

## Unusual Behaviour of Asian Elephants in the Rajaji National Park, North-West India

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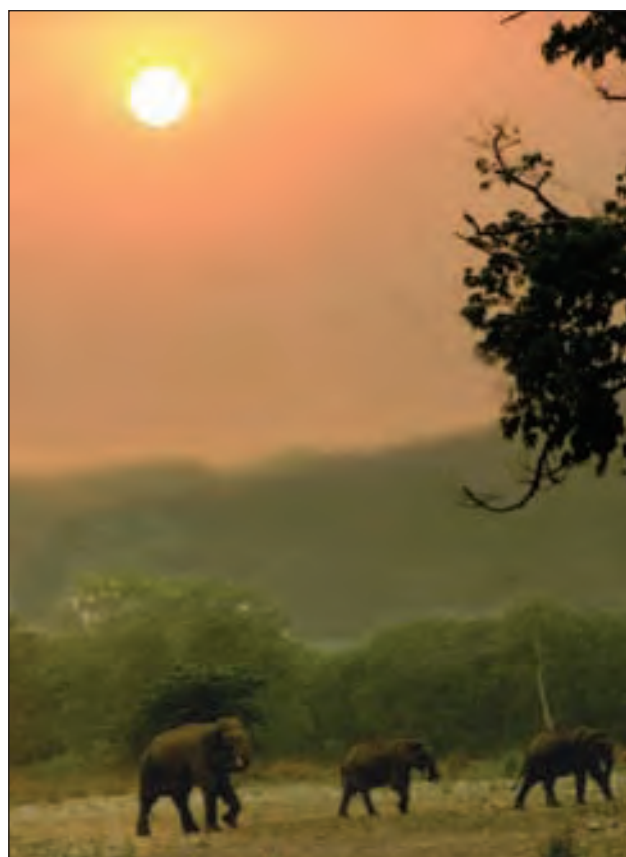
### Introduction

The behaviour of wild animals is a subject of great interest leading to understanding the nature of various species, which may be helpful in their management and conservation. The behaviour of Asian elephants (*Elephas maximus*) particularly domesticated elephants in circuses and zoos provide recreation to many people. However, the behaviour of wild Asian elephants is difficult to observe and study. Although several studies on the behaviour of African elephants (*Loxodonta africana*) have been conducted, few studies have been carried out on the behaviour of wild Asian elephants. Here we present some notes on unusual behaviours of wild Asian elephants observed during a long-term study on the behavioural biology of Asian elephants in sub tropical moist deciduous forests of India.

The observations were made in the Rajaji National Park (RNP), in the Shivalik foothills (lesser Himalayan zone), which is one of the world's most spectacular landscapes, encompassing tall grasslands and Sal forests (Fig. 1). The vegetation of the area is 'sub tropical moist deciduous' forest with extensive stands of *Shorea robusta* (Sal), *Mallotus philippinensis* (Rohini), *Acacia catechu* (Khair), *Adina cordifolia* (Haldu), *Terminalia bellirica* (Bahera), *Ficus bengalensis* (Bar), *Dalbergia sissoo* (Shisham). Rajaji National Park [29°15' to 30°31' North Latitude, 77°52' to 78°22' East Longitude] is spread over an area of 820 km<sup>2</sup> in and around the Shivalik foothills, which lie in the lesser Himalayas and the upper Gangetic plains. Spread across Hardwar, Dehradun and Pauri districts of Uttarakhand state, RNP has been designated as a reserved area for the "Project Elephant" by the Ministry of Environment and Forests, Government of India.

### Acrobatic behaviour

On 30<sup>th</sup> April 2007 when we were inside the forest we came across a group of elephants consisting of several adult females, sub-adults and juveniles and one adult male elephant. The adult male was following the group at a few meters distance. The adult male elephant saw us and started running towards us up to a few meters then suddenly stopped. The elephant then touched the ground with its trunk and bent forwards. Next it raised one of its hind legs in the air followed by the other hind leg and then the right front leg. At one point three legs of the elephant were in the air and the elephant was standing on its trunk and



**Figure 1.** Elephants during the sunset in the Rajaji National Park.



**Figure 2.** Acrobatic behaviour of an adult male.

left front leg (Fig. 2). He held this position for about one minute. Then he came to its normal position, went back and rejoined the group.

