MORPHOMETRY AND FEEDING HABIT OF SMALL TRAVANCORE FLYING SQUIRREL

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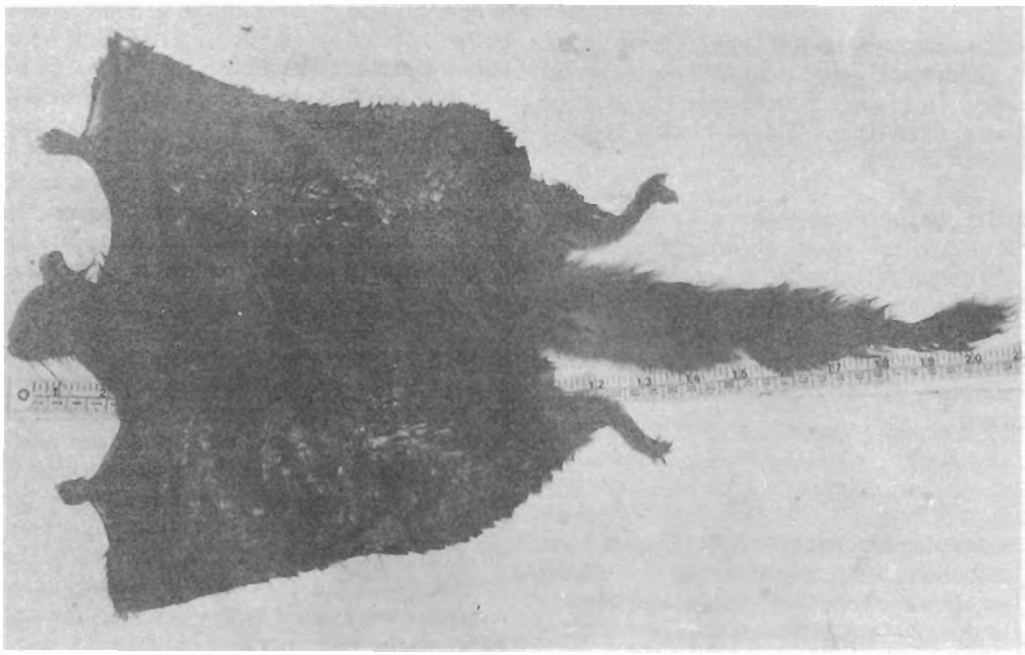

The small Travancore Flying Squirrel (*Petinomys fuscocapillus fuscocapillus*, Jerdon) is the only species of Small Flying Squirrels found in the South Indian forests. Although they are found in the evergreen and deciduous forests of southern India, they are reportedly meagre in number (Balakrishnan and Xavier, 1995). This species is reported to be endangered (WWF, 1992). Flying squirrels are classed based on their size; as large flying squirrels and small flying squirrels. The large flying squirrels have a body length of 45 cm and a long bushy tail of 60 cm. Ashraf *et al.* (1993) reported that *Petinomys* is not an extremely rare species as presumed to be and reported the relative abundance of two sympatric flying squirrels of Western Ghats.

The Large Brown Flying Squirrel (*Petaurista petaurista philippensis*, Elliot) and the Small Travancore Flying Squirrel are reported to be the only gliding mammals of the Western Ghats (Ashraf *et al.*, 1993). Described by Jerdon in 1874, *Petinomys fusucocapillus* has been collected only thrice. It was seventy years ago Jerdon (1874) and Wroughton (1915) collected these flying squirrels and the third one is a report by Kurup (1989). The present observation is probably a new record of this species from Central Kerala.

Prater (1948) described the Small Travancore Flying Squirrel. He has reported that flying squirrels have a broad 'parachute' like flap of skin extending on either side of its body from wrist to knee, which enables them to slide through the air. The Small Travancore Flying Squirrels make spectacular glide between trees (Israel and Sinclair, 1989). Prater (1948) opined that a single species, the Small Travancore Flying Squirrel inhabits the forest regions of the earlier 'Travancore region' of Kerala and Nilgiris. They emerge at dusk and return before dawn. They thrive on fruits, nuts, barks, gum, resins and buds (Balakrishnan and Xavier, 1995).

