by pastoral and agro-pastoral indigenous. Livestock rearing is one of the mainstays of Monpa economy, while the conflict that exists due to livestock predation by wild carnivore species is also another reason of enhanced conflict among these pastoralist people. Despite conservation measures rooted in their culture that invariably protects wildlife, both the tribes hunt mountain ungulates, which serve as an alternatives available for food and forms one of the major sources of Management of Faunal Resources protein for tribal people. Over 60 species of birds are recorded as being hunted by the pastoralist people or livestock herders of Monpas community (listed in Table 1). The importance of these grazing areas as avifaunal habitat and breeding ground could be understood from the fact that during the survey we documented the photographic and video-graphic evidence of a breeding pair of Ruddy shelduck (*Tadorna ferruginea*) from Tsomgo Ama wetland (4535 m altitude spread over 0.279 sq km), first time from this part of Arunachal Pradesh (Mazumdar *et al.* 2011). The presence of Mallard (*Anas platyrhynchos*) was also reported first time from the Sela lake (4160 m MSL) & Panggang Teng Tso lake (3900 m MSL) of western Arunachal Pradesh (Gogoi *et al.* 2010). Additionally the proposed Biosphere Reserve area also provide habitat to more than 200 species of avifauna including many vulnerable and near threatened species. On the other hand the Chander-Thungri grazing route is also encompassed as the Important Bird Area (IBA) along with the other 3 areas of west Kameng & Tawang district (Islam & Rahmani, 2004).

The tribes have historically relied on the wildlife resources not only towards conserving their cultural traditions, but at the same meeting with their livelihood related concerns. Their belief systems are a good blend of animistic values and Buddhist traditions, all expressed through a cultural calendar with a wide range of festivals and rituals. However, in recent times, there has been a tendency of erosion in their values towards nature and natural resources around, which often gets expressed illegal wildlife trade, a serious threat to the wildlife in the region. Some of the major conservation challenges that avifaunal species of the area persistently faces which has come up during this survey are mostly the illegal felling and Deforestation, firewood collection, Construction and developmental activities apart from hunting during grazing period.

### Conclusion

The tribes of this part of Himalaya historically relied on the wild resources not only to keep cultural practices alive, but also for subsistence. There are many festivals, rituals and belief systems that are being observed by the communities, where they pray with the canonical scriptures many of which are regarded as the oral teaching of Gautama Buddha in their crop field for the good harvest and the protection of the cultivated grains from insect and other crop raider species and thus prosperity of the whole village. In case of avifauna, some of the species were not hunted traditionally as they are considered or believed as sign of prosperity and happiness for the people e.g. Monpa farmers of Sangti valley of West Kameng district and Zimithyang valley of Tawang District consider the Black-necked Crane (*Grus nigricollis*) as sacred bird, which visits them only during the rice harvesting season. They believe that this bird brings prosperity to the village. Similarly Monpa people also believe that the passage of dabbling ducks (swans, geese and ducks) through their village and agricultural field during their breeding season brings prosperity and good harvest. Considering the utility value of the faunal species, the Monpas tribe has evolved mechanisms in the form of totems, taboos and other customs which helps in indirect conservation aspects. However, nowadays these taboos are fast eroding, mostly because of increasing in population and developmental activities and dilution of the traditional values. Proper mechanisms should be developed to promote these fast eroding belief systems and customs to linking it towards greater conservation perspective.

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