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First photographic record of Indian giant flying squirrel *Petaurista philippensis* Elliot, 1839 from Jambughoda Wildlife Sanctuary, Gujarat

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Abstract

Flying Squirrels are nocturnal gliding mammals, and occur in 15 genera and 43 species worldwide and 11 species reported in India, out of them, only Indian Giant Flying Squirrel *Petaurista philippensis* found in Gujarat state. The species is mentioned as Least Concern (LC) in IUCN Red data book, but few studies indicate its decreasing status in India due to hunting, anthropogenic disturbances, habitat destruction, and agricultural encroachment. There are no existing baseline records and data on status and distribution of the species in Gujarat. However, some scattered records indicating presence of the species in Ratanmahal Wildlife sanctuary, Kevdi Reserve forest, Polo Reserve forest, Dangs forest and Vyara forest of Gujarat. Current study is first ever photographic evidence of the species from Jambughoda wildlife sanctuary of Gujarat state.

Keywords: flying squirrel, jambughoda, gujarat, first record

Introduction

Flying Squirrels are nocturnal gliding mammals, and occur in 15 genera and 43 species worldwide. 11 species of flying squirrels are found in India and mainly concentrated in the Himalayan and Northeast regions. Indian Giant Flying Squirrel *Petaurista philippensis* only found in Gujarat state.

Petaurista philippensis has widely distribution than other flying squirrels and its high density was identified in most forests of peninsular part of the country ^[1, 2]. Indian Giant Flying Squirrel is large sized as per its name with length of 37 cm (tail 41 cm), But, the Squirrel cannot truly fly as per its name, it is gliding from one tree to other tree. Its forelimbs and hind limbs are connected with a membrane or parachute. This membrane is used by this squirrel to glide in the air from higher elevation to lower elevation. Predominantly behavior of the species is crepuscular to nocturnal. It roosts in a tree hole, cavity or sheltered place in crowns of trees. In global context, according to IUCN (2017) ^[3] the species is mentioned as Least Concern (LC), but later few studies on *P. philippensis* indicate its decreasing status in India due to hunting ^[4, 5], anthropogenic disturbances, habitat destruction, and agricultural encroachment ^[6, 7].

P. philippensis is better studied species from all Asian Flying Squirrel; however there are no existing baseline records and data on status and distribution of the species in Gujarat. Some researcher and Naturalists were reported and photographed the species in Ratanmahal Wildlife sanctuary, Kevdi Reserve forest, Polo Reserve forest, Dangs forest and Vyara forest of Gujarat.

As per the existing knowledge and literature, Singh N. *et al.* (2016) ^[8] was reported some indirect evidences of *P. philippensis* in Jambughoda WLS, like Pellets of Indian Giant flying squirrel and fallen twinges and branches of Mahua (*Madhuca indica*) under the tree, as they prefer to eat the pith of branches of Mahua ^[9]. Current study is first ever photographic evidence of the species from Jambughoda wildlife sanctuary of Gujarat.

Observation

On 5th March 2016, while travelling in car at 19:35 hours from Zandhanuman to Vadodara, near Mota Raska village, we saw a black colored small animal climbing on Mahua tree (22° 21' 26.30" N 073° 41' 28.32" E); from distance we concluded the species as an Asian Palm Civet (*Paradoxurus hermaphroditus*), as Asian Palm civet is abundant in this area. When we

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reached near to that tree, the animal were almost climbed on the top canopy of the Mahua tree, interestingly in next second the species jumped from the top branch of Mahua and opened its membrane and glided in the air, after this act we conformed the species as Indian Giant Flying Squirrel (*P. Philippensis*). The Flying Squirrel glided almost 20 meters in the air, and landed on another nearby Mahua tree and started climbing towards top canopy of the tree. During this activity we get success to click some photographs of Flying Squirrel (Fig.2). After spending some time in feeding on Mahua tree, again the Squirrel glided to the nearest tree of Timru (*Diospyros melanoxylon*) (Fig.1).

Current photographic record is adds some more knowledge of distribution of Flying squirrel in Gujarat, and might be helpful to identify distribution patten of Flying squirrel from Ratanmahal WLS, Kevdi to Jambughoda WLS. Some extensive in-depth study will be help to identify some isolated population of the Flying squirrel in the State, which can be helpful in conservation of elusive and least studied species.



Fig 1: Indian Giant Flying Squirrel (*P. Philippensis*) on Timru tree



Fig 2: Indian Giant Flying Squirrel (*P. Philippensis*) on Mahua tree

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