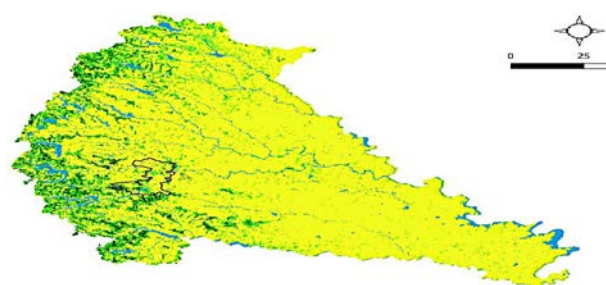


A note on the tale of elusive Jungle Cats from the dynamically changing urban hills of Pune City

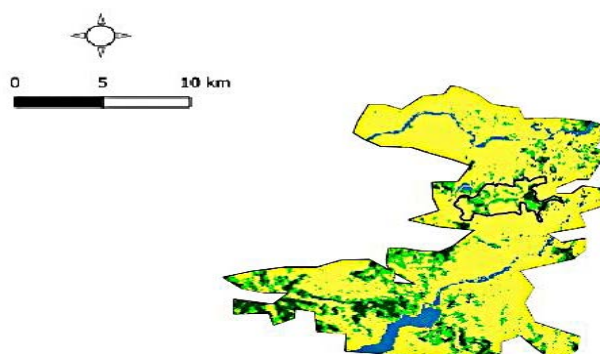
The rapid urban expansion and infrastructure growth in India’s megacities have severely fragmented natural habitats. Pune, in western Maharashtra, shaped by the outcrops of the Sahyadri ranges, retains its ‘urban hills’ as the city’s last remaining natural refuges. Recent land use/land cover (LU/LC) analysis (Choudaj et al. 2024) highlights a continuous decline in natural vegetation and a rise in encroachments on hilltops and slopes, underscoring the adverse effects of urbanization. While vegetation change has received some attention, the broader land-use dynamics of Pune’s hills remain poorly understood.

Historically, these hills supported rich biodiversity, with 79 mammalian species documented in the Pune District with at least 60 within city limits (Nalavade 1998, 2001). However, habitat fragmentation over the past two decades has significantly affected local fauna. Human-induced disturbances alter the behaviour, activity, and distribution of mammals in urban environments (Carricondo-Sanchez et al. 2019). The Jungle Cat *Felis chaus*, a mesocarnivore tolerant of human proximity (Prater 2015; Carricondo-Sanchez et al. 2019), was once common but later considered “critically affected” in urban Pune (Nalavade 2001). Subsequent studies reported habitat degradation (Nerlekar & Kulkarni 2015) and local species loss (Nerlekar et al. 2016), notably excluding *F. chaus*. Its present status on Pune’s

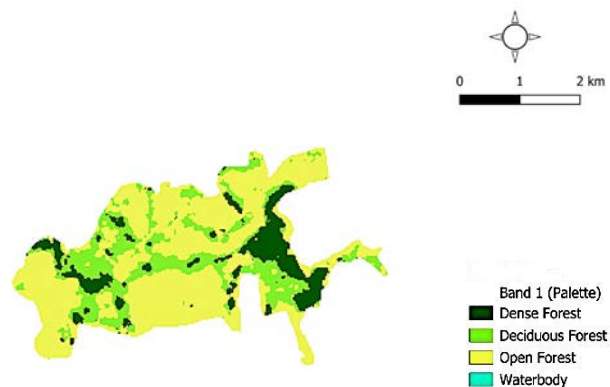
Vetal Hill Complex remains uncertain, with the last confirmed record being a kitten rescued in 2020 (Shah 2020).



Study area: Pune District



Study area: Bhamburda Forest Range



Study area: Vetal Hill Complex



The rapid loss of Pune’s green spaces poses a serious threat to the biodiversity sustained by its hills. Alterations in land use and land cover (LU/LC) patterns, along with increasing fragmentation, clearly demonstrate this decline. Over the past decade, built-up area within the study region increased by 4.16%, resulting in corresponding loss of 3.86% in scrub–grassland & 0.83% in woodland cover. Given the, landlocked extent of the study area (approximately 9.65 km²), even a 1% change substantially affects the biodiversity it supports. Notably, the surge in built-up expansion occurred predominantly on the western slopes of the hill, marking it most significantly.

