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## A PROVISIONAL GAZETTEER OF COLLECTION LOCATIONS FOR PALM SQUIRRELS (MAMMALIA: SCIURIDAE: *Funambulus*)

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### Abstract

*Funambulus* Lesson, 1835 incorporates palm squirrels representing model South Asian small mammals. They were widely collected between 1880 and 1980 furnishing international collections, especially in London. There's a dearth of regional small mammal studies since the 1960s and lack of geographical data could contribute to this. Listed here are 172 locations anchored to ~478 specimens incorporating sites where the genus was collected in mainland South Asia with special attention to obscure localities in South India and Sri Lanka. Emphasis is placed on sites from the Bombay Natural History Society Mammal Survey of India, Burma and Ceylon from 1912 to 1929. This list, with sources, contributes to, and addresses historical and taxonomic mammalogical studies for the entire subregion.

**Keywords:** BNHS, sciurid, map, museum collections, palmarum, rodent, Wroughton, zoogeography

### Introduction

Much pioneering South Asian zoological material is housed in western collections in Europe and North America. Many are well maintained and open to researchers. Insects (Maxwell-Leffroy & Howlett 1909, Pradhan & Jotwani 1964), birds (Rasmussen & Prys-Jones 2003), and mammals (Corbet & Hill 1992) are well represented thanks to amateur naturalists and collaborative ventures where specimens were shared between western and Indian institutes. Whereas such scientific collecting carried on well into the 1970s, they have declined or halted,

in part due to the interpretation of the Convention on Biological Diversity legislation (Pethiyagoda *et al.* 2007, Dissanayake 2017, Prathapan *et al.* 2018). Mammal collections from South Asia have been little documented recently compared to birds with coverage in works such as Corbett & Hill (1992). Given that using collections entails reliable location data, this work presents a geographical survey of *Funambulus* Lesson, 1835 squirrel collections that could help encompass locations of other South Asian mammal or related collections of interest for taxonomic or historical studies.

Geographical location data was poorly documented in early collections as addressed at that time by Wallace (1852) and echoed a century later by Kinnear (1952: 769), “few collectors in those early days realized the necessity for careful labelling”. Selander & Vaurie (1962) presented a historical zoological gazetteer for the neotropics that was unreliable and inadequate, given locality data were subsequently lost or disappeared. These shortcomings have since been addressed by improved surveys, gazetteers and mapping that arguably provided South Asia with a head start (Chisholm 1895, Yule & Burnell 1902) compared to other tropical regions. Modern collections are typically anchored to accurate GPS data. Tracing the sites of older material provides challenges and rewards in the context of sources and improvements to taxonomic rigor. However, supplemental gazetteers for Oriental zoology *sensu* Sclater (1858), continue to be needed.

*Funambulus* is an ideal South Asian representative small mammal for location data. Common names employed are based on current or historical usage. Except for the northern palm squirrel, *F. pennantii* Wroughton, 1905 in Iran, the genus is indigenous to South Asia, not generally extending into the Himalayas or east of Bangladesh, though it does occur outside the Indian peninsula *contra* Wroughton (1918) extending to Iran (see below). Being terrestrial and widespread, it cannot be compared to small mammals commensal with humans such as rats and mice—though the two commonest species, *F. pennantii* and the Indian palm squirrel, *F. palmarum* (Linnaeus, 1766) do accompany human habitation (Srinivasulu & Srinivasulu 2012, Datta & Nandini 2015). The genus is diurnal, relatively easily seen or heard and associated with birdlife. In the Bombay Natural History Society (BNHS) Mammal Survey (see below) *Funambulus* was collected in ~80% of the published reports.

Based on potentially the largest survey of the genus from collections, a dataset of locations including several obscure sites was established as part of a PhD undertaking [A taxonomic revision of *Funambulus* (Mammalia, Sciuridae)] (Unpublished PhD, London: School of Health and Life Sciences, Kings College, University of London, 262 pages). This work relied on several historical South Asian mammal collections with the most important being the *BNHS Mammal Survey of India, Burma and Ceylon* with

publications between 1912 and 1929, one of the longest documented enterprises of its kind (Kinnear 1952). Here, this geographical data as it applies to mainland South Asia and problematic sites in Sri Lanka, is made available with some improvements, anchored to approximately 480 referenced specimens from 6 international collections, representing historical material mainly collected prior to the 1950s.

There were several challenges to establishing geographical coordinates and it is impossible to establish them all to the same degree of precision. Priority was given to the locations of the lesser-known species such as the jungle striped squirrel, *F. tristriatus* (Waterhouse, 1837), and the Pigmy palm squirrel, *F. sublineatus* (Waterhouse, 1838), here, nominally rendered following “Malabar pygmy palm squirrel”, (Wroughton & Davidson 1920a) also known as the dusky-striped squirrel (see below, Dissanayake & Oshida 2012, Dissanayake 2012). There are no precise type locations for these two species nor for *F. palmarum*. The designated type location for the palm squirrel is simply “Madras (by selection)” (Robinson & Kloss 1918: 242)—an educated guess.

Both Ellerman (1961) and Moore & Tate (1965) had to be economical on location data in the most comprehensive, historically significant revisions for the entire genus. This work partially addresses many of the lacunae in such works with relevant specimen labels and the copious listed field reports below, almost all from the BNHS Mammal Survey. Most such field reports were without geographical coordinates though some such as Report 23 (Wroughton 1916b) had maps. They probably relied on context provided by major imperial mapping projects sourced below, though reference maps were never cited in them. Such maps are today largely unknown and inaccessible though knowledge of these and related contemporary sources would have been assumed at the time some reports were issued (Selander & Vaurie 1962). Many localities such as “Siwalik Hills” from labels, or village names from reports were not meant to be pinpoints, but to designate an area close to a collection site. Geographical coordinates are often taxonomically useful guidelines, somewhat approximate but useful with veracity dependent on the authorship and data quality.

Key reasons for difficulties in finding locations include: (1) inadequate label information on specimens—many collection sites

for the BNHS Mammal Survey though well characterized were roughly positioned, reflecting prevailing standards and insufficient contemporary maps; (2) there have been several, ongoing name changes for places and administrative areas; “Madras” or “Bombay” represented areas too vast to map specimens (HMSSIC 1907–1931); specimens with such general designations alone were largely excluded; (3) spellings were not consistent with often two disparate locations of the same or similar sounding names; and (4) place names, especially for estates or villages used by collectors may have since disappeared completely or remain obscure.

The geographic data is confined to this genus and stated specimens alone but lends itself to other related studies and references in terrestrial zoological studies. Whereas localities are somewhat apportioned between the mainland subcontinent and Sri Lanka, locations from Sri Lanka have been largely excluded as they are much better known and more easily traced. This work is substantially a historical exercise given that published sources have now been supplanted by more accessible sources online. Digital sources as consulted in 2008 have since evolved, improved and multiplied such that not all can be cited. However historical publications including maps sometimes represent the *only* sources of obscure localities from collector labels. This work is also a catalogue of *Funambulus* collections outside India including the largest one in London.

## Material and methods

**Museum collections and databases accessed.** A comprehensive dataset including geographic locations for *Funambulus* was collated from specimen labels or rarely, catalogues, from trips to the following seven collections denoted on specimen identification number prefixes (specimen records are often listed or mentioned online from these institutes depending on degrees of digitization): Natural History Museum, London, UK (NHMUK); American Museum of Natural History, New York, USA (AMNH); Field Museum of Natural History, Chicago, USA (FMNH); The Smithsonian Institution National Museum of Natural History, Washington DC, USA (USNM); Museum of Comparative Zoology at Harvard, Cambridge, USA (MCZ); Siberian Zoological Museum, Novosibirsk, Russia (SZM); and The National Museum of Sri Lanka, Colombo, Sri Lanka (NMSL).

Taxa were identified by labels except where this author was reasonably sure of misidentified specimens or collections (e.g., noted in Table 1 for locations Bharatpur, Calcutta and Muhammadganj). This was mainly a mixing up of *F. pennantii* (northern palm squirrel) with *F. palmarum* (palm squirrel)—the former is greyer with 5 pale stripes instead of 3. Similarly, for a collection mislabeled *F. layardi* (Blyth 1849), Layard’s squirrel at SZM, this species is endemic to Sri Lanka and was referable to *F. pennantii*, representing an easily resolvable label error (since corrected on SZM catalogue).

International collections were consulted based on their size, potential quality and value to *Funambulus* research. Not all *Funambulus* specimens in all these institutes were examined, though practically all registered, identifiable Indian specimens from NHMUK—probably the largest non-Indian collections are listed here (the author worked there for several years). From the other collections, priority was given to the specimens of the rarer and less collected species such as *F. tristriatus*, *F. layardi* and *F. sublineatus*. Potentially, all accessible Indian specimens of these species from the above collections are listed here except from the MCZ. The most relevant material from the MCZ of *F. obscurus* (Pelzeln & Kohl 1886), the Dusky striped squirrel is listed elsewhere with identified localities (Dissanayake & Oshida 2012).

Substantial remaining specimen collections are in South Asia. Except for NMSL, they were not visited. Some, such as at the Natural History Museum New Delhi, could have been destroyed in a recent fire in 2016. The NMSL collection was poorly maintained at the time of inspection and some of the specimens listed may not be as accessible now as they were to this author.

Databases such as the Global Biodiversity Information Facility (*gbif.org*) and VertNet (*vertnet.org*), accessed in 2023, are sometimes integrated with digitized specimen records if available in the above institutes, alongside other live observation platforms such as iNaturalist (*inaturalist.org*). Whereas they offer valuable, often live *Funambulus* records with map coordinates this contrasts with an older, museum specimen approach here.

**Geographical sources.** Locations from labels needed translation into geographical coordinates for mapping, using relevant sources often linked to those associated with the

collections such as the BNHS Mammal Survey Reports, or regional gazetteers published around or close to the time of the collections were established. This especially applied to the more obscure localities. All major atlases including local ones were consulted and multiple sources were used for corroboration. Background to sources is provided below, current up to a decade ago for physical publications. The URLs for online sources have been checked and stated as applying to date if still operational. Good published geographical sources were more limited for India and adjacent countries. No comprehensive indexed atlas for India was found, though Sri Lanka was better covered (Somasekaram *et al.* 1997). Online sources have been used to corroborate published ones including cross-corroboration between similar websites.

Initially, major reference sources were consulted: HM Secretary of State for India in Council (HMSSIC 1907–1931), U.S. Division of Geography (USDG 1957–1962), Bartholomew Ltd. (BL 1999), and the Times (1999). There were, however, many locations particularly from southern India (see below) that weren't available in these sources. Many such obscure sites such as Shernelly (a type locality in Napier 1985: 78) had not been adequately referenced as in Moore & Tate (1965) or Ghose *et al.* (2004). Extra referencing is provided here.

BNHS Mammal Survey reports mentioning *Funambulus* were consulted from Report 1 (Wroughton 1912a) to Report 46 (Fry 1929). The report identity (usually numerical) may represent multiple collection sites with supplemental reports added though only 31A (Lindsay 1926a) was labelled alphabetically (for sites with *Funambulus*, published alongside report 43) making >46 reports. Here reports are largely identified as published in connection with specimens examined incorporating reports 1–46, supplemental report 31A and an undocumented collection by N. A. Baptista associated with a related and subsequent ornithological collection (Whistler & Kinnear 1932) labelled “B” after the collector. B subsumes several unregistered specimens of *F. palmarum* at the NHMUK that are associated in time and place with Whistler & Kinnear (1932, Brandon-Jones, pers. comm. based on the museum archives 2022). Altogether, ~38 BNHS Mammal Survey reports cited below (1–15 18–26, 30–34, 37–45) were associated with *Funambulus* specimens noted here excluding 31A and subsequently B. Not all

specimens in associated locations listed here were necessarily connected with these publications, though a majority are identifiable as such. Many locations from these reports are not given here as associated specimens were not seen. Keeping to whole numbered reports (38/46), 82.6% collected *Funambulus*. Several smaller collection sites of the genus from India before and after the BNHS Mammal Survey, particularly at the NHMUK are listed here.

