

# Observation of melanism in Indian Giant Flying Squirrel (*Petaurista philippensis*) at Sathyamangalam Tiger Reserve, Tamil Nadu, Southern India

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Melanism is a ubiquitous phenomenon in the animal kingdom and has long been used to investigate evolutionary change (Tutt, 1891). Melanism is a development of the dark-coloured pigment melanin in the skin or its appendages and is the opposite of albinism. Historically, it was also the medical term for black jaundice. Due to melanism the coat of the animal becomes dark in colour.

The Indian giant flying squirrel, (*Petaurista philippensis*) belongs to the order Rodentia and family of Sciuridae, which vary in colour from grey to coffee-brown with a mottled back, a grey tail and pale undersides (Prater, 2005). They feed on fruits and leaves (Nandini and Parthasarathy, 2008). They construct nest mostly in tree cavities and are found in a mosaic of forests of tall trees and plantations and they leave their nests when dusk falls, and return only before dawn (Nandini and Parthasarathy, 2008).

On 12 May 2010 an injured Indian giant flying squirrel was rescued from Malliamman durgam of Thookanayakkan Palayam Range in Sathyamangalam Tiger Reserve (earlier Sathyamangalam Reserve Forest Division). Sathyamangalam Tiger Reserve located in the Erode district of Tamil Nadu, is the largest tiger reserve in the state. With a forest area of 1,411.6 km<sup>2</sup>, the reserve is a part of the Nilgiri Biosphere Reserve and lies between the Western Ghats and the Eastern Ghats.

The injured squirrel was treated by a local veterinary doctor under the supervision of forest department officials. It was quite interesting to note that the coat colour of the squirrel was fully black. Normally the colour of the flying squirrel is grey to coffee-brown with a mottled back, a grey tail and pale undersides as provided in field guides by the Prater (2005) and Menon (2014). This is a unique feature of a Melanistic Indian giant flying squirrel. Although literature have not mentioned on melanistic observation in Indian giant flying squirrel, some of the observations were noted on the Eastern gray squirrel and fox squirrel in the Mid-Western United States, Eastern Canada, and parts of the North-Eastern United States and the United Kingdom (Kiltie, 1984 and 1992; McRobie *et al.*, 2009). This observation was the first information on melanism on Indian giant flying squirrel in the Indian regions. The melanistic trait being a recessive one and is not random but is actually favoured when genes of two parents too similar. This observation envisaged that the melanism occurs due to population isolation,



**Fig 1. Melanistic Indian Giant Flying squirrel at Sathyamangalam Tiger Reserve (Photo: Ramasubramanian)**

stress and inbreeding (Robert, 2011), thus the current observation throw light on the necessity of long term studies on Indian flying giant squirrel in this region for future conservation.

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