

# The first records of Nilgiri Marten *Martes gwatkinsii* from Parambikulam Tiger Reserve, southern Western Ghats, India

R. SREEHARI and P. O. NAMEER

## Abstract

Nilgiri Marten *Martes gwatkinsii* is a globally threatened mustelid endemic to the Western Ghats, southern India. It was camera-trapped once and sighted thrice in Parambikulam Tiger Reserve, Kerala, in the Anamalai Hill sub-region of the southern Western Ghats, in 2011–2012. These are the first records for this area, which lies within the known geographic range.

**Keywords:** Anamalai Hills, camera-trap, distribution, endemic, Mustelidae, Kerala

മരനായയുടെ പറമ്പിക്കുളം കടുവാസങ്കേതത്തിൽ നിന്നുമുള്ള പ്രാഥമിക റിപ്പോർട്ട്

## സംഗ്രഹം

പശ്ചിമഘട്ടത്തിൽ മാത്രം കണ്ടുവരുന്ന മസ്തിലിയെ കുടുംബത്തിൽപ്പെട്ട മരനായകൾ ആഗോളതലത്തിൽ വംശനാശഭീഷണി നേരിടുന്ന സസ്തനീയാണ്. 2011-2012കളിൽ പറമ്പിക്കുളം കടുവാസങ്കേതത്തിൽ നിരീക്ഷണ ക്യാമറ ഉപയോഗിച്ച് നടത്തിയ പഠനത്തിൽ ഇവയുടെ ചിത്രം ഒരു തവണ പകർത്തുവാനും, മൂന്ന് തവണ നേരിൽ കാണുകയും ചെയ്തിട്ടുണ്ട്. പറമ്പിക്കുളത്തു നിന്ന് ആദ്യമായാണ് മരനായ റിപ്പോർട്ട് ചെയ്യുന്നത്.

Nilgiri Marten *Martes gwatkinsii* is a poorly known small carnivore endemic to the Western Ghats, southern India (Wirth & Van Rompaey 1991, Nameer 2000, Johnsingh & Nameer 2013, Mudappa 2013). *The IUCN Red List of Threatened Species* categorises it as Vulnerable (Choudhury *et al.* 2008). There are 22 published locality records, confined to the states of Karnataka, Tamil Nadu and Kerala (Table 1, Fig. 1). Apart from those by

Kinloch (1923) and Hutton (1949), all other records were during the last few decades. This paper reports the first records of Nilgiri Marten from Parambikulam Tiger Reserve, Kerala.

Parambikulam Tiger Reserve (Parambikulam TR), the second Tiger Reserve of Kerala, is situated in the Palghat district, within the Anamalai hills of Western Ghats. Its 643.66 km<sup>2</sup> are located within 10°20–26'N, 76°35–50'E, at 300–1,438 m asl

**Table 1.** Localities with records of Nilgiri Marten *Martes gwatkinsii* from the Western Ghats, southern India (its entire world range).

Map #	Location	Reference
1	Bisale Reserved Forest, Karnataka, 12°46'N, 75°44'E	Krishna & Karnad 2010
2	Sampaje, Karnataka, 12°29'N, 75°33'E	Karanth 1986
3	Thalakaveri Wildlife Sanctuary, Karnataka, 12°11'N, 75°48'E	Kumara & Singh 2007, Krishna & Karnad 2010
4	Virajpet, Coorg, Karnataka, 12°01'N, 75°52'E	Pocock 1941, Schreiber <i>et al.</i> 1989
5	Brahmagiris, Karnataka, 11°59'N, 75°07'E	Schreiber <i>et al.</i> 1989
6	Sandynallah, Nilgiris, Tamil Nadu, 11°32'N, 76°24'E	Krishna & Karnad 2010
7	Mukkurthi National Park, Tamil Nadu, 11°26'N, 76°38'E	Yoganand & Kumar 1995
8	Nilambur Reserved Forest, Kerala, 11°18'N, 76°33'E	Balakrishnan 2005
9	Upper Bhavani, Tamil Nadu, 11°13'N, 76°31'E	Gokula & Ramachandran 1996
10	Silent Valley National Park, Kerala, 11°09'N, 76°26'E	Christopher & Jayson 1996, Balakrishnan 2005
11	Muthikkulam Reserved Forest, Kerala, 10°56'N, 76°38'E	Balakrishnan 2005
12	Nelliampathy Reserved Forest, Kerala, 10°33'N, 76°41'E	Kinloch 1923, Krishna & Karnad 2010
13	Parambikulam Tiger Reserve, Kerala, 10°29'N, 76°47'E	Present study
14	Topslip, Tamil Nadu, 10°24'N, 76°51'E	Krishna & Karnad 2010
15	Grass Hills National Park, Tamil Nadu, 10°20'N, 77°55'E	Krishna & Karnad 2010
16	Indira Gandhi Wildlife Sanctuary, Tamil Nadu, 10°20'N, 76°01'E	Krishna & Karnad 2010, Sridhar <i>et al.</i> 2008
17	Pambadum shola National Park, Kerala, 10°14'N, 77°08'E	Krishna & Karnad 2010
18	Eravikulam National Park, Kerala, 10°12'N, 77°04'E	Madhusudan 1995
19	Palni Hills, Tamil Nadu, 10°10'N, 77°23'E	Krishna & Karnad 2010
20	High Wavy Mountains, Tamil Nadu, 9°42'N, 77°24'E	Hutton 1944, 1949
21	Periyar Tiger Reserve, 9°30'N, 76°17'E	Kurup & Joseph 2001
22	Peppara Wildlife Sanctuary, Kerala, 8°40'N, 77°08'E	Christopher & Jayson 1996
23	Kalakkad-Mundunthurai Tiger Reserve, Tamil Nadu, 8°32'N, 77°23'E	Mudappa 2002