Two web-based gazetteers: National Geospatial-Intelligence Agency (NGIA 2023) and Falling Rain Genomics (FRG 2023) were extremely useful in conjunction with the CD Rom mapsofindia.com (CI 2001). Initially, the National Geospatial coordinates were found to be more accurate than those of Falling Rain, though the latter provided altitudinal data. Google Earth (GE 2023) now appears the most comprehensive (locations from Google Earth preferred to those from Wikipedia (2023) in situations where they appear to contradict one another, e.g., Palanpur).

For remaining intractable locations particularly in “Travancore” and the south of India several potential sources were consulted (Nagam Aiya 1906, Hatch 1933, UPASI 1937, Nair 1987, Gopalakrishnan 1995) but these were of limited assistance. At the British Library more in-depth sources such as local gazetteers were available culminating in library consultations and apprehension of the 1–inch to 1–mile survey maps by the British colonial government. Administrative information and refinements to initial data were further obtained using Wikipedia (2023) and sources from India and Sri Lanka (Ali & Whistler 1935, Arya 2005, 2006, Arya *et al.* 2006, PPVMP & CBL 2006).

Three relatively recent publications have been referenced that deal extensively with many *Funambulus* locations (Fooden 1981, Brandon-Jones 2004, Lozupone *et al.* 2004) with Brandon-Jones being the most useful. The author was not aware of Fooden (1981) and Napier (1985) while prosecuting the PhD. Related gazetteer information incorporating much of South Asia and Burma consulted include Rahim *et al.* (2014) and more recently from a malacological survey by Preece *et al.* (2022).

Inevitably, certain regional localities, which were considered important for mapping e.g., “Travancore” (Raheem *et al.* 2014) or Siwalik Hills, have been approximated with justification (see below). Other point locations have been maintained as approximate positions, with uncertain places subsumed into the same

coordinates on Table 1: these could not be traced or were not worth the effort given constraints, though there has been a diminution of untraceable locations since 2008. The names and boundaries of localities are undergoing transition (e.g., Uttaranchal State became Uttarakhand in 2006, Andhra Pradesh was split into two states in 2014). Not all these changes have been accommodated—though administrative details are as up to date as possible.

More administrative information on the mainland is mainly provided for India (based on the substantial size of regions), given it is the hub for *Funambulus* diversity and the likely importance of such information for potential future research. This data is mapped in Fig. 1 that provides a broad overview of the sweep of collections. Figure 2, presents a summary of *Funambulus* collections sites from the BNHS Mammal Survey reports.

For Sri Lanka, some location data has been documented elsewhere (Dissanayake & Oshida 2012). Given locations for Sri Lanka are better known in comparison to parts of India, only the more obscure or significant sites are mentioned below. The reports of an early Sri Lanka mammal survey were consulted (Phillips 1933—following the BNH Mammal Survey) which were particularly useful as additional collection sites for *F. layardi*. Additional Sri Lanka locations and administrative references are available and were consulted (Sangam Books 2004, and others above) with several old maps available online, particularly for province information. Provinces represent the largest administrative divisions on the Island, mentioned on the labels (e.g., E.P.: Eastern). Whereas the Northern and Eastern provinces were merged into a Northeastern province in the 1980s, this has currently reverted to be as it was at the time of the BNHS Mammal Survey.

**Specimen labels and *Funambulus* taxonomy.** Primary specimen registration labels as attached to specimens were used where available. For NHMUK collections (the vast majority below), usually with four sets of figures, the initial two numbers represent the terminal digits of the year of collection. Thus NHMUK 84... could represent a collection from 1884 and NHMUK 04... from 1904. The last number represents the n<sup>th</sup> in that series (Napier 1985). The latest dry collection registration noted is from around 1979 from NHMUK. Individual institutes may be consulted on further interpretation on registrations. For unregistered

(unreg) material, only listed from the NHMUK except for site Wotekolli, a collector name is provided where possible and further details are available depending on the series.

Current overviews of the genus assume five valid species (Datta & Nandini 2015, Koprowski *et al.* 2016) with species names as used in the gazetteer (Table 1): *F. pennantii*, *F. palmarum*, *F. tristriatus*, *F. layardi* and *F. sublineatus*. Eight locations below accommodated more than a single *Funambulus* species. Whereas it is accepted here that *F. obscurus* (Pelzeln & Kohl 1886), the dusky striped squirrel, is a valid species (Dissanayake & Oshida 2012, Yapa & Ratnavira 2013), making six species, this recognition is not germane here as *F. obscurus* from Sri Lanka is absent below. Treatment on taxonomic designations is by necessity brief. Type material though listed is not generally identified in part as some have been synonymized or represent dubious subspecies.

## Results

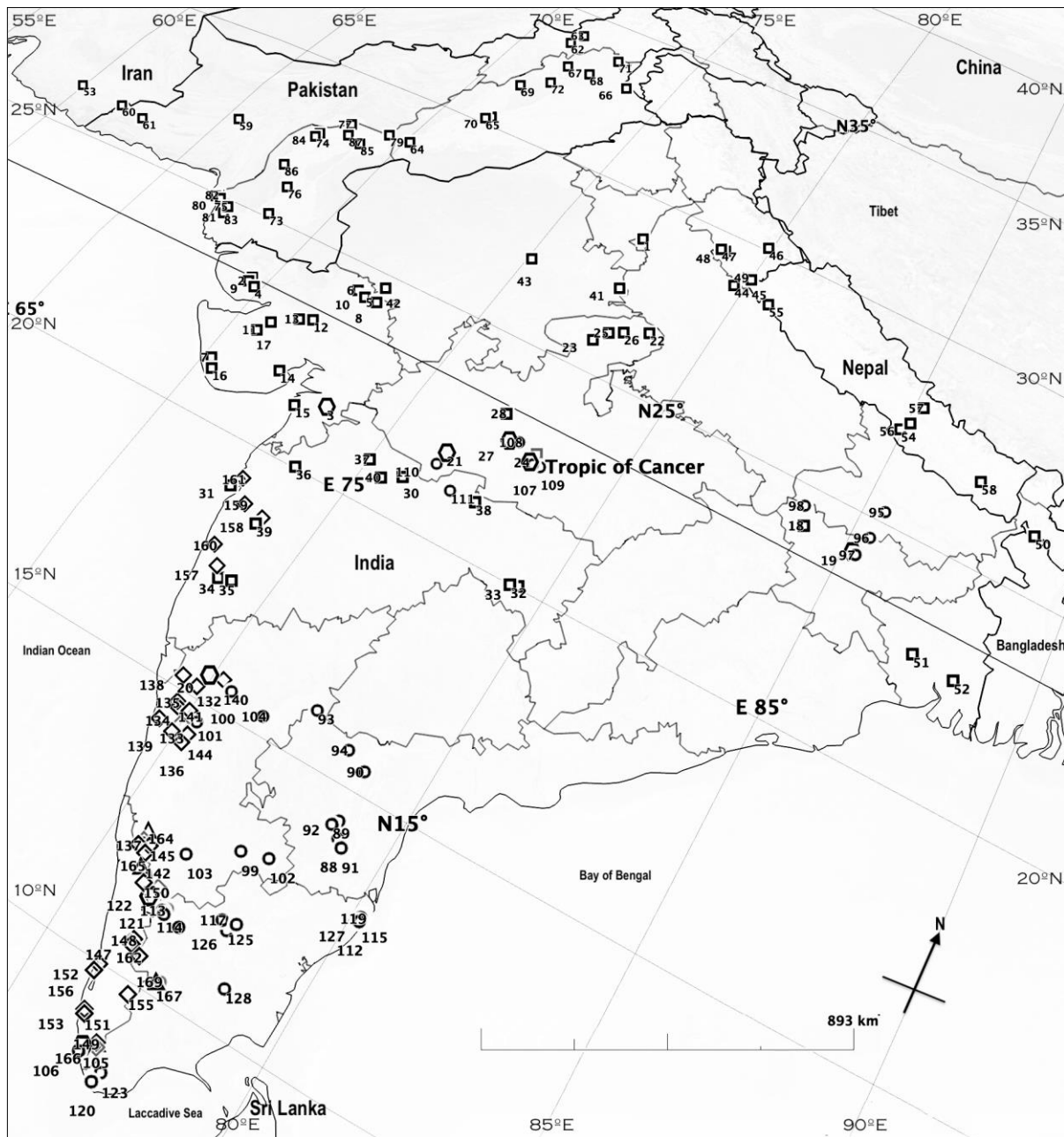
Approximated mainland locations are listed below. The Gazetteer (Table 1) presents geographical data with 167 locations and coordinates for the mainland (428 specimens) and 5 locations for Sri Lanka (50 specimens) consecutively. All primary location information is copied from largely handwritten specimen labels linked to specimens, (allowing for some discrepancies between labels attached to skins — and the associated label from skulls) except in the case of two type localities Shasthancotta, India and Ambegamuwa, Sri Lanka, where specimens available in Indian were not examined. Reference sources are provided below as relevant for each location. As much detail as possible is given with an elucidation of abbreviations that are not exhaustive (e.g., nr = near) but adequately referenced. The mainland locations have been mapped using Google Earth Pro (Ver 7 2023).

**Not located or approximated sites.** The following 23 locations or sets of locations were uncertain, approximated or included (incl.) under larger or similar designations if available and noted below. They incorporate collections of places united under an approximate centroid in part as they were sufficiently close together or sites not considered significant enough or due to insufficient information and time for further elucidation. A few of these sites could easily be located (e.g., Fort Bombay) but others, even if

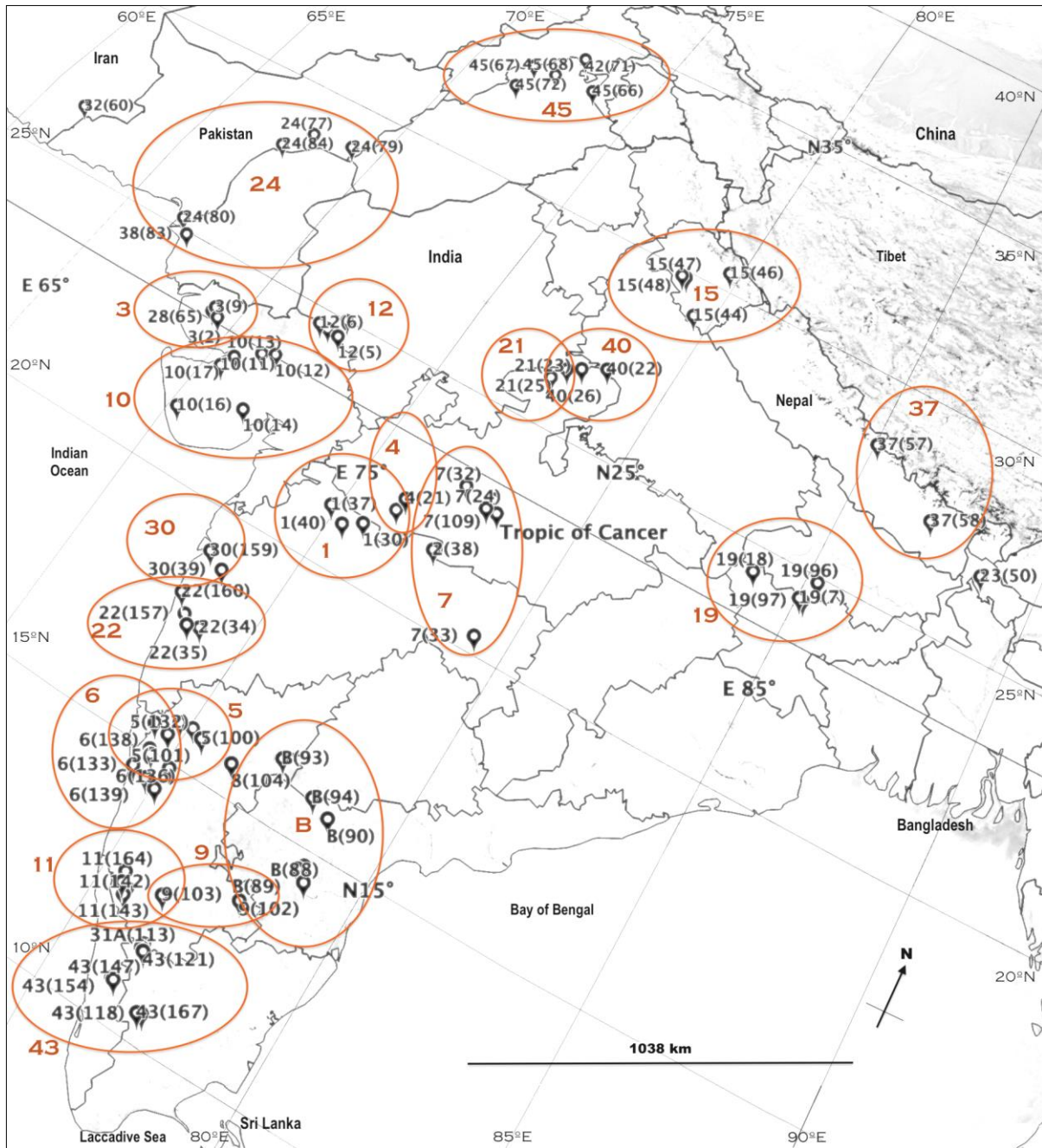
known, remain somewhat compromised. Approximate centroids are theoretically better than no data at all. They aren't the only approximations and represent areas for further work as in *not located* sites in Selander & Vaurie (1962).

