

Solitary Behaviour of Female Elephants in Idukki Wildlife Sanctuary, Kerala

Kannan Govindaraj

Asian Elephant Research and Conservation Centre, Bangalore, India

Solitary female elephants were observed in Idukki Wildlife Sanctuary Kerala, during our elephant population and habitat survey 2005-2006. The Idukki Wildlife Sanctuary in Idukki district of Kerala covers an area of 130 km² of which approximately 25 km² of forest area is submerged by the reservoir. The elephant population of Idukki is about 76 (Sivaram *et al.* 2006) estimated by direct sighting. Elephant density is 0.8 elephants/km² (Baskaran *et al.* 2007) by dung count method. The sanctuary is separated from elephant range number 9 by the Idukki reservoir but elephants regularly swim across to Thodupuzha range of Kothamangalam division. On the southern side human settlements completely curtails elephant movement into elephant reserve 10. Kottayam territorial division abuts the sanctuary on the eastern side.

During our population survey of elephants, on five instances we observed solitary females, 3 of them were adults and 2 of them were sub-adults. Female elephants live in groups of closely related individuals while only males disperse from their

natal herd on social and sexual maturity to lead a solitary life (Hamilton 1972; Moss 2002; Sukumar 2003). Normally unhealthy or old females that may not be able to move along with the herd would be seen alone. Sometimes due to scarcity of food resources female elephants may split from the rest of the herd temporarily. But in Idukki Wildlife Sanctuary, the solitary behavior of both healthy adult and sub adult female elephants is peculiar. The number of breeding males is fewer in Idukki Wildlife Sanctuary compared to other protected areas in Kerala.

We speculate that one possible motivation for an elephant female to temporarily leave its herd could be to search for a mate during her oestrus. The oestrus cycle of female elephants is approximately 16 weeks long but with a very brief ovulatory receptive period of 2 to 7 days (Moss 1983). During this brief period a female has to locate and attract a suite of potential mates and choose the best bull to mate with. In fairly undisturbed populations where potential mates are not scarce, eccentric behavior such as temporary separation from the herd by a female is not warranted. In disturbed populations, with highly skewed male-female sex ratios, there is possibility of behavior modifications in female elephants. Thus, the solitary behavior of females in Idukki Wildlife Sanctuary is highly unusual and therefore warrants an investigation.

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Figure 1. Solitary female in Idukki Wildlife Sanctuary.

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Author's e-mail: kannanjii@gmail.com



Elders blessing elephants at the Elephant Baci Ceremony during the Elephant Festival in Xayabouly Province, Laos, 2009 (see next article on page 42)

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