

ISRG Journal of Agriculture and Veterinary Sciences (ISRGJAVS)



ISRG PUBLISHERS

Abbreviated Key Title: ISRG. J. Agri. Vet. Sci.

ISSN: 3048-8869 (Online)

Journal homepage: <https://isrgpublishers.com/gjavs/>

Volume – III Issue - IV (July – August) 2026

Frequency: Bimonthly



A Checklist of the Flora and Fauna of the Bangladesh National Museum Campus, Shahbag, Dhaka, Bangladesh

Sumona Afroz¹, Mamata Rani Das², Ashraful Kabir^{3*}

^{1,2} Department of Natural History, Bangladesh National Museum, Shahbag, Dhaka, Bangladesh

³ Department of Biology, Cantonment Public College, Saidpur Cantonment-5311, Nilphamari, Bangladesh

| Received: 15.07.2026 | Accepted: 21.07.2026 | Published: 09.08.2026

*Corresponding author: Ashraful Kabir

Abstract

This study presents a comprehensive checklist of flora and fauna recorded within the Bangladesh National Museum campus, Shahbag, Dhaka, Bangladesh, from January 2025 to June 2026. A total of 150 plant species belonging to 29 orders, 52 families, and 126 genera were documented. The flora included native, ornamental, medicinal, cultivated, and exotic species, reflecting both natural and managed vegetation components of the campus. The dominant plant families were Asteraceae, Fabaceae, Caesalpiniaceae, Apocynaceae, and Rubiaceae. The faunal survey recorded 100 species belonging to 29 orders, 47 families, and 87 genera, encompassing invertebrates, amphibians, reptiles, birds, and mammals. Birds represented the most species-rich faunal group, comprising 48 species belonging to 13 orders and 24 families. Passeriformes was the dominant avian order with 27 species, followed by Coraciiformes, Piciformes, Cuculiformes, Columbiformes, Accipitriformes, Strigiformes, and Psittaciformes. The predominance of Passeriformes and the presence of diverse feeding guilds indicate a high degree of adaptation to urban and semi-natural habitats. The coexistence of native and exotic species demonstrates the formation of a heterogeneous urban ecosystem influenced by both natural ecological processes and landscape management practices. The findings indicate that the museum grounds serve as a significant urban biodiversity refuge in central Dhaka, emphasizing the vital role of institutional green spaces in sustaining and conserving urban biodiversity. Long-term monitoring and appropriate habitat management are recommended to support the long-term conservation of urban flora and fauna under increasing anthropogenic pressure.

Keywords: Urban biodiversity, Flora checklist, Fauna checklist, Museum campus, Conservation ecology.

1. INTRODUCTION

A checklist of flora and fauna provides an inventory of plant and animal species within a specific area. Such lists are valuable tools for ecological surveys, biodiversity studies, conservation planning, and nature tourism. Biodiversity can be defined as the variety of life including plants, animals, and microorganisms occurring as an interacting system within a given habitat. It encompasses the total sum of genes, species, and is typically measured in terms of the number of species and their population within a given area. Species diversity refers specifically to the variety of different species of plants and animals within a geographical area or ecosystem. Flora denotes the plant life present in a particular region or time, while fauna refers to the animal life. Plants form the foundation of ecosystems, providing essential resources such as food and habitat. Animals, as consumers, play a crucial role in maintaining ecological balance and exhibit key traits distinguishing them from other organisms. Biodiversity underpins ecosystem services and ecological resilience. Accurate documentation of species, especially through checklists, is essential for understanding, conserving, and managing biological resources (Heywood, 1995). As Gaston and Spicer (2004) note, “biodiversity assessment is the first and fundamental step toward conserving natural heritage.” In rapidly urbanizing environments, even small green spaces such as museum campuses can serve as crucial refuges for diverse species. Checklists provide baseline data for monitoring environmental changes, identifying rare or threatened species, and informing conservation strategies (Magurran, 2004). Singh and Rawat (2012) emphasize that “comprehensive floristic and faunal inventories are urgently needed, especially in urban and peri-urban landscapes where biodiversity is most at risk due to anthropogenic pressures.” Urban ecosystems, though often fragmented and heavily influenced by human activity, can still support significant biodiversity. Sukopp and Werner (1982) describe urban areas as “novel ecosystems where native, introduced, and ornamental species coexist and adapt.” Institutional grounds, such as university and museum campuses, are increasingly recognized for their ecological value (Aronson et al., 2014). These areas, often overlooked in conservation efforts, provide important microhabitats and corridors for wildlife movement.

The Bangladesh National Museum (BNM) campus represents one of the richest urban green spaces in Bangladesh, benefiting from the country’s diverse climate, topography and habitats. This unique enclave within densely built Dhaka hosts a variety of plant and animal species, including some that are rare or locally threatened. Despite its cultural and educational management, systematic documentation of the campus’s biodiversity has been limited. This study aims to compile a comprehensive checklist of the flora and fauna of the study area. This work addresses a knowledge gap and contributes to national efforts in documenting urban biodiversity. As Wilson (1988) famously stated, “The one process now going on that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us.” Documenting biodiversity, therefore, is not merely academic; it is a responsibility. This curated list focuses on urban biodiversity within Shahbag, particularly in gardened and semi-natural zones of the museum campus, adjacent gardens and botanical patches. Given urbanization, biodiversity in this area is semi-managed, consisting of both natural and cultivated species. The checklist serves educational, ecological, and landscaping purposes. The

BNM ecosystem encompasses all plants, animals, and microorganisms, alongside abiotic components such as climate, water, and soil. The museum aims to increase public awareness of environmental issues, promote environmental protection, and foster support for conservation of natural resources. Observations for the checklist carried out across multiple microhabitats, including pond surroundings, garden areas, tree canopies, and open spaces. This study highlights the ecological importance of institutional green spaces in urban environments and provides essential baseline data for conservation planning.

2. MATERIALS AND METHODS

Study Area

The study was conducted within the Bangladesh National Museum campus, Shahbag, Dhaka, covering an area of approximately 8.53 acres. The Bangladesh National Museum is one of the largest museums in South Asia and represents an important cultural landmark embedded within a highly urbanized matrix. The campus was selected due to its ecological heterogeneity, accessibility, and significance as an urban green space (Gaston & Spicer, 2004). The site comprises a mosaic of vegetation types, including ornamental gardens, native and planted trees, shrubs, lawns, and a freshwater pond. Despite being surrounded by dense urban infrastructure, the campus retains several distinct microhabitats that support diverse flora and fauna. Urban green spaces such as this are widely recognized as important components of biodiversity conservation in cities (Aronson et al., 2014). The museum complex includes a four-storied building with more than 22,000 m² of exhibition space and 46 galleries, integrated within a landscaped environment. The vegetation structure includes scattered trees, grass patches, and managed gardens that support ornamental, native, medicinal, fruit-bearing, and aquatic plant species. The pond and surrounding green areas function as an important ecological refuge within the urban landscape, historically supporting aquatic organisms, birds, and invertebrates. Trees provide nesting and perching sites for avifauna, while vegetated patches and lawns offer shelter and foraging habitats for reptiles, small mammals, and insects. Urban ecosystems often function as “novel ecosystems” where native and introduced species coexist under anthropogenic influence (Sukopp & Werner, 1982). Overall, the campus serves as a significant urban green space contributing to biodiversity conservation and ecological stability within Dhaka city. Such green patches are increasingly recognized as critical for maintaining biodiversity in rapidly urbanizing regions (Magurran, 2004).

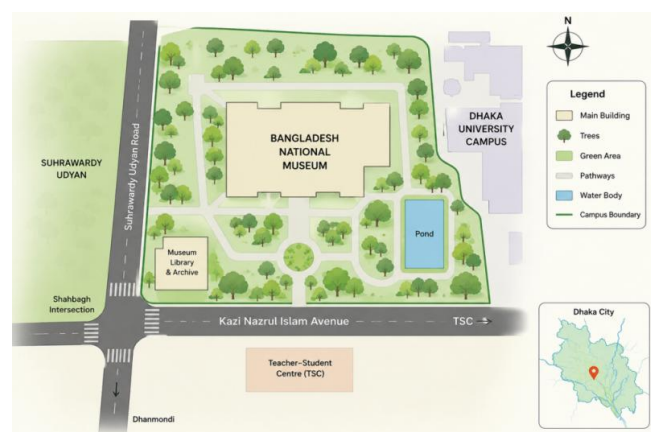


Fig. 1. Location of the study area of the Bangladesh National Museum campus located in Shahbag, Dhaka, Bangladesh.

Soil

The Bangladesh National Museum campus, located in Shahbag, Dhaka, lies within the Madhupur Tract, a Pleistocene terrace formation. The dominant soil type is Madhupur Clay, characterized by a reddish-brown color and composed of stiff, sticky silty clay with occasional iron nodules and mica particles. This clay layer is approximately 6-8 m thick and overlies the Dupi Tila formation, which consists of coarse sandy deposits providing a stable geological foundation for construction. According to Khan (1991), Madhupur Clay is a highly weathered upland soil with low permeability and poor natural drainage, making it susceptible to water logging during heavy rainfall. The underlying Dupi Tila sands, as described by Islam and Uddin (2008), are more permeable and contribute to groundwater recharge in the region. The soil exhibits high plasticity and moderate compressibility, which can create engineering challenges for heavy infrastructure development. However, its cohesive nature provides moderate resistance to erosion and seismic disturbance (Brammer, 1996). As a result, reinforced and engineered foundations are commonly required for long-term structural stability in Dhaka's urban core.

