

Nest Diversity: A Survey of the Kuvempu University Campus, Shimoga, Karnataka

Shwetha A.^{1*}; Manjula P. B.²; Pooja R.³; Srusti K. T.⁴

^{1,2,3,4}Department of Applied Zoology, Kuvempu University, Jnana Sahyadri, Shanakarghatta 577451, Shimoga, Karnataka, India

Corresponding Author: Shwetha A.^{1*}

Publication Date: 2026/10/13

Abstract: The Bhadra reservoir, part of western ghat and is rich in biodiversity. The forest provide vital role for flora and fauna with great place to eat rest and breed. This forest are the part of the ecosystem and fauna are the great way to monitor the environment for the conservation and protection of all the animal species and their ecology is important to understand their life cycle, habitat and ecosystem. This study was conducted to explore the nest diversity include nests of birds, mammals, insects and reptiles of Kuvempu University, Shimoga. Field observations were carried out during the early morning (6:00–10:00 AM) and late afternoon (4:00–6:30 PM), as these periods correspond to peak bird activity. Regular visits were made to different habitat types throughout the study period to maximize nest detection and minimize the chances of overlooking active nests. During the study period, A total of several nest types were recorded from different habitats, including tress, shrubs, grasslands, buildings, rock crevices, and underground burrows. Among the nests observed, cavity nests, platform nests, pendent nests, and woven nests of birds. Common nesting bird species recorded included house sparrow, mourning dove nest, bulbul nests. Common nesting insect species recorded include honey bee hive, termite mound, weaver ant nest. Mammals nesting species recorded include squirrel, grey squirrel. Reptiles include ground nest, burrow nest and mud nest.

Keywords: Nests, Faunal Diversity, University, Shimoga.

How to Cite: Shwetha A.; Manjula P. B.; Pooja R.; Srusti K. T. (2026) Nest Diversity: A Survey of the Kuvempu University Campus, Shimoga, Karnataka. *International Journal of Innovative Science and Research Technology*, 11(8), 4238-4241. <https://doi.org/10.38124/ijisrt/26aug1581>

I. INTRODUCTION

The university campus is spread over nearly 230 acres and is surrounded by ecologically rich landscapes, making it an ideal location for studying bird diversity and abundance. Its close proximity to the Bhadra Tiger Reserve and Bhadra Wildlife Sanctuary provides a natural habitat that supports a wide variety of flora and fauna. The campus consists of different habitat types, including dry deciduous forests, grasslands, plantations, scrublands, open fields and man-made wetlands. These diverse habitats offer food, water, nesting sites and shelter for numerous resident and migratory bird species throughout the year. Nesting is one of the most remarkable behavioural adaptations exhibited by animals for ensuring the survival and successful development of their offspring. A nest can be broadly defined as a structure constructed or modified by an organism to provide protection, shelter and a suitable microenvironment for reproduction, resting or rearing young (Hansell, 2000).

Animal utilize a wide variety of construction materials including twigs, leaves, grasses, feathers, silk, mud, wax, saliva and soil. Material selection may depend on local

availability, structural requirements and insulation properties (Hansell, 2000). Birds often exhibit selective preferences for particular plant species or material characteristics that enhance nest stability and concealment.

II. MATERIALS AND METHODS

The present study was conducted during March 2026 to May 2026 in three selected study sites within the Kuvempu University campus. These sites were chosen based on the availability of suitable nesting habitats, vegetation diversity and the presence of different bird species. The first study site, University Staff Quarters (Site-I) is a residential area surrounded by trees, ornamental plants, gardens and open spaces. The presence of mature trees and human habitation provides suitable nesting sites and food resources for several bird species. The second study site, Shankaramatha (Site-II) is characterized by dense vegetation, large shade trees, shrubs and relatively low human disturbance. The diverse plant community and peaceful environment make this area favourable for bird nesting and breeding activities. The third study site, Pampavana (Site-III) is a naturally vegetated area consisting of native trees, bamboo clumps, shrubs and

patches of grassland. This site supports a rich diversity of birds by providing ideal nesting habitats, shelter and abundant food resources. These three study sites were selected to compare the diversity of bird nests, nesting patterns and habitat preferences across different ecological conditions within the Kuvempu University campus.

The observation was carried out by using a field binocular, digital photo camera which is later analysed and identified with the help of standard literature and direct count method was used to record the faunal nests diversity monitored by using a pair of 10X50 binocular.

III. RESULTS AND DISCUSSIONS

In total 84 faunal nests belong to birds, insects, mammals and reptiles were recorded during study period (Table 1, Fig 1). Also Several nest types (Table 2, Fig 2) were recorded from different habitats, including tress, shrubs, grasslands, buildings, rock crevices and underground burrows. Among the nests observed, bird nests (23) such as cavity nests, platform nests, pendent nests and woven nests and bird species nests recorded includes house sparrow, mourning dove nest, bulbul nest. Common insect species nesting (40) recorded are honey bee hive, termite mound and weaver ant nest. Mammals nesting (16) recorded are different species of Gaint squirrel and grey squirrel. Reptile nests (05) include ground nest burrow nest and mud nest.

