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# Checklist of Small Mammals and Birds Diversity of Government Serchhip College Campus Serchhip District, Mizoram, North-Eastern India

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**Abstract**

Government Serchhip College campus is adorned with a rich variety of tropical semi-evergreen trees, bamboos, and fruit-bearing trees which plays a vital role in providing feeding grounds, breeding locations, nesting sites and habitats for numerous species of small mammals and birds. A comprehensive study conducted over the course of two years, from January 2021 to December 2022, involved direct and exhaustive observation to document the biodiversity of small mammals and birds residing within the college campus. Through this thorough investigation, 21 distinct species of small mammals and 38 different species of birds were meticulously observed, recorded, and documented. The primary aim and objective of this study were twofold: firstly, to compile a comprehensive checklist encompassing the diverse array of small mammals and birds present within the campus premises, those that rely on the campus environment for their survival, breeding, and sustenance as well as migratory avifauna. Secondly, in addition to creating this checklist, the study endeavours to propose and outline conservation measures aimed at safeguarding and preserving the habitats and consequently, the populations of these small mammals and birds. Recognizing the significance of the campus environment as a crucial habitat for these species, it becomes imperative to establish strategies and initiatives that ensure the continued well-being and existence of this biodiversity. In essence, the holistic goal is to cultivate an ethos of environmental stewardship within the campus community, fostering a sense of responsibility towards the conservation of these invaluable and integral components of our ecosystem and biodiversity.

**Keywords:** Government Serchhip College, mammals, birds, diversity, conservation

## Introduction

Mammals and birds play a vital role in human society, even holding substantial economic importance by significantly contributing to the regulation of populations of different insects and pests (Balkhande *et al*. 2013) [3]. They possess the unique ability to identify aspects of a subtle landscape conditions that may go unnoticed. Across history, they have been acknowledged as valuable contributors due to their role in providing abundant and diverse food resources for humans (Chitampally 1993) [5].

With a rich diversity, India harbours more than 400 mammal species, with the majority falling under the category of small mammals, each weighing less than 5 kg. Renowned and dedicated mammologist have been conducting extensive study on these small mammals in different parts of India. (Sinha *et al*., 2005; Rangarajan and Mahesh 2005; Choudhury, 2007, Singh, H. S. & Gibson, L. 2011; Brockelman, *et al*., 2019) [29, 34, 6, 33, 4]. Within the region of Mizoram, a comprehensive list was compiled, documenting 126 wild mammal species categorized into 32 families spanning 11 different orders. This includes 8 primate species, 3 ursids, 14 herbivores with ungulates, 8 felids, 2 canids, 8 felids, 19 lesser carnivores, as well as 5 fossorial, 9 arboreal, 37 chiropterans, 22 rodents and 1 aquatic mammal. (Sawmliana, 2009, Lalthanzara, 2017, Vanlalnghaka, 2020) [26, 21, 32].

A total of 1337 species of birds have been documented in India, among which 81 species are endemic to the country and 217 are globally threatened species (Manakadan *et al*., 2020; Lepage and Denis, 2021) [23, 22]. Numerous researchers have comprehensively documented on how avian diversity corresponds to variations in vegetation composition and structure. Moreover, they have demonstrated that avian diversity tends to increase with a higher level of vegetation. The distribution and presence of avifauna align closely with the vegetation patterns of the area, representing a matter of considerable significance (Jain *et al*. 2005) [10].

Mizoram being situated within the Indo-Burma global biodiversity hotspot (Myers *et al*., 2000) [25] and the Eastern

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Himalaya Endemic Bird Area (Stattersfield *et al*., 1998) [30], numerous studies on bird fauna been undertaken across key conservation areas in the region (Choudhury, 2008, Sawmliana, 2013; Lalthanzara, 2010; Kasambe 2014; Lalthanzara *et al*., 2013a,b, Lalthanzar *et al*. 2014a,b; Vanlalsawmi *et al*., 2011; Lalawmawi and Lalthanzara, 2015; Lalruatkimi *et al*., 2020) [7, 26, 14, 11, 18, 33, 13, 35]].

The primary goal of the current study is to amass an exhaustive list of the small mammals and avian fauna observed in the college campus, elucidating the diversities of both small mammals and birds.

## Materials and Methods

**Study Site:** The present study was conducted within the campus of Government Serchhip College (23°20'12"N and 92°05'17"E) in Serchhip District, Mizoram, situated at an elevation of 971.41 meters above sea level. Encompassing an area of 52 acres, 90% of which is characterized by its tropical semi-evergreen trees, lush bamboo forests, and fruit-bearing trees. This environment offers an optimal habitat for a wide variety of flora and fauna, including birds and small mammals.