Climate

The Bangladesh National Museum campus, located in Shahbag, Dhaka, experiences a tropical monsoon climate characterized by three distinct seasons: a hot and humid summer (March-June), a rainy monsoon (June-October), and a mild, dry winter (November-February). The highest temperatures generally occur in April, reaching around 35°C, while the lowest temperatures are observed in January, dropping to approximately 12°C. According to Islam and Uyeda (2007), Bangladesh's climate is strongly influenced by monsoon dynamics, resulting in high seasonal rainfall variability and pronounced humidity throughout most of the year. Annual rainfall in Dhaka typically ranges from 1900 to 2200 mm, with the majority concentrated during the monsoon season, which plays a crucial role in shaping urban vegetation patterns and faunal activity. Relative humidity remains high year-round, often exceeding 70-85%, particularly during the monsoon period. As described by Rashid (1991), such humid tropical conditions support rapid plant growth and sustain high levels of biological productivity in urban ecosystems. Wind patterns are seasonally variable, generally flowing from the south and southwest during the monsoon and from the north during winter, influencing dispersal of seeds, insects, and airborne organisms. These climatic conditions significantly affect the distribution, phenology, and seasonal dynamics of flora and fauna within the Bangladesh National Museum campus ecosystem, contributing to its overall biodiversity structure.

Survey Period

The biodiversity survey was carried out from January 2025 to June 2026 within the Bangladesh National Museum campus, Shahbag, Dhaka. Field observations were conducted across different seasons to capture temporal variations in species composition, including seasonal changes in abundance, behavior, and phenology. Systematic field visits were conducted at regular intervals, using both short-duration (approximately 1 hour) and prolonged observation sessions depending on habitat conditions and species activity. No systematic nocturnal surveys were conducted; observations were restricted to daylight hours. Sampling was conducted across representative microhabitats within the campus, including ornamental gardens, open lawns, tree canopies, and

pond-edge vegetation. These habitats were selected to ensure broad coverage of the campus ecosystem and to document species associated with both terrestrial and semi-aquatic environments. Data collection was based on a combination of direct field observation, photographic recording, and standard taxonomic identification. Avifaunal species were documented through visual sightings, vocal identification, and behavioral observations when applicable. All records were photographed and later verified using standard identification manuals and authenticated online biodiversity databases (Khan, 2015; Ahmed, 2008). Standard field equipment included binoculars for bird observation, a DSLR camera (Nikon D750, Cannon D50) for photographic documentation, a smart phone (Samsung Galaxy A05, Vivo V2111) for supplementary imaging and field notes, and audio recording devices for capturing bird calls. For each observation, metadata including date, time, microhabitat type, and prevailing environmental conditions were systematically recorded. Plant specimens were identified to species level, while faunal records were classified based on morphological characteristics and ecological behavior. The integration of multiple observational and verification techniques enhanced data reliability and reduced identification bias, ensuring robust documentation of urban biodiversity within the study area.

RESULTS AND DISCUSSION

The high richness of avifauna and vascular plant species recorded in the Bangladesh National Museum campus is consistent with findings from other urban green spaces, where habitat heterogeneity, vegetation complexity, and availability of food resources positively influence biodiversity. The coexistence of native and exotic species creates a heterogeneous mosaic of habitats capable of supporting pollinators, seed dispersers, and insectivorous birds, thereby enhancing ecosystem functioning and ecological resilience in urban environments (Aronson et al., 2014; Gaston, 2010).

Flora Diversity:

The present study provides a comprehensive evaluation of plant biodiversity within the Bangladesh National Museum campus situated in the urban landscape of Shahbag, Dhaka. A total of 150 plant species were recorded, representing 29 orders, 52 families, and 126 genera (Table 1). Among the recorded plant orders, Lamiales was the most species-rich (23 species), followed by Asterales (16 species), Fabales (11 species), Myrtales (10 species), and Sapindales (10 species). The recorded flora comprised several ecological and functional groups, including timber and native trees, medicinal plants, deciduous and evergreen species, fruit-bearing plants, flowering and ornamental plants, vegetables, herbs, shrubs, climbers, grasses, and gymnosperms (Plate 1 and Plate 2). This taxonomic diversity reflects a heterogeneous assemblage of native, ornamental, and introduced plant species that collectively contribute to the structural complexity and ecological functioning of the campus ecosystem. The coexistence of native and introduced taxa indicates a dynamic interaction between natural ecological processes and anthropogenic landscape management.

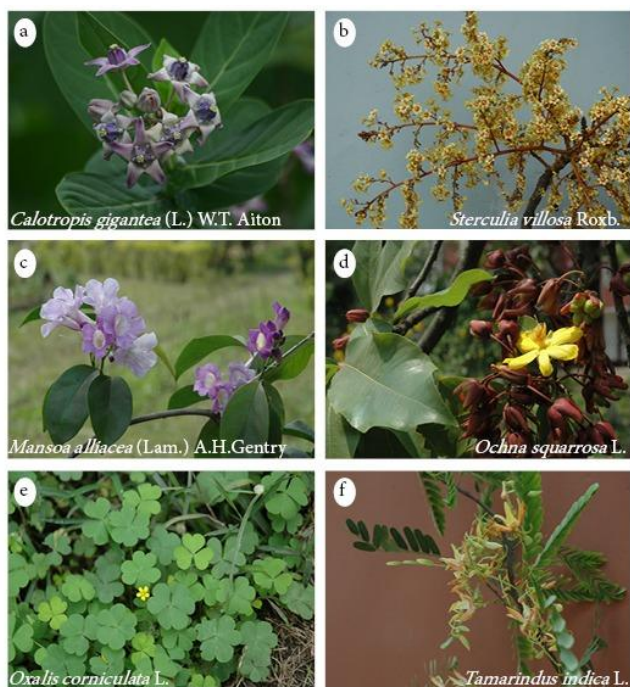


Plate 1. Representative flora recorded from the Bangladesh National Museum campus.

Among the recorded plant orders, Lamiales was the most species-rich order, represented primarily by ornamental and medicinal species such as *Ocimum basilicum* L. (Sweet Basil), *Jasminum sambac* (L.) Aiton (Arabian Jasmine), *Vitex negundo* L. (Chaste Tree), *Duranta erecta* L. (Golden Dewdrop), and *Lantana camara* L. (Lantana). The predominance of Lamiales reflects intensive horticultural planting and continuous landscape management, as many members of this order are widely cultivated for their ornamental and medicinal value. At the family level, Asteraceae, Fabaceae, Caesalpiniaceae, Apocynaceae, and Rubiaceae were the dominant taxa, reflecting their ecological adaptability and widespread use in urban landscaping. Asteraceae contributed a large number of herbaceous and annual species, particularly in disturbed and open lawn areas, indicating their strong colonization ability in urban habitats. Species belonging to Fabaceae, including *Delonix regia* (Peacock Flower), *Cassia fistula* L. (Golden Shower Tree), and *Bauhinia variegata* L. (Variegated Bauhinia), contributed substantially to canopy development and nitrogen enrichment, thereby improving soil fertility and enhancing ecological stability within the campus.



Plate 2. Representative flora recorded from the Bangladesh National Museum campus.

Native tree species such as *Ficus hispida* L.f. (Opposite-leaved Fig), *Ficus rumphii* Blume (Weeping Fig), *Terminalia arjuna* (Roxb. Ex DC.) Wight & Arn. (Arjun) and *Polyalthia longifolia* (Sonn.) (Cemetery Tree) are ecologically significant, providing food and habitat for various urban-adapted faunal species, including insects, birds, and small mammals. These species are also valued for their medicinal properties, shade provision, and cultural relevance in traditional South Asian landscapes. The presence of medicinal plants like *Azadirachta indica* (Neem Tree), *Ocimum tenuiflorum* (Basil), and *Mesua ferrea* L. (Ceylon Ironwood) further highlights the ethnobotanical importance of the campus flora. A total of 22 fruit tree species were recorded within the study area, comprising both native and introduced taxa. Notable among the native species were *Mangifera indica* L. (Mango), *Artocarpus heterophyllus* Lam. (Jackfruit), *Cocos nucifera* L. (Coconut), *Syzygium cumini* (L.) Skeels (Indian Blackberry), *Psidium guajava* L. (Guava) and *Limonia acidissima* L. (Koetbel) all of which are widely distributed across Bangladesh and hold significant ecological, nutritional, and cultural value. In contrast, a considerable proportion of the recorded flora consists of ornamental and horticulturally introduced species, such as *Bougainvillea spectabilis* Willd. (Bagan Bilash) and *Hibiscus rosa-sinensis* L. (Joba), which are widely cultivated for their aesthetic appeal. These species contribute significantly to the visual landscape and ecological heterogeneity, although their dominance may sometimes alter the composition of native plant communities. The herbaceous layer is dominated by grasses and seasonal flowering plants adapted to urban disturbance and seasonal variability. These species contribute to soil stabilization, nutrient cycling, and support for invertebrate communities, thereby enhancing ecosystem functioning in this urban habitat.

Table 1: Checklist of plant species recorded from the Bangladesh National Museum campus during January 2025–June 2026.