(1) Anaikatti base of Nilgiris, India included under Nilgiris; (2) Barigi/e Sorab, Mysore; (3) Shola Kodaikanal, top of Palni Hills, Kodaikanal under Bombay shola; (4) Chintarajupalli, Palkonda Hills under Balapalli; (5) Dachauri, Kumaon; (6) Jerua, under Ramnagar, Kumaon; (7) Fort Bombay under

Bombay (Mumbai); (8) Gamataghata under Sagar; (9) Garoor, Hewra, under Asirgarh; (10) Jehangir's tomb, Model town, Ravi River Bridge under Lahore; (11) Kailali, Nepal; (12) Katkarwadi, Pune; (13) Koduru, Balapalli; (14) Makwanpur, Nepal; (15) Nelliampatty Hills under Kollengode; (16) Rokerg Estate under Rookery, Kil Kotagiri; (17) Sakot under Rorighat (~Rasighat); (18) Shanti Cutir under Bharatpur; (19) Siwalik Hills, Uttarakhand; (20) Sodhi Salt Range, Punjab; (21) Travancore (former S. Indian kingdom); (22) Tribinei, Terai; and (23) Voddigeri, Shikaripur.



**Figure 1.** Distribution points for *Funambulus* in mainland South Asia (Table 1) with location numbers (not all points equally visible). Symbol key: *pennantii* (Square), *palmarum* (circle), *tristriatus* (diamond), *sublineatus* (triangle), >1 species (octagon). Maps created using Google Earth.



**Figure 2.** Distribution points for *Funambulus* in mainland South Asia as in BNHS Mammal Survey & a subsequent collections (not all points equally visible). Reports or collection numbers from 1–45 including supplemental report 31A and B, a related, unregistered collection (Whistler & Kinnear 1932) made by N.A. Baptista. There are 30 reports given some published reports lack *Funambulus*. Collections with >1 sites highlighted with rings. Collection reports with just 1 site: 2, 8, 23, 28, 31, 31A, 32, 38, 42. Collection reports with >1 site (report ID in parenthesis) in ascending number of sites: 2:(3, 4, 9, 21, 30, 37, 40); 3:(1); 4:(11, 12, 15, 19, 22, 24, 45); 5:(5, 7, 43); 6:(6, 10, B).

**Gazetteer.** In Table 1 below, taxa are arranged in an approximately north to south distribution from the northernmost *F. pennantii*; regions and sites are listed roughly alphabetically with consecutive numbered locations taking the first occurring location as primary number for sites with >species from sites 1–172 with additional notes or sources as needed. Three

principal online data sources were consulted: NGIA (2023), GE (2023) and FRG (2023). Of these Google Earth has been the most significant during revisions. These online sources are not cited below but were used for most locations, at least for corroboration. All other sources both singular and multiple are listed after each location with due annotation (Table 1).

**Table 1.** Gazetteer for mainland India, Pakistan, Nepal, Iran, and Sri Lanka; original locality numbers correspond to the numbers on the map in Figs 1–3; un-catalogued specimens are indicated with “uncat.” with (×) number of samples; eight Locations with more than one species identified by first occurring number. Taxa arranged from northernmost to southernmost species.

Country, State	Original locality	Alt. (m)	Lat/Long	Cat. No.
<b><i>F. pennantii</i></b>				
India, Delhi	1. Azadpur	207	28°43'00"N 77°11'00"E	NHMUK 13.4.15.1
	2. Bhuj, Cutch (now Kutch) [these locations are referenced in BNHS Mammal Survey Report 3 (Wroughton 1912b), Nokania roughly 10 miles N of Bhuj]	109	23°16'00"N 69°40'00"E	NHMUK 12.10.4.46–47
	3. Bundha, S. Guzerath (note by R. C. Wroughton on label for 98.4.2.25 – F. pennantii type: “S. Guzerath, cultivation in forest 15m N of Tapti, 50M east of sea” estimated from Google Earth)	234	21°27'00"N 73°30'00"E	NHMUK 98.4.2.25
	4. Charwa, Cutch (now Kutch) [approx location. Best description in BNHS Mammal Survey Report 3 (Wroughton 1912b)]	109	23°12'00"N 69°54'00"E	NHMUK 12.10.4.49
	5. Danta, Gujerat [BNHS Mammal Survey Report 12 (Ryley 1913c)]	342	24°11'00"N 72°46'00"E	NHMUK 15.11.2.12–14, 13.9.18.34
	6. Deesa / Disa, Palanpur, Gujerat [BNHS Mammal Survey Report 12 (Ryley 1913c)]	208	24°15'00"N 72°10'00"E	NHMUK 15.11.2.10, 13.9.18.104–105
	7. Junagadh, Kathiawar	106	21°15'00"N 70°20'00"E	NHMUK 13.8.8.48–49
	8. Lunwa (now Lunawa), Palanpur, Gujerat [BNHS Mammal Survey Report 12 (Ryley 1913c)]	208	24°13'28"N 72°25'27"E	NHMUK 13.9.18.35, 15.11.2.9
India, Gujarat	9. Nokania / Nokhania, Kutch [BNHS Mammal Survey Report 3, see Bhuj (Wroughton 1912b)]	40	23°23'03"N 69°40'30"E	NHMUK 12.10.4.48
	10. Palanpur, Gujerat	209	24°10'15"N 72°26'05"E	NHMUK 13.9.18.33, 15.11.2.7–8
	11. Rajkot, Kathiawar [BNHS Mammal Survey Report 10, Kathiawar (Ryley 1913b)]	133	22°18'00"N 70°47'00"E	NHMUK 13.8.8.50–51, uncat. (no skulls) × 2 (coll. W.S. Patton)
	12. Sadla, Bajana State, Kathiawar [BNHS Mammal Survey Report 10, Kathiawar (Ryley 1913b)]	7	23°07'00"N 71°46'00"E	NHMUK 15.11.2.5–6
	13. Satapur, Dhrangadhra, Kathiawar [BNHS Mammal Survey Report 10, Kathiawar (Ryley 1913b)]	63	22°59'00"N 71°28'00"E	NHMUK 15.11.2.3–4, 13.8.8.52–53
	14. Sihor, Bhavnagar, Kathiawar [BNHS Mammal Survey Report 10 (Ryley 1913b)]	59	21°42'00"N 71°58'00"E	NHMUK 13.8.8.54
	15. Surat West	12	21°10'00"N 72°50'00"E	NHMUK 12.3.23.2
	16. Talala, Kathiawar [BNHS Mammal Survey Report 10 (Ryley 1913b)]	106	21°02'00"N 70°32'00"E	NHMUK 13.8.8.46–47
	17. Vankaneer / Wankaner, Kathiawar [BNHS Mammal Survey Report 10 (Ryley 1913b)]	80	22°37'00"N 70°56'00"E	NHMUK 13.8.8.55, 15.11.2.1–2
India, Jharkhand	18. Daltongunj / Daltonganj, Bihar, Orissa [BNHS Mammal Survey Report 19 (Wroughton 1915)]	214	24°02'00"N 84°04'00"E	NHMUK 15.4.3.82–83



India, Jharkhand	<b>19.</b> Jagodih, Hazaribagh, Bihar & Orissa [BNHS Mammal Survey Report 19 (Wroughton 1915)]	603	24°00'00"N 85°15'00"E	NHMUK 15.4.3.80–81
India, Karnataka	<b>20.</b> Dharwar / Dharwad, South Maharashtra [BNHS Mammal Survey Report 5 (Wroughton 1912c)]	700	15°27'32"N 75°01'00"E	NHMUK 12.6.29.63
	<b>21.</b> Asirgarh Nimar incl. Hewra, Garoor, Nimar [based on Asirgah fort BNHS Mammal Survey Report 4 for Nimar, see Sival (Wroughton 1912b)]	409	21°47'00"N 76°29'00"E	NHMUK 12.6.28.16, 12.6.28.18–20
	<b>22.</b> Bhind, Gwalior State [BNHS Mammal Survey Report 40 (Lindsay <i>et al.</i> 1926)]	142	26°30'00"N 78°45'00"E	NHMUK 23.11.7.4–6
	<b>23.</b> Chorepura / Corepura, Gwalior, Central India [BNHS Mammal Survey Report 21 (Wroughton 1916a)]	427	25°43'00"N 77°43'00"E	NHMUK 15.7.2.8–9
	<b>24.</b> Dhain, Hoshanagabad [BNHS Mammal Survey Report 7 (Wroughton 1913)]	396	22°27'00"N 78°10'00"E	NHMUK 12.11.29.96, 12.11.29.99
India, Madhya Pradesh	<b>25.</b> Ghatigaum, Gwalior, Central India [BNHS Mammal Survey Report 21 (Wroughton 1916a)]	356	26°03'00"N 77°56'00"E	NHMUK 15.7.2.10–13
	<b>26.</b> Morar, Gwalior State [BNHS Mammal Survey Report 40 (Lindsay <i>et al.</i> 1926)]	194	26°13'34"N 78°13'34"E	NHMUK 23.11.7.7
	<b>27.</b> Rorigat, Hoshanagabad including Sakot [BNHS Mammal Survey Report 7 (Wroughton 1913)]	277	22°40'00"N 77°30'00"E	NHMUK 12.11.29.98
	<b>28.</b> Sehere, Central India	501	23°12'00"N 77°05'00"E	NHMUK 10.12.2.19– 21
	<b>29.</b> Sohagpur, Hoshangabad [BNHS Mammal Survey Report 7 (Wroughton 1913)]	458	22°42'00"N 78°12'00"E	NHMUK 12.11.29.97
	<b>30.</b> Bodvad / Bhodvad, (near) Shendurni, E. Khandesh [BNHS Mammal Survey Report 1 (Wroughton 1912a)]	496	20°53'00"N 75°59'00"E	NHMUK 11.12.21.20
	<b>31.</b> Bombay City including Fort Bombay (now Greater Mumbai)	27	18°58'30"N 72°49'33"E	NHMUK 5.12.13.1–3
	<b>32.</b> Chanda (now Chandrapur)	188	19°57'00"N 79°18'00"E	NHMUK 12.11.29.100, 12.11.29.103
	<b>33.</b> Chichpalli / Chinchpalli, Chanda (now Chandrapur) [BNHS Mammal Survey Report 7, Central Provinces, (Wroughton 1913)]	211	20°00'00"N 79°28'00"E	NHMUK 12.11.29.101–102
	<b>34.</b> Karad, Satara Dist. [BNHS Mammal Survey Report 22 (Wroughton 1916a)]	565	17°17'00"N 74°12'00"E	NHMUK 15.7.3.34
	<b>35.</b> Medha, Satara District [BNHS Mammal Survey Report 22 (Wroughton 1916a)]	710	17°12'00"N 73°55'00"E	NHMUK 15.7.3.35
India, Maharashtra	<b>36.</b> Nasik, Bombay	569	19°59'00"N 73°48'00"E	NHMUK 5.9.9.1–2
	<b>37.</b> Parola, East Khandesh [BNHS Mammal Survey Report 1 (Wroughton 1912a)]	260	20°53'00"N 75°07'00"E	NHMUK 11.12.21.17– 18
	<b>38.</b> Pili, Sipna Valley, Berars [BNHS Mammal Survey Report 2 (Wroughton 1912b) approx. location from Fitzgerald & Nelson (1911)]	698	21°08'00"N 77°40'00"E	NHMUK 12.3.8.14
	<b>39.</b> Poona (now Pune), Deccan [BNHS Mammal Survey Report 30 (Wroughton & Davidson 1920a)]	569	18°32'00"N 73°52'00"E	NHMUK 19.6.3.42–46

