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TAMILNADU FOREST DEPARTMENT

வரையாடு
VARAIYAADU

THE OFFICIAL NEWSLETTER OF PROJECT NILGIRI TAHR

PROJECT NILGIRI TAHR

SAVE OUR STATE ANIMAL
OUR NILGIRI TAHR, OUR PRIDE

JAN – MAR 2025

DIRECTOR'S MESSAGE

The month of February, 2025 highlights the contributions of women in science, and we wish to acknowledge all the women conservation scientists and their efforts toward species conservation. It brings me immense pleasure to present this edition of the "Varaiyaadu" newsletter, which emphasizes the remarkable progress of Project Nilgiri Tahr, an iconic initiative aimed at conserving the mountain monarch, the Nilgiri Tahr. This edition highlights several crucial aspects, including the contributions of WWF-India to Nilgiri Tahr conservation, field observations on Nilgiri tahr, ecological process in Pechi mottai area in Kanyakumari wildlife area, the necessity of community participation in conservation of endemic species Nilgiri Tahr, the assessment of invasive species in the Nilgiris division, and the newly colonized Nilgiri Tahr habitat at Peyar Varaiyattu Mottai in the Nellai Wildlife Sanctuary. Additionally, a description of the grass species *Arundinella mesophylla* is included. The self-narrating story "Fifth Hairpin Bend" beautifully illustrates the life of the Nilgiri Tahr and is a delightful read. I encourage all our readers, stakeholders, and supporters to share valuable suggestions and innovative solutions for the conservation of these unique mountain ungulates as we pursue our future goals.

M.G. GANESAN
Project Director,
Project Nilgiri Tahr

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OUR VISION

Our vision is to be a hub for passionate individuals, conservationists, and communities united in their commitment to safeguard the Nilgiri Tahr and its unique ecosystem.

OUR MISSION

Our mission is to excel in the conservation and protection of Nilgiri tahr, an iconic species endemic to the Western Ghats


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-மு. அ. பிரடிட், ஒருங்கிணைப்பாளர், நீலகிரி வரையாடு பாதுகாப்பு திட்டம், WWF-India, கோயம்பத்தூர்

மலை சோலை-புல்வெளி சுற்றுச்சூழல் அமைப்பு மற்ற உயிர்சூழல் (ecosystem) அமைப்புகளை காட்டிலும் மேன்மையான ஓர் அமைப்பு. இவ்வகை உயிர்சூழல் அமைப்புகளில் பல்லுயிர் பெருக்கங்களை (biodiversity) உயர்ந்த அளவில் பதிவு செய்துள்ளார்கள். மேலும் இவ்வகை உயிர்சூழல்களில் உலகளவில் இந்த மலைப்பகுதிகளில் மட்டும் வாழக்கூடிய அச்சுறுத்தப்பட்ட இனங்கள் (threatened species) அதிக அளவில் காணப்படுகின்றது. இவ்வகை உயிர்ச்சூழல் மண்டலங்கள் தான் அதிக அளவிலான நீர் பாதுகாப்பினை உறுதிசெய்கிறது. மேலும் இந்த உயிர்சூழல் மண்டலங்களில் தான் இயற்கையான ஊற்றுக்கண்ணுகள்(natural springs) பிறக்கின்றன. அவைகள் சிற்றோ ாடைகளாக உருவாகி, பேரோடைகளாக மாறி, பல பேரோடைகள் ஒன்று கூடி ஆறுகளாகவும், பேராறுகளாகவும் உருவாகி இந்த மலைகளை சுற்றியுள்ள மாவட்டங்களில் உள்ள மக்களுக்கான குடிநீர் மற்றும் விவசாயத்துக்கான முக்கிய நீர் ஆதாரங்களாக அமைகின்றது.

தென்னிந்தியாவில் இமாலய மலைத்தொடர் போன்று பனிபோர்த்திய சிகரங்கள் இல்லை என்றபோதிலும், வற்றாத ஜீவநதிகள் பல உள்ளன. அவை அனைத்தும், மலை உச்சியில் படர்ந்து விரிந்து காணப்படும், சோலை-புல்வெளி சுற்றுச்சூழல் அமைப்பிலிருந்தே உருவாகின்றன. சோலை-புல்வெளிகள், காற்றில் உள்ள ஈரப்பதத்தை ஈர்த்து தக்கவைப்பதோடு, அவற்றை மெல்ல மெல்ல வெளியேற்றி, ஆறுகளாய் உருவெடுக்க செயகின்றன. தென்னிந்தியாவின் தண்ணீர் பாதுகாப்பை உறுதிசெய்ய, சோலை-புல்வெளிகளை பாதுகாப்பது மிகவும் அவசியம்.

லேண்ட்சாட் படங்களை (LANDSAT images) பயன்படுத்தி வெளிவந்த சமீபத்திய ஆய்வு கட்டுரையில், கடந்த 4-5 பதிட்றாண்டுகளில் (decade), உயர்நில மலைவெளிகளில் (high elevation plateaus), 60% வரை இயற்கை நிலப்பரப்பில் கணிசமான மாற்றங்கள் (significant landscape modifications) ஏற்பட்டுள்ளது எனவும், மேலும் ஒற்றை வளர்ப்பு காடுகள் (monoculture plantations) மட்டும் (23%, 340 சதுர கி.மீ.) நிலப்பரப்பை கொண்டுள்ளது என வும் கண்டறியப்பட்டுள்ளது. மற்றும் ஒரு ஆய்வில், மேற்கு தொடர்ச்சி மலைகளில் 62,000 ஏக்கருக்கும் மேல் உள்ள நிலங்கள் திரும்பவும் இயற்கையான சோலை-புல்வெளிகளாக மாற்றுவதற்கு ஏதுவான நிலங்களாக உள்ளது என கண்டறியப்பட்டுள்ளன.