# Some additional records, particularly those not formally published, from within or near these sites are not shown.

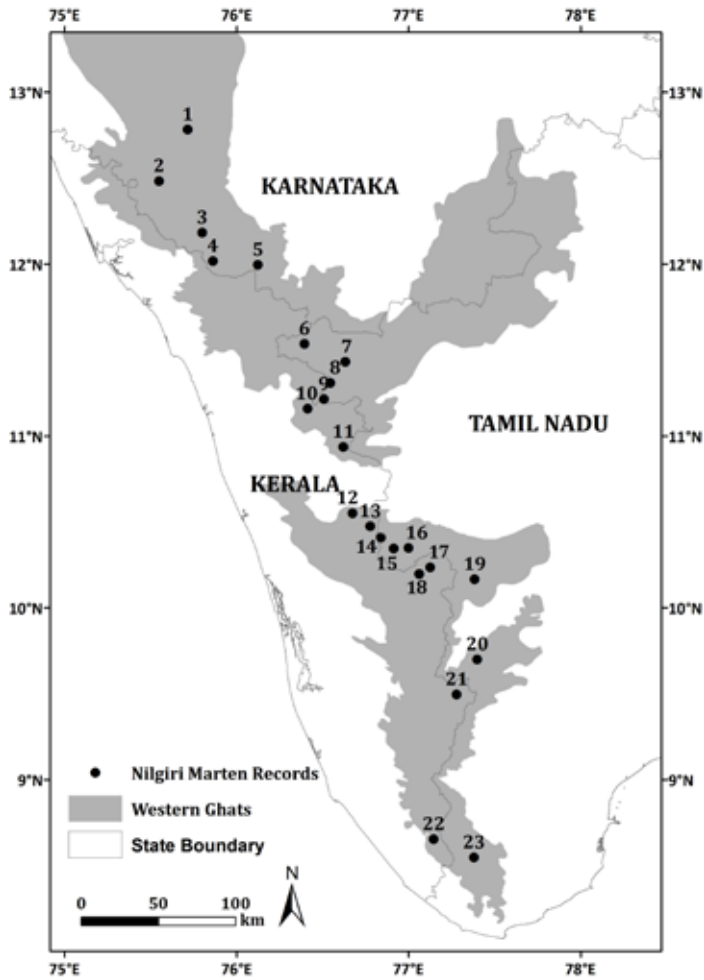


Fig. 1. Localities with Nilgiri Marten *Martes gwatkinsii* records from the Western Ghats, southern India.

(Kaler 2011). A small carnivore survey at Parambikulam TR from April 2011 to March 2012 deployed Bushnell TrophyCam infrared camera-traps with a digital scouting camera, without lures or baits, in various habitats, mostly along existing forest trails and near streams.

One Nilgiri Marten was camera-trapped (Fig. 2), at Karimalagopuram. Three direct sightings were also made: two from Kothala and the other one near to the Fifth Colony (a tribal settlement). All four records (Table 2, Fig. 3) were of apparently solitary individuals, with two each from semi-evergreen and from the adjoining moist deciduous forests. The directly sighted animals were all in the crowns of trees at heights of 10–20 m above ground, during daylight.