A PROVISIONAL GAZETTEER OF COLLECTION LOCATIONS FOR *Funambulus*

India, Maharashtra	<b>40.</b> Shendurni, East Khandesh [BNHS Mammal Survey Report 1 (Wroughton 1912a)]	330	20°39'00"N 75°35'00"E	NHMUK 11.12.21.19
India, Rajasthan	<b>41.</b> Bharatpur, incl. Shanti Cutir (labels) "Gkhana reserve (from museum website)" [Sehegal (1971), probably Shanti Kutir, just south of this location]	182	27°13'00"N 77°29'00"E	SZM 58060–74 originally labelled <i>layardi</i> before correction
	<b>42.</b> Mt. Abu, Rajputana [BNHS Mammal Survey Report 12 (Ryley 1913c)]	1164	24°36'00"N 72°42'00"E	NHMUK 13.9.18.31–32, 15.11.2.11
	<b>43.</b> Sambhar, Rajpootana	366	26°55'00"N 75°12'00"E	NHMUK 85.8.1.271
India, Uttar Pradesh	<b>44.</b> Pilibhit, Rohilkund, Uttau Pradesh [or Rohilkhand and variants (Preece <i>et al.</i> 2022), BNHS Mammal Survey Report 15 (Wroughton 1914)]	171	28°38'00"N 79°48'00"E	NHMUK 14.7.10.87–88
India, Uttarakhand	<b>45.</b> Banbasa, West Terai	2083	28°59'00"N 80°05'00"E	NHMUK 1938.8.2.8–9
	<b>46.</b> Dachauri, Kumaon, United Provinces [Not located, approx. based on BNHS Mammal Survey Report 15 (Wroughton 1914), formerly in state Uttaranchal]	1513	30°00'00"N 80°00'00"E	NHMUK 14.7.10.86
	<b>47.</b> Dela / Dhela, Ramnagar, Uttar Pradesh [approx. 0.8 miles west of Ramnagar (Napier 1985); BNHS Mammal Survey Report 15 (Wroughton 1914)]	450	29°24'00"N 79°00'00"E	NHMUK 14.7.10.84
	<b>48.</b> Ramnagar, Kumaon incl Jerua, Uttar Pradesh [BNHS Mammal Survey Report 15 (Wroughton 1914)]	1500	29°24'00"N 79°07'00"E	NHMUK 14.7.10.77–83, 14.7.10.85
	<b>49.</b> Siwalik Hills, Uttaranchal	656	29°00'00"N 80°00'00"E	NHMUK 7.10.4.3
India, West Bengal	<b>50.</b> Haldbari, Cooch, Behar (now Koch Bihar) [BNHS Mammal Survey Report 23 (Wroughton 1916b)]	56	26°20'00"N 88°46'00"E	NHMUK 15.9.1.120
	<b>51.</b> Salbani, Midnapore (now Medinipur), Bengal	25	22°38'00"N 87°20'00"E	NHMUK 15.4.3.19, 15.4.3.78
	<b>52.</b> Calcutta (AMNH - Zoo Hospital, Alipore; mislabelled as <i>F. palmarum</i> )	12	22°32'13"N 88°19'59"E	NHMUK 25.12.19.1, AMNH 215559, 215561–3, 215565
Iran	<b>53.</b> Nikshahr / Nik Shahr 26.15N, 60.12E, Ostan-e Sistan va Baluchestan (USDG 1960)	440	26°13'32"N 60°12'44"E	52.1473–1474, FMNH 96877–78, 96883, 96887, USNM 328003
Nepal	<b>54.</b> Bara, Simra Airport, 10mi N. Biranj [approx. from Simra (USDG 1957)]	150	27°10'00"N 84°59'00"E	FMNH 94113
	<b>55.</b> Kailali, Kaneri, "8mi Est Bhangadi" [from Kailali (USDG 1957), Est=east? Bhangadi is probably Dhangadhi]	500	28°34'00"N 80°47'00"E	FMNH 94112
	<b>56.</b> Makwanpur, 1.5 miles east of Hitaura [approx. from Makwanpur Garhi (USDG 1957)]	460	27°25'00"N 85°08'00"E	FMNH104184
	<b>57.</b> Naivakot / Nawakot, Bagmati Zone [BNHS Mammal Survey Report 37 (Hinton & Fry 1923)]	700	27°55'00"N 85°15'00"E	NHMUK 21.5.1.13
	<b>58.</b> Tribinei / Tribinia / Tribeni, Terai [alternative sources including BNHS Mammal Survey Report 37 (Hinton & Fry 1923) indicate locality at the Indian / Nepal border that may be more correct if different from given]	449	26°55'00"N 87°10'00"E	NHMUK 37.3.14.9–10, 21.5.1.14–15

Pakistan, Balochistan	<b>59.</b> Gajar, Mashkai Kalat, Balochistan [BNHS Mammal Survey Report 32 (Wroughton & Davidson (1920b)]	990	27°06'00"N 65°34'00"E	NHMUK 19.11.8.14–15
	<b>60.</b> Mand, Balochistan [BNHS Mammal Survey Report 32 (Wroughton & Davidson 1920b)]	216	26°07'00"N 62°04'00"E	NHMUK 19.11.7.26
	<b>61.</b> Turbat, Kech [or Tarbat (Ghose <i>et al.</i> 2004)], Balochistan	129	26°00'10"N 63°03'02"E	NHMUK 19.11.7.27–29, 35.3.25.8
Pakistan, “NWFP” (Khyber Pakhtunkhwa)	<b>62.</b> Kohat, North West Frontier Province	489	33°35'13"N 71°26'29"E	NHMUK 9.6.10.3–5
	<b>63.</b> Peshawar, North West Frontier Province	288	34°00'30"N 71°34'22"E	NHMUK 8.7.29.2–3
Pakistan, Punjab	<b>64.</b> Akramabad, 6 miles west of Rahim Yar Khan (estimated)	124	28°29'00"N 70°13'25"E	NHMUK 79.594
	<b>65.</b> Amballa	116	30°05'00"N 71°22'00"E	NHMUK 13.4.15.2
	<b>66.</b> Ara Salt Range [approx. HMSSIC 1907–1931, BNHS Mammal Survey Report 45 (Lindsay 1926a)]	727	32°49'00"N 73°54'00"E	NHMUK 23.11.3.30–31
	<b>67.</b> Choan, salt range, Punjab [BNHS Mammal Survey Report 45 (Lindsay 1926a)]	300	32°45'00"N 72°00'00"E	NHMUK 23.11.3.34
	<b>68.</b> Kallar Kahar Salt Range [a lake, BNHS Mammal Survey Report 45 (Lindsay 1926a)]	634	32°47'00"N 72°42'00"E	NHMUK 23.11.3.32–33
	<b>69.</b> Lahore including Jehangir's tomb, Model town, Ravi River Bridge, Punjab University (Odhams 1936)	200	31°31'10"N 71°22'00"E	USNM 326342, 326346, 326353, 327142, 353189, 369030
	<b>70.</b> Multan, Punjab	307	30°11'44"N 71°28'31"E	NHMUK 10.1.18.37–40
	<b>71.</b> Rawalpindi [BNHS Mammal Survey Report 42 (Lindsay <i>et al.</i> 1926)]	483	33°36'00"N 73°04'00"E	NHMUK 5.4.2.1–5, 5.11.19.10–14, 5.11.19.19
	<b>72.</b> Sodhi salt range, Punjab [BNHS Mammal Survey Report 45 (Lindsay 1926a) based on Salt Range from map in Pocock (1941) and HMSSIC (1907–1931)]	300	32°00'00"N 72°00'00"E	NHMUK 23.11.3.35
	Pakistan, Sindh	<b>73.</b> Biroo village, north of Malir City, Karachi	9	25°02'05"N 68°40'40"E
<b>74.</b> Bohara		34	27°31'50"N 67°53'15"E	NHMUK 23.11.9.6
<b>75.</b> Garo / Gharo / Garho		5	24°44'29"N 67°35'09"E	NHMUK 23.11.9.5
<b>76.</b> Gholam		21	25°53'45"N 68°29'00"E	NHMUK 23.11.9.4
<b>77.</b> Jacobabad, Sind [BNHS Mammal Survey Report 24 (Wroughton 1916c)]		60	28°17'02"N 68°26'10"E	NHMUK 15.11.1.82–83
<b>78.</b> Karachi		14	24°52'00"N 67°03'00"E	NHMUK 64.434
<b>79.</b> Kashmir, Northern Sind Frontier [BNHS Mammal Survey Report 24 (Wroughton 1916c)]		66	28°26'00"N 69°35'00"E	NHMUK 15.11.1.84–85
<b>80.</b> Landhi [BNHS Mammal Survey Report 24 (Wroughton 1916c)]		15	24°51'30"N 67°12'47"E	NHMUK 79.593
<b>81.</b> Malir, “Farm area 2 mil NE of Malir” Karachi (estimated from Google Earth)		14	24°52'00"N 67°03'00"E	NHMUK 75.1451
<b>82.</b> Microbiology building / campus, University of Karachi, Karachi		14	24°55'03"N 67°06'19"E	NHMUK 75.1447–1450

