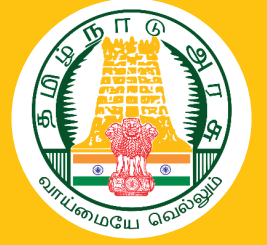


TAMILNADU
FOREST DEPARTMENT



SYNCHRONIZED
VULTURE SURVEY REPORT
2025

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1

Introduction



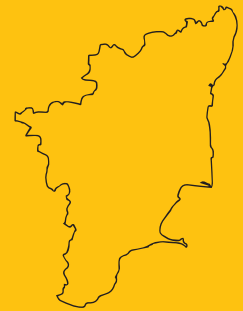
An ecosystem is deemed to be stable if it has different levels of organisms in their ecological niches without which it is considered to be an unbalanced state. Trouble for any of such organisms not only leads to collapse the food chain, but also it makes disorder in the existing food web (Green *et al.*, 2004). It is noteworthy to mention that the scavengers occupy an imperative and last level of the food chain without which the recycling or proper disposal, especially that of dead and decaying materials will be either stopped or delayed. Being a scavenger in habit, the vultures are an important link in the food chain, and are prevent spread of dangerous diseases such as anthrax and rabies (Prakash *et al.*, 2003), which could cause havoc to wild animals, livestock and human. Therefore, it is believed that the absence of scavenger can lead to a grave crisis in the terrestrial ecosystem (Verner *et al.*, 1986).



22 SPECIES



09 SPECIES



07 SPECIES



Population Status

Population status of White-rumped vulture, Long-billed vulture and Slender-billed vultures have declined by more than 97% in India (Prakash *et al.*, 2003). Due to this decline, the species are listed by IUCN (2000),

The other species are Eurasian Griffon (*Gyps fulvus*), Himalayan Griffon (*Gyps himalayensis*), Cinereous Vulture (*Aegypius monachus*) and Bearded Vulture (*Gypaetus barbatus*)



CRITICALLY ENDANGERED

- ⊙ White-rumped Vulture (*Gyps bengalensis*)
- ⊙ Long-billed Vulture (*Gyps indicus*)
- ⊙ Red-headed Vulture (*Sarcogyps calvus*)
- ⊙ Slender-billed Vulture (*Gyps tenuirostris*)



ENDANGERED

- ⊙ Egyptian Vulture (*Neophron percnopterus*)

Protection Status

▼ Egyptian Vulture
Neophron percnopterus



▼ White Rumped Vulture
Gyps bengalensis



▲ Long Billed Vulture
Gyps indicus



▲ Red Headed Vulture
Sarcogyps calvus

The Government of India has also listed all these nine species in Schedule-I, and they are protected by the Indian Wildlife (Protection) Act, 1972.

2 Study Area



For the conservation of ecologically important vulture species, it is imperative to study all the aspects associated with them such as their status, distribution, breeding biology, feeding habits, general behavioral aspects, causes of mortalities (pathology as well as parasitology) and threats to the last surviving population. To ensure and enhance their protection, a landscape-level conservation approach is necessary, and it is important to conduct yearly estimation of vulture population across different habitats of the landscape. Therefore, the present Synchronized vulture survey was carried out from 27th & 28th February, 2025.

The study area is a part of the Nilgiri Biosphere Reserve, a region of 5,520 square kilometers that encompasses an ecosystem of the Nilgiris hill ranges and its surrounding habitats. The area holds a significant place in India's conservation efforts, being the country's oldest and most prominent biosphere reserve.

The present synchronized vulture population estimation was conducted in Mudumalai TR (688 sq.km), Sathyamangalam TR (1408.60 sq.km), Wayanad landscape (except Aralam & Kottiyoor Wildlife Sanctuary) (863.8563 sq.km), Nagarhole TR (847.98 sq.km) and Bandipur TR (868.63 sq.km) which covers a total area of 4677.0663 square kilometers.



Mudumalai Tiger Reserve

Located in the Nilgiri Mountains of Tamil Nadu, southern India, the Mudumalai Tiger Reserve occupies an area of 688 square kilometers. Its elevation ranges from 450 to 2065 meters, encompassing the Nilgiri district and sharing borders with the states of Karnataka and Kerala. The reserve is adjacent to the Wayanad Wildlife Sanctuary in the west, the Bandipur Tiger Reserve in the north, and the Sathyamangalam Tiger Reserve in the east. To the south, it is bordered by the Nilgiri forest division.