**Survey and Identification:** This study is grounded in observations conducted from January 2021 to December 2022, focusing on small mammals and birds throughout the entire college campus. Observations were carried out twice daily during morning and evening hours, spanning two to three hours each session, with consistent daily monitoring using binoculars (Nikon ACULON A211 10-22x50 Zoom Binocular) and Video camera (Sony HDR-XR350V, Japan). Digital DSLR Camera (Cannon DS126291, Taiwan) was also used to record the photograph of captured small mammals and birds for further identification. Species identification was carried out in the field with the assistance of Field Guides (Grimmette *et al*., 1999; Tiwari, 2005; Ali *et al*., 2003, Menon, 2014) [9, 31, 2, 24]. The checklist was prepared following the guidelines provided by Abdulali (1981) [1], Gaikwad *et al*. (1997) [8], Kulkarni *et al*. (2005) [12], Sharma *et al.* (2013) [28] and Menon, (2014) [24].

## Results and Discussion

The current study documented 21 animals listed in Table 1, depicting specific details such as scientific names, common names, and local names of various small mammals. Table 2 exhibits the details of the 38 bird species identified in the college campus.

A considerable population of the following birds were observed in the present study-*Passer domestica*, *Zosterops placebos*, *Arachnothera magna*, *Glaucidium brodiei*, *Megalaima asiatica*, *Dicrurus adsimilis albiricus*, *Pycnonotus cafer*, *Pycnonotus jocosus*. Among small mammals, *Tupaia belangeri, Rattus rattus, Bandicota bengalensis, Talpa micrura, and Cynopterus sphinx* were the most frequently sighted during the study period.

**Table 1:** Checklist of small mammals of Government Serchhip College Campus.

| S. No. | Local Name | Common Name | Scientific Name |
|---|---|---|---|
| 1 | Chhimtir | Grey Musk Shrew | *Suncus Murinus* |
| 2 | Che-pa | Northern Tree Shrew | *Tupaia belangeri* |
| 3 | Sa-zaw (Zaw-buang) | Hymalayan Palm Civet | *Paguma larvata* |
| 4 | Tlum-pui | Large Indian Civet | *Viverra zibetha* |
| 5 | Tlum-ther | Small Indian Civet | *Viverricula indica* |
| 6 | Sa-nghar | Leopard Cat | *Felis bengalensis* |
| 7 | Hlei-kap-sen | Red-bellied Palla's Squirrel | *Callosciurus erythraeus* |
| 8 | Hlei-lu-bial | Orange-bellied Himalayan Squirrel | *Dremomys lokriah* |
| 9 | Awr-rang | Malayan Giant Squirrel | *Ratufa bicolour* |
| 10 | Sa-zu (Zu-pawl) | Indian Mole-rat | *Bandicota bengalensis* |
| 11 | Sazu | House Rat | *Rattus rattus* |
| 12 | Bui-pui | Red-cheeked Bamboo Rat | *Rhizomys erythrogenys* |
| 13 | Bui-ke-lek | Short-tailed Mole | *Talpa micrura* |
| 14 | Tam-pui | Large Bandicoot Rat | *Bandicota indica* |
| 15 | Bui-sen | Bay Bamboo Rat | *Cannomys hadius* |
| 16 | Uite-Bak | Greater short-nosed fruit bat | Cynopterus sphinx |
| 17 | Bak-hmuisei | Long-tongued fruit bat | *Macroglossus sorbinus* |
| 18 | Bak | Western bent-winged bat | *Miniopterus magnate* |
| 19 | Di-tip-Bak | Least pipistrelle | *Pipistrellus tenuis* |
| 20 | Mau-Bak | Lesser bamboo bat | *Tylonycteris pachypus fulvida* |
| 21 | Mau-Bak lian | Greater Asiatic Bamboo bat | *Scotophilus heathii* |

