



Tamil Nadu Forest Department

Project

Nilgiri Tahr

Saving the Mountain Monarch



Cover Image - Pravin Shanmughanandam



Historically, the Nilgiri Tahr was known to inhabit a large portion of the Western Ghats. But today it remains restricted to a few scattered patches in TamilNadu and Kerala. It has become endangered in around 14% of its traditional shola forest-grassland habitat.

Nilgiri Tahr

The iconic state Animal of TamilNadu



LOCAL NAME

The species is locally known as Varai Aadu



IUCN STATUS

It has been listed as an endangered species and is protected under Schedule-I of the Wildlife (Protection) Act of India, 1972



ESTIMATES

It is estimated that there are 3,122 Nilgiri Tahrs in the wild.



HABITAT AND DISTRIBUTION

The animal inhabits meadows with steep cliffs at elevations between 300 metres and 2,600 metres above sea level.

Project Tahr by TN GOVT

Nilgiri Tahr is the state animal of Tamil Nadu, whose cultural and ecological significance have been documented and written in the Tamil Sangam Literatures viz, Silappathigaaram (சிலப்பதிகாரம்) and Seevagasinthamani (சீவகசிந்தாமணி) as early as 2000 years ago.

Taking the cultural significance and numerous ecological factors into consideration and to highlight and conserve the State Animal, the TamilNadu Government on 28.12.2022, launched an

initiative for the conservation of the Nilgiri Tahr.

While presenting the Budget 2022-2023, the Honourable Finance Minister made the following announcement, among others in the Legislative Assembly

“For the conservation of Tamil Nadu’s State animal, expansion of its habitat and to spread awareness among the public, the Government will implement ‘Project Nilgiri Tahr’”







Objectives of the Project

Government of Tamil Nadu shall implement Project 'Nilgiri Tahr' with the following objectives

- » Developing a better understanding of the Nilgiri Tahr population, its distribution and ecology
 - Synchronised surveys using standardised methods across the Tahr range;
 - Radio - telemetry studies of a few individuals to understand their movement patterns, habitat use and behavior through radio-collaring etc.,
 - Population and Habitat viability assessment for conservation planning.

- » Re-introduction of Nilgiri Tahr to their historic habitat: It is proposed to choose historic habitats with less biotic pressure for re-introduction of Nilgiri Tahr.

- » Addressing proximate threat to Nilgiri Tahr
 - Diagnosis and treatment (if needed) for Nilgiri Tahr individuals affected by tumors;
 - Restoration of grassland habitats affected by Invasive plants
 - Building the capacity of forest staff to patrol and conserve Tahr habitats effectively