Sl. No.	Scientific Name	English Name	Local Name	Order	Family	Status
Timber/Native Plants						
1.	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	Cemetery Tree	Debdaru	Magnoliales	Annonaceae	R
2.	<i>Cinnamomum camphora</i> (L.) J.Presl	Camphor Tree	Karpur	Laurales	Lauraceae	LC
3.	<i>Adenanthera pavonina</i> L.	Red Wood	Ranjan	Fabales	Mimosaceae	LC
4.	<i>Tectona grandis</i> L.f.	Teak	Segun	Lamiales	Verbenaceae	EN
Medicinal Plants						
5.	<i>Justicia adhatoda</i> L.	White Dragon's Head	Bashak	Lamiales	Acanthaceae	LC
6.	<i>Mesua ferrea</i> L.	Ceylon Ironwood	Nageshwar	Malpighiales	Clusiaceae	VU
7.	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	Arjun	Arjun	Myrtales	Combretaceae	-
8.	<i>Ocimum basilicum</i> L.	Sweet Basil	BabuiTulsi	Lamiales	Lamiaceae	-
9.	<i>Ocimum tenuiflorum</i> L.	Basil	Kalo Tulsi	Lamiales	Lamiaceae	-
10.	<i>Barringtonia acutangula</i> (L.) Gaertn.	Indian Oak	Hijal	Ericales	Lecythidaceae	LC
Deciduous Plants						
11.	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Myrobalan	Bohera	Myrtales	Combretaceae	LC
12.	<i>Terminalia chebula</i> Retz.	Black Myrobalan	Horitoki	Myrtales	Combretaceae	LC
13.	<i>Lagerstroemia speciosa</i> (L.) Pers.	Indian Lilac	Jarul	Myrtales	Lythraceae	LC
14.	<i>Azadirachta indica</i> A.Juss.	Neem Tree	Nim	Sapindales	Meliaceae	LC
15.	<i>Ficus rumphii</i> Blume	Weeping Fig	Pipul	Rosales	Moraceae	-
16.	<i>Moringa oleifera</i> Lam.	Drumstick Tree	Sajna	Brassicales	Moringaceae	LC
17.	<i>Sterculia villosa</i> Roxb.	Elephant Rope Tree	Udal	Malvales	Sterculiaceae	LC
Semideciduous Plants						
18.	<i>Murraya koenigii</i> (L.) Spreng.	Curry-leaf Tree	Kamini	Sapindales	Rutaceae	LC
Evergreen Plants						
19.	<i>Mimusops elengi</i> L.	Indian Medlar	Bokul	Ericales	Sapotaceae	LC
20.	<i>Aquilaria malaccensis</i> Lam.	Agar	Agar Gach	Malvales	Thymeleaceae	-
Fruiting Plants						
21.	<i>Mangifera indica</i> L.	Mango	Aam	Sapindales	<u>Anacardiaceae</u>	DD
22.	<i>Areca catechu</i> L.	Betel Nut	Supari	Arecales	Arecaceae	LC
23.	<i>Cocos nucifera</i> L.	Coconut	Narikel	Arecales	Arecaceae	-
24.	<i>Tamarindus indica</i> L.	Tamarind Tree	Tetul	Fabales	Caesalpiniaceae	LC
25.	<i>Carica papaya</i> L.	Papaya	Pepe	Brassicales	Caricaceae	DD

26.	<i>Dillenia indica</i> L.	Elephant Apple	Chalta	Dilleniales	Dilleniaceae	LC
27.	<i>Diospyros discolor</i> Willd.	Velvet Apple	Belati Gab	Ericales	Ebenaceae	-
28.	<i>Elaeocarpus floribundus</i> Blume	Indian Olive	Jalpai	Oxalidales	Elaeocarpaceae	LC
29.	<i>Phyllanthus emblica</i> L.	Emblic Myrobalan	Amloki	Malpighiales	<u>Euphorbiaceae</u>	LC
30.	<i>Litchi chinensis</i> Sonn.	Litchi	Lichu	Sapindales	Sapindaceae	-
31.	<i>Manilkara zapota</i> (L.) P.Royen	Sapota	Safeda	Ericales	Sapotaceae	LC
32.	<i>Artocarpus heterophyllus</i> Lam.	Jackfruit	Kanthal	Rosales	Moraceae	-
33.	<i>Syzygium cumini</i> (L.) Skeels	Indian black-Berry	Jam	Myrtales	Myrtaceae	LC
34.	<i>Psidium guajava</i> L.	Guava	Peyara	Myrtales	Myrtaceae	LC
35.	<i>Averrhoa bilimbi</i> L.	Bilimbi	Belimbi	Oxalidales	Oxalidaceae	LC
36.	<i>Averrhoa carambola</i> L.	Chinese Gooseberry	Kamranga	Oxalidales	Oxalidaceae	DD
37.	<i>Punica granatum</i> L.	Pomegranate	Dalim	Myrtales	Punicaceae	LC
38.	<i>Ziziphus mauritiana</i> Lam.	Indian Jujube	Boroi	Rosales	Rhamnaceae	LC
39.	<i>Citrus × aurantiifolia</i> (Christm.) Swingle	Lime	Lebu	Sapindales	Rutaceae	-
40.	<i>Citrus maxima</i> (Burm.) Merr.	Pummelo	Jambura	Sapindales	Rutaceae	LC
41.	<i>Citrus reticulata</i> Blanco	Orange	Komola	Sapindales	Rutaceae	-
42.	<i>Limonia acidissima</i> L.	Koetbel	Elephant Apple	Sapindales	Rutaceae	-
Flowering/ Cultivated Plants						
43.	<i>Celosia argentea</i> L.	Cock's Comb	Morog Phul	Caryophyllales	Amaranthaceae	LC
44.	<i>Allamanda cathartica</i> L.	Golden Trumpet	Ghanta phul	Gentianales	Apocynaceae	-
45.	<i>Holarrhena pubescens</i> Wall. ex G. Don	Bitter Oleander	Kurchi	Gentianales	Apocynaceae	-
46.	<i>Tabernaemontana divaricata</i> (L.) R.Br. ex Roem. & J.A.Schult.	Wax Flower	Tagar	Gentianales	Apocynaceae	LC
47.	<i>Plumeria alba</i> L.	Pagoda Tree	Kat-golap	Gentianales	Apocynaceae	LC
48.	<i>Plumeria obtusa</i> L.	Pagoda Tree	Kat-golap	Gentianales	Apocynaceae	LC
49.	<i>Plumeria pudica</i> Jacq.	Bridal Bouquet	Nag Champa	Gentianales	Apocynaceae	LC
50.	<i>Plumeria rubra</i> L.	Pagoda Tree	Kat-golap	Gentianales	Apocynaceae	LC
51.	<i>Chrysanthemum indicum</i> L.	Chrysanthemum	Chandramallika	Asterales	Asteraceae	-
52.	<i>Cosmos sulphureus</i> Cav.	Summer Cosmos	Tara Genda	Asterales	Asteraceae	-
53.	<i>Cyanthillium cinereum</i> (L.) H.Rob.	Fleabane	Kukshim	Asterales	Asteraceae	-
54.	<i>Dahlia pinnata</i> Cav.	Dalia	Dalia	Asterales	Asteraceae	-
55.	<i>Bombax ceiba</i> L.	Red Silk Cotton Tree	Shimul	Malvales	Bombacaceae	LC

56.	<i>Epiphyllum oxypetalum</i> (DC.) Haw.	Dutchman's Pipe Cactus	Night Queen	Caryophyllales	Cactaceae	LC
57.	<i>Bauhinia variegata</i> L.	Variegated Bauhinia	Kanchan	Fabales	Caesalpiniaceae	LC
58.	<i>Caesalpinia pulcherrima</i> (L.) Sw.	Peacock Flower	Radhachura	Fabales	Caesalpiniaceae	LC
59.	<i>Delonix regia</i> (Hook.) Raf.	Peacock Flower	Krishnachura	Fabales	Caesalpiniaceae	LC
60.	<i>Tagetes erecta</i> L.	Marigold	Gada	Asterales	Asteraceae	-
61.	<i>Zinnia elegans</i> Jacq.	Zinia	Zinia	Asterales	Asteraceae	-
62.	<i>Tridax procumbens</i> (L.) L.	Mexican Daisy	Tridhara	Asterales	Asteraceae	-
63.	<i>Cassia fistula</i> L.	Golden Shower Tree	Bador Lathi	Fabales	Caesalpiniaceae	LC
64.	<i>Chlorophytum comosum</i> (Thunb.) Jacq.	Variegated Spider Plant	Klorocos	Asparagales	Liliaceae	-
65.	<i>Hippeastrum reginae</i> (L.) Herb.	Amaryllis	Lily Phul	Asparagales	Liliaceae	-
66.	<i>Hymenocallis littoralis</i> (Jacq.) Salisb.	Spider Lily	Bok Phul	Asparagales	Liliaceae	-
67.	<i>Syzygium malaccense</i> (L.) Merr. & L.M.Perry	Malay Rose Apple	Jamrul	Myrtales	Myrtaceae	LC
68.	<i>Rosa × centifolia</i> L.	Cabbage Rose	Golap	Rosales	Rosaceae	-
69.	<i>Rosa chinensis</i> Jacq.	Tea Rose	Kanta Golap	Rosales	Rosaceae	-
70.	<i>Rosa × damascene</i> Herm.	Bengal Rose	Golap	Rosales	Rosaceae	-
71.	<i>Jasminum sambac</i> (L.) Aiton	Arabian Jasmine	Beli	Lamiales	Oleaceae	-
72.	<i>Neolamarckia cadamba</i> (Roxb.) Bosser	Bur-flower Tree	Kadam	Gentianales	Rubiaceae	-
Vegetable Plants						
73.	<i>Amaranthus viridis</i> L.	Green Amaranth	Notey Shak	Caryophyllales	Amaranthaceae	-
74.	<i>Colocasia esculenta</i> (L.) Schott	Taro	Kochu	Alismatales	Araceae	LC
75.	<i>Basella alba</i> L.	Indian Spinach	Pui Shak	Caryophyllales	Basellaceae	LC
Ornamental Plants						
76.	<i>Cordyline fruticosa</i> (L.) A.Chev.	Good Luck Plant	Patabahar	Asparagales	Agavaceae	LC
77.	<i>Polyscias balfouriana</i> (André) L.H.Bailey	Dinner Plate Aralia	Patabahar	Apiales	Araliaceae	C
78.	<i>Roystonea regia</i> (Kunth) O.F.Cook	Royal Palm	Royal palm	Arecales	Arecaceae	C
79.	<i>Mansoa alliacea</i> (Lam.) A.H.Gentry	Garlic Vine	Rashun Lata	Lamiales	Bignoniaceae	C

