

ASSESSMENT OF ANGIOSPERMIC FLORA AT RAJSHAHI METROPOLITAN AREA OF BANGLADESH

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ABSTRACT

Objectives: The study aimed to document the angiospermic flora at Rajshahi metropolitan area of Bangladesh. The study also examined the species diversity in the study area.

Methods: The research work is based on fresh materials collected during 33 field visits at Rajshahi metropolitan area of Bangladesh was carried out from February 2016 to March 2017 to cover the seasonal variations. Plant parts with either flower or fruits collected using traditional herbarium techniques to make voucher specimens for documentation.

Results: The results show that a total of 494 species belonging to 455 genera and 106 families were recorded. Of these, Magnoliopsida (Dicotyledones) is represented by 413 species under 390 genera and 84 families while Liliopsida (Monocotyledones) is represented by 81 species under 65 genera and 22 families. For each species scientific name, local name, family name, habit, relative occurrence, and flowering time were recorded. The present study will help in identifying the major angiospermic plant species for further investigation.

Conclusion: The present research focused on the angiospermic flora growing throughout the Rajshahi metropolitan area of Bangladesh. A total of 494 angiospermic plant species were recorded.

Keywords: Diversity, Angiospermic flora, Rajshahi metropolitan area, Bangladesh.

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INTRODUCTION

Flowering plants (angiosperms) are the most diverse group of land plants, also known as Angiospermae Lindl or Magnoliophyta. Angiosperms, like gymnosperms, are seed-producing plants that can be distinguished from gymnosperms by a series of synapomorphies (derived characteristics). Flowers, endosperm within the seeds, and the production of seeds-containing fruits are among these characteristics. Angiosperm is an etymological term for a plant that produces seeds within a container; they are fruiting plants, though they are more commonly known as flowering plants.

A taxon's description, whether it is a phylum, a family, or a species, is a declaration of its traits, which together form the taxon's definition. Taxonomic or systematic characters are those that contribute to a taxonomic description. A diagnosis is a condensed description that only includes the diagnostic features that are required to distinguish a taxon from other taxa. For example, the genus *Brassica* has various species such as *Brassica nigra* (black mustard), *Brassica juncea* (rai), *Brassica rapa* (shalgam), and others; however, the genus *Brassica* is distinguished from all other genera in the Cruciferae family by some common characteristics (Brassicaceae). Angiosperms are vascular plants that produce seeds. Flowers with ovules enclosed in an ovary are their reproductive structures. Angiosperms can be found in a wide variety of environments, from forests and grasslands to seashores and deserts. Trees, herbs, submerged aquatics, bulbs, and epiphytes are just a few of the life forms found in angiosperms. Orchids, Compositae (daisies), and legumes are the three largest plant families (beans). Flowering plants, also known as angiosperms has number around 3, 52, 000 species of the world. Around 245–202 million years ago, flowering plants split from gymnosperms and the first flowering plants were discovered around 160 million years ago. During the Lower Cretaceous, they diversified greatly and became widespread around 120 million years ago, but they only replaced conifers as the dominant trees around 60–100 million years ago [1].

Angiospermic flora was carried out in Bangladesh by [2-42]. The aim of the present research was to explore and assess the diversity of angiosperms at Rajshahi metropolitan area of Bangladesh.

METHODS

Study area

Rajshahi is a metropolitan city and a major urban, commercial, and educational center of Bangladesh. It is also the administrative seat of the eponymous division and district. Located on the north bank of the Padma River, near the Bangladesh-India border, the city has a population of over 1,250,000 residents. The town is surrounded by the satellite towns of Nowhatta and Katakhal, which together build an urban agglomeration of about 1 million population. Modern Rajshahi lies in the ancient region of Pundravardhana. The foundation of the city dates to 1634, according to epigraphic records at the mausoleum of Sufi saint Shah Makhdum. The area hosted a Dutch settlement in the 18th century. The Rajshahi municipality was constituted during the British Raj in 1876. It was a divisional capital of the Bengal Presidency.

Rajshahi is a significant administrative, educational, cultural, and business center in Bangladesh. It is a historic center of silk production. Varendra Research Museum, the oldest of its kind in Bangladesh, is located in the city. The city is home to many renowned educational institutions of Bangladesh. The head office of Rajshahi Agricultural Development Bank and Barind Multipurpose Development Authority (BMDA) is situated in the city. The Shah Makhdum Airport serves Rajshahi. According to The Guardian, it is the cleanest city in Bangladesh [43].

Methodology

The work is based on fresh materials collected during 33 visits to Rajshahi metropolitan area of Bangladesh from February 2016 to March 2017 to cover the seasonal variations. The visits covered all types of habitats, particular riverbank; char land area, slope, village grove, fruit