**Table 2:** Checklist of birds of Government Serchhip College Campus.

| S. No. | Local Name | Common Name | Scientific Name |
|---|---|---|---|
| 1 | Chawngzawng | House Sparrow | *Passer domestica* |
| 2 | Chip-te | Little Bunting | *Emberiza pusilla* |
| 3 | Pit-te | White-rumped Munia | *Lochura stiata acuticauda* |
| 4 | Pit-sen | Blackheaded Munia | *Lonchura Malacca* |
| 5 | Mitval | Indian White-eye | *Zosterops plabrebosa* |
| 6 | Ki-reuh | Streaked Spiderhunter | *Arachnothera magna* |
| 7 | Tumbu-Lawi-Zit | Little Spiderhunter | *Arachnothera longirosta* |
| 8 | Va-te | Rubby-cheeked Sunbird | *Anthreptes singalensis* |
| 9 | Tek-tek | Plain Flowerpecker | *Dicaem concolor* |
| 10 | Tek-tek-awr-trial | Yellow-vented | *Dicaem chrysorrheum* |
| 11 | Chip | Indian Tree Pipit | *Anthus hogdsoni* |
| 12 | Ram-chawngzawng | Redheaded Tit | *Aegithalos concinnus* |
| 13 | Va-in-ro-nghak | Blue Rock-thrush | *Monticola solitaries* |
| 14 | Tawk-tawk-awr-sen | White-tailed Rubythroat | *Erithacus pectoralis* |
| 15 | Chin-rang | Black-backed Forktail | *Enicurus immaculatus* |
| 16 | Chin-rang | Spotted Forktail | *Enicurus maculates* |
| 17 | Va-te-mei-bul | Slaty-bellied Tesia | *Tesia olivea* |
| 18 | Va-te-mei-tawi | Grey-bellied Tesia | *Tesia cyaniventer* |
| 19 | Dai-kat | Common Tailor Bird | *Orthotomus sutorius* |
| 20. | Va-dum-de-leng | Pale-blue Flycatcher | *Cyornis unicolor* |
| 21. | Va-pawl | Blue-throated Flycatcher | *Cyornis rubeculoides* |
| 22. | Va-te | Brown-bushed Warbler | *Abroscopus luteoventris* |
| 23. | Va-te | Black-faced Warbler | *Abroscopus schisticepsi* |
| 24. | Valeisawt | Spotted Wren-babbler | *Spelaeornis formosus* |
| 25 | Valeisawt | Chin Hills Long-tailed Wren-babbler | *Spelaeornis chocolatinus oastesi* |
| 26. | Ngal-va-pual | Mizo Coral-billed Scimitar-babbler | *Phomatorphinus ferruginosus phayrei* |
| 27. | Tukkumvilik | Blackcrested | *Pycnonotus jocosus* |
| 28. | Tlai-berh | Red-vented Bulbul | *Pycnonotus cafer* |
| 29. | Dawk-kek | White-throated Bulbul | *Criniger flavelous* |
| 30. | Chhawl-hring | Golden-fronted leaf bird | *Chloropsis aurifrons* |
| 31. | Bawng | Shortbilled Minivet | *Pericrocotus brevirostris* |
| 32 | Chang-kak | North Indian Black Drongo | *Dicrurus adsimilis albiricus* |
| 33 | Chhem-hur | Brown Shrike | *Lanius cristatus* |
| 34 | Va-mur-ngum-sen | Red-rumped Swallow | *Hirundo daurica* |
| 35. | Tuk-lo | Blue-throated Barbet | *Megalaima asiatica* |
| 36. | Fanghmir thloh | Bay Woodpecker | *Blythipicus pyrrhotis* |
| 37. | Va-lam-bawk | Grey Nightjar | *Caprimulgus indicua* |
| 38 | Hrang-kir | Collared Pigmy Owlet | *Glaucidium brodiei* |

A comparable investigation was conducted by researchers in Mizoram. For instance, in Dampa Sanctuary, a research group identified 54 bird species (Vanlalsawmi *et al*., 2011) [33]. Additionally, Lalawmawi and Lalthanzara conducted an extensive study of bird diversity in Lengteng Wildlife Sanctuary in 2015, documenting 126 bird species. Another study focused on bird diversity in the Reiek Biodiversity Spot, revealing the identification of 117 bird species (Lalruatkimi *et al*., 2020) [13].

The College campus and the adjacent forest area experience minimal human activity during the mornings and evenings, fostering conditions conducive to the availability of food, water, favourable climatic conditions, and surrounding vegetation for both mammals and avian fauna.

The primary threat for small mammal and bird species stems from hunting activities persisting even within the protected reserve zones. Increased awareness among the locals and the students alike is therefore a must, and constitute one of the underlying objectives of this study.

Knowledge on the basic needs and habitat requirements of each species will help in making the more effective conservation strategy. Therefore scientific studies and long term monitoring of the small mammal and avian community of our college campus is recommended. The species diversity can be well preserved providing that proper conservation measures are implemented by the concerned authority.

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