இந்த பிரச்சனையின் முக்கியத்துவத்தினை உணர்ந்த நீலகிரி மலைகளில் உள்ள இயற்கை ஆர்வலர்கள், நீலகிரி மலைகளில் உள்ள மொத்த ஒற்றை வளர்ப்பு காடுகளையும் முறையே சோலை-புல்வெளிகளாக மறுசீரமைக்க வேண்டும் என்று சில ஆண்டுகளுக்கு முன் தமிழக பசுமை தீர்வாணையத்தில் ஒரு பொதுநல வழக்கைத் தொடர்ந்துள்ளனர். இந்த

வழக்கின் தீர்ப்பு பிற்காலத்தில் சோலை-புல்வெளிகளின் பாதுகாப்பு முக்கியத்துவம் எவ்வாறு அமையும் என்பதாக ஏதிர்பார்க்கப்படுகின்றது.

உயிர்சூழல் மண்டலங்களில் உள்ள பிரச்சனைகளும் – தீர்வுகளும்

WWF-India மேற்கொண்டுள்ள, நீர் மேலாண்மையில், பலதரப்பட்ட வன வகைகளின் பங்கு என்னும் சமீபத்திய ஆய்வு ஒன்றில், ஒற்றை வளர்ப்பு காடுகளில் (monoculture plantation) ஆண்டு ஒன்றுக்கு தாவர இலைகளிலிருந்து ஏற்படும் நீராவி இழப்பை (evapo -transpirational loss) எட்டு சதவிகிதம் வரை ஏற்படுத்துகிறது என்று மதிப்பிடப்பட்டுள்ளது. மேலும் இவ்வகை காடுகளில் பல்லுயிர் பெருக்கத்திற்கான சூழ்நிலைகள் குறைகின்றன என்று அறியப்படுகிறது. ஒற்றை வளர்ப்பு காடுகளால் பலவகையான வனவிலங்கினங்களின் வாழ்விடங்கள் பாதிக்கப்பட்டுள்ளதாக பல்வேறு ஆய்வுகளில் குறிப்பிடப்பட்டுள்ளது.

WWF ஆய்வில் இயற்கையான சோலை-புல்வெளி காடுகளே நீர் பாதுகாப்பை அதிக அளவில் உறுதி செய்கின்றன என்று கண்டறியப்பட்டுள்ளது. எனவே தற்போதைய சுற்றுச்சூழல் பாதுகாப்பின் புரிதலுக்கு ஏற்ப ஒற்றை வளர்ப்பு காடுகளை பெரிய அளவில் அகற்றி இவ்வகை இயற்கை சோலை-புல்வெளி உயிர்ச்சூழல்களை உருவாக்குவதன் மூலம் பலவகையான வனவிலங்குகளின் வாழ்விடங்களை அதிகப்படுத்தியும், பல்லுயிரியினபெருக்கத்தை உறுதிசெய்தும், நீராதாரத்தை மேன்படுத்தும் யுக்தியாக அமையும் என்பதில் மாற்று சிந்தனை இல்லை.

இந்த உயிர்சூழல் மண்டலங்களின் பாதுகாப்பு நம் எதிர் கால சந்ததியின ரின் நீர் தேவையை பாதுகாக்கவல்லது. வரையாட்டின் இயற்கை வாழ்விடங்களை பாதுகாத்து மீட்டெடுக்க வேண்டிய அவசியம் உள்ளது. தமிழ்நாடு அரசு வரையாடு பாதுகாப்பு திட்டத்தின் மூலம் வரையாட்டினுடைய வாழிவிடங்களான சோலை-புல்வெளி உயிர்ச்சூழல் மண்டலங்கள் புனரமைக்கப்பட்டு வருகின்றன. அதன் ஒரு பகுதியாக முற்காலத்தில் அழிந்து போன சில வாழ்விடங்களை மீண்டும் புனரமைத்து வரையாடுகளை குடியமர்த்துவதும் இந்த திட்டத்தின் மூலம் நடைபெற்று வருகின்றது.

வரையாடு போன்ற அறிய விலங்கினங்கள் பாறைகள் நிறைந்த மலை சோலை-புல்வெளிகளில் மட்டுமே வாழக்கூடிய விலங்கினங்களாகும். எனவே இந்த வகை உயிர்ச்சூழல் மண்டலங்களை பாதுகாப்பதன்மூலமாகவே, வரையாடுகளை பாதுகாக்க இயலும் என்பதும் நிதர்சனம்.

FIELD OBSERVATIONS

THE NEED FOR COMMUNITY PARTICIPATION IN HABITAT RESTORATION IN THE PARTS OF UDUMALPET DIVISION OF ANAMALAI TIGER RESERVE

M. Ashokkumar, Project Scientist, Project Nilgiri Tahr

As part of Project Nilgiri Tahr, we the team of four have inspected the historical distributional areas of the Nilgiri Tahr and its habitat to assess the current status in the context of Project Nilgiri Tahr habitat assessment and population enumeration. We surveyed the Kurumalai, Varasaathimalai, Kidamalai, Kanjimalai and Puttumalai regions in the Udumalpet range of Anamalai Tiger Reserve from 7th January to 11th January, 2025. All of these hills were interspersed with the settlements such as Kurumalai, Mavadappu and Kulipatti. The only road connecting these settlements is through the Aliyar dam, which is about 60km of forest road. The accessibility to the village by road is limited. While we get through from the lower Aaliyar dam towards Valparai, we leave no stone unturned in to see the collared male in the hairpin bends of the Valparai road. We travelled in the eventide around 4:00 pm through the hairpin bends of Valparai road. The time was perfect with evening sunlight but, we could not spot the Nilgiri Tahr in the cliffs. Further, we travelled towards the Upper Aliyar dam road, deviation towards the eastern side of the Valparai road through Kadampari check post to reach the Kulipatti camp.

The major livelihood of the Pulaya tribal people is agriculture with major cultivation of paddy, lemon grass, Palm leaves collection (*Phoenix loureiroi*) from the forest for the broom-stick, and pasturage is the main occupation. The settlement Kulipatti is surrounded by hills on all sides and the village is on highland hamlet. The accessibility to this village is limited. The houses were made of grass-thatched roofs or tin sheets and bamboo walls plastered with mud. We camped in the Kulipatti camp on the first day. The next day, first blush morning, we surveyed the Varasaathimalai which is juxtaposed the camp. The path leads to precipitous in the mountain, traverses through evergreen forest patches, forest rivulets, and rocky terrain areas. As we ascend the hill, our heart beat thumping, breath become flutter. Our stride increases with normal breath as we reach the crest of the hill that opens up into grasslands and beams. The breeze is cool and mist droplets covered our eyelids and hairs.