Table 1 Check List of Nests Recorded During the Study Period Within the Kuvempu University Campus.

Animal group	Nest type	Habitat	Number of nests observed
Birds	Cup nest, cavity nest and platform nest	Trees, shrubs and buildings	23
Insects	Honey bee hive, termite mound and weaver ant nest	Walls, soil and trees	40
Mammals	Red giant squirrel and grey squirrel	Tree trunks	16
Reptiles	Ground nest and mud nest	Soil and grassland	5
Total:			84

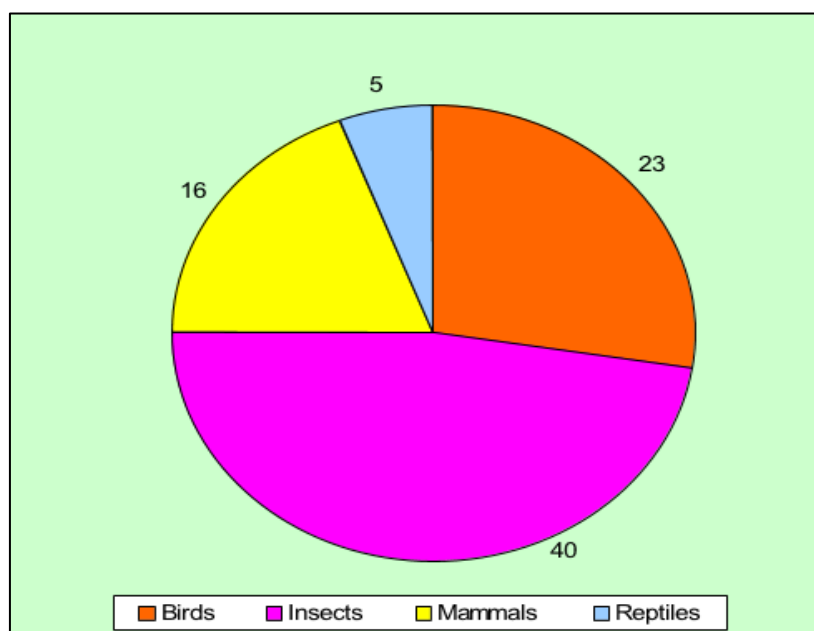


Fig 1 Check List of Nests Recorded During the Study Period within the Kuvempu University Campus.

Table 2 List of Faunal Species, Nest Types Nest Location, & No. of Nests Identified During the Study Period within the Kuvempu University Campus

Sl. No.	Animal species	Scientific name	Nest type	Nest location	Number of nests observed
1.	Weaver ant nest	<i>Genus oecophylla</i>	Aerial nest	Site-II	20
2.	Gaintsquirrel nest	<i>Ratufa</i>	Platform nest	Site-I	8
3.	Magpie nest	<i>Pica pica</i>	Spherical twig nest	Site-I	2
4.	Grey squirrel nest	<i>Sciurus carolinensis</i>	Platform nest	Site-I	3
5.	Booted eagle nest	<i>Hieraetus pennatus</i>	Platform nest	Site-I	2
6.	Termite nest	<i>Termites</i>	mounds	Site-II	10
7.	Honey bee hive	<i>Apis mellifera</i>	Cavity nest	Site-I & II	6
8.	Mourning dove nest	<i>Zenaida macroura</i>	Platform nest	Site-I	1
9.	Ground squirrel nest	<i>spermophilus</i>	Burrow nest	Site-III	5
10.	Termites	<i>Termite</i>	mounds	Site-II	4

11.	Pagoda ant nest	<i>crematogaster</i>	Arboreal nest	Site-III	2
12.	House sparrow	<i>Passer domesticus</i>	Cavity nest	Site-II	1
13.	Bulbul	<i>Pyconotus barbatus</i>	Cup nest	Site-I	1
14.	Red vented bulbul	<i>Pyconotous bulbul</i>	Cup nest	Site-I	1