### **Climbing and sliding behaviour**

During the course of study we frequently observed elephants moving over steep hills, through very narrow passages and across steep slopes in situations even difficult for a human to traverse. At one spot in Mundal forest beat (Chilla forest range) we found footprints and feeding signs of elephants in a very narrow passage at a height of about 30 feet. We could see that there was a climber - *Bauhinia vahlii* (maljhan) at that spot, a favourite food item of elephants. The elephant had probably mounted up to that height just to feed on this fodder species.

### **Soundless movement in forest**

During the autumn a heavy bed of fallen leaves can be seen all around the area in RNP. The sound of the fallen litter was always noted while we walked through such areas with dry leaves. Even the movement of smaller wild animals makes enough noise, which is a good indicator of their movement through forest areas. However, it was observed that when elephants walked through these areas there was no sound at all. It is amazing that such an animal with a huge body and heavy legs does not make any sound while walking through these areas. Many human casualties,

mainly with woodcutters and grass-cutters, have occurred in this region. This is probably due to the victims not hearing any sound of movement of elephants before they are getting too close

### **Variations in feeding behaviour**

*Haplophragma adenophylla* (kut sagaun) and *Tectona grandis* (sagaun, Fig. 3) are important fodder species for elephants, from December to June. However, elephants have been feeding extensively on these species only since the last 5-6 years and before 2002 elephants were not observed to feed on these species. Only the bark is utilized by the elephants and they may spend even a whole day feeding on it. Consequently, elephant induced damage to these species is quite extensive. These species were planted in a few forest pockets some 20 years ago.

In Shyampur (Hardwar forest division) and Chilla forest range some elephants consume *Eucalyptus* spp. especially during dry months. Elephants started to feed on this species only after August 2007. They consume the soft bark of this species. Only four identified adult bull elephants were observed to feed on it and no groups were seen utilizing eucalyptus species as their food.

### **Long-term bull association**

Generally it is thought that bull elephants prefer to live a solitary life after attaining an age of about 16 years. Male elephants were observed to join groups during breeding periods and they were observed near groups for short durations.



**Figure 3.** Cow and calf feeding on teak bark.

During the last three years, we have continuously observed six individually identified adult bull elephants living together and moving inside and outside the protected area. In 2007, four of them were separated from each other for a short period during summer (March - June). Otherwise they were seen moving, playing and resting together and had a very close association round the year. An adult bull elephant (about 50 year old) was always observed to lead the group.

### **Unexpected close encounters with people**

We used to observe movement of elephants across the Singhal bridge on Hardwar – Bijnor National Highway. On the evening of 8<sup>th</sup> July 2006 we were waiting for the elephants to cross the bridge and saw a mentally deranged person who was totally naked coming towards the bridge. At the same time a single tusked bull elephant (commonly called ‘Ganesh’) came out close to the person. The elephant was scared of the person and ran away from him and re-entered the forest. After five minutes, the elephant came towards the bridge and attacked a vehicle creating a hole in the back of the vehicle with its tusk. However the elephant did not cause any major harm to the vehicle or to its occupants.

On the evening of July 8<sup>th</sup>, 2007, we were waiting at the Singhal bridge. A handicapped person in a hand driven handicap cycle rickshaw reached the bridge crossing the irrigation canal road. At the same time we saw two adult bull elephants emerging out from the forest and come slowly towards the national highway. The handicapped person was just 10 feet away from the elephants.

The elephant, which was in the front, saw the handicapped person and was not at all disturbed. The handicapped person also was not scared of the elephants near him and crossed the bridge followed by the elephants coming to no harm.

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A herd of elephants at Luni river, Rajaji National Park, India.

Photo by Ritesh Joshi