The path that leads to the hilltop is clear, frequent movement of people for the collection of palm leaves for the preparation of broomstick. This plant grows only in higher altitudes of more than 1200m, hence, the people established temporary sheds by using bamboo and grass-thatched roofs on the highlands. They stay for few weeks with their families and brought their livestock for grazing. They collected the palm leaves, dried them on the rocky slopes of the hill. The drying helps to reduce the weight for transport by head loads. Then the dried leaves were carried from the highlands to lower elevations. The transport process is tedious and all the family members including women carry the dried plants in their heads. They

also had temporary stockpiles in the route, since carrying to the villages directly were arduous. The collected plants were further dried and made into smaller broomsticks. Then they were transported to the nearest town in the lower Aliyar dam and adjacent Pollachi town area by truck. Though the effort made in the preparation of broomstick is high, but the profit gained is less may be due to middle man commission.

As we push on inside the Kurumalai village, which is around six kilometres towards the eastern side. The major livelihood of the people is the rice farming, lemon grass and livestock rearing. People were collecting the palm from the Kidamalai and Kanjimalai area. We could spot several temporary sheds at the top of the hill. We recorded signs of elephant, sambar, black-napped hare and carnivore species such as leopard and dhole. The villagers have the issue of regular crop raiding by the elephants and wild pig in the Kurumalai village since the hamlet is centre of the forests. There was no road network, people compelled to walk around three kilometres to reach the Thirumoorthy dam to commute for their daily needs. There is a proposal of road from Thirumoorthy dam to the Kurumalai. Hence, implementation of an eco-development project and transformation of the people through education and alternate income generation activities are mandatory to restore the habitat and long-term conservation of Nilgiri Tahr habitat.

Currently the establishment of temporary huts, people movement, collection of palm and lemon grass and grazing impact the habitat. Formerly, in 1959 and 1967, Aaliyar dam and Thirumoorthy dam has been constructed respectively, due to that there were disruption in these areas. The Fragmentation of habitats, disturbances in past and people movement might cause the plight of the Nilgiri tahr population in the lower elevational ranges of these areas. Thus, implantation at community conservation measures and curtail the reliance of people could help in the restoration of habitat with establishment of corridors to the adjacent Pichitchi malai. That would help in the conservation of the Nilgiri tahr.

Temporary huts established in the Varasaathimali hill top for the collection of Palm leaves (*Phoenix loureiroi*)

Drying of the Palm leaves (*Phoenix loureiroi*) to prepare broom stick

Kurumalai village – Grass thatched houses with bamboo-mud mixed walls

AN ASSESSMENT OF INVASIVE PLANTS IN UPPER BHAVANI TO RESTORE THE SHOLA GRASSLANDS

Manigandan K, Senior Research Fellow

Objective

Invasive plants pose a significant threat to native habitats. In recent years, over 40% of montane shola grasslands have been invaded. In 2016, the Madras High Court issued an order to address the invasion of these grasslands to facilitate their restoration. The restoration of shola grasslands is a primary objective of Project Nilgiri Tahr, which aims to enhance the grassland area. As part of this initiative, a preliminary assessment was conducted between August and November 2024 in the Upper Bhavani area to evaluate the presence of invasive species. This evaluation involved identifying invasive plants and measuring the extent of their invasion by mapping their distribution. The results of the study will aid in designing a restoration plan and ultimately contribute to the conservation of the Nilgiri Tahr and its habitats.

Shola Grasslands and Their Significance

"Shola" is a Tamil word that means "forest" or "wood" and refers to a unique type of montane forest found in the cool, moist, and misty high-altitude regions of the Western Ghats in India. These forests are characterized by their evergreen vegetation and are typically surrounded by grasslands—large, open areas primarily covered with grasses and small plants, with few or no trees.

Shola grasslands specifically support endemic and endangered populations of Nilgiri tahr, grassland birds such as the endemic Nilgiri pipit, as well as several species of butterflies and reptiles. These ecosystems play a crucial role in water and climate regulation, carbon sequestration, and soil conservation. They also hold cultural significance and support tourism and education. However, the grasslands are vulnerable to invasive species, underscoring the urgent need for their protection.

Invasion of the Shola Grasslands

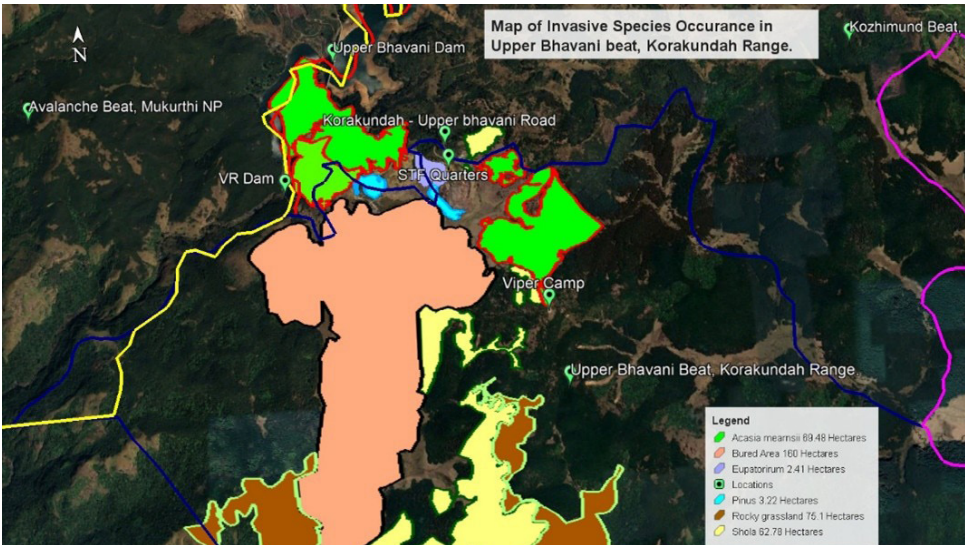
Invasive plant species spread rapidly in new environments, posing significant threats to ecosystems, economies, and human health. Lacking natural predators, these species outcompete native flora, disrupt the ecological balance, and are difficult to manage. Addressing these invasions is crucial for preserving the integrity of the Shola grasslands.