The Mudumalai Tiger Reserve is traversed by the Moyar river and the reserve experiences an average annual rainfall of approximately 1,420 mm and hosts tropical and subtropical moist broad-leaved forests.

Sathyamangalam Tiger Reserve

Located in the Erode District of Tamil Nadu, India, within the Eastern Ghats, which covers a total area of 1408.60 square kilometers. Serving as a gateway to the Eastern Ghats, it holds immense ecological importance as a wildlife corridor within the Nilgiri Biosphere Reserve, connecting the Western Ghats with the rest of the Eastern Ghats.

It also acts as a genetic link between five adjacent protected areas, including the Billigiriranga Swamy Temple Wildlife Sanctuary, Sigur Plateau, Mudumalai National Park, Bandipur National Park, and the Cauvery Wildlife Sanctuary. The region encompasses five distinct forest types, namely tropical evergreen (Shola), semi-evergreen, mixed-deciduous, dry deciduous, and thorn forests.

Nellai Forest Division

Nellai Forest Division is situated in the Tirunelveli district of Tamil Nadu, India. It is most renowned for its famous mountains. Out of the 29 such mountain peaks, Sivagiri Mala is considered the highest point at 1,748 m and Ramakkaltheri is a great tourist attraction. Nellai Wildlife Sanctuary earned the title of 'wildlife sanctuary' in the year 2015. It is a protected wildlife sanctuary.

3

Methodology





106

Vantage Points

The survey was conducted from and a total of 106 vantage points were selected for the survey. Volunteers, including vulture identification experts, Non Governmental Organization members and students of various institutions participated in the survey. The participants were formed into 33 groups of 5, including forest field staff.

Vantage point count was the adopted method for the survey since the terrain is hilly and undulated. The vantage point was selected to have a clear view of the surrounding area, i.e., a hill top or a plain area. Data sheets were prepared for each session and handed over to the teams.

Details of vantage points

Sl. No	Name of the Protected area	No. of vantage points
1	Mudumalai Tiger Reserve	20
2	Sathyamangalam Tiger Reserve	10
3	Nellai Forest Division	03
4	BRT Tiger Reserve	15
5	Bandipur Tiger Reserve	32
6	Nagerhole Tiger Reserve	08
7	Wayanad Wildlife Sanctuary	18
Total		106

Details of sessions

The teams conducted the survey in the field for two days

	Day 1 (27.02.25)	Day 2 (28.02.25)
Session 1	09.30 - 11.30 am	10.30 am - 12.30 pm
Session 2	02.00 - 4.00 pm	01.30 - 03.30 pm



4

Results



Based on the data, Double count was carefully calculated and avoided based on the timing and direction of observation in the nearby vantage points. After accounting for double count, the average of all the sessions was calculated and the vulture population was estimated as below.

02
Days

04
Sessions

08
Hours

106
Vantage
points



TAMILNADU



KERALA



KARNATAKA

Details of vulture population recorded during the synchronized vulture survey 2025

Sl. No	State	Name of the Protected area	White-rumped	Long billed	Red headed	Egyptian	Total
1	Tamil Nadu	Mudumalai Tiger Reserve	97 (90)	14 (10)	8 (5)	0	119 (105)
2		Sathyamangalam Tiger Reserve	13 (9)	17 (10)	3 (2)	0	33 (21)
3		Nellai Wildlife Sanctuary	0	0	0	5 (5)	5 (5)
4	Karnataka	Biligiri Rangaswamy Temple Tiger Reserve	8 (6)	0	0	0	8 (6)
5		Bandipur Tiger Reserve	51 (20)	14 (12)	12 (7)	0	77 (39)
6		Nagarhole Tiger Reserve	14 (11)	2 (1)	7 (4)	0	23 (16)
7	Kerala	Wayanad Wildlife Sanctuary	105 (77)	3 (2)	17 (12)	0	125 (91)
Total			288 (213)	50 (35)	47 (30)	5 (5)	390 (283)

() indicates average value of all the four sessions

The most abundant across the geographic location was White rumped vulture (n = 288) followed by Long billed vulture (n = 50) and Red headed vulture (n = 47).