In spite of an effort of 1,349 camera-trap-nights in all



Fig. 2. Nilgiri Marten *Martes gwatkinsii* camera-trapped in Parambikulam Tiger Reserve, Kerala, India, on 27 July 2011.

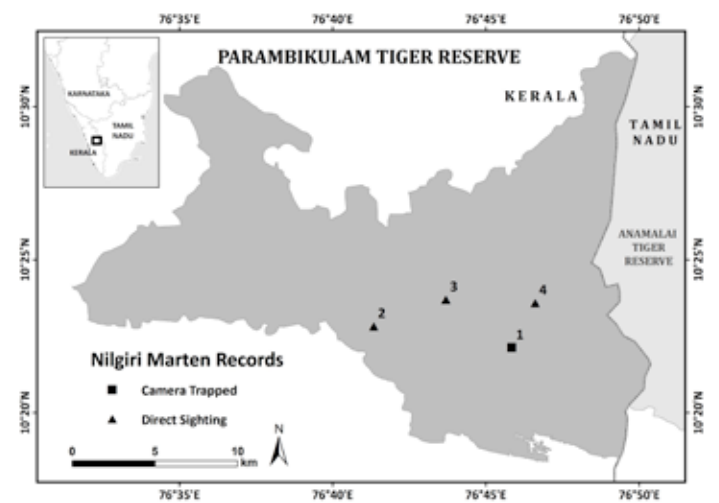


Fig. 3. Nilgiri Marten *Martes gwatkinsii* records from Parambikulam Tiger Reserve, Kerala, India.

representative habitats, across the altitudinal range of Parambikulam TR, Nilgiri Marten was camera-trapped only once. Moreover, in 242 km of day transect and 344 km of night vehicle transect surveys, over a period of one year, the animal was sighted only thrice. These records suggest that Nilgiri Marten is an uncommon animal at Parambikulam TR. Given that all three direct sightings were of animals in trees, camera-trapping may not be a very efficient search method for the species, at least as typically employed (using unbaited, ground-level camera-traps). The present survey is the first camera-trap-based survey of small carnivores at Parambikulam TR. Thus, the present sighting of this species from the Parambikulam

Table 2. Records of Nilgiri Marten *Martes gwatkinsii* from Parambikulam Tiger Reserve, India.

Date	Time	Location	Latitude	Longitude	Altitude	Habitat**
27 July 2011*	17h01	Karimalagopuram	10°22'N	76°45'E	708 m	SEG
14 Sept 2011	11h30	Kothala	10°22'N	76°41'E	543 m	SEG
22 Sept 2011	10h00	Kothala	10°23'N	76°43'E	526 m	MDF
11 Feb 2012	15h20	Fifth Colony	10°23'N	76°46'E	580 m	MDF

\*\*SEG: semi-evergreen forest; MDF: moist deciduous forest. All altitudes are approximate; they were measured using a Garmin 72 GPS.

All records involved single individuals. All were direct field sightings except one camera-trap record\*

TR, which lies within the known geographic range, could be a case of Nilgiri Marten being overlooked in the past from here, rather than the species increasing in abundance.

### Acknowledgements

We thank Chief Wildlife Warden, Kerala Forest Department for the permission to study the small carnivores of Parambikulam TR (WL12-7972/2010). We thank the Deputy Director of the Tiger Reserve and Assistant Wildlife Wardens of Parambikulam TR for helping with the logistics and other support, and the Dean, College of Forestry, Kerala Agricultural University, for encouragement and support. Thanks are also due to Sreenidasan, Vijayan and Murali of Parambikulam Tiger monitoring team and Jobin K. Mathew, Sajeer K. V. and Sachin K. Aravind for their assistance in the field. Our gratitude to R. Sugantha-sakthivel for helping in preparation of the maps. Financial support for this study was provided by the Kerala Agricultural University. The authors also thank the anonymous reviewers for their critical comments which greatly improved the manuscript.