Study Area

The Upper Bhavani area is an administrative beat of the Korakundah Range, covering approximately 2,800 hectares. It is bordered to the north by the Kozhimund beat, to the south by the Attapadi Reserve Forest in Kerala, to the west by the Avalanche beat of Mukurthi National Park, and to the east by the Korakundah beat.

Methods

The invasive species assessment in Upper Bhavani focused on key habitats, such as forest edges and grasslands. Invasive species such as *Acacia mearnsii, Eucalyptus globulus, Pinus patula*, and other invasive shrubs were observed. I have marked the extent of invasion, measuring growth, and conducting plot evaluations to assess their spread and ecological impact. Based on these findings, control strategies, including removal of invasive, and the restoration of native species were recommended to help conserve the Shola grasslands.



Map 1: Map showing the study area and occupancy of Invasive species with the Sholas and Rocky grasslands in Upper Bhavani beat, Korakundah Range, Nilgiris forest division.

The invasive species threatening Shola Grasslands in the study area

Acacia mearnsii (Black Wattle) and *Eucalyptus globulus* (Blue Gum), both from Australia, predominantly outcompete native plants, alter soil chemistry, and deplete water resources. *Pinus patula* (Mexican Pine) also poses similar risks by consuming excessive water and altering soil acidity.

Invasive shrubs like *Ulex europaeus* (Gorse) and *Cytisus scoparius* (Scotch Broom) degrade soil, increase fire risks, and outcompete native vegetation. *Rubus ellipticus* (Yellow Himalayan Raspberry) and *Rubus fruticosus* (Blackberry) further disrupt the ecosystem. Additionally, *Eupatorium glandulosum* forms dense colonies, displacing native plants.

The grassland slopes of this region border the Avalanche grasslands of Mukurthi National Park and the Attapadi Forest Division in Kerala. The Upper Bhavani Beat, particularly in the Bison Swamp area, once supported thriving grasslands that played a crucial role in the region's ecological balance. However, the spread of invasive species has significantly altered this landscape, creating barriers to the movement of the Nilgiri Tahr and restricting connectivity between Mukurthi National Park and fragmented

Overgrowth of Acacia mearnsii
Around the VR dam at Upper Bhavani

Pinus patula plantation in a swamp area near STF-Camp.

Ulex europaeus (Gorse)

Eupatorium glandulosum

Nilgiri habitats, including East and West Varagapallam up to Kinnakora.

Removing invasive species along these boundaries is essential for restoring ecological connectivity. This intervention will facilitate the free movement of the Nilgiri Tahr, promoting genetic exchange and enabling the recolonization of the Mukurthi population. Ultimately, these habitat restoration efforts are crucial for ensuring the long-term viability of the species in the Nilgiris.

Forest fire influence on invasion

Fire is double-edged sword, fire promote certain species to grow faster, reduces biomass accumulation when it is controlled fire. But a natural forest fire affect native flora depending on the nature of grassland and extent of invasion. A significant regrowth of invasive species has been observed in the burnt areas. Species such as *Acacia mearnsii, Eucalyptus globulus* and *Pinus patula* are emerging rapidly after fire and outcompeting native vegetation.

PEYAR VARAIYATTU MOTTAI – A NEWLY COLONIZED NILGIRI TAHR HABITAT IN COURTALLAM RANGE, NELLAI WILDLIFE SANCTUARY, TIRUNELVELI DIVISION

N. Rajeshkumar, Senior Research Fellow

A field study was conducted in a potential distribution area for the Nilgiri Tahr in the Courtallam Range of Nellai Wildlife Sanctuary as part of Project Nilgiri Tahr habitat assessment survey. After intimation to the District Forest Officer and Wildlife Warden, Tirunelveli Division, I began my field trip to the Courtallam Range Office on 27.01.2025. In the afternoon, following a discussion with Mr. Seetharaman, the Forest Range Officer, Courtallam Range. I, along with B. Pon Ganesan (Forest Guard), B. Arun Kumar (Forest Guard), P.R. Rameesh Raja (APW) and R. Sudhakaran (APW) visited the historical habitat of Peyar Varaiyattu Mottai to validate the presence of Nilgiri Tahr and assess the habitat. We decided to trek *via* the Karkudi route. On 28.01.2025, morning, myself along with forest guards and watchers trekked into the forest. We examined the habitats in Peyar Varaiyattu Mottai which is part of Karkudi Beat of Shengottai Section, Courtallam Range, Tirunelveli Division. The altitude of area ranges from 220m to 530m (MSL). At around 10:30 AM, we have seen the Nilgiri Tahr Pellets. There were no earlier reports of Tahr in this area (Shengotti region). After a few minutes of examination, we heard some animal movement sounds, we proceeded in call direction quietly. We surprised to spot three Nilgiri tahr in the lower elevation, and three of them flew away to cliff area on seeing us. We delighted with happiness on sighting of tahr and I failed to capture the sighting moments in the camera. It was wonderful first sighting of Nilgiri Tahr in this landscape.

While returning through a bamboo-mixed forest, we could see significant number of Nilgiri Tahr pellets. These animals descend to the waterbody area (a perennial stream at an elevation of 340 meters) to quench their thrust. We collected fresh Nilgiri Tahr pellets in zip lock cover and samples were sent to AIWC, Vandalur. It will be used for examination of faecal parasites and DNA deposition for population genetics. This analysis is crucial to examine the faecal parasites and genetic relatedness of the population. The habitat consisted of a moist mixed-deciduous forest featuring bamboo and teak trees. The terrain interspersed with cliffs and rocky outcrops, making it an ideal habitat for Nilgiri Tahr, which thrives in areas with suitable grass species and escape terrain.