80.	<i>Chromolaena odorata</i> (L.) R.M. King & H.Rob.	Jack in the Bush	German Lata	Asterales	Asteraceae	LC
81.	<i>Saraca thaipingensis</i> Prain	Yellow Saraca	Shorma Ashok	Fabales	Caesalpiniaceae	C
82.	<i>Thuja occidentalis</i> L.	Northern White Cedar	Thuja	Cupressales	Cupressaceae	C
Herbs						
83.	<i>Blepharis maderaspatensis</i> (L.) B.Heyneex Roth	Creeping Blepharis	Madras Blephar	Lamiales	Acanthaceae	C
84.	<i>Rungia repens</i> (L.) Nees	Creeping Rungia	Kharmor	Lamiales	Acanthaceae	LC
85.	<i>Evolvulus nummularius</i> (L.) L.	Dwarf Morning Glory	Bhui Akra	Solanales	Convolvulaceae	LC
86.	<i>Phyllanthus niruri</i> L.	Gale of the Wind	Vuiamla	Malpighiales	<u>Euphorbiaceae</u>	C
87.	<i>Euphorbia hirta</i> L.	Dove Milk	Dudhia	Malpighiales	<u>Euphorbiaceae</u>	LC
88.	<i>Ampelgynon chinensis</i> (L.) Lindl.	Chinese Knotweed	Chinese Bishkatali	Caryophyllales	Polygonaceae	C
89.	<i>Oldenlandia corymbosa</i> L.	Two Flowered Oldenlandia	Khet Papra	Gentianales	Rubiaceae	LC
90.	<i>Mazus pumilus</i> (Burm.f.) Steenis	Japanese Mazus	Tutra	Lamiales	Scrophulariaceae	LC
91.	<i>Solanum villosum</i> Mill.	Orange Nightshade	Tit Begun	Solanales	Solanaceae	C
92.	<i>Pouzolzia zeylanica</i> (L.) Benn.	Pouzalzia	Kullaruki	Rosales	Urticaceae	LC
Annual or Short-lived Perennial Herb						
93.	<i>Laphangium luteoalbum</i> (L.) Tzvelev	Dudh Ghas	Weedy Cudweed	Asterales	Asteraceae	C
94.	<i>Synedrella nodiflora</i> (L.) Gaertn.	Nodeweed	Relanodi	Asterales	Asteraceae	LC
95.	<i>Youngia japonica</i> (L.) DC.	Oriental False Hawksbeard	Younga Phul	Asterales	Asteraceae	C
96.	<i>Acalypha indica</i> L.	Indian Acalypha	Muktajhuri	Malpighiales	<u>Euphorbiaceae</u>	LC
97.	<i>Scoparia dulcis</i> L.	Sweet Broom	Bandhoney	Lamiales	Scrophulariaceae	LC
Tropical Climbing Plants						
98.	<i>Monstera deliciosa</i> Liebm.	Swiss Cheese Plant	Makhna	Alismatales	Araceae	C
Gymnosperms						
99.	<i>Araucaria columnaris</i> (Forst.) Hook.	Araucaria	Colum Aurocaria	Araucariales	Araucariaceae	C
Shrubs and Small-sized Trees						
100.	<i>Polyscias filicifolia</i> (C.Moorex E.Fourn.) L.H.Bailey	Angelica	Lisisaya pata	Apiales	Araliaceae	R
101.	<i>Calotropis gigantea</i> (L.) W.T. Aiton	Milkweed	Baro Akand	Gentianales	Asclepiadaceae	LC

102.	<i>Codiaeum variegatum</i> (L.) Rumph. ex A. Juss.	Golden Ring Croton	Patabahar	Malpighiales	<u>Euphorbiaceae</u>	C
103.	<i>Euphorbia milii</i> Des Moul.	Crown of Thorns	Kata mukut	Malpighiales	<u>Euphorbiaceae</u>	LC
104.	<i>Euphorbia tithymaloides</i> L.	Slipper plant	Rangchita	Malpighiales	<u>Euphorbiaceae</u>	LC
105.	<i>Dendrophthoe falcata</i> (L.f.) Ett.	Honey Suckle Mistletoe	Bajrangi	Santalales	Loranthaceae	LC
106.	<i>Hibiscus rosa-sinensis</i> L.	China rose	Joba	Malvales	Malvaceae	C
107.	<i>Malvaviscus arboreus</i> Dill. ex Cav.	Tree Malvaviscus	Lanka Joba	Malvales	Malvaceae	C
108.	<i>Hiptage benghalensis</i> (L.) Kurz	Hiptage	Madhabi Lata	Malpighiales	<u>Malpighiaceae</u>	LC
109.	<i>Memecylon edule</i> Roxb.	Iron Wood Tree	Anjan	Myrtales	Melastomataceae	R
110.	<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thoms.	Tinospora	Guloncho	Ranunculales	Menispermaceae	LC
111.	<i>Ficus hispida</i> L.f.	Opposite-leaved Fig	Dumur	Rosales	Moraceae	LC
112.	<i>Streblus asper</i> Lour.	Streblus	Sheora	Rosales	Moraceae	LC
113.	<i>Melaleuca linearis</i> Schrad. & J.C. Wendl.	Bottle Brush	Bottle Brush	Myrtales	Myrtaceae	E
114.	<i>Bougainvillea spectabilis</i> Willd.	Bougainvillea	Bagan Bilash	Caryophyllales	Nyctaginaceae	VC
115.	<i>Ochna squarrosa</i> L.	Golden Champak	Konokchapa	Malpighiales	Ochnaceae	LC
116.	<i>Jasminum multiflorum</i> (Burm.f.) Andrews	Star Jasmine	Kunda	Lamiales	Oleaceae	C
117.	<i>Mussaenda erythrophylla</i> Schumacher & Thonn.	Tropical Dogwood	Musanda	Gentianales	Rubiaceae	LC
118.	<i>Ixora casei</i> Hance	Giant Red Ixora	Rangan	Gentianales	Rubiaceae	C
119.	<i>Ixora chinensis</i> Lam.	Chinese Ixora	China Rangan	Gentianales	Rubiaceae	C
120.	<i>Ixora coccinea</i> L.	Jangle-flame Ixora	Rangan	Gentianales	Rubiaceae	C
121.	<i>Brunfelsia latifolia</i> (Pohl) Benth.	Fragrant Brunfelsia	Shugandhi Brunfelsia	Solanales	Solanaceae	C
122.	<i>Turnera ulmifolia</i> L.	West Indian Holly	Turan	Malpighiales	Turneraceae	C
123.	<i>Lantana camara</i> L.	Lantana	Lantana	Lamiales	Verbenaceae	C
124.	<i>Duranta erecta</i> L.	Golden Dewdrop	Katamehedi	Lamiales	Verbenaceae	C
125.	<i>Nyctanthes arbor-tristis</i> L.	Night Jasmine	Sheuli	Lamiales	Verbenaceae	LC
126.	<i>Vitex negundo</i> L.	Chaste Tree	Nishinda	Lamiales	Verbenaceae	LC
Herbaceous Species						
127.	<i>Blumea lacera</i> (Burm.f.) DC.	Lettuce Leaf Blumea	Bara Kukshima	Asterales	Asteraceae	LC
128.	<i>Eclipta prostrata</i> (L.) L.	False Daisy	Kalokeshi	Asterales	Asteraceae	LC

129.	<i>Cleome houtteana</i> Schltldl.	Pink Queen	Jharna Phul	Brassicales	Capparaceae	C
130.	<i>Cleome rutidosperma</i> DC.	Fringed Spider Flower	BegunyHurburey	Brassicales	Capparaceae	C
131.	<i>Dianthus chinensis</i> L.	Carnation	Dianthus	Caryophyllales	Caryophyllaceae	C
132.	<i>Salvia coccinea</i> Buc'hozex Etl.	Scarlet Sage	Lal Salvia	Lamiales	Lamiaceae	C
133.	<i>Ocimum gratissimum</i> L.	Shrubby Basil	Ram Tulsi	Lamiales	Lamiaceae	C
134.	<i>Musa × Paradisiaca</i> L.	Banana	Kola	Zingiberales	Musaceae	CE
135.	<i>Boerhavia diffusa</i> L.	Spreading Hogweed	Punarnava	Caryophyllales	Nepenthaceae	LC
136.	<i>Oxalis corniculata</i> L.	Yellow Sorrel	Amrul	Oxalidales	Oxalidaceae	LC
137.	<i>Portulaca oleracea</i> L.	Common Purslane	Nune shak	Caryophyllales	Portulacaceae	LC
138.	<i>Petunia × atkinsiana</i> (Sweet) D. Don ex W.H. Baxter	Petunia	Petunia	Solanales	Solanaceae	C
139.	<i>Physalis angulata</i> L.	Gooseberry	Phutki	Solanales	Solanaceae	LC
140.	<i>Pilea microphylla</i> (L.) Liebm.	Artillery Plant	Latamaricha	Rosales	Urticaceae	C
141.	<i>Verbena × hybrida</i> Groen. & Ruml.	Verbena	Verbena	Lamiales	Verbenaceae	C
Climbing Plants						
142.	<i>Coccinia grandis</i> (L.) Voigt	Ivy Gourd	Telakucha	Cucurbitales	Cucurbitaceae	LC
143.	<i>Cucurbita maxima</i> Duchesne	Sweet Gourd	Mistikumra	Cucurbitales	Cucurbitaceae	C
144.	<i>Smilax ovalifolia</i> Roxb. ex D. Don	Wild Sarsaparilla	Kumari Lata	Liliales	Smilacaceae	C
145.	<i>Causonis trifolia</i> (L.) Mabb.	Fox Grape	Anollata	Vitales	Vitaceae	C
Grasses						
146.	<i>Cynodon dactylon</i> (L.) Pers.	Bermuda Grass	Durba Ghass	Poales	Poaceae	C
147.	<i>Oplismenus burmanni</i> (Retz.) P.Beauv.	Burmann's Basket Grass	Jabri Durba	Poales	Poaceae	LC
148.	<i>Axonopus compressus</i> (Sw.) P.Beauv.	Savannah Grass	Carpet Ghas	Poales	Poaceae	LC
149.	<i>Bambusa ventricosa</i> McClure	Bamboo	Bash	Poales	Poaceae	C
150.	<i>Dactyloctenium aegyptium</i> (L.) Willd.	Crowfoot Grass	Kakpaya	Poales	Poaceae	-

Note: The species and family names are arranged following the classification system of Cronquist (1981). Conservation status categories used in this study include R (Rare), EN (Endangered), LC (Locally Common, not equivalent to the IUCN category Least Concern), C (Common/Cultivated species), VC (Very Common), VU (Vulnerable), DD (Data Deficient), and CE (Cultivated Experimental Plant), while a dash (-) indicates species for which the local conservation status in Bangladesh has not been assigned or has not been evaluated.