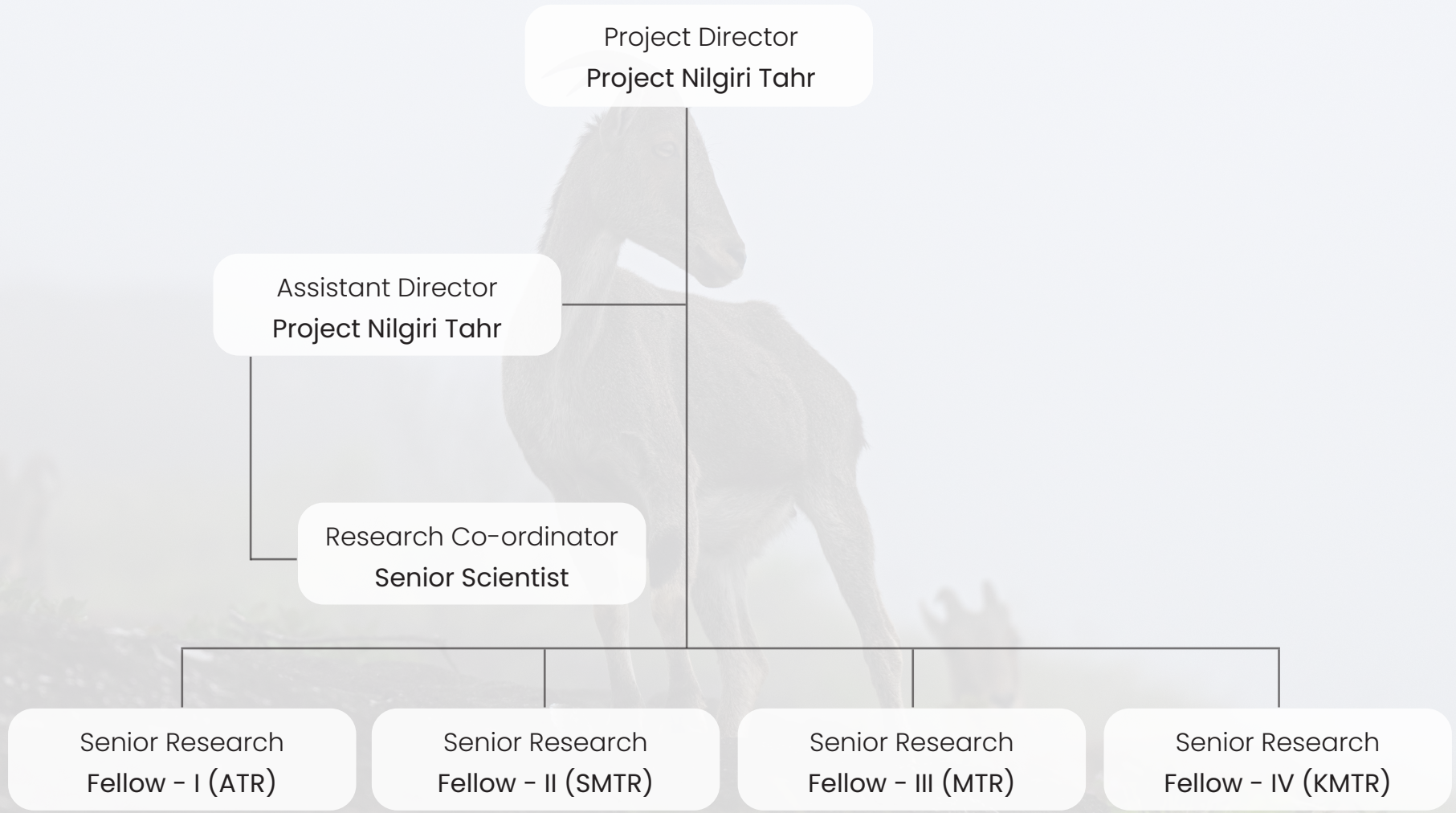
Increasing public awareness

- **Nilgiri Tahr Day** - October 7th will be celebrated as the Nilgiri Tahr Day in honour of Dr. E.R.C. Davidar whose birthday falls on this day. Dr. Davidar was responsible for pioneering one of the first studies on Nilgiri Tahr in 1975
- Developing Nilgiri Tahr based eco-tourism activities at selected sites
- Developing educational material for school children

Project 'The Nilgiri Tahr' shall be headed by a Project Director who will be assisted by an Assistant Director. The Team will include senior scientists, research fellows and field staff.



The setup is represented as below




Based on the Budget announcement 2022-23, the Principal Chief Conservator of Forests and Chief Wildlife Warden has sent a proposal to implement the Project 'Nilgiri Tahr' over a period of five years i.e. 2022 to 2027

The Government, after careful examination has accorded sanction for implementation of the Project 'Nilgiri Tahr', Tamil Nadu's State Animal, at a cost of Rs. 25.14 Crore with the following nine components

- Administrative setup for the 'Nilgiri Tahr'
- Bi-annual synchronized surveys across the divisions
- Tranquilization, collaring and monitoring of Tahr Individuals
- Re-introduction and monitoring of Nilgiri Tahr
- Diagnosis and treatment for affected individuals
- Field gear and training support to staff
- Shola Grassland restoration pilot in Upper Bhavani
- Implementation of eco-tourism programmes
- Communication and outreach





Skillful cliff climbers. Fearless stunt masters. Extreme adrenaline junkies – if Nilgiri tahrs were human, these would be the adjectives one would use to describe them.



The Iconic State Animal of Tamilnadu

At plain sight, Nilgiri Tahr might appear to be a drab version of our domestic goats, but these iconic creatures are Tamil Nadu's state animal that live in the mountainous terrain of the Anamalai Hills spread across the Anamalai Tiger Reserve, Parambikulam Wildlife Sanctuary and Eravikulam National Park of the

mighty Western Ghats Populations are also spread across Mukurthi national park, and other parts of Mudumalai tiger reserve, Kalakkad-Mundanthurai Tiger Reserve, restricted ranges of Srivilliputhur-Meghamalai Tiger Reserve, isolated pockets of Siruvani forests, Palani hills, Kodaikanal range etc.,





The Mountain Guardians

The Nilgiri tahr, found in the montane shola-grassland ecosystems are rightly attributed to being the 'mountain guardians'. These animals help mankind in enhancing the water catchment areas and in maintaining the unique shola-grassland ecosystem which are of crucial significance to the very survival of mankind itself. It's in these sensitive ecosystems our perennial rivers originate and without tahrs, these ecosystems may not thrive as they do today.