Materials and Methods

Morphometric observations were made on an adult female Small Travancore flying squirrel. It was obtained from a village adjacent to Vazhachal Forest Division, Trichur district of Kerala (Between 70°10' and 76°40' east and 10°15' and 10°30' north). The carcase was subjected to post-mortem examination. If had injuries on its head and that caused its death. Measurements were taken on the carcass with a standard measuring tape. The alimentary tract of the animal was exposed. It had no pathological lesions and the stomach contents were analysed using standard comparison techniques.

Results and Discussion

The Small Travancore Flying Squirrel had a dark brown hair coat covering the whole body. The long and bushy tail was lighter shaded. The eyes were large and rounded. Prominent dark coloured whiskers were also seen.

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The limbs were connected to an elastic membrane - 'parachute'. The parachute was translusent and had a brown hair cover. The slimly built animal with its parachute tucked close to the body, had an aerodynamic body construction. The brown hair coat and the distribution of hair, camouflage them effectively (Fig.).

The adult female squirrel had a body length of 53 cm from the tip of the nostril to the apex of the tail. The long bushy tail measured 27 cm from base to apex. The length of the head from tip of the nostril to the base of the ear was 4 cm., the forehead width was 4 cm. The parachute measured 30 cm (length) from the front to the rear. It had a width of 12.5 cm near the forelimb region and 10 cm at the back.

Prater (1948) reported that small flying squirrels measured 25 to 30 cm. In the present observation the body region measured 26 cm. Large flying squirrels have a body length of 45 cm. The elastic parachute is tucked close to the body and can barely be noticed. Young ones do not have fully developed parachute (Waterson, 1977). The present observation of a fully developed elastic parachute and the developed teats and full dentition revealed that it was an adult female Small Travancore Flying Squirrel.

The stomach contents weighed about 100 g. It was greenish brown in colour having a fruity odour. The fibrous mass comprised of chewed leaves and buds, seeds and seed coats, fruit pulp, barks and part of an insect. About 50 per cent of the stomach contents consisted of fruit pulp. Thirty five per cent comprised of chewed leaves, flowers and buds. The rest was bark, seeds and unidentified plant materials.

The fruit pulp were from four major fruiting trees found in the areas, and known to be fruiting during the months of April-May. The seeds were crushed and chewed except for the smaller seed of *Pisidium guajava* and *Lantana camara*. Seed coats of larger seeds were also found. The fruits and seeds were identified using authentic samples and confirming it with the list of fruiting trees in the region during the season. The head parts of an insect was also found in the stomach contents. The list of food items identified are presented in Table 1.

Table 1. Identified fruits and seeds from the stomach contents of a small Travancore Flying Squirrel.

	Botanical Name	Parts found
1.	*Artocarpus hirsutus*	fruit pulp
2.	*Syzygium cumini*	fruit pulp
3.	*Grewia tiliifolia*	fruit pulp, seed parts
4.	*Ziziphus rugosa*	fruit part
5.	*Pisidium guajava*	seed cover, intact seed
6.	*Lantana camara*	seed parts
7.	*Caryca arborea*	seed parts
8.	*Olea dioiea*	seed parts
9.	Unidentified coloured mass	flower and bark

As the animal was apparently healthy looking and no pathological lesions were located in postmortem examinations it can be assumed that the stomach contents reveal a representative sample of the food materials of Small Travancore Flying Squirrel of this region. The rare sightings of the smaller mammals of our forest regions point to the need for conservation measures to be adopted. Unless effective conservation measures are adopted the Small Travancore Flying Squirrel will be placed at the verge of extinction. This species is endangered mainly due to over exploitation, for its pelt and flesh along with depletion of its habitat.

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