FLORA CORNER

Arundinella mesophylla Nees ex Steud.- an important fodder species of the Nilgiri Tahr

Dr. B. Subbaiyan, Senior Research Fellow

Family: Poaceae

Habit: Herb

Habitat: Rocky grasslands

Flowering/ Fruiting: Jul-Dec

Ecological status: Endemic (PI)

The Nilgiri Tahr Project has been initiated by the Tamil Nadu government with the goal of protecting the Nilgiri Tahr and its habitats. *Arundinella mesophylla* is an endemic grass species found in the Western Ghats and serves as an important fodder source for the Nilgiri Tahr. This grass is a tufted perennial herb with ovate-lanceolate leaves that are rounded at the base. The sheaths are also rounded and glabrous, featuring cilia along the margins. Its panicles are branched and racemiform, with glumes covered in bulbous-based hairs. *Arundinella mesophylla* typically grows in open rocky grasslands alongside other grass species such as *Arundinella purpurea, Chrysopogon zeylanicus, Andropogon lividus,* and *Eulalia tripartita*. This species can be found in open grasslands at elevations ranging from 1600 to 2100 meters above sea level.

Arundinella mesophylla is an important fodder species for the Nilgiri Tahr. During regular field surveys conducted by the Tahr team in the Anamalai Tiger Reserve (ATR), Srivilliputhur Megamalai Tiger Reserve (SMTR), Kalakkad Mundanthurai Tiger Reserve (KMTR), and Mudumalai Tiger Reserve (MTR), it was observed that Nilgiri Tahrs often feed on the leaves of *Arundinella mesophylla*. Continuous studies by the team indicated that this species is present in all habitats frequented by the Nilgiri Tahr. Locally, it is known as 'Malaivekkaepillu,' and the leaves of *Arundinella mesophylla* have traditionally been used to treat fever (Sathishkumar and Anbarasu, 2019).

The following species are closely associated with *Arundinella mesophylla* such as *Chrysopogon zeylanicus, Andropogon lividus, Eulalia tripicata, Exacum anamalaiyanum, Anaphalis subdecurence Exacum wightianum, Emilia scabra, IImpatiens thangachii, Impatiens chineinsis, Themeda trandra, Chrysopogon zeylanicus* and *Anaphalis elliptica*. By conserving endemic plants and fodder species, we can protect the Nilgiri Tahr and its habitat in the Western Ghats.

SPECIAL COLUMN

Ecological process that retains grasslands habitats at Pechimottai, Kanniyakumari division

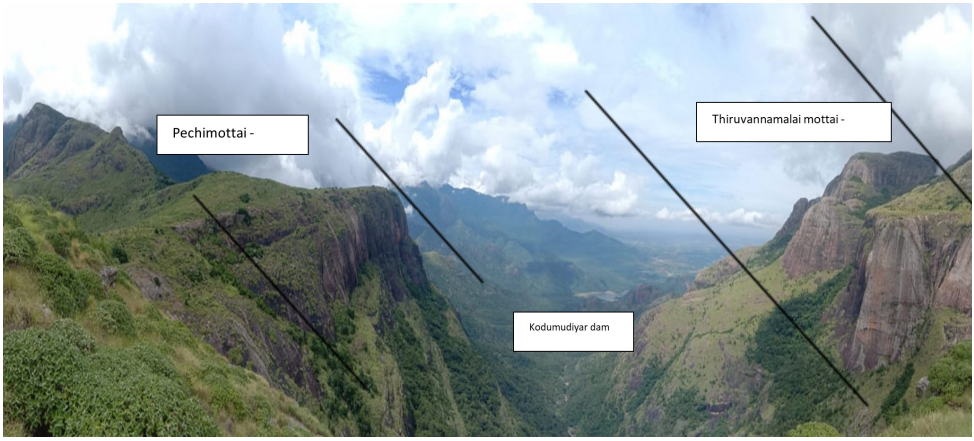
M.G.Ganesan, Project Director, Project Nilgiri Tahr

As I am the Project Director for Project Nilgiri Tahr, decided for field visit to check the tahr presence and its habitats suitability narrated by Dr.A.J.T John Singh in his "Walking the western ghats" book through Pechimottai area which is adjacent to Thiruvannamalai mottai presence in Kalakad division. Since, we already in the process of assessing the fragmented tahr habitats in entire Tamil Nadu state by our research team, by commitment and enthusiasm, I made visit on 24.10.2024 with Dr. Shameer, Project Scientist, AIWC, Mr. Rajeshkumar, SRF, Mr. Nithesh, JRF, AIWC, One Forester, two forest guard and one Anti-Poaching watcher.

About 7.30 AM in the morning, we drove towards the bottom of Rosmiyapuram village where the thorn forests of Mahendiragiri R.F. start. From there, we trekked about 2km to reach the Puthumai Lakshimiamman temple. With little rest and breakfast, started to ascend the Pechimottai which is in Kanniyakumari district. By passing scrub forest climber forest dense forests, mid altitude, we can able to see the Thiruvannamalai mottai eastern part. After crossing Panakudi and Sivasamypuram beat, green lush with coarse grasslands down landscape can be seen. It is flat top called mesa and stunted palm is interspersed with coarse grasses. The grasses are at knee height and very rough in nature, could not able to step in to claim or trek further. After heavy breath, we could able to reach top and we could see Thiruvannamalai mottai (1390 msl) hills in Northern side which is in Tirunelveli district. Also at base, kodumudiyar dam with catchment area was clearly visible with water.

Along the ascending route to pechimottai (1088m msl) and above 1000m msl, we could find grasslands. While walking to the top, the mountain date palm *Phoenix loureiroi* (Arecaceae) was grown in stunted form in coarse grasslands. Interesting things are red palm weevil was erring along the way and finding suitable palm tree for laying its eggs. Also, we could see the elephant dungs along the grasslands, some places these palm trees were broken and damaged by the elephants.

