

of the species close to the droppings. The droppings of Mongoose were hard to find and we came across it only on three occasions during the study period.

On examination of 28 of the droppings collected we counted 362 seeds of *Phoenix farinifera*, a small (3 m tall) date palm species common in Sriharikota. Later, we also recorded seeds of *Grewia rhamnifolia* and *Syzgium cumini*. In Sriharikota, the Golden Jackal *Canis aureus* and Small Indian Civet *Viverricula indica* are the major dispersers of these three plant species (David *et al.* 2008).

According to Balasubramanian and Bole (1993), the

Common Indian Mongoose does not play a significant role in seed dispersal as it eats the pulp and drops the seeds under the parent plant. However, our observations in Sriharikota suggest that the Common Indian Mongoose is a probable legitimate seed disperser as seeds were recorded in its faeces. Other than the mongoose, small carnivores like Badgers, Martens and Civets are known to play a role in seed dispersal and facilitate germination (Herrera 1989; Rabinowitz 1991; Zhou *et al.* 2008). Hence, small mammals like the mongoose must be intensively evaluated for their role in seed dispersal.

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#### 4. HIGHEST ELEVATIONS REACHED BY ASIAN ELEPHANTS *ELEPHAS MAXIMUS* LINN. – A REVIEW

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The Asian Elephant *Elephas maximus* Linn. occurs across south and south-east Asia, from peninsular India and Sri Lanka to Sumatra and Borneo (Corbet and Hill 1992; Choudhury 1999). It occurs in the plains as well as hills, occasionally moving to higher areas. The highest mountain range within and near its distribution range is the Himalaya. How far up the species has ascended has been a matter of great interest and curiosity.

The first published attempt to find out the highest occurrence of Asian elephants was by Capt. Molesworth (1914). He mentioned of 3,109 m at Bhutan-Tibet boundary, which he recorded during the Aka expeditions. He mentioned that the elephants move up during hot weather. This area is apparently somewhere in the present West Kameng district of Arunachal Pradesh because the Aka tribes inhabit there. Although, the boundary of both Bhutan and Tibet is nowhere nearby, it is understandable that about a century back clear demarcation on the inaccessible mountains was difficult.

Shebbeare (1915) while quoting Mr. Tinne of the Forest Department stated that elephants ascend at all seasons

at Rechila and Sathila in British Bhutan, at 3,066 m to feed on bamboos. Even tracks were seen in 0.6 m snow in April 1907. Elwes (1916) while supplementing Shebbeare (1915) said that “in August 1886 I made a trip with Mr. Prestage from Darjeeling up the Rishila or Rechila with the object of finding a shorter and better route into the Chumbi Valley. For some miles the only path that then existed was made by wild elephants, and our camp below the summit at about 2,743 m was disturbed in the night by a herd. But I was assured by my friend, the late Mr. C.B. Clarke, FRS, that on one of his botanical expeditions into eastern Sikkim, he had seen elephants’ tracks in the snow at about 3,657 m”.

Betts (1947) mentioned that “While crossing the Bompou La (2,926 m) in early September I was surprised to find fresh traces of a large number of elephants...” He further stated that the ringal bamboos growing there attracted the elephants during the summer months. He, however, did not pin point the location and no subsequent writer except Choudhury (1999) highlighted the site.

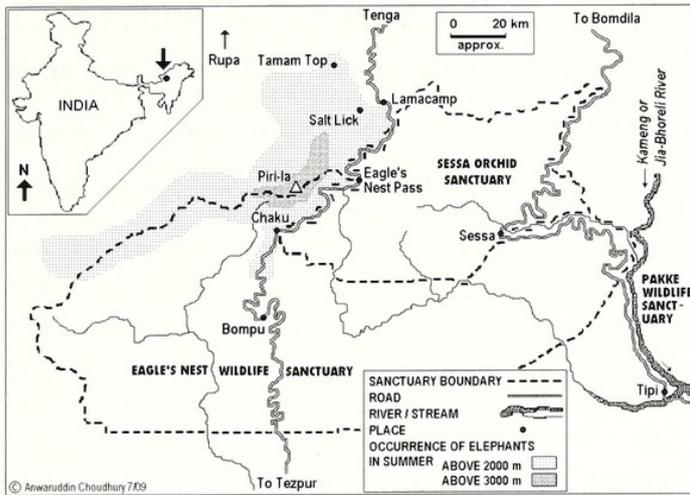


Fig. 1: Map of Eagle's Nest Sanctuary and Piri-La ridge showing high elevation summer range of elephants in western Arunachal Pradesh

The sites mentioned by Molesworth (1914) and Betts (1947) appeared to be the same and will be discussed later in detail. Those of Shebbeare (1915) and Elwes (1916) are located in the present day Neora Valley National Park of Darjeeling district, West Bengal, and adjacent areas of Sikkim (Pangolakha Wildlife Sanctuary, East Sikkim district) and Bhutan (Samtse or Samchi district). However, there is no recent report of occurrence in this part of Sikkim or Bhutan although the pachyderms move considerably high up in the Neora Valley, but all such movements are in summer and not in all seasons as mentioned by Shebbeare (1915).