A PROVISIONAL GAZETTEER OF COLLECTION LOCATIONS FOR *Funambulus*

Pakistan, Sindh	<b>83.</b> Mirpur Sakro, Sindh [BNHS Mammal Survey Report 24 (Wroughton 1916c), BNHS Mammal Survey Report 38 (Lindsay 1926b): report 38 names this location explicitly whereas report 24 mentions Mirpur)	8	24°32'49"N 67°37'41"E	NHMUK 23.11.9.1–3
	<b>84.</b> Naundero, Larkhana / Larkana [BNHS Mammal Survey Report 24 (Wroughton 1916c)]	60	27°40'00"N 67°55'00"E	NHMUK 15.11.1.86–87
	<b>85.</b> Panoaqil (Pano Aqil), U. Sind	60	27°51'00"N 69°07'00"E	NHMUK 47.288–292, 66.3393–3394
	<b>86.</b> Sehwan west of Sehwan, Sind	18	26°26'00"N 67°52'00"E	NHMUK 91.10.7.100
	<b>87.</b> Shikarpore, Sind	62	27°57'00"N 68°38'00"E	NHMUK 79.11.21.367
<b><i>F. palmarum</i></b>				
India, Andhra Pradesh	<b>88.</b> Balapalli, S. Cuddapah, Palkonda Hills including Chintarajupalli, Koduru [Perhaps unprocessed material from Kinneer & Whistler (1930)]	157– 500	14°05'00"N 79°05'00"E	NHMUK 30.5.24.140– 141; uncat. (no skull) × 4 (coll N.A. Baptista)
	<b>89.</b> Dasarladdodi, Palkonda Hills [approx. location (Brandon–Jones 2004), 10 miles West of Chintarajupalli, according to Napier with no coordinates (1985); see Balpalli]	490	14°15'00"N 78°50'00"E	NHMUK uncat. (no skull) × 2 (coll N.A. Baptista)
	<b>90.</b> Diguvametta, Kurnool District [(Napier 1985, Brandon–Jones 2004), Nallamalai Range near Nandikanama Pass (Kinneer & Whistler 1930), though mammals never covered from subsequent reports)	315	15°23'00"N 78°50'00"E	NHMUK uncat. (no skull) × 9 (coll N.A. Baptista)
	<b>91.</b> Koduru, Balapalli Range, Madras (Bates & Harrison 1997 [multiple options] – see Balapalli)	190	13°58'00"N 79°14'00"E	NHMUK 30.5.24.141
	<b>92.</b> Kondagorlapenta, Palkonda Hills (Brandon–Jones 2004); [see Balapalli for related series, perhaps unprocessed material from Kinneer & Whistler (1930)]	588	14°22'00"N 78°55'00"E	NHMUK uncat. (no skull) × 3 (coll N.A. Baptista)
	<b>93.</b> Madhavaram, Vontimitta range [Probably from Kinneer & Whistler (1930)]	329	15°56'00"N 77°21'00"E	NHMUK uncat. × 2 (coll N.A. Baptista)
	<b>94.</b> Malkondapenta, Kurnool District [as above Balapalli, associated with Kinneer & Whistler (1930)]	273	15°35'00"N 78°20'00"E	NHMUK uncat. × 4 (coll N.A. Baptista)
India, Bihar	<b>95.</b> Bihar, Nalanda	158	25°11'00"N 85°31'00"E	NHMUK 15.4.3.74
India, Gujarat	<b>3.</b> Bundha			NHMUK 98.4.2.26
India, Jharkhand	<b>96.</b> Gujhundi, Hazaribagh [BNHS Mammal Survey Report 19 (Wroughton 1915). Based on Gujhandi near Hazaribagh below]	741	24°29'00"N 85°28'00"E	NHMUK 15.4.3.77
	<b>97.</b> Hazaribagh [BNHS Mammal Survey Report 19 (Wroughton 1915)]	603	23°59'00"N 85°21'00"E	NHMUK 15.4.3.76
	<b>19.</b> Jagodih			NHMUK 15.4.3.75
	<b>98.</b> Muhammadganj, Bihar (O'Malley 1907) – 32 Miles north of Daltonganj and 16 miles west (USDG 1957)	200	24°27'00"N 83°53'00"E	AMNH 150085 <i>labelled pennantii</i>
India, Karnataka	<b>99.</b> Bangalore, Mysore	913	12°59'00"N 77°35'00"E	NHMUK 13.4.11.58

	<b>20. Dharwar / Dharwad</b>			NHMUK 12.6.29.56–57	
India, Karnataka	<b>100.</b> Gadag, S. Maharatta, Dharwar [BNHS Mammal Survey Report 5 (Wroughton 1912c)]	662	15°25'00"N 75°37'00"E	NHMUK 12.6.29.58, 12.6.29.60	
	<b>101.</b> Hawsbhavi, Dharwar / wad [Havasbhavi (Brandon–Jones 2004), BNHS Mammal Survey Report 5 (Wroughton 1912c), possibly modern Haunsbhavi]	700	14°35'00"N 75°22'00"E	NHMUK 12.6.29.59	
	<b>102.</b> Kolar Town, East Mysore [BNHS Mammal Survey Report 9 (Ryley 1913a) & Brandon-Jones (2004)]	821	13°08'00"N 78°08'00"E	NHMUK 13.4.11.55–57	
	<b>103.</b> Serinapatam, South Mysore [BNHS Mammal Survey Report 9 (Ryley 1913a)]	679	12°25'10"N 76°41'04"E	NHMUK 13.4.11.59–62, 35.3.25.7	
	<b>104.</b> Vijayanagar, Bellary [BNHS Mammal Survey Report 8 (Wroughton 1913)]	479	15°19'00"N 76°28'00"E	NHMUK 13.4.10.38–41	
India, Kerala	<b>105.</b> Kuttiani / Katyani / Kuttiani, Trevandrum (now Thiruvananthapuram; Burrard 1916), two locations close together, Kuttani & Kuttiani, about a mile apart near Pandalakkod Malai, a hill of 548ft, 7–8 miles north of Trevandrum [also in maps in Ali & Whistler (1935), an intermediate point closer to the northern point selected]	76	08°35'10"N 76°55'17"E	NHMUK 95.10.9.18–19	
	<b>106.</b> Trevandrum (now Thiruvananthapuram)	0	08°29'00"N 76°55'00"E	NHMUK 94.7.1.12–13, 0.5.26.7–15	
India, Madhya Pradesh	<b>21.</b> Asirgarh			NHMUK 12.6.28.15	
	<b>107.</b> Bori Forest, Hoshanagabad (Brandon–Jones 2004)	500	22°27'00"N 78°16'00"E	NHMUK uncat. × 2 (coll A.M. Caecia)	
	<b>24.</b> Dhain			NHMUK 12.11.29.90, 12.11.29.93	
	<b>108.</b> Hoshangabad, Central Province	277	22°45'00"N 77°43'00"E	NHMUK 12.11.29.97	
	<b>109.</b> Pachmarhi, Hoshanagabad [BNHS Mammal Survey Report 7 (Wroughton 1913)]	1045	22°28'00"N 78°26'00"E	NHMUK 12.11.29.91–92, 12.11.29.95	
	<b>27.</b> Rorighat			NHMUK 12.11.29.94	
India, Maharashtra	<b>110.</b> Sival, Nimar, Burhanpur [BNHS Mammal Survey Report 4 (Wroughton 1912b)]	269	21°28'40"N 76°26'50"E	NHMUK 12.6.28.17	
	<b>111.</b> Kolkaz, Sipna valley, Berar	698	21°05'47"N 77°03'31"E	NHMUK 12.3.8.12–13	
	<b>112.</b> Adyar, Madras (now Chennai)	12	13°00'16"N 80°15'30"E	NHMUK 8.7.28.4–5	
	<b>113.</b> Benhope Estate, Nilgiris [Mapped in Francis (1908), BNHS Mammal Survey Report 31A (Lindsay 1926a)]	1501	11°20'30"N 76°52'45"E	NHMUK 25.10.1.19–22	
	<b>114.</b> Gantha, Coimbatore	379	11°15'00"N 77°20'00"E	NHMUK 19.6.2.36	
	<b>115.</b> Kilpauk, Madras (now Chennai)	12	13°04'48"N 80°14'27"E	NHMUK 8.7.28.1, 8.7.28.8	
	<b>116.</b> Kotagiri, Nilgiris [BNHS Mammal Survey Report 31 (Wroughton & Davidson 1920a)]	1792	11°26'00"N 76°53'00"E	NHMUK 27.7.15.6–7	
	<b>117.</b> Kurumbapatti, Salem District (Richards 1918)	277	11°46'00"N 77°59'00"E	NHMUK 30.5.24.137–139	

A PROVISIONAL GAZETTEER OF COLLECTION LOCATIONS FOR *Funambulus*

India, Tamil Nadu	<b>118.</b> Machurr (now Dindigul), Palni Hills including Palni Hills, Machchur (Brandon–Jones 2004), [BNHS Mammal Survey Report 43 (Lindsay 1926a)]	1966	10°16'00"N 77°35'00"E	NHMUK 25.10.1.17
	<b>119.</b> Madras (now Chennai) Museum grounds	8	13°05'00"N 80°17'00"E	NHMUK 8.7.28.2–3
	<b>120.</b> Nagercoil (now Kanniyakumari)	12	08°10'00"N 77°26'00"E	NHMUK 20.4.22.1
	<b>121.</b> Nellitorre, North Coimbatore [BNHS Mammal Survey Report 43 (Lindsay 1926a)]	176	11°18'00"N 76°57'00"E	NHMUK 25.10.1.18
	<b>122.</b> Nilgiris including Anaikatti, base of Nilgiris, Madras [Hill designation in USDG (1957), Anaikatti on outskirts of Coimbatore town, not found during searches]	1792	11°25'00"N 76°30'00"E	AMNH 163113
	<b>123.</b> Pashavin / Pazhavin / Pazhavar / Payhavar, foot of Mahendragiri range (Gopalakrishnan 1995)	200	08°23'00"N 77°30'00"E	NHMUK 20.4.22.2–4
	<b>124.</b> Rookery, Kil Kotagiri including Rorkerg Estate Nilgiris (Francis 1908, Wall 1918)	1792	11°25'00"N 76°57'30"E	NHMUK 19.6.2.31–35
	<b>125.</b> Salem, Madras (USDG 1957)	200	11°39'00"N 78°10'00"E	AMNH 164049
	<b>126.</b> Shevaroy Hills, Eastern Ghats, Salem (Brandon–Jones 2004)	1033	11°50'00"N 78°16'00"E	NHMUK 30.5.24.142
	<b>127.</b> Tandiarpet / Tondiarpet, Madras (now Chennai)	8	13°07'47"N 80°17'23"E	NHMUK 8.7.28.6–7
	<b>128.</b> Trichnopoly (now Tiruchchirappalli)	75	10°45'56"N 78°42'33"E	NHMUK 7.11.25.2–3
	Sri Lanka	<b>129.</b> Anasigalla / Annasigala, Matugama including St George (Dilmah 2023, Geoview.info 2023), tens of <i>F. palmarum</i> (and other animals) were collected from Annasigala estate (“pineapple rock”), mostly by W.W.A. Phillips from Kalutara District, owned by 1920s St. George rubber company with nearby site, associated with a single specimen below)	18	06°29'2"N 80°02'37"E
<b>130.</b> Kala Oya, Northwestern Province (USDG 1960), based on stream rather than town, label could refer to the town, Mayor in Wroughton (1915) sketchy		40	08°18'00"N 79°50'00"E	NHMUK 15.3.1.113–122
<b><i>F. tristriatus</i></b>				
India, Karnataka	<b>131.</b> Barigi / East Sorab, Mysore [Based on Sorab (USDG 1957)]	200	14°23'00"N 75°06'00"E	AMNH 186891–3
	<b>132.</b> Devikop, South Mahratta [BNHS Mammal Survey Report 5 (Wroughton 1912c), 26 miles south of Dharwar, edge of Kanara Forest]	509	15°08'00"N 74°56'00"E	NHMUK 12.6.29.62
	<b>133.</b> Gersappaa / Gersoppa, Kanara, Uttar Kannad [BNHS Mammal Survey Report 6, Kanara (Wroughton 1913)]	7	14°15'00"N 74°39'00"E	NHMUK 12.11.28.82–83
	<b>134.</b> Hosur Forest, Sorab Taluk, Shimoga, Mysore [from Hosur Village (USDG 1957)]	500	14°40'00"N 75°06'00"E	AMNH 186894–6
	<b>135.</b> Hulekal, W. Sirsi, Uttar Kannad [BNHS Mammal Survey Report 6 (Wroughton 1913)]	509	14°42'00"N 74°46'00"E	NHMUK 12.11.28.81