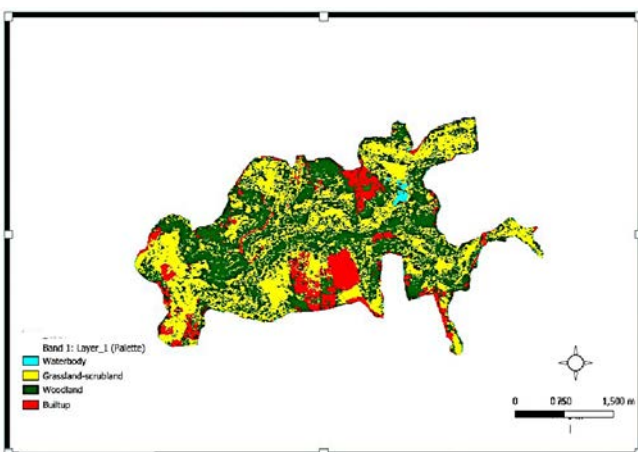
Vetal Hill Complex (2014–2024)

The Vetal Hill Complex (VHC) forms a crucial habitat for meso-mammals along Pune’s

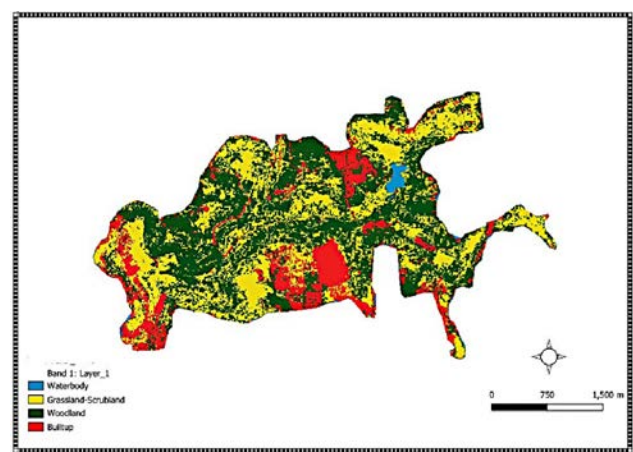
expanding urban fringe. Land use and land cover (LULC) analysis reveals that built-up areas have steadily encroached upon scrubland and forest, intensifying habitat loss. A reconnaissance camera-trapping survey from March–May 2025 confirmed the presence of the Jungle Cat *Felis chaus*, emphasizing the ecological significance of this hill system as a refuge for meso-mammals & reinforcing the urgency of conserving its remaining natural patches amid rapid urbanization. On 2 April 2025, a Jungle Cat was photographed by a camera trap deployed at approx. 18.5169 N, 73.7969 E, at an approximate altitude of 650 m. The site encompasses territorial forest and privately owned land, characterized by vegetation type 5A/C3/DS1 (Champion & Seth 1968). There were subsequent sightings of Jungle Cat from the VHC during the survey.

LU/LC changes over the study area (Vetal Hill Complex)

		km ²		km ²		
		Waterbody	Scrubland	Woodland	Built-up	Total
Vetal Hill Complex	2014	0.09038	3.70736	4.65060	1.20061	9.64
	2024	0.12980	3.33362	4.57096	1.60157	9.634
Change		0.0393	0.37	0.07964	0.39986	
Percent change		0.93%	-3.86%	-0.83%	4.16%	



LU/LC Vetal Hill Complex 2014



LU/LC Vetal Hill Complex 2024



Jungle Cat recorded on our camera trap, Vetal Hill Complex. ©Project Team



Direct sighting of Jungle Cat from Vetal Hill Complex. © Ketan Bhawe.

Sighting records of Jungle Cat from Vetal Hill Complex

	Date of sighting	Location	Remark
1	September 2024	Vetal Hill Complex	Direct sighting no photo evidence
2	April 2025	Vetal Hill Complex	Camera trap record
3	May 2025	Vetal Hill Complex	Direct sighting photo record
4	November 2025	Vetal Hill Complex	Direct sighting Photo record

These photographic evidences substantiate the continued presence of the Jungle Cat on VHC despite its earlier classification as “critically affected” (Nalavade 2001).

The urban hills, increasingly subjected to encroachment, now offer only limited refuge for wildlife. Camera traps recorded the Jungle Cat *Felis chaus*, Indian Crested Porcupine *Hystrix indica*, and Asian Palm Civet *Paradoxurus hermaphroditus*, yet their population density and occupancy remain unassessed, warranting further study. Restricted dispersal caused by growing habitat discontinuity heightens the risk of local extirpation. Expansion of built-up areas at the expense of scrubland and forest further intensifies this concern. Nevertheless, camera-trap evidence confirms continued site use by these mammals, demonstrating resilience despite rising urban pressures. As scrublands provide essential cover and prey resources, their loss to infrastructure poses a critical threat to meso-mammal persistence in the Pune hill landscape. Protecting remaining natural patches and integrating habitat conservation into urban planning are vital for sustaining Pune’s wildlife.

The decade-long presence of the Jungle Cat and other photographed species offers rare optimism, underscoring the need to preserve these last urban refuges to maintain ecological connectivity and the wild essence of urban Pune.

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