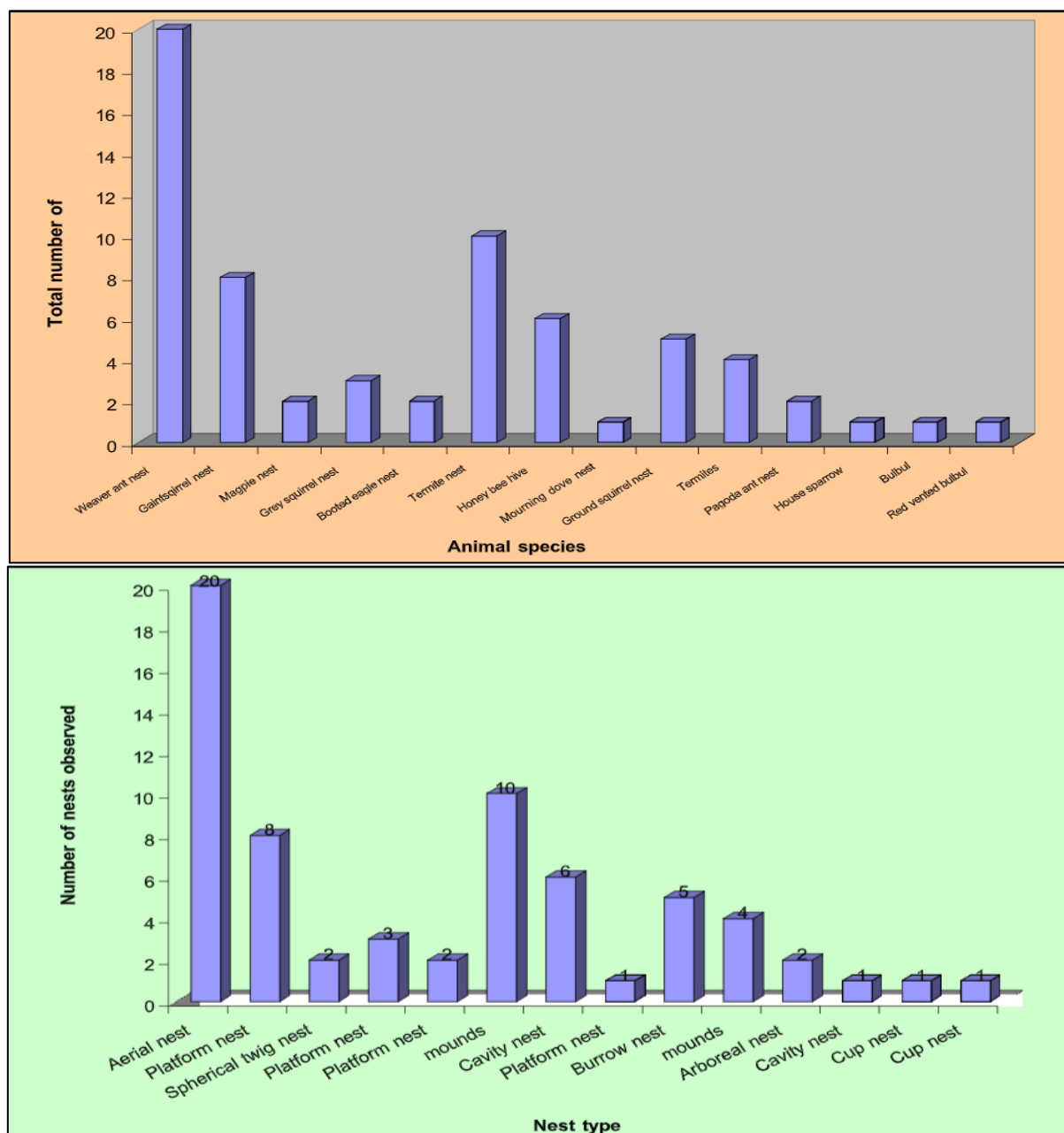


Fig 2 List of Faunal Species, Nest Types Nest Location, & No. of Nests Identified During the Study Period within the Kuvempu University Campus

The results indicated that, Kuvempu university campus provides a variety of suitable habitats for nesting animals, thereby supporting rich biodiversity. The diversity of nest structures reflects the ecological adaptations of different animal groups and highlights the importance of habitat conservation within the campus ecosystem.

The occurrence of different nest types within the campus demonstrates that educational institutions can function as important centers for biodiversity conservation. Although university campuses are primarily established for

academic purposes, they often retain patches of natural vegetation that provide refuge for wildlife. The present findings therefore support the view that campuses can contribute significantly to local biodiversity conservation by maintaining suitable breeding habitats. Similar observations were reported by Yadav *et al.* (2024) and emphasized the conservation value of educational institutions. The present investigation therefore establishes a scientific foundation for future studies on nesting ecology, behavioural adaptations, habitat utilization and biodiversity conservation within university ecosystems.

REFERENCES

- [1.] Yadav, H., Pansari, S., & Phartyal, S. S. (2024). Bird Diversity on an Under-Constructed Educational Campus: A Case Study of Nalanda University, Rajgir, India. *International Journal of Ecology and Environmental Sciences*, 50(6), 909–920. <https://doi.org/10.55863/ijees.2024.0334>.
- [2.] Sheard, C., Street, S.E., Troisi, C.A., Clark, A.D., Yovcheva, A., Trébaol, A., Vanadzina, K., Lala, K.N., & Healy, S.D. (2023). Nest traits for the world's birds. *Global Ecology and Biogeography*, 33(2), 206–214.
- [3.] Møller, A.P. (1990). Nest predation selects for small nest size in the blackbird. *Oikos*, 57(2), 237–240.
- [4.] Brouwer, L., & Komdeur, J. (2004). Green nesting material has a function in mate attraction in the European starling. *Animal Behaviour*, 67(3), 539–548.
- [5.] Hansell, M. (2000). *Bird Nests and Construction Behaviour*. Cambridge University Press. England, pp.