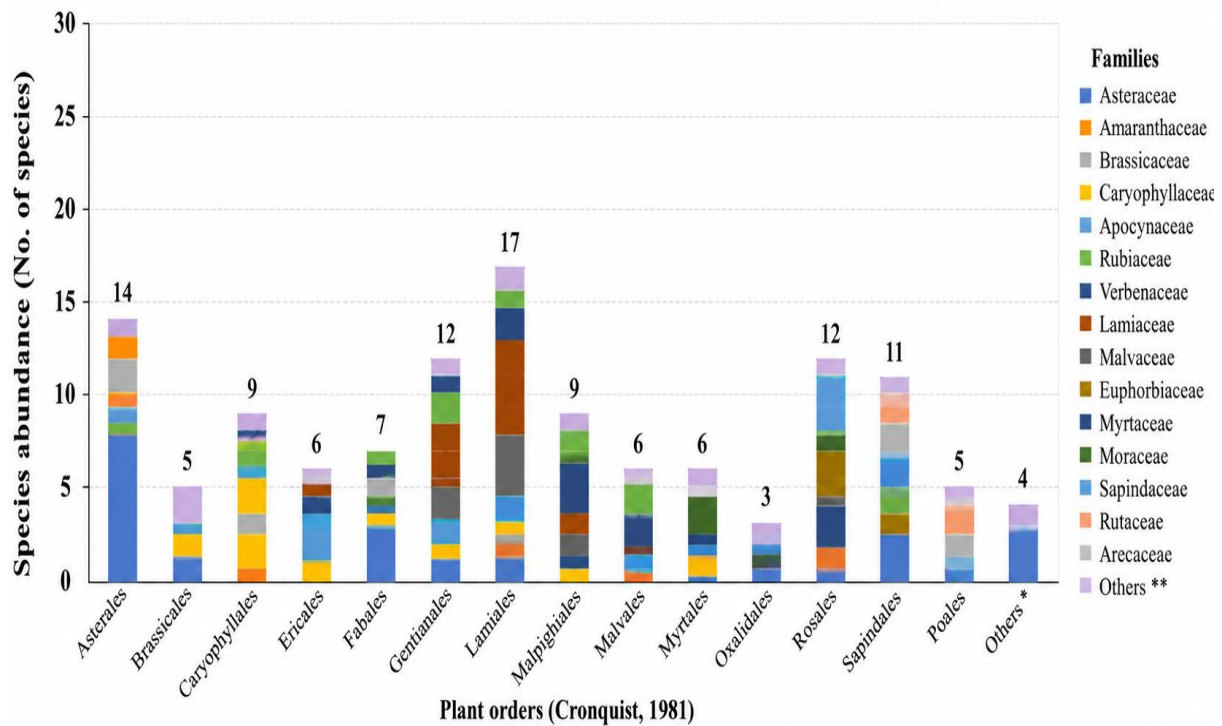


Fig. 2. Species richness across plant orders recorded from the Bangladesh National Museum campus ecosystem. Bars represent the number of plant species in each order, while colours indicate family-level composition.

Faunal Diversity:

A total of 100 faunal species were recorded from the Bangladesh National Museum campus, representing birds, mammals, reptiles, amphibians, and invertebrates. The dominance of avifauna reflects the availability of diverse vegetation, food resources, nesting sites, and relatively undisturbed habitats within the campus. A total of 48 bird species belonging to 46 genera, 24 families, and 13 orders were recorded (Fig. 3). Passeriformes was the dominant avian order, comprising 27 species (56.25% of the total avifauna) across 16 families, highlighting the Bangladesh National Museum campus as an important urban biodiversity refuge supporting birds from 13 different orders. The predominance of Passeriformes indicates a high degree of adaptation of perching birds to urban habitats, where diverse food resources, nesting opportunities, and vegetation structure support a wide range of ecological guilds. The family Sturnidae was the richest family with 4 species, followed by Corvidae and Picidae with 3 species each. Most recorded species were resident urban birds, although several winter migratory visitors such as the *Ficedula albicilla* (Taiga Flycatcher), *Dendronanthus indicus* (Forest Wagtail), and *Acrocephalus dumetorum* (Blyth's Reed Warbler) were also observed. The invertebrate assemblage included butterflies, bees, dragonflies, ants, termites, wasps, and spiders, indicating the presence of

diverse microhabitats and abundant floral resources within the campus. Amphibians and reptiles comprised both terrestrial and arboreal forms, while the mammalian fauna was dominated by urban-adapted species, including rodents, bats, primates, mongooses, and domestic associates. The occurrence of these taxonomic groups highlights the ecological role of the museum campus in providing suitable habitats, food resources, and shelter within a highly urbanized environment. Most recorded species are currently categorized as Least Concern (LC) on the IUCN Red List, indicating relatively stable global conservation status. The presence of resident birds, seasonal visitors, pollinating insects, amphibians, reptiles, and small mammals further demonstrates the ecological value of the campus as an urban biodiversity refuge in central Dhaka. Similar patterns of species persistence in urban green spaces have been reported from other metropolitan environments, where habitat heterogeneity and vegetation structural complexity contribute significantly to biodiversity conservation (Aronson et al., 2014; McKinney, 2008). The predominance of avifauna and pollinating insects reflects the availability of flowering plants, fruit-bearing trees, nesting sites, and structurally diverse vegetation across the campus. These habitat features support a variety of feeding guilds and ecological interactions, enhancing ecosystem functioning and resilience. The findings demonstrate that even relatively small institutional green spaces can contribute substantially to urban biodiversity conservation and serve as important refuges for wildlife in densely populated cities.

Table 2. Checklist of faunal species recorded from the Bangladesh National Museum campus during January 2025–June 2026.

Table 2A. Invertebrates (Insects, Spiders, Butterflies, and other Invertebrates; total = 31 species)

Sl. No.	Scientific Name	English Name	Local Name	Order	Family	Relative Abundance	Global Status
Butterflies:							
01.	<i>Acraea terpsichore</i> (Linnaeus, 1758)	Tawny Coster	Horinchorha	Lepidoptera	Nymphalidae	C	LC

02.	<i>Catopsilia pomona</i> (Fabricius, 1775)	Lemon Emigrant	Holud Projapoti	Lepidoptera	Pieridae	F	LC
03.	<i>Danaus chrysippus</i> (Linnaeus, 1758)	Plain Tiger	Tiger Butterfly	Lepidoptera	Nymphalidae	FC	LC
04.	<i>Danaus genutia</i> (Cramer, 1779)	Striped Tiger	Common Tiger	Lepidoptera	Nymphalidae	LC	LC
05.	<i>Phalanta phalantha</i> (Drury, 1773)	Common Leopard	Holud Chita	Lepidoptera	Nymphalidae	LC	LC
06.	<i>Tirumala limniace</i> (Cramer, 1775)	Blue Tiger	Nil Dora	Lepidoptera	Nymphalidae	LC	LC
07.	<i>Delias eucharis</i> (Drury, 1773)	Common Jezebel	Hortoni	Lepidoptera	Pieridae	LC	LC
08.	<i>Eurema hecabe</i> (Linnaeus, 1758)	Grass Yellow	Grass Yellow Butterfly	Lepidoptera	Pieridae	LC	LC
09.	<i>Eurema brigitta</i> (Stoll, 1780)	Small Grass Yellow	Yellow Butterfly	Lepidoptera	Pieridae	LC	LC
10.	<i>Euploea core</i> (Cramer, 1780)	Common Crow	Kaowa	Lepidoptera	Nymphalidae	LC	LC
11.	<i>Graphium agamemnon</i> (Linnaeus, 1758)	Tailed Jay	Sobuj Jay	Lepidoptera	Papilionidae	R	LC
12.	<i>Hypolimnas bolina</i> (Linnaeus, 1758)	Great Eggfly	Dim Projapoti	Lepidoptera	Nymphalidae	C	LC
13.	<i>Jamides celeno</i> (Cramer, 1775)	Common Cerulean	Nil Projapoti	Lepidoptera	Lycaenidae	R	LC
14.	<i>Junonia almana</i> (Linnaeus, 1758)	Peacock Pansy	Nayan	Lepidoptera	Nymphalidae	LC	LC
15.	<i>Lampides boeticus</i> (Linnaeus, 1767)	Long-tailed Blue	Pea Blue	Lepidoptera	Lycaenidae	LC	LC
16.	<i>Leptosia nina</i> (Fabricius, 1793)	Psyche Butterfly	Chhoto Shada Projapoti	Lepidoptera	Pieridae	F	LC
17.	<i>Papilio demoleus</i> (Linnaeus, 1758)	Lime Butterfly	Lemon Butterfly	Lepidoptera	Papilionidae	LC	LC
18.	<i>Papilio polytes</i> (Linnaeus, 1758)	Common Mormon	Common Mormon Butterfly	Lepidoptera	Papilionidae	LC	LC
19.	<i>Pachliopta hector</i> (Linnaeus, 1758)	Crimson Rose	Katka	Lepidoptera	Papilionidae	LC	LC
20.	<i>Castalius rosimon</i> (Fabricius, 1775)	Common Pierrot	Tilaiya	Lepidoptera	Lycaenidae	LC	LC
21.	<i>Tetragonula iridipennis</i> (Smith, 1854)	Stingless Bee	Honey Bee	Hymenoptera	Apidae	LC	LC
Insects and other Invertebrates							
22.	<i>Apis dorsata</i> (Fabricius, 1793)	Giant Honey Bee	Boro Moumachi	Hymenoptera	Apidae	LC	LC
23.	<i>Camponotus compressus</i> (Fabricius, 1787)	Carpenter Ants	Ants	Hymenoptera	Formicidae	LC	LC
24.	<i>Crocothemis servilia</i> (Drury, 1773)	Scarlet Skimmer	Lal Foding	Odonata	Libellulidae	F	LC

