

Distribution of species : This bat species is reported from southern Europe to India and also from Morocco to Egypt and South Africa (Corbet and Hill, 1992). From India it is reported from Kolkata (West Bengal), Cachar District from Assam and Cherapunji from Meghalaya (Kurup, 1968). The present report is the extension of the species in the central western region of India.

Ecological note : Both these colonies are located in the urban area, where the surrounding is quite green due to indigenous plants and hence cool and humid even in summer.

Like other species of *Pipistrellus*, the bats of the present species come out from their diurnal roost about 10 to 15 minutes after sunset. The bats leave their roost one by one at the interval of about 2 to 3 minutes. The flight is jerky but regular.

Nothing is known about the reproduction. The bats seem to shift the day roosts in response to even slight disturbance in their habitat or due to human interference.

(3) SAVI'S PIPISTRELLE

Class MAMMALIA

Order CHIROPTERA

Suborder MICROCHIROPTERA

Family VESPERTILIONIDAE

Genus *Pipistrellus*

Species *savii* (Bonaparte, 1837)

1837. *Vespertilio savi* Bonaparte : fasc. 20 Type Loc. : Pisa, Italy.

Diagnosis of species : Inner upper incisor I^2 is bicuspid. I^3 is half or more in height to I^2 , but similar in crown area. Pm^2 is little reduced in crown area, about two thirds of that of I^2 . Postorbital region, supraorbital region and rostrum are moderately widened. Supraorbital tubercles are small. Braincase is low, flat and elongate. Basial pits are lacking. Pelage is soft, dense, long and silky.

Dental formula : $i \frac{-2 \ 3}{1 \ 2 \ 3}, c \frac{1}{1}, pm \frac{-2-4}{-2-4}, m \frac{1 \ 2 \ 3}{1 \ 2 \ 3} = 34$

External, cranial and dental measurements (mm) of *Pipistrellus savii*

HB	46–51	GTL	14.4–14.5
HF	6–7	CCL	12.4–13.5
T	29.5–30	ZB	8.3–8.5
FA	35.8–36.7	BB	7–7.2

E	11.6–12.2	PC	3.5–3.7
5MT	31–31.6	CM ³	5.1–5.2
4MT	33.6–34.3	CM ₃	5–5.2
3MT	30.2–33.4	M ³ –M ³	6–6.1
TIB	13.2–14.5	M	9.5–10.5
WSP	235–249	RW	5.5–5.7

*n = 2 male

HB : Head & body length, HF : Foot length, T : Tail length, FA : Forearm length, E : Ear length, 5MET : Length of 5th metacarpus, 4MET : Length of 4th metacarpus, 3rd MET : Length of 3rd metacarpus, TIB : Length of tibia, WSP : Wingspan, GTL : Greatest length of skull, CCL : Condylorcanine length, ZB : Zygomatic breadth, BB : Length of braincase, PC : postorbital constriction, CM³ : Maxillary tooththrow, CM₃ : Mandibular tooththrow, M³–M³ : Posterior palatal width, M : Mandible length, RW : Width of rostrum.

The medium sized bat with uniformly dark brown long, silky, soft and dense pelage. Ventrally the hair bases are darker, while the tips are pale in colour. The snout, ears and wing membranes are uniformly dark brown. The muzzle is naked and flat. The membranes are translucent. The ear lobes are long and broad at the base. The tip of the ear lobe is rounded. The tragus is long, inwardly curved and with blunt tip. On its outer margin on the lower half, there is a triangular projection. The tail is significantly shorter than the head and body length.

Collecting locality : The bats of the present species *Pipistrellus savii* were trapped, when hiding behind the nameplate fitted on the stony wall of old building in the premises of Fergusson College. Two isolated males were trapped, one in mid March 1999 and the other in mid February next year.

Systematic remark : Specimens from India and Myanmar are provisionally referred to *P. s. austenianus* (Ellerman & Morrison-Scott, 1951 and Hill, 1962) as reported by Corbet & Hill, (1992).

Distribution of the species : *Pipistrellus savii* is reported from Korea, Japan, Arabia, Iran, Afghanistan, India, Myanmar and North Africa. In India Cherapunji (Meghalaya) is the type locality of *P. s. austenianus*. It is a widespread but little studied species. In Indian subcontinent the endemic subspecies *P. s. austenianus* has a restricted range. But its occurrence in the peninsular India has extended its distribution in this subcontinent.

Ecological notes : Nothing is known about the food and feeding habit or reproduction cycle of the present species.

SUMMARY

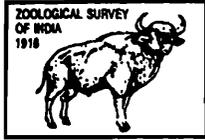
Occurrence of three species of pipistrelles, *Pipistrellus pipistrellus* (Schreber, 1774), *P. kuhlii* (Kuhl, 1819) and *P. savii* (Bonaparte, 1837) in urban area of Pune (Maharashtra, India) has extended the distribution of these species in the Indian subcontinent. The results are based on the morphological, cranial and dental measurements.

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Short Communication

ANIMALS FROM INDIA IN THE CARIBBEAN

No substantial research has been done on the animals and birds that came from India to the West Indies/Caribbean. Historians have instead chosen to focus their studies on Indians (West Indians) in relation to religion, caste, leadership, law and land. Animals were brought on the same ship with labourers who were imported to work on the sugar cane plantations after the abolition of slavery. Large lop-eared goats, for instance, were the survivors of the ship *Lapwing* which was wrecked near Barbados on its way to Guyana (cited in Shannon 1945). As agricultural workers during Indentureship (1838–1917), Indians worked alongside cattle in the fields, and they also kept private animals as property and pets. Indians have an ancient tradition of animal husbandry which continued in the West Indies. Indeed, it must be remembered that the cow (cattle) has always been sacred to Hindus who form a major ethnic group in Trinidad and Guyana. *Until the 1950s every Indian family raised cows to produce dung, milk and manure for subsistence and sale.* The animals were raised on common holdings and fed crop residues, wild grass and cane tops. They, therefore, did not compete with their owners for food and space.

This neglect in research is unfortunate. Researchers Julie Cole, Will Faust and Matt Fleming claim in their work on “The Evolution of Wild Cattle” (1991) that the first known bovid (family of cattle, sheep and goats) in the world was the Aurochs, which is of Indian origin. The breed first evolved in Asia, and then in Europe and Africa at approximately the same time during the Pleistocene Period (1.8 million to 11,000 years ago). The closest resemblance of the Aurochs today can be found in the wild Zebu cattle of India, and the Sanga cattle from Africa. Archaeological findings and genetic evidence have proven that farmers in India were the first to capture and tame the humped Zebu cattle which is native to that country (Bradley 2003).

Though domesticated cattle was first brought to the Americas by Columbus on his second voyage, the Zebu cattle (*Bos indicus*) was brought to the West Indies by the British in the 1860's.¹

¹ *Bos indicus* is thought to have originated in India more than 4,000 years ago (RRAT 2002).