	Tamilnadu	Kerala	Karnataka
White rumped vulture <i>Gyps bengalensis</i>	110	105	73
Long billed vulture <i>Gyps indicus</i>	31	03	16
Red headed vulture <i>Sarcogyps calvus</i>	11	17	19
Egyptian vulture <i>Neophron percnopterus</i>	05	-	-

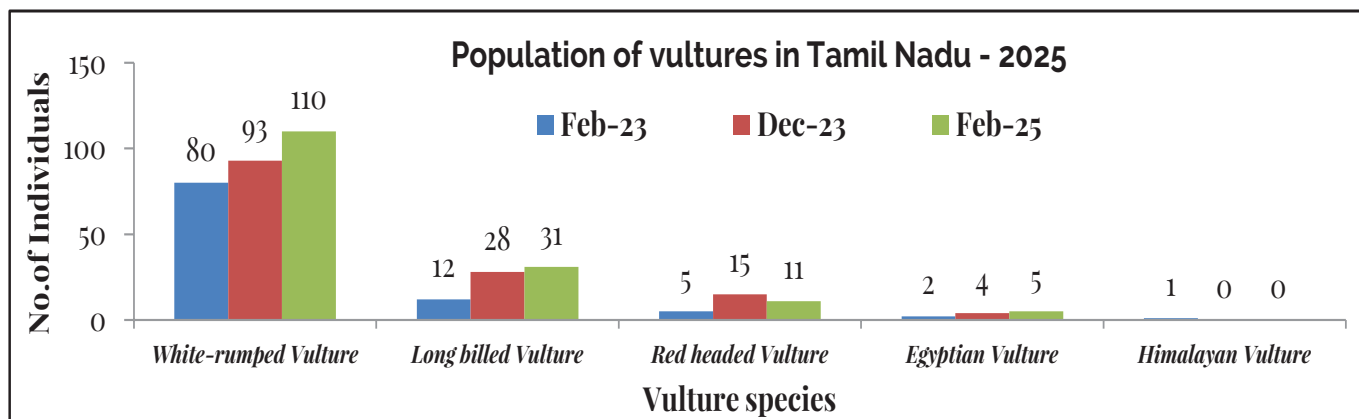
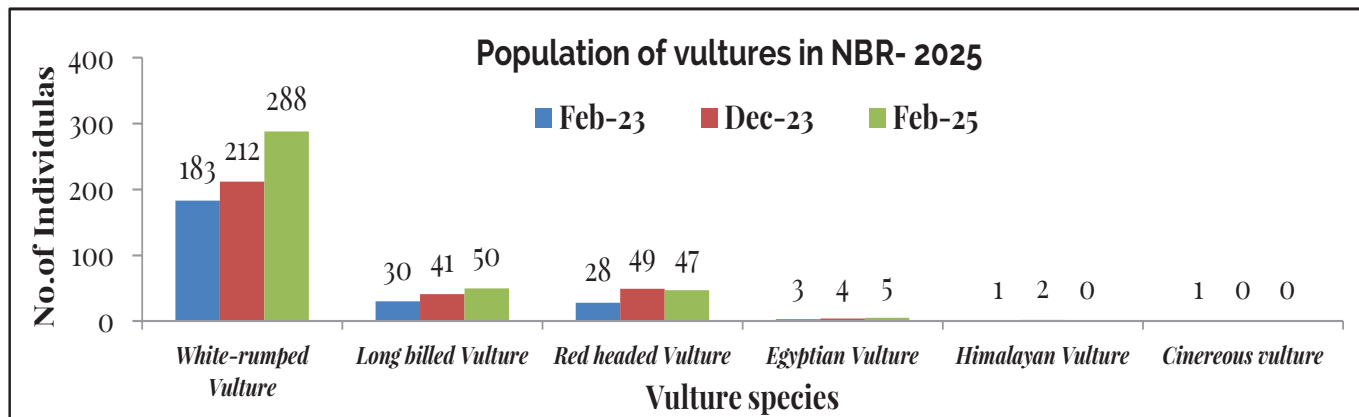
A total of 711 vulture sightings were encountered during the survey period. Along with this, nesting records were also recorded. When comparing the protected areas, Wayanad landscape (n=243) recorded the most sightings, followed by Mudumalai Tiger Reserve (n=229), Sathyamangalam Tiger Reserve (n=100), Bandipur Tiger Reserve (n=79), Nagarahole Tiger Reserve (n=49), BRT (n=10) and Nellai Wildlife Sanctuary (n=1).

Most sightings were recorded during the morning sessions, compared with the evening sessions. The third session recorded the highest of 171 sightings (n=390).



The vulture population is in increasing trending in Tamil Nadu White rumped and Long billed population are steadily increasing compared with previous synchronized vulture surveys. Egyptian vulture recorded also shows an increasing trend. Himalyan vulture was not recorded during this survey.