25.	<i>Cryptotermes bengalensis</i> (Gupta, 1946)	Dry Wood Termite	Termites	Blattodea	Kalotermitidae	LC	LC
26.	<i>Diplacodes trivialis</i> (Rambur, 1842)	Ground Skimmer	Mati Foding	Odonata	Libellulidae	F	LC
27.	1. <i>Nephila pilipes</i> (Fabricius, 1793)	Giant Golden Orb-weaver	Makarsha	Araneae	Nephilidae	LC	LC
28.	<i>Orthetrum abbotti</i> (Calvert, 1892)	Abbott's skimmer	Dragonflies	Odonata	Libellulidae	LC	LC
29.	<i>Polistes olivaceus</i> (DeGeer, 1773)	Paper Wasp	Bolta	Hymenoptera	Vespidae	C	LC
30.	<i>Plexippus petersi</i> (Karsch, 1878)	Jumping Spiders	Common Housefly Catcher	Araneae	Salticidae	LC	LC
31.	<i>Xylocopa latipes</i> (Drury, 1773)	Large Carpenter Bee	Kath Moumachi	Hymenoptera	Apidae	F	LC

Table 2B. Amphibians and Reptiles (Total = 10 species)

Amphibians:							
32.	<i>Duttaphrynus melanostictus</i> (Schneider, 1799)	Common Asian Toad	Koono Bang	Anura	Bufonidae	LC	LC
33.	<i>Euphlyctis cyanophlyctis</i> (Schneider, 1799)	Skittering Frog	Katkati Bang	Anura	Dicroglossidae	LC	LC
34.	<i>Fejervarya limnocharis</i> (Gravenhorst, 1829)	Cricket Frog	Jhijhi Bang	Anura	Dicroglossidae	LC	LC
35.	<i>Hoplobatrachus tigerinus</i> (Daudin, 1802)	Bull Frog	Kola Bang	Anura	Dicroglossidae	LC	LC
36.	<i>Microhyla ornata</i> (Duméril & Bibron, 1841)	Ornate Narrow-mouthed Frog	Chhoto Bang	Anura	Microhylidae	R	LC
37.	<i>Polypedates leucomystax</i> (Gravenhorst, 1829)	Common Tree Frog	Gach Bang	Anura	Rhacophoridae	R	LC
Reptiles:							
38.	<i>Calotes versicolor</i> (Daudin, 1802)	Oriental Garden Lizard	Roktochosha	Squamata	Agamidae	LC	LC
39.	<i>Eutropis carinata</i> (Schneider, 1801)	Keeled Grass Skink	Anjani	Squamata	Scincidae	LC	LC
40.	<i>Hemidactylus frenatus</i> (Duméril & Bibron, 1836)	Common House Gecko	Tiktiki	Squamata	Gekkonidae	LC	LC
41.	<i>Fowlea piscator</i> (Schneider, 1799)	Checkered Keelback	Pani Shap	Squamata	Colubridae	R	LC

Table 2C. Birds (Avifauna) (Total = 48 species) (Urban resident & visitor species)

42.	<i>Corvus splendens</i> Vieillot, 1817	House Crow	Pati Kak	Passeriformes	Corvidae	VC	LC
43.	<i>Corvus macrorhynchos</i> Wagler, 1827	Large-billed Crow	Dar Kak	Passeriformes	Corvidae	C	LC
44.	<i>Dendrocitta vagabunda</i> (Latham, 1790)	Rufous Treepie	Hari chacha	Passeriformes	Corvidae	C	LC
45.	<i>Acridotheres tristis</i> (Linnaeus, 1766)	Common Myna	Bhat-shalik	Passeriformes	Sturnidae	VC	LC
46.	<i>Gracupica contra</i> (Linnaeus, 1758)	Asian Pied Starling	Go-shalik	Passeriformes	Sturnidae	C	LC
47.	<i>Sturnia malabarica</i> (Gmelin, 1789)	Chestnut-tailed Starling	Khoyralej-shalik	Passeriformes	Sturnidae	C	LC
48.	<i>Acridotheres fuscus</i> (Wagler, 1827)	Jungle Myna	Jhuti-shalik	Passeriformes	Sturnidae	F	LC
49.	<i>Dicrurus macrocercus</i> (Vieillot, 1817)	Black Drongo	Kala-fingey	Passeriformes	Dicruridae	C	LC
50.	<i>Lanius cristatus</i> Linnaeus, 1758	Brown Shrike	Khoyra Lyatorra	Passeriformes	Laniidae	L	LC
51.	<i>Turdoides striata</i> (Duméril, 1805)	Jungle Babbler	Sat Bhai	Passeriformes	Leiothrichidae	F	LC
52.	<i>Passer domesticus</i> (Linnaeus, 1758)	House Sparrow	Pati Chorui	Passeriformes	Passeridae	VC	LC
53.	<i>Ficedula albicilla</i> (Pallas, 1811)	Taiga Flycatcher	Taiga Chutki	Passeriformes	Muscicapidae	F	LC
54.	<i>Copsychus saularis</i> (Linnaeus, 1758)	Oriental Magpie Robin	Doel	Passeriformes	Muscicapidae	VC	LC
55.	<i>Dendronanthus indicus</i> (Gmelin, 1789)	Forest Wagtail	Bon Khonjon	Passeriformes	Motacillidae	F	LC
56.	<i>Motacilla alba</i> Linnaeus, 1758	White Wagtail	Dhola Khonjon	Passeriformes	Motacillidae	F	LC
57.	<i>Pycnonotus cafer</i> (Linnaeus, 1766)	Red-vented Bulbul	Bangla Bulbul	Passeriformes	Pycnonotidae	VC	LC
58.	<i>Pycnonotus jocosus</i> (Linnaeus, 1758)	Red-whiskered Bulbul	Sipahi Bulbul	Passeriformes	Pycnonotidae	R	LC
59.	<i>Orthotomus sutorius</i> (Pennant, 1769)	Common Tailorbird	Tuntuni	Passeriformes	Cisticolidae	C	LC
60.	<i>Acrocephalus dumetorum</i> (Blyth, 1849)	Blyth's Reed Warbler	Blayther Futki	Passeriformes	Acrocephalidae	F	LC

61.	<i>Acrocephalus stentoreus</i> (Hemprich & Ehrenberg, 1833)	Clamorous Reed Warbler	Bachal Nolfutki	Passeriformes	Acrocephalidae	F	LC
62.	<i>Leptocoma zeylonica</i> (Linnaeus, 1766)	Purple-rumped Sunbird	Beguni-pith Moutushi	Passeriformes	Nectarinidae	C	LC
63.	<i>Cinnyris asiaticus</i> (Latham, 1790)	Purple Sunbird	Beguni Moutushi	Passeriformes	Nectarinidae	C	LC
64.	<i>Lonchura atricapilla</i> (Vieillot, 1807)	Black-headed Munia	Kalo-matha Munia	Passeriformes	Estrildidae	F	LC
65.	<i>Microcarbo niger</i> (Vieillot, 1817)	Little Cormorant	Pankouri	Suliformes	Phalacrocoracidae	F	LC
66.	<i>Apus nipalensis</i> (Hodgson, 1837)	House Swift	Deshi Talbatashi	Apodiformes	Apodidae	VC	LC
67.	<i>Cypsiurus balasiensis</i> (J.E. Gray, 1829)	Asian Palm Swift	Asian Talbatashi	Apodiformes	Apodidae	LC	LC
68.	<i>Caprimulgus macrurus</i> Horsfield, 1821	Large-tailed Nightjar	Boro-lej Ratchora	Caprimulgiformes	Caprimulgidae	LC	LC
69.	<i>Oriolus xanthornus</i> (Linnaeus, 1758)	Black-hooded Oriole	Kutumpakhi	Passeriformes	Oriolidae	FC	LC
70.	<i>Ploceus philippinus</i> (Linnaeus, 1766)	Baya Weaver	Babui	Passeriformes	Ploceidae	F	LC
71.	<i>Hirundo rustica</i> Linnaeus, 1758	Barn Swallow	Pati Ababil	Passeriformes	Hirudinidae	F	LC
72.	<i>Dinopium benghalense</i> (Linnaeus, 1758)	Black-rumped Flameback	Kaththokra	Piciformes	Picidae	C	LC
73.	<i>Dendrocopos macei</i> (Vieillot, 1818)	Fulvous Breasted Woodpecker	Batabi Kathkuruli	Piciformes	Picidae	FC	LC
74.	<i>Micropternus brachyurus</i> (Vieillot, 1818)	Rufous Woodpecker	Khoyra Kathkuruli	Piciformes	Picidae	R	LC
75.	<i>Psilopogon haemacephalus</i> (Statius Müller, 1776)	Coppersmith Barbet	Basanta Bauri	Piciformes	Megalaimidae	C	LC
76.	<i>Halcyon smyrnensis</i> (Linnaeus, 1758)	White-throated Kingfisher	Dhola-gola Machhranga	Coraciiformes	Halcyonidae	C	LC
77.	<i>Pelargopsis capensis</i> (Linnaeus, 1766)	Stork-billed Kingfisher	Megghou Machranga	Coraciiformes	Alcedinidae	R	LC
78.	<i>Alcedo atthis</i> Linnaeus, 1758	Common Kingfisher	Pati Machhranga	Coraciiformes	Alcedinidae	LC	LC
79.	<i>Merops orientalis</i> Linnaeus, 1758	Green Bee-eater	Shobuj Shuichora	Coraciiformes	Meropidae	FC	LC

80.	<i>Columba livia</i> Gmelin, 1789	Rock Dove	Jalali Kobutor	Columbiformes	Columbidae	VC	LC
81.	<i>Spilopelia chinensis</i> (Scopoli, 1786)	Spotted Dove	Tila ghughu	Columbiformes	Columbidae	VC	LC
82.	<i>Eudynamys scolopaceus</i> (Linnaeus, 1758)	Asian Koel	Kokil	Cuculiformes	Cuculidae	C	LC
83.	<i>Cacomantis merulinus</i> (Scopoli, 1786)	Plaintive Cuckoo	Korun Papia	Cuculiformes	Cuculidae	F	LC
84.	<i>Milvus migrans</i> (Boddaert, 1783)	Black Kite	Bhubon Cheel	Accipitriformes	Accipitridae	VC	LC
85.	<i>Haliastur indus</i> (Boddaert, 1783)	Brahminy Kite	Shongkho Cheel	Accipitriformes	Accipitridae	F	LC
86.	<i>Psittacula krameri</i> (Scopoli, 1769)	Rose-ringed Parakeet	Shobuj Tia	Psittaciformes	Psittacidae	VC	LC
87.	<i>Psittacula alexandri</i> (Linnaeus, 1766)	Red-breasted Parakeet	Lal-buk Tia	Psittaciformes	Psittacidae	FC	LC
88.	<i>Athene brama</i> (Temminck, 1821)	Spotted Owlet	Khurule Pecha	Strigiformes	Strigidae	FC	LC
89.	<i>Tyto alba</i> (Scopoli, 1769)	Barn Owl	Lokkhi Pecha	Strigiformes	Tytonidae	F	LC