### References

- Balakrishnan, P. 2005. Recent sightings and habitat characteristics of the endemic Nilgiri Marten *Martes gwatkinsii* in Western Ghats, India. *Small Carnivore Conservation* 33: 14–16.
- Choudhury, A., Wozencraft, C., Muddapa, D. & Yonzon, P. 2008. *Martes gwatkinsii*. In: IUCN 2012. *IUCN Red List of Threatened Species*. Version 2012.2. <www.iucnredlist.org>. Downloaded on 31 December 2012.
- Christopher, G. & Jayson, E. A. 1996. Sightings of Nilgiri Marten (*Martes gwatkinsii* Horsfield) at Peppara Wildlife Sanctuary and Silent Valley National Park, Kerala, India. *Small Carnivore Conservation* 15: 3–4.
- Gokula, V. & Ramachandran, N. K. 1996. A record of the Nilgiri Marten (*Martes gwatkinsii* Horsfield) in Upper Bhavani. *Journal of the Bombay Natural History Society* 93: 82.
- Hutton, A. F. 1944. Feeding habits of the Nilgiri Marten. *Journal of the Bombay Natural History Society* 48: 374–375.
- Hutton, A. F. 1949. Notes on the snakes and mammals of the High Wavy Mountains, Madurai district, south India, Part II – mammals. *Journal of the Bombay Natural History Society* 48: 681–694.
- Johnsingh, A. J. T. & Nameer, P. O. 2013. Introduction. Pp. xxvii–lvii in Johnsingh, A. J. T. & Manjrekar, N. (eds) *Mammals of South Asia*, 1. Universities Press, Hyderabad, India.
- Kaler, O. P. 2011. *Management plan for Parambikulam Tiger Reserve (2011–2021)*. Kerala Forest Department, Thiruvananthapuram, Kerala, India.
- Karanth, K. U. 1986. Status of wildlife and habitat conservation in Karnataka. *Journal of the Bombay Natural History Society* 83: 166–179.
- Kinloch, A. P. 1923. The larger mammals of Nelliampathy Hills. *Journal of the Bombay Natural History Society* 29: 552–554.
- Krishna, Y. C. & Karnad, D. 2010. New records of the Nilgiri Marten *Martes gwatkinsii* in Western Ghats, India. *Small Carnivore Conservation* 43: 23–27.
- Kumara, H. N. & Singh, M. 2007. Small carnivores of Karnataka: distribution and sight records. *Journal of the Bombay Natural History Society* 104: 155–162.
- Kurup, D. N. & Joseph, G. K. 2001. Certain observations on the behaviour of Nilgiri Marten (*Martes gwatkinsii*) in Periyar Tiger Reserve, Kerala, India. *Small Carnivore Conservation* 25: 1–2.
- Madhusudan, M. D. 1995. Sighting of the Nilgiri Marten (*Martes gwatkinsii*) at Eravikulam National Park, Kerala, India. *Small Carnivore Conservation* 13: 6–7.
- Mudappa, D. 2002. Observations of small carnivores in the Kalakad-Mundanthurai Tiger Reserve, Western Ghats, India. *Small Carnivore Conservation* 27: 4–5.
- Mudappa, D. 2013. Herpestids, viverrids and mustelids. Pp 471–498 in Johnsingh, A. J. T. & Manjrekar, N. (eds) *Mammals of South Asia*, 1. Universities Press, Hyderabad, India.
- Nameer, P. O. 2000. *Checklist of Indian mammals*. Kerala Forest Department and Kerala Agricultural University, Thrissur, Kerala, India.
- Pocock, R. I. 1941. *The fauna of British India, including Ceylon and Burma. Mammalia*, 2nd edn, II. Taylor & Francis, London, U.K.
- Schreiber, A., Wirth, R., Riffel, M. & Van Rompaey, H. 1989. *Weasels, civets, mongooses, and their relatives. An action plan for the conservation of mustelids and viverrids*. IUCN, Gland, Switzerland.
- Sridhar, H., Raman, T. R. S. & Mudappa, D. 2008. Mammal persistence and abundance in tropical rainforest remnants in the southern Western Ghats, India. *Current Science* 94: 748–757.
- Wirth, R. & Van Rompaey, H. 1991. The Nilgiri Marten, *Martes gwatkinsii* (Horsfield, 1851). *Small Carnivore Conservation* 5: 6.
- Yoganand, T. R. K. & Kumar, A. 1995. The distribution of small carnivores in the Nilgiri Biosphere Reserve, Southern India. A preliminary report. *Small Carnivore Conservation* 15: 3–4.

**Centre for Wildlife Studies, College of Forestry,  
Kerala Agricultural University, KAU P.O. 680 656,  
Thrissur, Kerala, India.  
Emails: sree.forestry@gmail.com, nameer.po@kau.in**