We could understand the ecological process that, these grasslands are not



covered by these dwarf date palm, if it would have allowed by the nature. These two species one is mammal elephant and one is insect red palm weevil is controlling this palm growth. Because, the red palm weevil *(Macrocheilus-Coleoptera)* is damaging the pith part of palm and making them to dry. Similarly, the elephants are grazing and trying to eat the pith part after damaging the palms. Because of this ecological process, we could assume it is playing crucial role in grassland habitats to maintain shola grasslands. This red palm weevil is fighting among them to retain their selected palm trees for laying eggs and not allowing another adult weevil to occupy. Even if already occupied by one adult weevil, another one will fight for their resting and the winner will own that palm tree.

At the end of the day, we had sighted one Saddle back male at the top of Thiruvannamalai mottai top through Binocular. It was surprise that, the sentinel is looking towards kodumudiyar dam by sitting quietly in the breeze of cold wind.

The nearest habitats where Nilgiri Tahr was extinct was Kunnanni and Kottangithatti in Kalakad division in 1950's. It is suitable place for Nilgiri tahr since no anthropogenic pressure and other pressures as per the expert Dr.AJT John Singh who have visited twice this place in 1983 and 2012. There is complete disconnection between these two habitats due to deep gorge towards eastern sides. In past, the loosen rocky part between these two cliffs were slide down due to heavy rain.

EDITOR'S CHOICE

FIFTH HAIRPIN BEND

Dr.V.Gokula
Associate professor and Head,
PG and Research Department of Z oology,
National College, Tiruchirapalli

In the stillness of the night, a city reveals its true nature, just as the purity of a forest is unveiled through its scent. From arid deserts to lush rainforests, each forest carries a unique fragrance, an identity that defines it. The moment this scent changes, the forest loses its distinctiveness. The animals and the mountain dwellers recognize this scent, as it is intrinsic to their existence.

On a winding mountain road in Valparai, at the fifth hairpin bend, my mother carried me in her womb for 187 days. It was the second week of February, and she was walking alongside our kin, her breath labored as the moment of my birth approached. She had conceived me in the monsoon of August the previous year. Now, as she felt the pressure intensify, she paused, bracing herself. First, the amniotic sac burst, then my front hooves emerged, and soon, my face followed. Within an hour, I was fully born, collapsing onto the ground, struggling to stand. Again and again, I faltered, but my mother licked me clean, her warmth giving me strength. The crisp mountain air filled my lungs as I finally stood. I had triumphed.

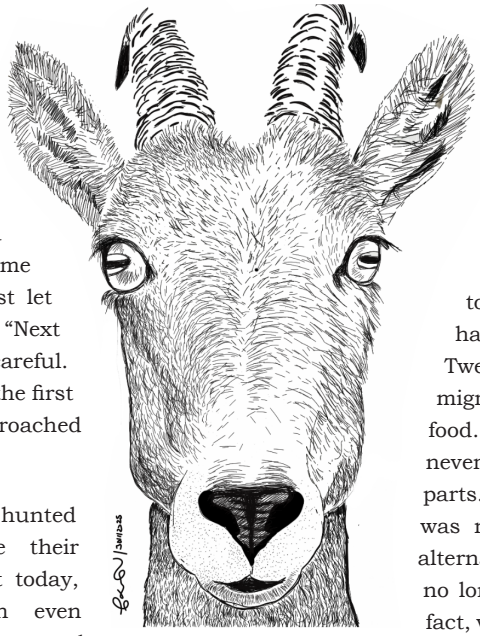
I was born at an elevation of approximately 1,770 meters, on the slopes of the fifth hairpin bend. This stretch of road, from Azhiyar's Monkey Falls checkpoint to Valparai, winds through the mountains with 40 sharp bends, some bordered by steep drops. In this terrain, I lived with a group of 26, including seven other calves my age. Despite different mothers, we shared a single father. Our herd had three males—one elder and two younger—while the rest were

female. After two weeks of nursing, I began to nibble on soft vegetation. Our days were spent climbing and descending the cliffs, our hooves perfectly adapted for gripping steep rock faces. It was our best defense against predators. Early mornings and late evenings were for foraging; midday was for rest. We often climbed past the Azhiyar viewpoint to reach a beautiful grassland plateau—our favorite feeding ground.

This place, though seemingly safe, held unseen dangers. Leopards were rare, and neither tigers nor dholes roamed these parts, making life appear peaceful. But one day, a sudden noise shattered our calm. Before I could turn, another calf from my group rammed into me, sending me tumbling down. A sharp whistle sliced through the air—an arrow. It struck the calf's skull, and it collapsed. Panic spread, and we scattered in different directions.

"Got one!" a man exclaimed. "Came right in our path. Just let it go," another replied. "Next time, we'll be more careful. We're done for today," the first man said as they approached the fallen calf.

Humans hunted young ones because their meat was tender. But today, they had taken an even younger life. In our supposed safety, humans had become the greatest threat.



Years passed, and I reached maturity. At three years old, I marked my territory, spraying small amounts of urine to communicate my strength and status. However, finding a mate proved difficult. The dominant male of our group controlled access to the females. I endured six months of frustration before I finally challenged him. As I approached a receptive female, he rushed in, ready to fight. There was no choice but to stand my ground. We faced each other, muscles tense, then charged. Our curved horns clashed with a loud noise that echoed through the valley. He had experience; he had defeated many before me. But I had youth and vigor. We locked horns repeatedly. On the third strike, his leg got caught in my horn's curve, tearing his flesh. It wasn't skill—just luck. He began to falter, and eventually, he withdrew. With that, the group became mine.

Our home was once untouched wilderness. But tea plantations, eucalyptus, wattle cultivation, roads, and tourism developments had driven us here. Twenty-five years ago, we migrated to this region for food. Before that, we had never been seen in these parts. But even this land was not ideal. Yet, with no alternatives, we adapted. We no longer feared humans; in fact, we barely regarded them as threats.

If you pause at the hairpin bends of Valparai, you'll see how we've changed. We

tolerate human touch, accept food from their hands, and stand unafraid beside speeding vehicles. We have become like domesticated animals, performing for their amusement. In the 1980s, researcher Clifford J. Rice spent a year trying to observe us up close in Eravikulam. Back then, the mere sight of a human sent us fleeing. Now, we are as trusting as sheep among wolves.

