

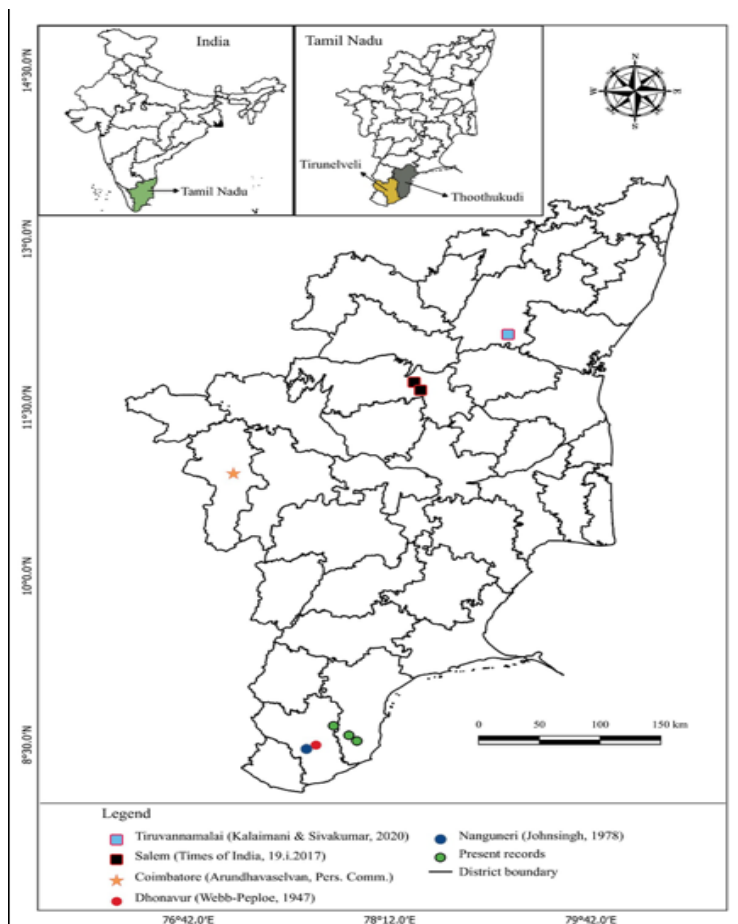
## Range reaffirmation: Indian Fox sighting in eastern Tamil Nadu after four decades

The Indian Fox (*Vulpes bengalensis*) is distributed along the plains of the Indian subcontinent (Garg et al. 2023). Their habitats are characterized by open landscapes in semi-arid zone with flat to undulating terrain covered by grasslands or scrub cover (Gompper & Vanak 2006).

The environment with relatively dry weather, low vegetation cover provides suitable conditions for their hunting and denning (Jhala 2016). The species also known to inhabit thorny deciduous forests and marginal croplands and can tolerate human presence (Punjabi et al. 2013).

On the other hand, it avoids the true deserts and the steep terrain with dense-wooded forests or tall grasslands (Gompper & Vanak 2006). Historical accounts and recent surveys confirm their absences along the forests of Western Ghats and coastal habitats in further west. It plays a vital ecological role as a mesopredator, regulating populations of rodents, insects, and other small vertebrates, and aiding seed dispersal, thus maintaining grassland ecosystem balance and

health (Vanak & Gompper 2010; Jhala 2016). Its presence indicates healthy, functioning semi-arid and grassland habitats in peninsular India.



**Spatial representation of former and current sightings of Indian Fox in Tamil Nadu**

Date	Location & Coordinates	Event/Observation	Remarks
31.iii.2014	Pidaneri village, Thoothukudi. 8.534622N, 77.956964E.	The forest department rescued the Indian Fox, and the late Naveen Joseph shared this information with us.	First confirmed occurrence of the species in Thoothukudi district
08.viii.2020	Krishnapuram, Sivanthipatti region, Tirunelveli. 8.681458N, 77.78492E.	Indian Fox observed near abandoned stone quarry.	They were frequently sighted near quarries, pond banks, and knoll during twilight.
05.x.2020	Kettiyampalpuram, Thoothukudi. 8.585606N. 77.89725E.	The forest department rescued the Indian fox after it fell into a well.	Second confirmed occurrence of the species in Thoothukudi district.

In Tamil Nadu, confirmed reports of *Vulpes bengalensis* are limited. Arundhavelvan (pers. comm.) documented its presence approximately forty years ago in Chettipalayam, within the Coimbatore district. More recently, Kalaimani and Sivakumar (2020) reported the observation of a female with two pups at Adiannamalai lake, Tiruvannamalai district. Historically, Webb-Peploe (1947) recorded sightings from Dhonavur village, located 3 km east of the Kalakkad-Mundanthurai Tiger Reserve in the southern Western Ghats.

Additionally, Johnsingh (1978) investigated certain aspects of the ecology and behavior of *V. bengalensis* in Nanguneri Taluk, Tirunelveli district, forty years ago. Since then, no further verified sightings have been documented in

Tirunelveli. Herein, we report recent sightings of *Vulpes bengalensis* from Tirunelveli and Thoothukudi districts in eastern Tamil Nadu, thereby reaffirming the species' presence in this region after four decades.

Recent sightings and rescue location of the Indian Fox (*Vulpes bengalensis*) documented in Thoothukudi and Tirunelveli districts, southern Tamil Nadu, between 2014 and 2020.

The Tirunelveli and Thoothukudi districts are situated in south and southeastern Tamil Nadu, respectively. Both areas are characterized by vast expanses of scrublands, grasslands and croplands.



An Indian Fox (*Vulpes bengalensis*) standing near its den (above) and an individual fleeing upon detecting the observer (indicated by arrow) at Krishnapuram, Sivanthipatti region, Tirunelveli, southern Tamil Nadu. Both images are extracted from video footage. © M. Rameshwaran

The lowland areas receive the highest precipitation (548.7mm) during the Northeast monsoon (October to January). Indian Foxes are known to thrive in human-altered environments due to their adaptable behavior (Jhala 2016). This adaptability may explain their continued presence in the human-modified landscapes of Tirunelveli and Thoothukudi, where suitable lowland habitats have been increasingly converted for development.

### Conservation threats

Extirpation of the Indian Fox has been linked to habitat degradation, disease, and anthropogenic pressures, including hunting for meat, fur, and skin (Garg et al. 2023). During a *Paraechinus nudiventris* survey in Nakkneri, we observed illegally displayed fox tails on door casings, reflecting superstitious beliefs and potentially increasing targeted hunting. Illegal hunting of Indian Hares (*Lepus nigricollis*) using dogs was also reported; as hares are a key prey for Indian Foxes (Home & Jhala 2009), their decline may further threaten fox populations. In addition, widespread changes in land use and land cover (LULC), including the conversion of grasslands and scrublands into monoculture plantations, urban infrastructure, and intensive agriculture, have led to a significant loss of suitable habitat for the species. Accidental mortality from open wells in agricultural lands remains a concern, underscoring the need for mitigation measures such as protective curbs. A continued decline in Indian fox populations could disrupt local ecological balance, potentially leading to increases in rodent populations and agricultural pest outbreaks. Urgent community awareness programs are recommended to dispel harmful myths and promote coexistence.

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