Biologist George Schaller rightly describes it as the 'mountain monarch'. Known as Varai Aadu in Tamil (varai – cliff, aadu – goat), these gravity-defying goats are capable of scaling sheer cliffs and skillfully tread along the steep and rocky terrain at altitudes of up to 2,600 m.asl.



The real climb-masters

They have no fear of slipping or falling whether climbing up or down the hills and at times occupy places where no human would dare to go. Apart from climbing, these mountain goats are also

skilled at jumping – young ones are often seen playing by jumping around the precipitous slopes as if it were a trampoline.



Physical Description

The exterior of these tahr is sheathed with short, coarse fur and a bristly mane. While the males display a dark brown fur coat with a tinge of black, females and young ones are greyish in colour. As they grow into adulthood, both male

and female goats bear backward-curving horns, although those of the female are smaller in size. A fully grown male is known as 'saddleback' due to the greyish hair that develops on the rump in the shape of a saddle.





Habitat

Endemic to the Western Ghats of South India, Nilgiri tahr are found at high elevations on cliffs, grass-covered hills, and open terrain. While occupying the grass-woodland

mosaic habitat, their diet consists mostly of grass found in the montane grasslands and open shola patches atop their mountain home.

Reproduction

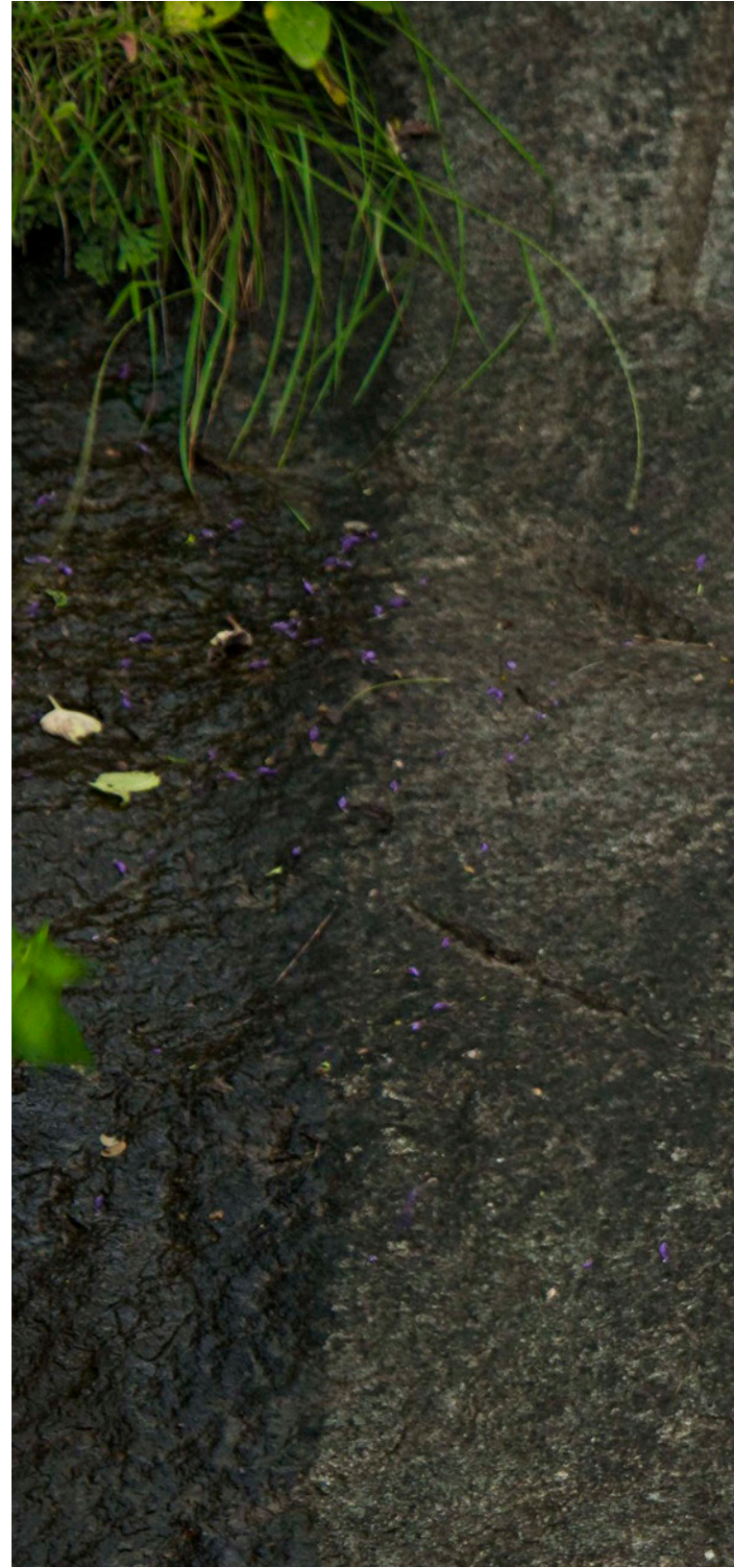
Mating takes place during the monsoon season and calving is during January-February. The female gestates for about 180 days and usually gives birth to one kid per pregnancy and can give birth twice in one year.

