

**NEW RECORDS OF SHORT-NOSED FRUIT BAT *CYNOPTERUS SPHINX* (VAHL, 1797) FROM THAR DESERT, RAJASTHAN**

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The Short-nosed Fruit Bat *Cynopterus sphinx* is distributed widely in the Indian subcontinent and in south-east Asia. Within India it occurs commonly and is widespread (Bates & Harrison, 1997; Molur *et al.*, 2002). Although it has been reported from southern and southwestern Rajasthan (Sinha, 1980; Advani, 1982; Molur *et al.*, 2002; Dookia, 2004), we could find no previous reference to its presence in the parts of northwestern Rajasthan. Recently, we recorded this species for the first time in Thar desert of Jaisalmer and Jodhpur districts of Rajasthan (Fig. 1).

During our survey from August to October 2004, in Jodhpur and Jaisalmer districts, we recorded two diurnal roosts of the Short-nosed Fruit Bat (Image 1<sup>w</sup>). On 25 August 2004, two individuals (male & female) were seen at Lathi village (27.03661°N & 71.51699°E) of Jaisalmer district. They were found roosting in a semi-dark portion of a dilapidated fort of this village, along with three microchiropteran species, namely, *Taphozous nudiventris*, *Rhinopoma microphyllum kinneari* and *R. hardwickii* (Image 2<sup>w</sup>).

The second roost was located on 5 October 2004, at Tinwari village (26.46195°N & 72.92123°E) of Jodhpur district. Four individuals (two pairs of male & female bats) were seen roosting in an abandoned building, Badi Haveli, along with four species of microchiropterans namely *T. nudiventris*, *T. perforatus*, *R. microphyllum kinneari* and *R. hardwickii* (Image 3<sup>w</sup>). In each of these roosts we estimated more than 3000 individuals of all species.

All the six individuals of *C. sphinx* were caught by hoop net

and morphometric measurements were taken (Table 1). We also analyzed their comparative response to our entry into the diurnal roosts. The *Cynopterus sphinx* looked more sensitive, but second to *T. perforatus*, to the disturbance caused by our visit, making frequent flights in the roost and looking more disturbed when lights were pointed at them. However, *R. microphyllum kinneari*, *R. hardwickii* and *T. nudiventris* roosting did not react strongly. Characteristically, they were roosting in close proximity, sometimes in contact with each other. *C. sphinx* seemed tolerant to the co-roosting individuals of other species and did not react strongly even when individuals of *T. nudiventris* exhibited aggression. At both the roosts they were occupying the ceiling, either the corners or wall edges.

From the Thar desert part of Rajasthan so far there is only one record of *C. sphinx* from Bhinmal (25.00214°N & 72.26257°E) in Jalor district (Dookia, 2004). Current findings add significantly to the distribution range of *C. sphinx* in the north-western parts of Rajasthan. Tinwari and Lathi are located 175km north-east and 240km north-west of Bhinmal, respectively (Fig. 1) and represent the characteristic habitat of the Thar desert.

Beside local range extension, the current findings add to the knowledge of roosting biology of *C. sphinx*. Although we have several references on biology of *C. sphinx* (Bates & Harrison, 1997; Balasingh *et al.*, 1993, 1995; Elangovan *et al.*, 2000, 2001, 2003; Storz *et al.*, 2000; Vasishta & Badwaik, 1994), roosting association of this species with four microchiropterans, namely *R. microphyllum kinneari*, *R. hardwickii*, *T. nudiventris* and *T. perforatus* looks imperative, as we could find no previous reference to such roost making behaviour. Also, their roost in eaves of buildings is an uncommon sighting.

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<sup>w</sup> See Images 1-3 in the web supplement at www.zoosprint.org

**Table 1. Morphometric measurements of the *Cynopterus sphinx* specimen collected from the fort of Lathi village in Jaisalmer**

Name of the body part	Length in mm			
	Lathi village		Tinwari village	
	Male * (n = 1)	Female (n = 1)	Male (n = 2) n <sub>1</sub> n <sub>2</sub>	Female (n = 2) n <sub>1</sub> n <sub>2</sub>
HB (Head and Body length)	100	102	98 103	108 105
T (Tail)	17	16	15 17	18 17
HF (Hind Foot)	16	16	14 17	17 16
FA (Fore Arm)	71	72	68 73	75 73
E (ear)	21	21	19 22	23 21
WS (Wing Span)	342	358	340 365	378 362
TbL (Tibial length)	34	35	32 35	35 34

\* The specimen of male *Cynopterus sphinx* is kept in the laboratory of Dr. Ashok Purohit, Department of Zoology, J.N.V. University, Jodhpur.



Figure 1. Distribution of Short-nosed Fruit Bat, *Cynopterus sphinx* in Rajasthan

*sphinx* Vahl, 1797) in the Thar desert of Rajasthan. *Zoos' Print Journal* 19(9): 1629.

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