Table 2D. Mammals (Total = 11 species) (Urban-adapted species):

90.	<i>Macaca mulatta</i> (Zimmermann, 1780)	Rhesus Macaque	Lal Banor	Primates	Cercopithecidae	C	LC
91.	<i>Funambulus palmarum</i> (Linnaeus, 1766)	Indian Palm Squirrel	Tin Dora Kath Berali	Rodentia	Sciuridae	C	LC
92.	<i>Funambulus pennantii</i> (Wroughton, 1905)	Five-striped Indian Palm Squirrel	Dora Kath Berali	Rodentia	Sciuridae	C	LC
93.	<i>Rattus rattus</i> (Linnaeus, 1758)	Black Rat	Indur	Rodentia	Muridae	C	LC
94.	<i>Mus musculus</i> Linnaeus, 1758	House Mouse	Nengti Indur	Rodentia	Muridae	C	LC
95.	<i>Bandicota bengalensis</i> (Gray, 1835)	Lesser Bandicoot Rat	Boro Indur	Rodentia	Muridae	F	LC
96.	<i>Pteropus giganteus</i> (Brünnich, 1782)	Indian Flying Fox	Boro Badur	Chiroptera	Pteropodidae	C	LC
97.	<i>Cynopterus sphinx</i> (Vahl, 1797)	Greater Short-nosed Fruit Bat	Chhoto Nak Fruit Bat	Chiroptera	Pteropodidae	C	LC
98.	<i>Pipistrellus tenuis</i> (Temminck, 1840)	Indian Pipistrelle	Chhoto Badur	Chiroptera	Vespertilionidae	R	LC
99.	<i>Herpestes</i>	Small Indian	Chhoto Nagini	Carnivora	Herpestidae	R	LC

	<i>auropunctatus</i> (Hodgson, 1836)	Mongoose					
100	<i>Herpestes edwardsii</i> (É. Geoffroy Saint-Hilaire, 1818)	Indian Grey Mongoose	Beji	Carnivora	Herpestidae	C	LC

Note: Relative abundance categories were assigned based on field observations during the study period: R = Rare (*individuals observed*), F = Few (*individuals observed*), FC = Fairly Common (*individuals observed*), C = Common (*individuals observed*), and VC = Very Common (*individuals observed*). Scientific names are accompanied by their corresponding English common names. Global conservation status is based on the International Union for Conservation of Nature (IUCN) Red List Categories, where LC = Least Concern.

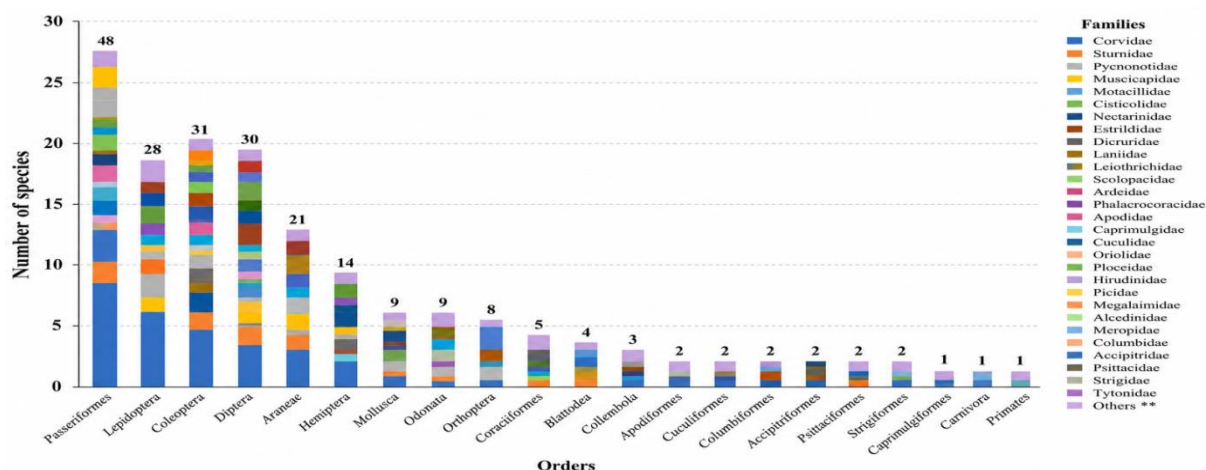


Fig 3. Species richness across faunal orders recorded from the Bangladesh National Museum campus ecosystem. Bars represent number of species in each order, while colours indicate family-level taxonomic composition.

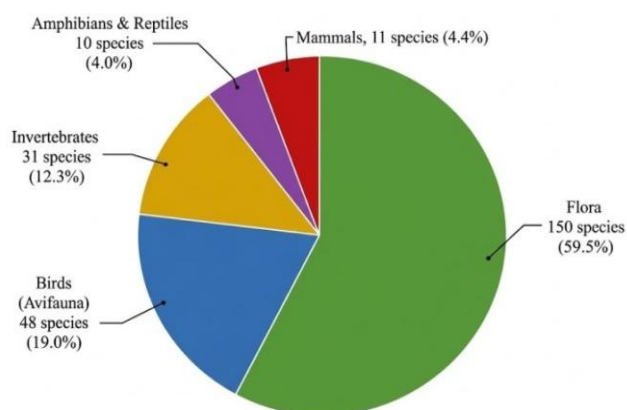


Fig 4. Biodiversity species distribution recorded from the Bangladesh National Museum campus, Shahbag, Dhaka (Total = 250 species).

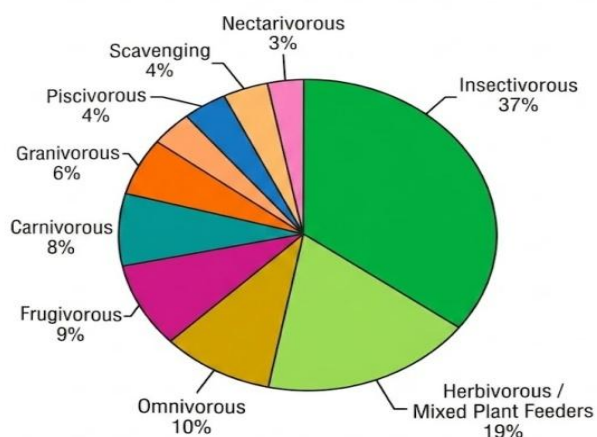


Fig 5. Local status of feeding guild composition of fauna recorded from the Bangladesh National Museum campus, Shahbag, Dhaka (Total species = 100).



Plate 3. Representative bird and mammal species recorded from the Bangladesh National Museum campus.

Ecological Importance

The recorded fauna represent a wide range of feeding guilds, including omnivores, piscivores, scavengers, carnivores, frugivores, granivores, insectivores, nectarivores, and herbivores, reflecting the structural complexity and ecological heterogeneity of the museum grounds (Plate. 3 and Plate. 4). Plant diversity dominated the biodiversity inventory, comprising 150 species

(59.5%) of the total recorded taxa. Among the faunal groups, birds were the most species-rich, with 48 species (19.0%), followed by invertebrates (31 species; 12.3%), mammals (11 species; 4.4%), and amphibians and reptiles (10 species; 4.0%) (Fig. 4). This high plant species richness reflects the heterogeneous vegetation structure of the museum campus and forms the ecological foundation for sustaining diverse faunal communities. The high diversity of vascular plants within the urban green space likely supports the persistence of pollinators, frugivorous birds, and insectivorous fauna (Fig. 5). These plant–animal interactions enhance key ecosystem services such as pollination, seed dispersal, nutrient cycling, and biological pest regulation, thereby contributing to greater ecological stability within the urban landscape (Begon et al., 2006; Gaston, 2010). Recent beautification and infrastructural developments around the campus pond have altered its natural habitat structure. Although embankment construction and landscape design have improved aesthetic and recreational value, they have simultaneously reduced vegetation cover and disturbed microhabitats. This has negatively affected breeding, foraging, and sheltering opportunities for waterfowl, migratory birds, turtles, and other associated fauna. These changes represent a clear trade-off between urban beautification and habitat quality, with measurable consequences for native biodiversity. Several key ecological patterns were observed. Tree diversity strongly influences avian richness, as heterogeneous canopy structure provides multiple foraging niches, nesting sites, and roosting opportunities. Continuous human presence favors commensal and synanthropic species such as *Columba livia* (Rock Pigeon), *Corvus splendens* (House Crow), and *Acridotheres tristis* (Common Myna), which are well adapted to urban environments.



Plate 4. Representative insect, reptile, and bird species recorded from the Bangladesh National Museum campus.

The occurrence of *Psittacula krameri* (Rose-ringed Parakeet) within the campus indicates the availability of mature trees and suitable nesting cavities. This species is widely recognized as one

of the most successful urban-adapted parrots in South Asia and frequently utilizes institutional green spaces as feeding and roosting habitats. Nearby wetlands and aquatic habitats, particularly those associated with Ramna Park, indirectly support amphibian diversity by providing essential breeding habitats. In contrast, the relatively low mammalian diversity reflects habitat fragmentation and limited refuge availability within the urban core. Globally, urban ecological studies recognize museum campuses and institutional green spaces as important secondary biodiversity refuges. Despite anthropogenic pressures and habitat fragmentation, such areas can sustain significant ecological interactions and contribute to urban biodiversity conservation. The coexistence of native and exotic plant species further creates a hybrid ecosystem, supporting diverse trophic interactions and reflecting long-term urban landscape management.