When two or more males are competing for the attention of the same female, fights can break out and whilst a sharp headbutt may be enough to settle the issue, although, well-matched competitors can tussle for hours.





Nilgiri Tahr is a social animal that lives in herds with adult females and their young ones. Most adult males live either as bachelor herds or in solitary and are observed with herds during the rutting season.





Lifespan/Longevity

Nilgiri tahrs have a relatively short life expectancy. Life expectancy at birth is estimated to be 3-3.5 years, though they may live longer upto 9 years.

Behavior

Nilgiri tahrs are active intermittently from dawn to dusk and are primarily grazers. Most tahrs feed in the early morning until about 8 a.m. and from 10.30 a.m. to 2.30 p.m. about half are inactive. A second feeding peak occurs after 4 p.m.

Key Behaviors

Diurnal (active during the day) - crepuscular (appearing or active in twilight) - territorial - social - dominance - hierarchies



Communication and Perception

The primary modes of communication are visual, auditory and olfactory. Pheromones released in their urine communicate information about mate

identification and reproductive activity, spacing mechanisms, and alarm.





Food Habits

Preferred foods include various grasses and forbs (herbaceous, broad leaf plants that are not grass-like). Species included among these various forage types are *Eulalia phaeothrix*, *Andropogon*

polyptichus, *Chrysopogon zelan*, *Eupatorium adenophoru*, *Strobilanthes kunthianus* and *Cymbopogon* sp.

Primary Diet: herbivore, folivore

Predation

Native predators of the Nilgiri tahr are the Bengal Tiger (*Panthera tigris*), Leopard (*Panthera pardus*), Golden jackals (*Canis aureus*) and Asiatic Wild Dogs / dholes (*Cuon alpinus*).

Cultural Significance

The Nilgiri tahr is described in ancient Classic (Sangam) Tamil literature including the Silapathikaram, Seevaga sinthamani, Nattrinai, Ainguru Nooru, Pathiruppaththu, Paripaadal and Pattinappaalai – all written over 2,000 years ago. The play, Thirukutrala kuravanji,

(திருக்குற்றால குறவஞ்சி) written by Thirigudarasapa Kavirayar also describes "Nilgiri Tahr" in a song under "Kurathi malaivalam kooral (குறத்தி மலைவளம் கூறல்) as one of animals that indicates the richness of biodiversity in a region.







Goat on the slopes, the Nilgiri tahr (Perunkunrār Kizhār & Kapilar)

The Tamil name for Nilgiri tahr is வரையாடு (வரை ஆடு) but the name used during the Sangam days was varudai (வருடை). The word occurs in many poems of the Kurinji mountainous landscape. Almost all the poems specifically contain the word 'mountain' or 'slopes' in them. Nattrinai has these two poems on varudai

பல் மலர்க் கான் யாற்று உம்பர், கருங் கலை
கடும்பு ஆட்டு வருடையாடு தாவன உகளும்

In the company of a herd of wild goats on the hill
Beyond the banks of a wild river
with a variety of blooms floating in it

Nattrinai 119

.....அவன் மலைப்
போருடை வருடையும் பாயா,
சூருடை அடுக்கத்த கொயற்கு அருந் தழையே?