The sites of Molesworth (1914) and Betts (1947) are somewhat difficult to locate for people unfamiliar with eastern Himalaya as Molesworth (1914) mentioned of a general area and latter just Bompou La. Presently, there is no place called Bompou La but there is a station having camps of road construction labourers known as Bompou ( $27^{\circ} 04' N$ ;  $92^{\circ} 24' E$ ) in West Kameng district, Arunachal Pradesh. It is through this place that the old Foothills – Bomdila road passes. The highest point on road is north-east of Bompou, known as Eagle's Nest Pass at 2,850 m elevation ( $27^{\circ} 07' N$ ;  $92^{\circ} 28' E$ ). Eagle's Nest appears to be the new name for Betts' (1947) Bompou La? The mountain ridge above Eagle's Nest Pass is known as Piri-La, whose highest point is 3,200 m high. Piri-La apparently refers to a pass on an old foot track, but is now also the name of the ridge as well as the peak. Many of these locations are now inside Eagle's Nest Wildlife Sanctuary and Sessa Orchid Sanctuary (Fig. 1).

I had the opportunity to work in the area in the 1990s (Choudhury 1999, 2003). I observed dung, footprints as well as

live animals in the area including Piri-La ( $27^{\circ} 07' N$ ;  $92^{\circ} 25' E$ ), which has a nice topography and enroute there were several smaller flat areas with pools and abundant ringal bamboos. The elephants start ascending in late March or early April and remain there till end-October. They move from south-west of Piri-La towards north and north-east up to Tamam Top ( $27^{\circ} 10' N$ ;  $92^{\circ} 27' E$ ; south of Tenga and south-east of Rupa) for about 5-6 months before starting to descend at the onset of winter when the area experiences snowfall.

While ascending they follow the main road (gravel road) from Bompou to Chaku; some directly ascend Piri-La while others continue through the road via Eagle's Nest Pass to Lamacamp. Interestingly, the villagers and visitor's follow the trail made by elephants while ascending Piri-La (including me). The animals which directly ascend Piri-La follow the crest line of the mountains, which is not rugged but rolling for their subsequent movement and foraging. The elephants which travel through the road to Lamacamp mainly affect the roadside areas at Eagle's Nest Pass, where some flat and rolling areas are present with abundant bamboos, and near a large pond with salt lick and ringal bamboos near Lamacamp. The elephants cannot descend from the ridge to the road at most stretches of the road owing to steep slopes and cliffs. Most of the animals (except for some lone bulls) mingle again above Lamacamp at Tamam Top.

While descending, the elephants take both the routes till Chaku, but it is not known (unless some animals are radio-collared) whether the same animals are passing through. So far as the number of elephants is concerned, they were found to be in family groups or small herds of 7-10 animals. Although congregations have not been encountered, on Piri-La and Tamam Top, where the flat or rolling ground is relatively large with abundant ringal bamboos and grass, herds of 20+ were reported by locals who occasionally pass through on foot. The total number of elephants spending their summers at such height is estimated to be between 50 and 80.

The road in question (Foothills-Bompou-Chaku-Eagle's Nest Pass-Lamacamp-Tenga) is largely a disused one with only a few vehicles of Border Roads Organisations (BRO, GREF, BRTF, etc.) and hunter's plying on it. but it was under widening and improvement for all-weather traffic between Tezpur and Bomdila till such steps were shelved a few years back owing to possible damage to the sanctuaries. This remains the major threat for future also, which might stop such interesting migration of the elephants to such a height every year.

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## 5. FIRST SIGHT RECORD OF ASIATIC IBEX *CAPRA IBEX SIBRICA* FROM KUGTI WILDLIFE SANCTUARY, CHAMBA, HIMACHAL PRADESH, INDIA

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Snow Leopard survey was conducted in Uttarakhand and Himachal Pradesh by WWF-India in 2008. Kugti Wildlife Sanctuary (KWLS) was one of the study areas for collecting the information on direct and indirect evidences of Snow Leopard, co-predators and their prey. KWLS is situated in the Chamba district of Himachal Pradesh, India. It represents the Biogeographic zone-2A of North-West Himalayas (Rodgers and Panwar 1988). On November 14, 2008, while surveying from Duggi to Relang and scanning surrounding mountains for evidence of wildlife, an Asiatic Ibex *Capra ibex sibirica* was sighted at location 32° 39' 55.1" N and 76° 46' 39.5" E. It was a group of five individuals, of which two males could be identified. The animals' identity was ascertained from the pointed beard, and shape of horns that were thick scimitar-shaped (Prater 1998; Menon 2003). The sex of the remaining animals could not be determined due to long distance (about 100 m) and low visibility.

They appeared for about three to four minutes and went to the other side of the hill. The group of Ibex was sighted at an elevation of 3,700 m at the southern aspect. These were at 50° slope and in a shrubland. The vegetation consisted of grass (40%) and shrub (60%). This was the first sighting of Asiatic Ibex in the KWLS. Only indirect evidences were recorded so far (G.S. Rawat and S. Sathyakumar pers.

comm.). Apart from Asiatic Ibex *Capra ibex*, Brown Bear *Ursus arctos*, Goral *Nemorhaedus goral* and Monal Pheasant *Lophophorus impejanus* were also sighted during the survey.

The Asiatic Ibex is a wild goat, and male can easily be identified by the thick scimitar-shaped horns and pointed beard. Female can be identified by the smaller size and thin parallel horns. The coat is dark brown with dull white saddle patches. It is distributed in the mountain ranges (3,650 m to 6,700 m) of western Himalayas, i.e., west of Sutlej in Himachal Pradesh and western Ladakh (Menon 2003). It prefers steep slopes and in the spring they are found low below the snow-line, attracted by the new sprouting grass where they usually graze early in the morning and evening.

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