India, Karnataka	<b>136.</b> Kardibetta Forest, Shimoga, Mysore [BNHS Mammal Survey Report 6 (Wroughton 1913)]	568	14°05'00"N 75°20'00"E	NHMUK 12.11.28.85
	<b>137.</b> Makut (Makutta), South Coorg (Brandon–Jones 2004)	80	12°05'00"N 75°45'00"E	NHMUK 13.8.22.49 (label crossed, no skull)
	<b>138.</b> Potoli, southeast of Supa, North Canara [a town further north of coordinates, Brandon–Jones (2004) more plausible, BNHS Mammal Survey Report 6 (Wroughton 1913, Napier 1985)]	500	15°11'00"N 74°33'00"E	NHMUK 12.11.28.80, 12.11.28.86–87, uncat. (no skull) × 1 (same series)
	<b>139.</b> Sagar, Shimoga, Mysore including Gamataghata [BNHS Mammal Survey Report 6 (Wroughton 1913)]	579	14°10'00"N 75°02'00"E	NHMUK 12.11.28.84
	<b>140.</b> Samasgi, Kanara border, South Dhawar (now Dharwad), South Maharatta [BNHS Mammal Survey Report 5, Dharwar (Wroughton 1912c)]	700	15°30'00"N 75°20'00"E	NHMUK 12.6.29.61
	<b>141.</b> Sirsi, Kanara, Uttar Kannad [BNHS Mammal Survey Report 6 (Wroughton 1913)]	568	14°37'00"N 74°51'00"E	NHMUK 12.11.28.88
	<b>142.</b> Srimangala, South Coorg (Brandon–Jones (2004), BNHS Mammal Survey Report 11 (Ryley 1913b))	844	12°01'00"N 75°58'00"E	NHMUK 13.8.22.47–48
	<b>143.</b> Virajpet now Virarajendrapet, South Coorg [BNHS Mammal Survey Report 11 (Ryley 1913b), see Wotekolli]	909	12°12'00"N 75°48'00"E	NHMUK 13.10.23.1–2, uncat. (no skull) × 1 (no coll.)
	<b>144.</b> Voddigeri, Shikaripur Taluk, Shimoga, Mysore (Based on Shikaripur)	500	14°16'00"N 75°21'00"E	NHMUK AMNH 186898
	<b>145.</b> Wotekolli (Vatekolli) South Coorg (Brandon–Jones 2004) after Fooden (1981), BNHS Mammal Survey Report 11 (Ryley 1913b) Coorg. See Makuta, Makut is just south of here from maps for Kodagu very close, like Virajpet.	844	12°10'00"N 75°58'00"E	NHMUK 13.8.22.50, FMNH 82897, FMNH uncat. (immature) × 2
	<b>146.</b> Bonaccord / Bon Accord, Glenleith Est., Trevandrum [Burrard (1912). Waddington (1925) mentions this as Bon Accord Estate of Poonmudi Tea & Rubber company, Kallar Bridge post office allied to an associated estate as nearest location]	990	08°40'37"N 77°10'10"E	NHMUK 95.10.9.14
	<b>147.</b> Cotengady Estate / Kottangadi / Kotengady Estate (Burrard 1912); coffee estate mentioned in Waddington (1925) and BNHS Mammal Survey Report 43 (Lindsay 1926a); also, in Napier (1985), Brandon–Jones (2004)	991	10°31'10"N 76°42'40"E	NHMUK 21.11.5.13–16
	<b>148.</b> Kollengode, Travancore incl. Nelliampatty (Nelliampathi/y) Hills [Kollengode (Brandon–Jones 2004) demarcates approx position of hills here]	112	10°37'00"N 76°42'00"E	AMNH 54652–3
	<b>105.</b> Kuttiani / Katyani / Kuttiani			NHMUK 95.10.9.17
	<b>149.</b> Merchiston, Travancore (now Thiruvananthapuram; Ryder 1923), Waddington (1925) mentions estate in South Travancore)	990	08°44'52"N 77°07'53"E	NHMUK 94.10.21.2
<b>150.</b> Nellacotta, Wynad (Sampaio <i>et al.</i> 2020)	880	11°33'14"N 76°15'54"E	NHMUK 85.8.1.270	

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India, Kerala	<b>151.</b> Paumba / Pavumba, N. Travancore (Ryder 1919) from two close points called Pavumba / Paavumba, near 48ft hill	12	09°06'55"N 76°35'25"E	NHMUK 4.3.2.1–4
	<b>152.</b> Poothota, N. Travancore (Renny-Tailyour 1913), from Udayamperur close by (Koshy, T. Pers. Comm. 14/5/2004) on location of Poothota	0	09°54'47"N 76°22'08"E	NHMUK 4.3.2.5–7
	<b>153.</b> Shasthancotta, Kollam [the type locality of <i>F. t. annandalei</i> (not examined) referenced in Robinson (1917)]	24	09°03'00"N 76°38'00"E	-
	<b>154.</b> Shernelly / Sharnelli Estate, Sheerneilly [Burrard (1912); rubber estate from Waddington (1925) 2000 ft, BNHS Mammal Survey Report 43 (Lindsay 1926a) also Brandon–Jones (2004), Fooden (1981)]	609	10°31'58"N 76°39'42"E	NHMUK 21.11.5.11–12, 25.10.1.23–24
	<b>155.</b> Travancore [state, – largely in reference to a set of <i>F. tristriatus</i> squirrels collected by C. Rowson at elevation of 3–4000'. The Cardamom hills fit this altitude in central Travancore south of the Anamalai hills in North Travancore of similar elevation based on Hatch (1933) as theoretically]	1066	09°45'00"N 77°10'00"E	NHMUK 22.8.28.3–8
	<b>156.</b> Tyecantuctary / Tyegantchary / Tyecautuchary / Tyegautchary [Tyecattussery in Renny-Tailyour (1913); chary / sseri interchangeable, this comes closest nr Kottayam, Pavumba and Poothota, elusive “Northern Travancore” sites for coll. H. S. Ferguson. A faded “Vycome” (Moore & Tate 1965) on label (Vaikam Taluk) corroborates location]	0	09°46'33"N 76°20'50"E	NHMUK 4.3.2.8–9
India, Maharashtra	<b>157.</b> Helwak, Satara [BNHS Mammal Survey Report 22 (Wroughton 1916a)]	741	17°22'00"N 73°44'00"E	NHMUK 15.7.3.25–33, FMNH 82895–6
	<b>158.</b> Katkarwadi, Pune [approx. from Pune District, (USDG 1957)]	500	18°40'00"N 73°55'00"E	AMNH 189467
	<b>159.</b> Khandalla, Western Ghats, Bombay Presidency [BNHS Mammal Survey Report 30 (Wroughton & Davidson 1920a)]	671	18°45'00"N 73°23'00"E	NHMUK 19.6.3.47–51
	<b>160.</b> Khed, Ratnagiri [BNHS Mammal Survey Report 22 (Wroughton 1916a)]	24	17°43'00"N 73°23'00"E	NHMUK 15.7.3.23–24
	<b>161.</b> Thana / Thane, Bombay Presidency	8	19°12'00"N 72°58'00"E	NHMUK 5.9.12.1–2
India, Tamil Nadu	<b>162.</b> Animalai Hills, Western Ghats (now Indira Gandhi Wildlife Sanctuary)	2500	10°25'00"N 76°58'00"E	AMNH 245110–13
	<b>163.</b> Mudumalai, base of Nilgiris (for variations see Brandon–Jones (2004), Fooden (1981), Lozupone <i>et al.</i> (2004)	903	11°37'00"N 76°34'00"E	AMNH 163108
<b><i>F. sublineatus</i></b>				
India, Karnataka	<b>164.</b> Huvinakadu Estate, Kutta, south Coorg [BNHS Mammal Survey Report 11 (Ryley 1913b)]	1000	12°25'00"N 75°45'00"E	NHMUK 13.8.22.51
India, Kerala	<b>105.</b> Kutyani / Katyani / Kuttiani			NHMUK 95.10.9.20–24
	<b>165.</b> Manantoddy, Wynaad	39	11°48'00"N 76°01'00"E	NHMUK 85.8.1.272



India, Kerala	<b>166.</b> Ponmudi / Punmudi, Travancore (now Thiruvananthapuram; Ryder (1923), taken as estate contra Pon Mudi, Ibex Hill nearby	990	08°45'58"N 77°07'48"E	NHMUK 94.10.21.3, 95.10.9.25
	<b>167.</b> Bombay Shola / Shola Kodaikanal including Kodaikanal, top of Palni Hills, BNHS Mammal Survey Report 43 (Lindsay 1926a)	1966	10°14'00"N 77°29'00"E	NHMUK 7.7.7.4446
India, Tamil Nadu	<b>168.</b> Coonoor, Nilgiris (Brandon–Jones 2004)	1501	11°21'00"N 76°49'00"E	NHMUK 84.12.12.2
	<b>122.</b> Nilgiris			NHMUK 217a, 55.12.24.321, 82.6.9.1 “Nilgiris”
	<b>169.</b> Tiger Shola [approx. point close to designation from Foreau (1961) ~ 8 miles west of Kodaikanal, BNHS Mammal Survey Report 43 (Lindsay 1926a)]	1966	10°14'00"N 77°31'00"E	NHMUK 25.10.1.26
<b><i>F. layardi</i></b>				
Sri Lanka	<b>170.</b> Ambegamuwa hills / Ambagamuwa [Thomas (1924) gave 70N and 80030'E for the Ambegamuwa hills, a type locality for <i>F. layardi</i> – specimen not examined, close to Nuwara Eliya; a similar location is “Ambagamuwa” near Kandy from surveys. This is a regional identification and S. Goonetilleke advised (2008) that the older designation closer to Newara Eliya is probably correct)	636	7°00'00"N 80°02'37"E	—
	<b>171.</b> Hallinna Kiu (USDG 1960) possibly estate in Kahawatta (Dilmah 2023); based on “Halinna”	416	06°37'00"N 80°36'00"E	NMSL 59M
	<b>172.</b> Wala Ketiya could read Watta Ketiya; (pers. comm. Survey Dept. Colombo, Sri Lanka 2006)	213	06°58'52"N 81°06'57"E	NMSL 59F

## Discussion

Most *Funambulus* studies to date and major revisions (Ellerman 1961; Moore & Tate 1965; Datta & Nandini 2015) using many of the specimens listed, have not provided the same level of detail on geography or as comprehensively as above. Zahn (1942) was among the first to map the genus but neither provided a gazetteer or coordinates, nor did his interesting series of maps have latitude, longitude markings or a grid. Moore & Tate (1965) made a salutary effort with useful taxon maps and a gazetteer.

Given locations used are from specimen labels in the absence of geotagging data, accuracy of latitudes and longitudes are often constrained to the nearest minute rather than second. There is room to further improve these locations (e.g., the co-ordinates for Annasigala, Sri Lanka have been improved due to later sources such as Geoview (2023) and Dilmah (2023) that are often updated frequently unlike physical publications.

**Summary of sources.** Apart from the invaluable and evolving online sources cited, general geographical works and colonial maps, some of the best gazetteer information for local South Asian studies with older specimens may be listed without pretense of being definitive or comprehensive. For mammalogy Corbet & Hill (1992) provide maps but no coordinates. Works like Moore & Tate (1965), Fooden (1981), Napier (1985), Bates & Harrison (1997) and Molur *et al.* (2002) are useful, complemented by Brandon-Jones (2004) in the context of the BNHS and associated mammal surveys. Lozupone *et al.* (2004) encompasses these and related collecting sites in the context of ornithology dating back to the 19<sup>th</sup> century. Recent Indian malacological texts also provide gazetteer information (Preece *et al.* 2022; Raheem *et al.* 2014). These works provide a useful detailed historical overview for collecting sites in South Asia with detailed sources and source categories listed above. Citation of reports of the BNHS Mammal Survey are by necessity

inconsistent as the style of these reports, including titling formats, changed over the years – they've been provided as faithfully as possible.

**Collection bias.** This work provides a useful overview of the BNHS Mammal Survey and related collecting activities including one of the few maps dealing with the survey since Spence (1920). The BNHS collecting sites represent about 50% of the total collection sites, but the overall distribution of collection sites by comparing Fig 1. and Fig. 2 mirror each other with a paucity of sites from central and eastern India. Either this represents an overview of true *Funambulus* distribution or suggests collecting bias towards the west coast. Inaccessibility or infrastructure issues may not be explanatory given Mitford's 1840s Indian journey (Mitford 1884) was down the eastern coast past Madras (Chennai) to Rameswaram. The BNHS Mammal survey itself was hampered by World War 1 (Kinnear 1952), but in the absence of other evidence, the map conveys a good historical overview of *Funambulus* (incorporating Moore & Tate 1965) with likely reductions in range for rarer forest species such as *F. sublineatus*. Clearly further assessments of *Funambulus* distribution may be needed with the one major collection towards southeastern India labelled B in Fig. 2 referenced obliquely as the Eastern Ghats (Kinnear & Whistler 1930).

