

An observation on sharing of the kill by a tigress with her separated daughter in Valmiki Tiger Reserve, Bihar

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The Valmiki Tiger Reserve is situated in West Champaran District of Bihar (longitude 83°50' to 84°10' E and latitude from 27°10' to 27°03' N). The *terai* and *bhabar* land of the Reserve fall in the Shiwalik Range of the Himalayas, and its northern portion is contiguous with Royal Chitwan National Park of Nepal.

The diversified habitats of the Reserve are inhabited by various wildlife species, though in low abundance. Spotted deer (*Axis axis*), sambar (*Cervus unicolor*), barking deer (*Muntiacus muntjak*), nilgai (*Boselaphus tragocamelus*), gaur (*Bos gaurus*), wild boar (*Sus scrofa*) are main prey species for tiger (*Panthera tigris*), leopard (*Panthera pardus*) and Indian wild dog (*Cuon alpinus*) – predators at the Reserve.

Due to low abundance in most of the parts of the Reserve, predation of wild herbivores is comparatively lower in comparison to domestic cattle, which go even deep (2-3 km from the Reserve boundary) inside the forest for grazing and are frequently killed by tigers and leopards. The grasslands along the sides of the rivulets are used for domestic cattle grazing in high number. These cattle are frequently killed in the grasslands by the tigers.

I have been monitoring the movement of a tigress and her cubs in the adjoining area of Sonha and Pachnad Rivulet bed in Gonauli Forest Range of the Reserve since October 2004. Till January 2005, I located the movement of two cubs with their mother. After February the cubs (one male and one female) got separated from the mother. Now, the female juvenile has small territory within the larger territory of mother, while the male lives along the Pachnad Rivulet (forming the north western boundary of Valmiki TR and Royal Chitwan National Park), about 10 km east of his mother and sibling's movement area. In fact, by the age of 18 months, juvenile males make forays away from their mother's range to begin a transient life, while juvenile females stay close to their mother, but eventually disperse by 20 – 28 months, as their mother becomes increasingly aggressive towards them (Smith, 1993). The present case is very much similar to this observation.

The female juvenile after separation started preying, mainly domestic cattle. During June 2005, I could find her cattle kill in the grasslands along the Sonha Rivulet bed on 9th June. She killed a cow calf and consumed it for 3 days. On 15th June the mother killed a cow (about 125 – 130 kg weight) in the evening in the grasslands. On 16th May at 6:00 AM I went to the kill, the tigress had left the place hardly half an hour before, as evident from the fresh pugmark impressions with water splashes around. We saw the kill almost completely covered with grasses and leaves. The kill was dragged for about 25 mts. after removal of the rumen. Rump and hind legs were completely finished.

In the morning on 17th June, both the mother and the female

juvenile were together and their pugmark impressions were found side – by – side. They were together for the first time during the last few months. They came from the hills on northern side of the rivulet and crossed it to reach the kill (killed by the mother) on the southern side of the rivulet.

The mother had dragged the kill to the hillock (from where both had come in the morning) across the rivulet bed comprising of stone pebbles and narrow water channels. The mother dragged the kill alone keeping herself on the right side of the kill. Pugmark evidences suggested that the juvenile didn't assist in dragging and she had moved along with her mother. The mother pulled the kill to a height of about 2 meters on cliff along the rivulet and dragged for further 200 mts. north of the rivulet. The kill was kept in an open area on the hillock slope. Altogether, the tigress had dragged the kill for about 300 mts from the spot of killing. Karanth and Sunquist (2000) have also reported dragging of kills by tigers over distances ranging from 0 – 350 mts. Pugmarks of the mother near the kill remains suggested that this was consumed by her, while a small portion of the kill was dragged for further 50 mts and was eaten by the female juvenile. Pugmark impressions of the juvenile were clear on the spot. Smith (1993) has reported sharing of kill by a tigress with cubs, sometimes with her older daughter, who may have her own litters, leading to temporary associations of 7 -8 related tigers.

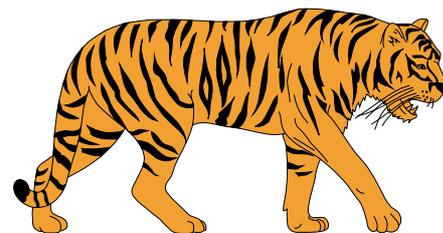
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