The leaves in the garment picked up from a spot
Inaccessible to the mountain goat,
Skilled at negotiating heights and chasms.
A spot in the mountains presided over by fearsome gods

Natrinai 359

Anthropological studies reveal the rock art based on Nilgiri tahrs were done with red ochre using the flat wash technique from the Marayoor areas in Kerala during the Mesolithic (10,000-4,000 BP) period.







Ecological Significance

Wild ungulates such as the Nilgiri tahr play an important role in maintaining ecosystem structure, and are also determinants of predator populations.

The Nilgiri tahr is also a generalist by food habit. They feed on around 120+ species

of plants including grasses, herbs, shrubs, leguminous plants and also a few tree species. This has facilitated the mountain ecosystem to be fertile through the recycling process.

Conservation Status

Around 60 percent of the current habitats of Nilgiri tahr, an endangered ungulate residing in the mountainous grasslands of the southern Western Ghats, are projected to become unsuitable as global surface temperatures rise. As a result, the researchers call for greater monitoring of the habitats and populations that have been identified as most-at-risk.

Challenges in the conservation of the Nilgiri Tahrs

- Potential local extinction due to highly fragmented populations.
- Invasion of exotic species into the habitat.
- Forest fires.
- Over-exploitation of forest resources.
- Lack of ecological data and understanding.







The horns of Nilgiri Tahrs have growth rings

The horns of the Nilgiri Tahrs are quite special too. Wondering why? Normally, the claws of animals are used to estimate their age, but for Nilgiri Tahrs, it's their horns!

Interestingly, they have growth rings that develop every year, revealing their age. Males have bigger, longer horns than females. This difference becomes more obvious when males experience rapid horn growth in the 2nd and 3rd years of their life. Although female horns typically grow to 26 cm, male horns can reach a length of 44 cm.

Male Nilgiri Tahrs change colour with age

You must have heard of chameleons changing their colour. But did you know that Nilgiri Tahrs, the male ones, change colour too, as they grow? Born with a grey coat lacking facial markings or carpal patches, their fur turns tan and fluffy as they grow to 10–14-weeks old. By the time they grow to 20 weeks, this coat sheds and turns grey again. They also develop facial stripes, with the carpal patch turning black. The adult male Nilgiri Tahr develops a coat that is overall dark brown to blue.

And it's not just their coat, but their saddle patch too changes colour with age. A young Tahr has an off-white saddle patch, black legs, and dark brown neck and shoulders. By the time they turn seven, the black colour on their legs expands upwards on their shoulders, and their saddle patch turns silvery. At about 8 years, the black fur spreads throughout their entire body, including their neck, and their whole saddle patch takes a shade of silvery tint. From brown to grey to black, what a colour transformation! And what is even more interesting is that, the female Nilgiri Tahrs never lose their original colours and remain dusky to yellow brown throughout their lifespan.

A female tahr resting after a grazing bout

Sheep is their closest cousin

Being classified as a Tahr, the Nilgiri Tahr is more closely linked to sheep than the Himalayan or Arabian Tahr. The Himalayan and Arabian Tahrs are members of the genus *Hemitragus*, in which the Nilgiri Tahr was categorised as well, but only until 2005. After analysing their genetics based on four molecular markers, scientists concluded that Nilgiri Tahrs are more specific to the genus *Ovis*, to which sheep belong. Thus, these Tahrs were re-classified to their own genus, *Nilgiritragus*, which is derived from the Greek word *trágos*, which means 'goat'.





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**TamilNadu Forest
Department**

Tmt. Supriya Sahu, I.A.S.,

Additional Chief Secretary to the Government
Department of Environment, Climate Change,
and Forests

Thiru.Srinivas R. Reddy, I.F.S.,

Principal Chief Conservator of Forests & Chief
Wildlife Warden

Thiru.S.Ramasubramanian I.F.S.,

Chief Conservator of Forests, ATR and
Project Director, Project Niligiri Tahr

Dr. S. Priyanka,

Senior Scientist

Senior Research Fellow:

Dr. B. Subbaiyan
N. Rajesh Kumar
K. Manigandan
S. Gokul Prasath

Dhanu Paran

Photographs

Pravin Shanmughanandam

Content and Curation

Hariharan

Design



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