I consume nearly 120 different plant species, choosing specific flowers, buds, and shoots. I avoid toxic plants like rhododendrons. Our food sources vary by location and season, making constant movement essential. Occasionally, we lick mineral-rich rocks to supplement our diet. The forest department does provide salt licks for us. Our dung plays a crucial role in seed dispersal, aiding the ecosystem. Young grass sprouting after forest fires attracts us, though some of us perish in those very flames.

Today, our once-unified herd is fragmented into smaller groups, isolated by human expansion. These divisions have led to inbreeding, weakening our genetic diversity. In the past, we lived up to eight or nine years. Now, reaching four is considered fortunate. I, too, have aged. My movements have slowed. I no longer roam far for food. Instead, I spend my days grazing briefly before resting on the retaining walls of the hairpin bends. Tourists toss food at me—I eat whatever they offer. My strength wanes.

This morning, I could not eat. The drizzle soaked my body as I lay on the wall, too weak to move. My breath grew shallow.

"Stop! Stop the car!" a child shouted. "Look! A Nilgiri Tahr!" a woman pointed.

A family approached me as I took my final breath.

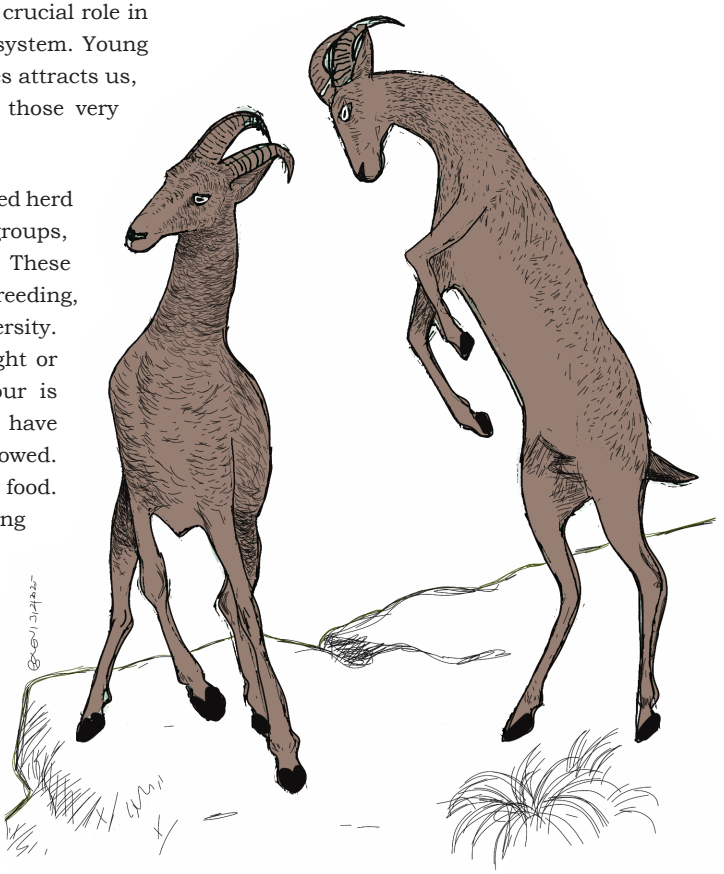
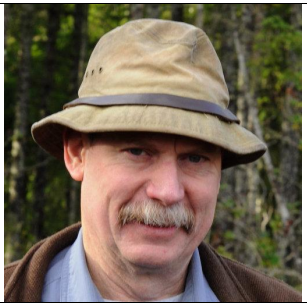


PHOTO GALLERY

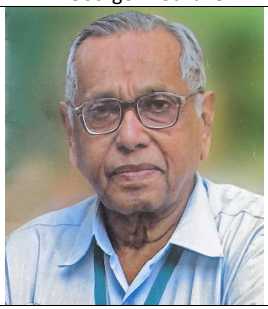
Scientist contributed to the Nilgiri Tahr conservation

Sri. ERC Davidar

Dr. George B. Schaller

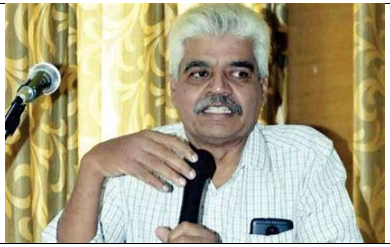


Dr Clifford G. Rice



Sri. J.C. Daniel

Dr. AJT Johnsingh



Sri. Ajay A. Desai

Dr Stephen Sumithran

Dr Kulbhushansingh Ramesh Suryawanshi

மாலைமலர்

விழிப்புணர்வு பிரசார வாகன கலைப்பயணத்தை கலெக்டர் கார்த்திகேயன் தொடங்கி வைத்த போது எடுத்த படம்.

வரையாடு தினத்தை முன்னிட்டு

விழிப்புணர்வு பிரசார வாகன கலைப்பயணம்

கலெக்டர் தொடங்கி வைத்தார்

நெல்லை, டிச. 17–

ஒவ்வொரு ஆண்டும் அக்டோபர் 7–ந் தேதி வனத்துறை சார்பில் நீலகிரி வரையாடு தினம் கொண்டாடப்பட்டு வருகிறது.

அதன்படி இந்த ஆண்டு வரையாடு தினத்தை முன்னிட்டு நெல்லை மாவட்ட வனத்துறை சார்பில் அரும்புகள் அறக்கட்டளை ஏற்பாட்டில் நீலகிரி வரையாடுகள் பாதுகாப்பு விழிப்புணர்வு பிரசார வாகன கலைப் பயணம் ரெட்டியார்பட்டி நான்கு வழி சாலை அருகே பொருநை அருங்காட்சியகம் அமைந்துள்ள இடத்தில் வரையாடு சிலை அருகே நடைபெற்றது.

