A Note on Feeding Habits of Fruit Bats in Colaba, Urban Mumbai, India

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In CCINSA and RISCINA we have never passed a period of six months (and actually it is now eight months) between newsletters and had so few new members. Either we have everybody who is interested in bats and rats already a member (VERY unlikely) or we have lost our reach into the academic and nature study institutions that have provided our current collection of members. I hope we haven't lost "our touch" to satisfy some of the needs of batty and ratty scholars and enthusiasts. Please let us know if there is something we can do to improve that doesn't cost money.

We had not mentioned before but we lost over half our funding about 3 years ago when the economy plummeted around the world, and our donors have not recovered. Be that as it may we have still brought out SMM and also conducted a training in some South Asian county every year. This year we don't have funds to go outside of India or bring anyone here so, our own Dr. Sanjay Molur, who today (really and truly) had his Viva to obtain a Ph.D. with a thesis on bats and rats. He won't get the letter confirming before we go to press so ... if we are wrong about the **Dr.** in Sanjay Molur, we are sorrier than anybody! See you next issue with a summary of his thesis! Sally Walker, Editor, SMM

A Note on Feeding Habits of Fruit Bats in Colaba, Urban Mumbai, India

J. Patrick David* and Vidyadhar Atkore**

Observing feeding behaviour of nocturnal creatures like bats is very difficult unless we are equipped with night-vision instruments. However, we were very fortunate to observe the feeding techniques of the Short-nosed fruit bat *Cynopterus sphinx* and the Indian Flying Fox *Pteropus giganteus* on the fruits of *Ficus racemosa* near the Police Headquarters in Colaba, Mumbai, without the aid of any specialised instruments. Since the tree was located in an urban area, there was bright light which made observations easier with the naked eye. The tree produced pink ripe fruits, numbering more than one thousand. Unlike other figs, the fruits are borne directly in the main trunk and other branches in bunches of 50-100. We could not collect any systematic data as it was a sensitive area and we were even questioned by sentries about our intentions. So we just observed them for 15 minutes for three days without pen or paper. It provided us valuable insights into the feeding behaviour of the two fruit bat species.

Feeding Behaviour

The Short-nosed fruit bat maneuvered for sometime around the fruiting tree and then flew directly into a bunch of fruits and took a fruit in its mouth and disappeared to feed on another tree. It stayed in the fruiting tree only for a few seconds. All attempts to pluck fruit were not successful, some of them ended in failure. It picked up fruits at the lower level, at about 2m from the ground and always took the fruit away from the fruiting tree to eat. Some of them were taken into the Police campus and some were eaten on trees along the pavement, such as *Polyalthia longifolia* and *Peltophorum roxburgii*. In contrast the Indian Flying Fox landed directly on the tree and crawled along the branches to reach the fruits. Once near the fruit it picked up a single fruit with its mouth, supported by one of its fore legs and started to feed. It did not fly away with the fruit. It took 2-3 bites to finish one fruit. The Indian Flying Fox was always found feeding a metre or two above the Short-nosed fruit bat and hence did not compete with the Short-nosed fruit bat for the fruit resource. But there was competition among Flying Foxes, there was constant squabbling and some of them were even displaced from their feeding sites.

Implications

This differential feeding behaviour of the two fruit bat species has one significant implication. The Short-nosed fruit bat, by carrying the seeds away from the fruiting tree, helps in dispersing the seeds of this species and thereby provides the seeds a better chance to germinate. The Indian Flying Fox by dropping the seeds below the fruiting tree gives seeds little chance to survive. Seed and seedling mortality are high below the parent tree and it is always beneficial for the seeds to be carried away from the parent plant (Janzen 1970). Though these might be invalid in an urban environment, in the wild these observations are very significant as have been shown by some scientists (Howe 1987).

Conclusion and Recommedations

Casual observation around Colaba, reveal that there are lots of fig trees and fruit bats were observed feeding on them. From the conservation point of view we suggest that year round observations should be undertaken to bring out the significance of figs for fruit bats in Colaba and these plants should be given priority for conservation.

References

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