**Scope of present work.** This work combines gazetteer and historical specimen (478 specimens) information together (Table 1) for a genus of squirrel characteristic of and mostly confined to the Indian subcontinent. There is no mystery about the bulk of the locations, but here they are associated with zoological collections and specimens. The importance of this location data goes beyond zoogeography. The genus is widely held in international collections outside India but in the absence or narrowing of future collecting opportunities due to legal or other constraints, this body of information may be of use in the context of the specimens and collections referred to. The BNHS Mammal Survey map (Fig. 2) indicates *Funambulus* present in over 80% of the survey sites. It is the kind of map that was never compiled by the authors of the survey or subsequently – indicating a lack of interest in one of the most pioneering mammal surveys in taxonomy. As with Selander & Vaurie (1962) and general history, a few sites (e.g., collection B) remain untraced. *Funambulus* was arguably better surveyed than less obvious mammalian wildlife

(e.g., *Tatera*), given the genus is conspicuous being active and noisy. Its location data may overlap and apply to other, relevant collections less poorly documented for further taxonomic studies. Most of the collections catalogued above will not be accessible to many and public museum databases referencing these specimens are often either incomplete or non-existent. This data will support future biodiversity work, given that many other specimens were collected at these sites, often simultaneously to these specimens (e.g., BNHS surveys, Pocock 1941). For example, prolific collectors (e.g., WWA Phillips from Anasigalla, Sri Lanka) who occupied some of these places also collected birds (Wynell-Mayow 2002). Many of these sites are often listed though not located as for *Funambulus* in Ghose *et al.* (2004) and in primate studies such as Napier (1985) where some coordinates are absent, probably due to research constraints.

Southern India and the Ghats in particular are regarded as a biodiversity hotspot both for squirrels (Koprowski & Nandini 2008) and more generally (Bossuyt *et al.* 2004). For illustration, the following ten originally highly problematic locations from South India have been elucidated or more accurately located than before: 113. Benhope, 146. Bonaccord, 147. Cotengady, 105. Kuttyani, 149. Merchiston, 123. Pashavin, 151. Paumba, 154. Shernelly, 169. Tiger Shola, 156. Tyecantuctary. Based on this work, there is an opportunity for improving research based on older biological collections for South Asia in the context of Johnson *et al.* (2023) who highlight the importance of international collections for biodiversity research. There is also the opportunity for an expanded Lozupone *et al.* (2004) if not Yule & Burnell (1902).

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### Literature Cited

- Ali, S. and H. Whistler (1935). The ornithology of Travancore and Cochin. Part I. *The Journal of the Bombay Natural History Society*, 37(4): 814–843.
- Arya, R.P. (2005). *Karnataka Road Atlas & Distance Guide* (including 7 new districts and Goa). Indian Map Service, Jodhpur: 48pp.
- Arya, R.P. (2006). *Tamil Nadu Road Atlas & Distance Guide* (including Pondicherry). Indian Map Service, Jodhpur: 48pp.
- Arya, R.P., J. Arya, G. Arya *et al.* (2006). *Kerala Road Atlas & Distance Guide* (including Lakshadweep). Indian Map Service, Jodhpur: 48pp.
- Bates, P.J.J. and D.L. Harrison (1997). *Bats of the Indian Subcontinent*. Harrison Zoological Museum Press, Sevenoaks, Kent: 258pp.
- BL (1999). Bartholomew Ltd. *Collins Indian subcontinent, India, Pakistan, Bangladesh, Sri Lanka*. 1:4,000000 (1 inch:63 miles). Harper Collins, London.
- Blyth, E. (1849). Note on the Sciuri inhabiting Ceylon and those of the Tenasserim provinces. *Journal of the Asiatic Society Bengal*, 18(1): 600–603.
- Bossuyt, F., M. Meegaskumbura, N. Beenaerts *et al.* (2004). Local Endemism Within the Western Ghats-Sri Lanka Biodiversity Hotspot. *Science*, 306(5695): 479–481.
- Brandon-Jones, D. (2004). A taxonomic revision of the langurs and leaf monkeys (Primates: Colobinae) of South Asia. *Zoos' Print*, 19(8): 1552–1594.
- Burrard, S.G. (1912). *Malabar District & Cochin State (Madras)*. No. 58B/10. 1:63,360 (1 inch:1 mile); Accession: X/9053/58B/10/1912. Survey of India Offices (Map Record & Issue Branch), Calcutta.
- Burrard, S.G. (1916). *Anjengo District & Travancore State (Madras)*. No. 58D/14. 1:63,360 (1 inch:1 mile); Accession: X/9053/58D/14/1916. Survey of India Offices (Map Record & Issue Branch), Calcutta.
- Corbet, G.B. and J.E. Hill. (1992). *The Mammals of the Indomalayan Region: A Systematic Review*. Oxford University Press & Natural History Museum Publications, Oxford: 488pp.
- Chisholm, G.G. (1895). *Longmans' Gazetteer of the World*. Longmans Green & Co., London: 1788pp.
- CI (2001). Compare Infobase. *Maps of India*. CD (Version 1) <URL> Compare Infobase Pvt, Ltd, New Delhi. Accessed on 01 January 2023.
- Datta, A. and R. Nandini (2015). Sciurids. Pp. 513–573. *In: Jonsingh, A. & N. Manjrekar (eds.). Mammals of South Asia*. Volume 2. Universities Press India, Hyderabad: 799pp.
- Dilmah (2023). *The History of Ceylon Tea from Dilmah*. <URL> Accessed on 01 January 2023.
- Dissanayake, R. (2012). The Nilgiri striped squirrel (*Funambulus sublineatus*), and the dusky striped squirrel (*Funambulus obscurus*), two additions to the endemic mammal fauna of India and Sri Lanka. *Small Mammal Mail - Bi-Annual Newsletter of CCINSA & RISCINSA*, 3(2): 6–7.
- Dissanayake, R. (2017). Opinion: Is the convention on biodiversity killing collection-based research? *The Biologist*, 64(3): 6–7.
- Dissanayake, R. and T. Oshida (2012). The systematics of the dusky striped squirrel, *Funambulus sublineatus* (Waterhouse 1838) (Rodentia: Sciuridae) and its relationships to Layard's squirrel, *Funambulus layardi* Blyth 1849. *Journal of Natural History*, 46(1–2): 91–116.
- Ellerman, J. R. (1961). Genus 8. *Funambulus* Lesson. Pp. 190–240. *In: Roonwal M.L. (ed.). The Fauna of India including Pakistan, Burma and Ceylon, Mammalia*. Second edition, Volume 3: Rodentia (in two parts), Part 1 (2<sup>nd</sup> edition). Zoological Survey of India (Govt. of India), Delhi: 884pp.
- Fitzgerald, S. V. & A. E. Nelson (1911). *Central Provinces District Gazetteer, Amraoti District* (Volume A). G. W. and A. E. Claridge, Bombay: 437pp.
- Fooden, J. (1981). Taxonomy and evolution of the *Sinica* group of macaques: 2 species and subspecies accounts of the Indian Bonnet macaque, *Macaca radiata Fieldiana*, *Zoology* (New Series), 9: 1–47.
- Foreau, G.S.J. (1961). The moss flora of the Palni Hills. *The Journal of the Bombay Natural History Society*, 58(1): 13–47.
- Francis, W. (1908). *Madras District Gazetteers - The Nilgiris* (Volume 1). The Superintendent, Government Press, Madras: 394pp.
- FRG (2023). Falling Rain Genomics Inc. <URL> Accessed on 01 January 2023.
- Fry, T.B. (1929). Bombay Natural History Society's mammal survey of India, Burmah and Ceylon - Report No. 46 (Supplementary) On the second, third and fourth collections from Toungoo, Burmah, made by Mr. J.M.D. Mackenzie, I. F. S., between the dates Feb 9,

- 1927 to March 2, 1928. *The Journal of the Bombay Natural History Society*, 33(3): 636–652.
- GE (2023). Google Earth <URL> Accessed on 01 January 2023.
- Geoview (2023). geoview <URL> Accessed on 01 January 2023.
- Ghose, R.K., A.K. Mandal, and P.S. Ghose (2004). A contribution to the taxonomy of Indian five striped squirrel [sic] (*Funambulus pennanti* Wroughton), with description of two new subspecies. *Records of the Zoological Survey of India*, 102(3–4): 89–103.
- Gopalakrishnan, M. (1995). *Gazetteers of India: Tamil Nadu State, Kanniyakumari District*. Government of Tamil Nadu, Madras: 1259pp.
- Hatch, E.G. (1933). *Travancore - A Guide Book for the Visitor* (1<sup>st</sup> edition). Humphrey Milford. Oxford University Press, Madras: 294pp.
- Hinton, M.A.C. and T.B. Fry (1923). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report 37 - Nepal. *The Journal of the Bombay Natural History Society*, 29(2): 399–428.
- HMSSIC (1907–1931). HM Secretary of State for India in Council from 1907 to 1931. *The Imperial Gazetteer of the Indian Empire* (Volumes 1–26). Clarendon Press, Oxford.
- Johnson, K.R., I.F.P. Owens & Global Collection Group (2023). A global approach for natural history museum collections. *Science*, 379(6638): 1192–1194.
- Kinnear, N. (1952). A history of Indian mammalogy and ornithology. Part I. Mammals. *The Journal of the Bombay Natural History Society*, 50(4): 766–778.
- Kinnear, N.B. and H. Whistler (1930). The Vernay scientific survey of the Eastern Ghats. Ornithological section. *The Journal of the Bombay Natural History Society*, 34(2): 386–403.
- Koprowski, J.L. and R. Nandini (2008). Global hotspots and knowledge gaps for tree and flying squirrels. *Current Science*, 95(7): 851–856.
- Koprowski, J.L., E.A. Goldstein, K.R. Bennet *et al.* (2016). Family Sciuridae (tree, flying and ground squirrels, chipmunks, marmots and prairie dogs). Pp. 648–838. In: Wilson D.E., T.E.J. Lacher, & R.A. Mittermeier (eds.). *Handbook of the Mammals of the World*. Volume 6: Lagomorphs and Rodents I. Lynx Editions, Barcelona: 988pp.
- Lesson, R.P. (1835). *Illustrations De Zoologie, ou Recueil De Figures D'animaux peintes d'après nature*. Arthur Bertrand, Paris: 334pp.
- Lindsay, H.M. (1926a). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report Nos. 43 - Nelliampathy plateau & Palni Hills; 44 - Kangra & Chamba; 45 - The Punjab Salt Range & Murree; Supplement to Report No. 23 by F.M. Bailey; Supplement to Report No. 31–31A, Nilgiris. *The Journal of the Bombay Natural History Society*, 31(3): 591–614.
- Lindsay, H.M. (1926b). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report No. 38 (Sind). *The Journal of the Bombay Natural History Society*, 31(1): 40–42.
- Lindsay, H.M., M. Hinton, and O. Thomas (1926). Bombay Natural History Society's mammal survey of India, Burma and Ceylon, Report No. 40 (Gwalior State); 41 (Assam & Mishmi Hills, supplement 1 (Chilka Lake, Orissa), supplement 2 (Kangra); 42 (Kashmir and Punjab). *The Journal of the Bombay Natural History Society*, 31(2): 379–407.
- Linnaeus, C. (1766). *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis* (10<sup>th</sup> edition, Volume 1). Laurentii Salvii, Holmiae: 823pp.
- Lozupone, P., B.M. Beehler, and S.D. Ripley. (2004). *Ornithological Gazetteer of the Indian Subcontinent*. Center for Applied Biodiversity Science, Conservation International, Washington DC: 194pp.
- Maxwell-Leffroy, H. and F.M. Howlett (1909). *Indian Insect Life, A Manual of the Insects of the Plains*. Thacker, Spink & Co, London: 786pp.
- Mitford, E.L. (1884). *A Land March from England to Ceylon Forty Years Ago*. (Volume 1). W. H. Allen, London: 374pp.
- Molur, S., G. Marimuthu, C. Srinivasulu *et al.* (2002). *Status of South Asian Chiroptera: Conservation Assessment and Management Plan (C.A.M.P.) Workshop Report*. CBSG South Asia and WILD, Coimbatore, India: 320pp.
- Moore, J.C. and G.H.H. Tate (1965). A study of the diurnal squirrels, Sciurinae, of the Indian and Indo-Chinese subregions. *Fieldiana Zoology*, 48: 1–351.
- Nagam Aiya, V. (1906). *The Travancore State Manual*. Travancore Government Press, Trivandrum: 815pp.
- Nair, A.K.K.R. (1987). *Gazetteer of India - Kerala State Gazetteer* (Volume 1). Kerala Books & Publications Society (Government of Kerala). Kakkannad, Cochin: 419pp.
- Napier, P. H. (1985). *Catalogue of Primates in the British Museum (Natural History) and Elsewhere in the British Isles*. Part 3: Family