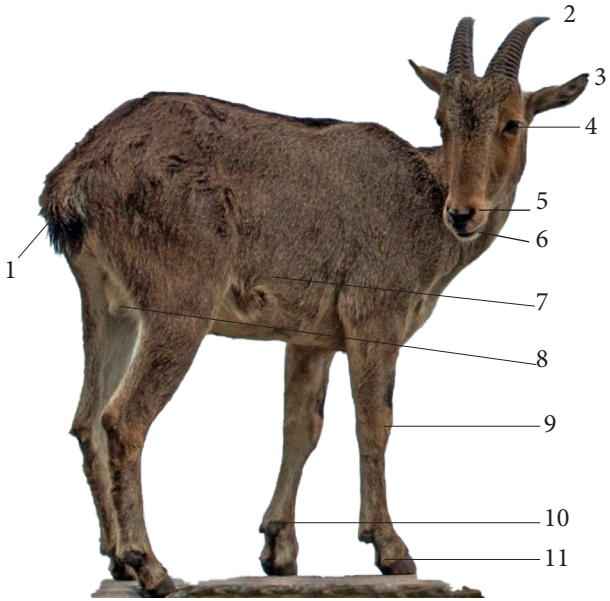
இதில் மாவட்ட கலெக்டர் கார்த்திகேயன் தலைமை தாங்கி கலந்து கொண்டு விழிப்புணர்வு வாகன கலைப்பயணத்தை கொடியசைத்து தொடங்கி வைத்தார். இதில் அரும்புகள் அறக்கட்டளை நிறுவனர் மதிவாணன் வரவேற்றார். மாவட்ட வன அலுவலர் அகில் தம்பி, கோட்ட வன அலுவலர் இளங்கோ ஆகியோர் முன்னிலை வகித்தனர். கலை நிகழ்ச்சிகளை அரும்புகள் கலை குழுவினர் மேற்கொண்டனர். முடிவில் அறக்கட்டளை இயக்குனர் லதா மதிவாணன் நன்றி கூறினார்.

இந்த வாகன பிரசாரம் இன்று தொடங்கி மாவட்டம் மற்றும் மாநகர பகுதியில் பல்வேறு இடங்களுக்கு சென்று வர உள்ளது.

முதல் கட்டமாக இன்று மாநகரில் உள்ள தனியார் பள்ளிகள் முன்பும், தச்ச நல்லூர், வண்ணார்பேட்டையில் பொது இடங்களிலும் சென்று விழிப்புணர்வு ஏற்படுத்த உள்ளது. அதன் பின்னர் நாளை மாவட்டத்தில் சேரன்மகாதேவி, களக்காடு, திருக்குறுங்குடி, அம்பை, ஆழ்வார்குறிச்சி, மணிமுத்தாறு உள்ளிட்ட பகுதிகளுக்கும் இந்த விழிப்புணர்வு வாகனம் செல்ல உள்ளதாக வனத்துறை சார்பில் தெரிவிக்கப்பட்டது.

இந்த விழிப்புணர்வு பிரசார பயணத்தில் தமிழ்நாடு வனத்துறை சமூக வனக்கோட்டம், மாவட்ட வன அலுவலக, தூழல் மேம்பாட்டுக் கோட்ட வனப்பணியாளர்கள், தாசில்தார் செல்வம், சாரதா மகளிர் கல்லூரி மாணவிகள் மற்றும் பேராசிரியர்கள், நீலகிரி வரையாடுகள் திட்ட ஆராய்ச்சியாளர், முதுநிலை ஆய்வாளர் ஆகியோர்களும் கலந்து கொண்டனர்.

POSTER VLOG



1 Tail

2 Horn- Annular ringed and curling downward. Made of bone.

3 Ear - Sharp hearing capacity from far distance

4 Eye - Horizontal pupil is giving wide panoramic view of landscape to see the predators

5 Nose - It is main olfactory organ to smell the pheromones and other smells in ecosystem

6 Mouth - Its main grazing part which consume above 150 species of flora

7 Flank - Covered with coarse fur and water repellent

8 Testes of Male - main reproductive organ

9 Keel or Joint - Differentiating in carpal white marking in male and female

10 Vestigial foot

11 Sure foot pad - Sure-foot helps them to keep stable in cliff against the gravity

Project Nilgiri Tahr

Iconic Project Launched on October 12, 2023 by Honourable Chief Minister

- A dedicated Project team has been recruited
- A State-of-the-Art Project Director Office has been set up at Coimbatore
- First synchronized survey completed in coordination with Kerala
- First Radio collaring of a saddle back male done at Mukurthi National Park along with WWF
- Mystery revealed for Lump in Nilgiri Tahr, caused by Tape worms
- Molecular and Genetic studies of Nilgiri Tahr in coordination with AIWC
- 60 community & outreach programs conducted
- Estimated Population of Nilgiri Tahr in Tamil Nadu – 1031
- Shola grassland restoration works have been initiated
- Nilgiri Tahr "My Stamp" has been released

Oct 7th

of every year is celebrated as Nilgiri Tahr day

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What history speaks about Nilgiri Tahr?

In June, 14, 1955, the Population census for Nilgiri Tahr was conducted in Nilgiris by Mr. PHYTHIAN-ADAMS, Lieut.Col, The Hon. Supdt.of Nilgiri Game Association. This is the extract of BNHS report.

1. The Nilgiri Ibex in Nilgiri hills were on the verge of extinction owing to poaching and indiscriminate shooting and it was decided to hold a census of these animals in order to ascertain the exact position
2. The Attempt was made on May 1954 to April 1955 and abandoned due to horsefly in summer which will hindrance to enumerator and Nilgiri Tahr
3. Along the great 20-miles sweep of the cliffs from Nilgiri Peak to Sispara and Ankinmalai, about 296 Nilgiri Tahr with 17 herds were sighted A herd of 42 individuals were enumerated in the Billithadahalla area. Put together, the grand total was 338 Nilgiri Tahr in Nilgiri Hills.
4. In 1947, it was found that in Glenmorgan area of Nilgiris was devoid of Nilgiri Tahr, survey revealed neither direct nor indirect evidences of Nilgiri Tahr. Earlier report recorded 30 indviduals of Nilgiri Tahr in this area, which could be wiped out by sports hunting.


Source : DTGokula

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