

## Short Note

# First Record of Red Giant Flying Squirrel (*Petaurista petaurista*) from Sakaerat Biosphere Reserve, Thailand

KRUNAL TRIVEDI<sup>1\*</sup>, BARTOSZ NADOLSKI<sup>2,3</sup>, SURACHIT WAENGSOOTHORN<sup>3</sup>,  
JESSE GOODYEAR<sup>4</sup>

<sup>1</sup>26, Kasturba Mahila Society, Palanpur Patiya, Surat (395009), INDIA

<sup>2</sup>Suranaree University of Technology THAILAND

<sup>3</sup>Sakaerat Environmental Research Station THAILAND

<sup>4</sup>10707 Carloway Hills Dr, Wimauma, Florida 33598 USA

\* Corresponding Author: Krunal Trivedi (krunal.trivedi.7567@gmail.com)

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Sakaerat Biosphere Reserve is protected forest area established by Royal Thai Government in 1967. This forest is spread in total 851 km<sup>2</sup> and divided in three different zone, Core area (57 km<sup>2</sup>), Buffer Zone (91 km<sup>2</sup>), and Transition area (673 km<sup>2</sup>).

Sakaerat Environmental Research Station covers 82 km<sup>2</sup>. It ranges in elevation from 250–762 m, and is characterized by a patchy network of two main forest types: Dry Dipterocarp Forest (DDF; 18%) and Dry Evergreen Forest (DEF; > 60%). All the



FIGURE 1. Red giant flying squirrel *Petaurista petaurista* in its habitat from Sakaerat Biosphere Reserve

remaining area consists of bamboo fragments and sparse grasslands except for the 1% of the area consisting of the station headquarters, which contain staff offices and student dormitories<sup>1</sup>. It is rich in biodiversity of flora and fauna. Approximately 80 wild mammal species are known to be present at Sakaerat Environmental Research Station (SERS) including threatened species such as Serow (*Capricornis sumatraensis*), Pangolin (*Manis javanica*), and Slow Loris (*Nycticebus coucang*)<sup>2</sup>. Around 486 species of vertebrates have been recorded from reserve so far. Four species of flying squirrel are reported from SERS, Hairy-footed Flying Squirrel (*Belomys pearsoni*), Red-cheeked Flying Squirrel (*Hylopetes spadiceus*), Phayre's Flying Squirrel (*Hylopetes phayrei*), and White-bellied Flying Squirrel

(*Petinomys setosus*)<sup>3</sup>.

On 13<sup>th</sup> August 2017 and 24<sup>th</sup> September, we came across flying squirrels in DEF of Sakaerat Biosphere Reserve (14.496741°N, 101.916663°E) at 22:05 and 23:10 hrs, respectively, while doing field survey at Sakaerat Najas Project. During the first encounter we were not sure about the identification of it as it was 15 m high on tree. It was approximately 400 mm in body length excluding tail length. In second encounter we observed three individuals calling from the canopy of trees. We observed them sitting on nearby trees to each other. After few minutes all started gliding from one tree to another. They were interacting with each other by giving repeated calls. We kept on following them by the direction of call. Whole incident was of more than one hour, after that we left



FIGURE 2. Red giant flying squirrel *Petaurista petaurista* from Sakaerat Biosphere Reserve



**FIGURE 3.** Habitat for red giant flying squirrel *Petaurista petaurista* in Sakaerat Biosphere Reserve

them alone and continued our survey.

We took necessary photographs during the sighting and to identify them later on. After analysing the photographs, characters like black eye ring, chestnut-red upper body parts, thick long tail darker at tip, brownish red patagium, and buff underparts confirmed it to be Red Giant Flying squirrel (*Petaurista petaurista*) (Fig. 1-3). All this description is similar to *P. petaurista barroni* but more specimens need to examine in detail to confirm the sub species<sup>4</sup>. This is probably the first photographic record of this species from Sakaerat Biosphere Reserve<sup>3</sup>. Nearest known location of this species is Khao Yai national park which is approximately 95 km from Sakaerat Biosphere Reserve<sup>5</sup>. We believe that this species was not recorded in Sakaerat due to the nocturnal & arboreal behaviour, which make it hard to find.

Dense vegetation of DEF also make it difficult to identify and document the observations during time of the activeness of the described squirrels.

Red Giant Flying Squirrel is widely distributed throughout Asia, such as Afghanistan, Cambodia, India, Myanmar, Indonesia, Thailand, etc. It is listed as Least Concern in IUCN Red list of Threatened species<sup>6</sup>. Very less information is available about their distribution and ecology in Thailand. This is nocturnal species, and found most active between sunset and midnight<sup>5</sup>. Like all other flying squirrel they have an elastic skin called Patagium, stretched between wrist and the ankles, which they use to glide<sup>7</sup>. This particular species have Uropatagium an additional flap of skin that connects the heel and tail as well. Red Giant Flying Squirrel is solitary squirrel species<sup>8</sup>, but we have recorded three

individuals together on 24<sup>th</sup> September 2017. They are recorded from various habitat such as scrub forest, temperate forest, evergreen forest, rocky area as inland cliff, etc<sup>9</sup>. Habitat loss, degradation due to shifting agriculture, forest fire, hunting for pet trade and fur trade are big threats to the species<sup>9</sup>. Hence more research is necessary to conserve and protect this beautiful species across Thailand.

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