The present checklist was based primarily on daytime observations and did not include systematic nocturnal surveys. Seasonal fluctuations in abundance were recorded qualitatively rather than through quantitative population estimation. Microorganisms, soil fauna, and several cryptic taxa were not investigated. Consequently, the documented species richness may underestimate the total biodiversity present within the Bangladesh National Museum campus ecosystem. Future studies incorporating long-term monitoring, nocturnal surveys, camera trapping, acoustic monitoring, and quantitative ecological analyses would provide a more comprehensive understanding of urban biodiversity dynamics.

ACKNOWLEDGEMENTS

The authors would like to express their heartfelt gratitude and thanks to the Bangladesh National Museum authorities for all kinds of support during this work.

CONCLUSIONS

The Bangladesh National Museum (BNM) campus serves not only as a cultural and educational institution but also as an important urban biodiversity reservoir within central Dhaka. The recorded biodiversity reflects a heterogeneous urban ecosystem shaped by both natural ecological processes and landscape management practices. Native and ornamental vegetation, together with ponds, gardens, lawns, and tree canopies, provide food resources, shelter, breeding sites, and ecological connectivity for a wide range of organisms. The predominance of avifauna, pollinating insects, and urban-adapted mammals highlights the ecological significance of the campus as a refuge for wildlife within a densely populated metropolitan environment. Although recent beautification and infrastructural developments have enhanced the aesthetic and recreational value of the campus, they have also reduced habitat complexity in certain areas, emphasizing the need to integrate biodiversity conservation into future landscape planning and management. The coexistence of native and exotic species demonstrates the formation of a transitional urban ecosystem that supports diverse ecological interactions and contributes to ecosystem resilience. Overall, the documented checklist provides a valuable baseline dataset for future biodiversity monitoring, ecological research, habitat management, and conservation planning. The findings underscore the importance of institutional green spaces in maintaining urban biodiversity and promoting ecological sustainability in rapidly urbanizing cities such as Dhaka.

REFERENCES

1. Ahmed, Z.U. (ed.) 2008. *Encyclopedia of Flora and Fauna of Bangladesh*. Vol. 6: *Angiosperms (Dicotyledons)*. Asiatic Society of Bangladesh, Dhaka, pp. 45–312.
2. Ahmed, Z.U. (ed.) 2009. *Encyclopedia of Flora and Fauna of Bangladesh*. Vol. 10: *Angiosperms (Dicotyledons)*. Asiatic Society of Bangladesh, Dhaka, pp. 1–580.
3. Ahmed, Z.U. (ed.) 2009. *Encyclopedia of Flora and Fauna of Bangladesh*. Vol. 25: *Amphibians and Reptiles*. Asiatic Society of Bangladesh, Dhaka, pp. 1–204.
4. Ahmed, Z.U. (ed.) 2009. *Encyclopedia of Flora and Fauna of Bangladesh*. Vol. 26: *Birds*. Asiatic Society of Bangladesh, Dhaka, pp. 1–320.
5. Ahmed, Z.U. (ed.) 2009. *Encyclopedia of Flora and Fauna of Bangladesh*. Vol. 27: *Mammals*. Asiatic Society of Bangladesh, Dhaka, pp. 1–264.
6. Ali, S. & Ripley, S.D. 1983. *A Pictorial Guide to the Birds of the Indian Subcontinent*. Oxford University Press, Delhi, 177 pp.
7. Ali, S. & Ripley, S.D. 1983. *Handbook of the Birds of India and Pakistan*. Compact Edition. Oxford University Press, New Delhi, pp. 145–520.
8. Aronson, M.F.J., Nilon, C.H. & Lepczyk, C.A. 2014. *Biodiversity in the City: Urban Ecosystems and Conservation*. Oxford University Press, Oxford, pp. 1–18.
9. Begon, M., Townsend, C.R. & Harper, J.L. 2006. *Ecology: From Individuals to Ecosystems*. 4th ed. Blackwell Publishing, Oxford, pp. 350–480.
10. Brammer, H. 1996. *The Geography of the Soils of Bangladesh*. University Press Limited, Dhaka, pp. 45–78.
11. Catalogue of Life. 2026. *Annual Checklist of Species*. Available at: <https://www.catalogueoflife.org> (Accessed: 23 May 2026)
12. Cronquist, A. 1981. *An Integrated System of Classification of Flowering Plants*. Columbia University Press, New York, pp. 15–180.
13. Daniel, J.C. 2002. *The Book of Indian Reptiles and Amphibians*. Oxford University Press, New Delhi, pp. 1–238.
14. Gaston, K.J. & Spicer, J.I. 2004. *Biodiversity: An Introduction*. 2nd ed. Blackwell Publishing, Oxford, pp. 1–25, 120–145.
15. Gaston, K.J. 2010. *Urban Ecology*. Cambridge University Press, Cambridge, pp. 95–210.
16. Global Biodiversity Information Facility (GBIF). 2026. *GBIF Backbone Taxonomy*. Available at: <https://www.gbif.org> (Accessed: 23 May 2026)
17. Grimmett, R., Inskipp, C. & Inskipp, T. 2011. *Birds of the Indian Subcontinent*. 2nd ed. Oxford University Press, New Delhi, pp. 58–412.
18. Heywood, V.H. (ed.) 1995. *Global Biodiversity Assessment*. Cambridge University Press, Cambridge, pp. 1–12.
19. Islam, M.R. & Uyeda, H. 2007. Hydroclimatic trends in Bangladesh: A study of recent precipitation and temperature variations. *International Journal of Climatology*, 27(3): 295–308.
20. Islam, M.S. & Uddin, M.J. (2008). Hydrogeological characteristics of the Dupi Tila aquifer in Dhaka City. *Bangladesh Journal of Geology*, 27, 45–56.
21. IUCN Bangladesh. 2015. *Red List of Bangladesh*. Volume 3: *Birds*. IUCN Bangladesh Country Office, Dhaka, xvi + 676 pp.
22. IUCN Bangladesh. 2015. *Red List of Bangladesh*. Volume 2: *Animals*. IUCN Bangladesh Country Office, Dhaka, pp. 10–145.
23. IUCN. 2026. *The IUCN Red List of Threatened Species*. Available at: <https://www.iucnredlist.org> (Accessed: 23 May 2026).
24. Kabir, A. 2012. Breeding birds in Saidpur Cantonment area, Bangladesh. *International Research Journal of Biochemistry and Bioinformatics*, 2(10): 216–219.
25. Kabir, A., Hawkeswood, T.J. & Makhan, D. 2020. The vertebrate fauna of the Teachers' Quarters-2 of Saidpur Cantonment Public School and College, Nilphamari, Bangladesh. *Calodema*, 730: 1–6.
26. Khan, F.H. 1991. *Geology of Bangladesh*. University Press Limited, Dhaka, pp. 110–150.
27. Khan, M.A.R. 1982. *Wildlife of Bangladesh: A Checklist*. University of Dhaka, Dhaka, 174 pp.
28. Khan, M.A.R. 2008. *Field Guide to the Birds of Bangladesh*. University of Dhaka, Dhaka, 336 pp.
29. Khan, M.M.H. 2008. *Protected Areas of Bangladesh: A Guide to Wildlife*. Nishorgo Program, Bangladesh Forest Department, Dhaka, 304 pp.
30. Khan, M.M.H. 2015. *Photographic Guide to the Birds of Bangladesh*. Arannayk Foundation, Dhaka, pp. 25–240.
31. Khan, S.I. (2025) 'Temporal variation and heterogeneity of avifauna in the Bangladesh National Museum premises', *Journal of the Asiatic Society of Bangladesh (Science)*, 51(2), pp. 177–192.
32. LepIndex. 2026. *The Global Lepidoptera Names Index*. Natural History Museum, London. Available at: <https://www.nhm.ac.uk/our-science/data/lepindex.html> (Accessed: 23 May 2026)
33. Magurran, A.E. 2004. *Measuring Biological Diversity*. Blackwell Publishing, Oxford, pp. 1–10, 85–110.
34. Mammal Diversity Database. 2026. *Mammal Diversity Database*. Available at: <https://www.mammaldiversity.org> (Accessed: 23 May 2026)

35. McKinney, M.L. 2008. Effects of urbanization on species richness: A review of plants and animals. *Urban Ecosystems*, 11: 161–176.
36. Pasha, M.K. & Uddin, M.Z. 2013. *Dictionary of Plant Names of Bangladesh (Vascular Plants)*. Bangladesh National Herbarium, Dhaka, pp. 55–200.
37. Pasha, M.K. & Uddin, S.B. 2022. *Nomenclatural Companion to the Encyclopedia of the Flora and Fauna of Bangladesh: Pteridophyta, Gymnosperm and Magnoliophyta (Vascular Flora; Vols. 5–13)*. Bangladesh Book Bank, Dhaka, 212 pp.
38. POWO. 2026. *Plants of the World Online*. Royal Botanic Gardens, Kew. Available at: <https://powo.science.kew.org> (Accessed: 10 May 2026)
39. Rahman, M.M. 2013. *Field Guide to the Amphibians and Reptiles of Bangladesh*. Arannayk Foundation, Dhaka, 191 pp.
40. Rashid, H.E. 1991. *Geography of Bangladesh*. University Press Limited, Dhaka, pp. 45-110.
41. Sarker, M.S.U. & Sarker, N.J. 1988. *Wildlife of Bangladesh (A Systematic List with Status, Distribution and Habitat)*. The Rico Printers, Dhaka, 69 pp.
42. Singh, S.K. and Rawat, G.S. (2012) 'Inventory and monitoring of biodiversity in Indian protected areas', *Biodiversity*, 13(3), pp. 132–142.
43. Sukopp, H. & Werner, P. 1982. Urban environments and vegetation. In: Holzner, W., Werger, M.J.A. & Ikusima, I. (eds.), *Man's Impact on Vegetation*. Dr. W. Junk Publishers, The Hague, pp. 247–260.
44. Varshney, R.K. & Smetacek, P. 2015. *A Synoptic Catalogue of the Butterflies of India*. Butterfly Research Centre, Bhimtal, 261 pp.
45. Wilson, E.O. (ed.) 1988. *Biodiversity*. National Academy Press, Washington, D.C., pp. 3–15.
46. Wynter-Blyth, M.A. 1957. *Butterflies of the Indian Region*. Bombay Natural History Society, Mumbai, 523 pp.