Most sightings were recorded during the morning sessions, compared with the evening sessions. The third session recorded the highest of 171 sightings (n=390).

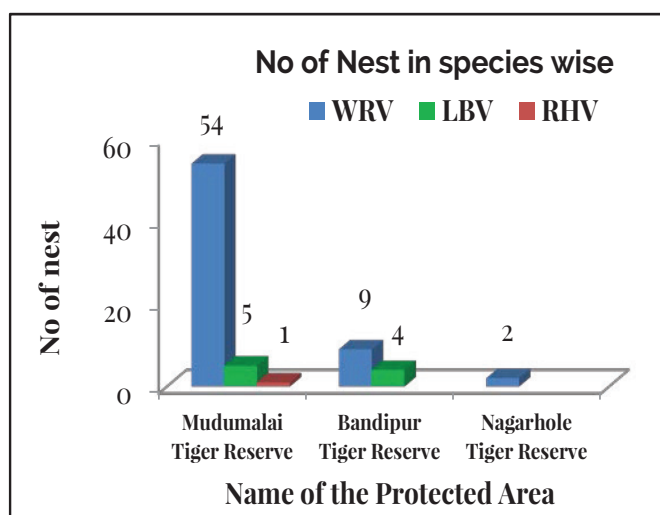
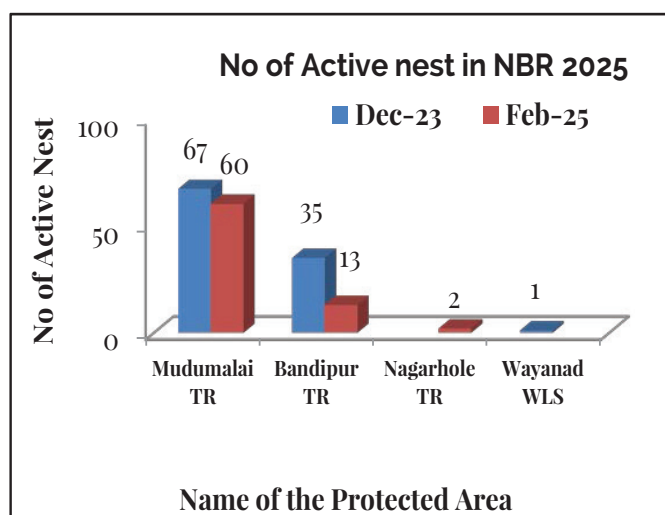


Nest

The nest count method would be a more reliable method to exactly count the minimum number of individuals at a given the Table. In Mudumalai Tiger Reserve, Bandipur Tiger Reserve, and Nagarhole Tiger Reserve, based on the observation of the nesting and the chicks were observed.

Name of the Species	Name of the Protected area	No. of nesting site	No. of Active nest	No. of Vulture population estimated	No. of chicks
White Rumped Vulture	Mudumalai Tiger Reserve	5	54	108	30
	Bandipur Tiger Reserve	6	9	18	0
	Nagarhole Tiger Reserve	2	2	4	1
Long Billed Vulture	Mudumalai Tiger Reserve	2	5	10	3
	Bandipur Tiger Reserve	2	4	8	4
Red Headed Vulture	Mudumalai Tiger Reserve	1	1	2	1
Total		18	75	150	39

- ▶ The nest count Data shows more active nest in Mudumalai Tiger Reserve followed by Bandipur Tiger reserve.
- ▶ More number of nest of white-rumped vulture was recorded.



HIGHLIGHTS OF THE SURVEY

75

Nests



White-Rumped vulture was the most abundant species



711

Sightings

Red Headed vulture nest first time recorded in Southern India at Mudumalai Tiger Reserve.

04 Species were recorded during the survey | 03 Critically Endangered | 01 Endangered

Recommendations for Future Survey:

1. To identify all vulture nesting sites division-wise before the next synchronized Vulture survey.
2. To assess whether any vulture nesting sites are located near human habitations, and conduct an anthropological survey to understand the human-vulture interface.
3. To deploy Vulture Watchers for monthly monitoring of vulture populations in nesting habitats, and maintain a database of observations at the divisional level.
4. To deploy camera traps near wild and domestic carcass sites to assess vulture population sizes and composition using camera trap methodology.
5. To monitor and assess the status of nesting trees, including their health, stability, and suitability for vulture nesting.

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