- Cercopithecidae, Subfamily Colubinae. British Museum (Natural History), London: 111pp.
- NGIA (2023). National Geospatial-Intelligence Agency <URL> Accessed on 01 January 2023.
- Odhams (1936). *The New Pictorial Atlas of the World with an Introduction to Encyclopedia of Geographical Terms and Gazetteer Index*. Odhams Press Ltd., London: 280pp.
- O'Malley, L.S.S. (1907). *Bengal District Gazetteers, Palamau*. The Bengal Secretariat Book Depot, Calcutta: 192pp.
- Pelzeln, A. von and F.F. Kohl (1886). Ueber eine sendung von saugethieren und vogeln aus Ceylon. *Verhandlungen zoologisch - botanischen Gesellschaft in Wien*, 35: 525–528.
- Pethiyagoda, R., N. Gunatilleke, M. de Silva *et al.* (2007). Science and biodiversity: the predicament of Sri Lanka (Opinion). *Current Science*, 92(4): 426–427.
- Phillips, W.W.A. (1933). Survey of the distribution of mammals in Ceylon. *Spolia Zeylanica*, 17(3): 127–138.
- Pocock, R.I. (1941). *The Fauna of British India including Ceylon and Burma* (2<sup>nd</sup> edition, Volume 2). Taylor and Francis, Ltd., London: 499pp.
- PPVMP & CBL (2006). Poovendran P. Vishnu Maps Publications & Collins Bartholomew Ltd. *Oxford School Atlas*. Oxford University Press India, Delhi: 104pp.
- Pradhan, S. and M.G. Jotwani (1964). History of entomology in India. Pp: 1–17. In: Pant, N.C. (ed.). *Entomology in India*. The Entomological Society of India, New Delhi: 529pp.
- Prathapan, K.D., R. Pethiyagoda, K.S. Bawa *et al.* (2018). When the cure kills - CBD limits biodiversity research. *Science*, 360(6396): 1405–1406.
- Preece, R.C., T.S. White, D.C. Raheem *et al.* (2022). William Benson and the golden age of malacology in British India: Biography, illustrated catalogue and evaluation of his molluscan types. *Tropical Natural History, Supp.* 6: 1–434.
- Raheem, D.C., H. Taylor, J. Ablett *et al.* (2014). A systematic revision of the land snails of the Western Ghats of India. *Tropical Natural History, Supp.* 4: 1–294.
- Rasmussen, P.C. and R.P. Prys-Jones (2003). History vs. mystery: the reliability of museum specimen data. In: Collar, N.J., C.T. Fisher, & C.J. Feare (eds.). *Why museums matter: avian archives in an age of extinction*. *Bulletin of the British Ornithologists' Club*, 123A: 1–360.
- Renny-Tailyour, T.F.B. (1913). *Malabar District & Cochin & Travancore States (Madras)*. No. 58C/1&5. 1: 63,360 (1 inch:1 mile); Accession: X/9053/58C/1&5/1913. Survey of India Offices (Map Record & Issue Branch), Calcutta.
- Richards, F.J. (1918). *Salem* (Volume 1). Superintendent, Government Press, Madras: 343pp.
- Robinson, H.C. (1917). On two new subspecies of squirrel from southern India. *Records of the Indian Museum*, 13(1): 41–42.
- Robinson, H.C. and C.B. Kloss (1918). A nominal list of the Sciuridae of the Oriental region with a list of specimens in the collection of the Zoological Survey of India. *Records of the Indian Museum*, 15(4): 171–254.
- Ryder, C.H.D. (1919). *Travancore State ("Madras")*. No. 58C/SE. 1:126,720 (1 inch:2 miles); Accession: X/9052/58C/SE/1919. Survey of India Offices (Map Record & Issue Branch), Calcutta.
- Ryder, C.H.D. (1923). *Tinnevelly District & Travancore State ("Madras")*. No. 58H/NW. 1:126,720 (1 inch:2 miles); Accession: X/9052/58H/NW/1923. Survey of India Offices (Map Record & Issue Branch), Calcutta.
- Ryley, K.V. (1913a). Bombay Natural History Society's mammal survey of India, Report No. 9 (Mysore, with one plate). *The Journal of the Bombay Natural History Society*, 22(2): 283–295.
- Ryley, K.V. (1913b). The Bombay Natural History Society's mammal survey of India. Report No. 10 (Kathiawar) and Report No. 11 (Coorg). *The Journal of the Bombay Natural History Society*, 22(3): 464–513.
- Ryley, K.V. (1913c). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report No. 12 (Palanpur and Mount Abu). *The Journal of the Bombay Natural History Society*, 22(4): 684–690.
- Sampaio, F.L., S. Narayanan, V.P. Cyriac *et al.* (2020). A new Indian species of *Rhinophis* Hemprich, 1820 closely related to *R. sanguineus* Beddome, 1863 (Serpentes: Uropeltidae). *Zootaxa*, 4881(1): 1–24.
- Sangam Books. (2004). *The Orient Longman School Atlas for Sri Lanka*. Orient Longman Private Ltd., Chennai: 84pp.
- Sclater, P.L. (1858). On the general geographical distribution of members of the Class Aves. *Journal of the Proceedings of the Linnean Society, Zoology*, 2(7): 130–145.
- Sehegal, K.K. (1971). *Rajasthan District Gazetteers - Bharatpur*. Directorate, District Gazetteers, Government of Rajasthan, Jaipur: 492pp.
- Selander, R.B. and P. Vaurie (1962). A gazetteer to accompany the "Insecta" volumes of the "Biologia Centrali - Americana". *American*

- Museum Novitates*, 2099: 1–70.
- Somasekaram, T., M.P. Perera, and M.B.G. de Silva (1997). *Arjuna's Atlas of Sri Lanka*. Arjuna Consulting Co., Dehiwala: 220pp.
- Spence, R.A. (1920). Report of the committee of the Bombay Natural History Society. *The Journal of the Bombay Natural History Society*, 27(2): 371–378.
- Srinivasulu, B. and C. Srinivasulu (2012). *South Asian Mammals: Their Diversity, Distribution and Status*. Springer, NY: 459pp.
- The Times (1999). *The Times Comprehensive Atlas of the World 2000*. Times Books, London: 544pp.
- Thomas, O. (1924). On some Ceylon mammals. *The Annals and Magazine of Natural History*, 13(74): 239–243.
- UPASI (1937). *Planting Directory of Southern India*. The United Planter's Association of South India, Coonoor: 291pp.
- USDG (1957). U.S. Division of Geography *India - Official Standard Names Gazetteer Approved by the United States Board on Geographic Names* (Volumes 1, 2 & Supplement). Division of Geography, Department of the Interior, Washington DC.
- USDG (1960). U.S. Division of Geography *Ceylon - Official Standard Names Gazetteer Approved by the United States Board on Geographic Names*. Division of Geography, Department of the Interior, Washington DC: 432pp.
- USDG (1962). U.S. Division of Geography *Gazetter No. 67, Pakistan - Official Standard Names*. Division of Geography, Department of the Interior, Washington DC: 883pp.
- Waddington, H. (1925). *Planting Directory of Southern India*. The United Planter's Association of S. India (UPASI), Coimbatore.
- Wall, F. (1918). Notes on a collection of snakes made in the Nilgiri Hills and the adjacent Wynaad (with diagam and maps). [Map located before contents page of bound volume]. *Journal of the Bombay Natural History Society*, 26(2): 552–584.
- Wallace, A.R. (1852). On the Monkeys of the Amazon. *Proceedings of the Zoological Society London*, 20: 107–110.
- Waterhouse, G.R. (1837). Observations of the palm squirrel (*Sciurus palmærum* of Authors). *The Magazine of Natural History and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology*, 1: 496–499.
- Waterhouse, G.R. (1838). On a new species of squirrel *Sciurus sublineatus*. *Proceedings of the Zoological Society of London*, 6: 19–20.
- Whistler, H. and N.B. Kinnear (1932). The Vernay scientific survey of the Eastern Ghats (Ornithological). *The Journal of the Bombay Natural History Society*, 35(3): 505–524.
- Wikipedia (2023). Wikimedia Foundation. Wikipedia: The Free Encyclopedia <URL> Accessed on 01 January 2023.
- Wroughton, R.C. (1905). The common striped palm squirrel. *Journal of the Bombay Natural History Society*, 16(3): 406–413.
- Wroughton, R.C. (1912a). Bombay Natural History Society's mammal survey of India. Collection No. 1. (E. Khandesh). *The Journal of the Bombay Natural History Society*, 21(2): 392–410.
- Wroughton, R.C. (1912b). Bombay Natural History Society's mammal survey of India. Collection No. 2, (Berars); 3 (Cutch); 4 (Nimar). *The Journal of the Bombay Natural History Society*, 21(3): 820–851.
- Wroughton, R.C. (1912c). Bombay Natural History Society's mammal survey of India. Collection No. 5 (Dharwar). *The Journal of the Bombay Natural History Society*, 21(2): 1170–1195.
- Wroughton, R.C. (1913). The Bombay Natural History Society's mammal survey of India. Report No. 6 (Kanara), Report No. 7 (Central Provinces), and Report No. 8 (Vijayanagar, Bellary). *The Journal of the Bombay Natural History Society*, 22(1): 29–66.
- Wroughton, R.C. (1914). Bombay Natural History Society's mammal survey of India, Burma and Ceylon (Report No. 15 (Kumaon)). *The Journal of the Bombay Natural History Society*, 23(2): 282–301.
- Wroughton, R.C. (1915). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report Nos. 18 & 19 (Ceylon; Bengal, Bihar and Orissa). *The Journal of the Bombay Natural History Society*, 24(1): 79–110.
- Wroughton, R.C. (1916a). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report No 20 (Chindwin River; Report 21 Gwalior; Report 22 Koyna Valley, Western Ghats). *The Journal of the Bombay Natural History Society*, 24(2): 291–316.
- Wroughton, R.C. (1916b). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report No. 23 (Sikkhim and Bengal Terai). *The Journal of the Bombay Natural History Society*, 24(3): 468–493.
- Wroughton, R.C. (1916c). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report No. 24 (Sind); Report No. 25 (Chin Hills); Report No. 26 (Darjiling District). *The Journal of the Bombay Natural History Society*, 24(4): 749–782.
- Wroughton, R.C. (1918). Summary of the results from the Indian mammal survey of the Bombay

- Natural History Society, Part III. *The Journal of the Bombay Natural History Society*, 26(2): 338–379.
- Wroughton, R.C. and W.M. Davidson (1920a). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report No. 30 (Dekhan, Poona District). Report No. 31 (Nilgiris). *Journal of the Bombay Natural History Society*, 26(4): 1025–1035.
- Wroughton, R.C. and W.M. Davidson (1920b). Bombay Natural History Society's mammal survey of India, Burma and Ceylon. Report No. 32 (Baluchistan). *The Journal of the Bombay Natural History Society*, 27(2): 314–322.
- Wynell-Mayow, E. (2002). *W. W. A. Phillips, A Naturalist's Life*. WHT Publications, Colombo: 82pp.
- Yapa, A.C. and G. Ratnavira (2013). *The Mammals of Sri Lanka*. Field Ornithology Group of Sri Lanka, Colombo: 1012pp.
- Yule, H. and A.C. Burnell (1902). *Hobson-Jobson, A Glossary of Anglo-Indian Colloquial Words and Phrases and of Kindred Terms* (2<sup>nd</sup> edition). John Murray, London: 1083pp.
- Zahn, W. (1942). Die riesen-, streifen-, und spitznasen-hornchen der Orientalischen region. *Zeitschrift Saugetierk*, 16: 1–182.