

Understanding Urban Wildlife – Observation and Documentation Method

Kartikeya V. Sarabhai *

E. K. Nareshwar *

Abstract

While the term “urban area” is typically used as a synonym for “city” the two are not the same. All cities are urban areas, but not all urban areas are cities. “Urban” is a statistical concept defined by the country’s government. A city on the other hand is more than just large numbers of people living in close proximity to one another; it is a complex political, economic and social entity (World Resources, 1996).

A typical city landscape for a layperson consists only of a concrete jungle. Floral and faunal elements are omnipresent in any given urban situation. This includes biological and genetic diversity, which will imply human interventions at the levels of agriculture, horticulture, silviculture besides various forms of animal husbandry. At the same time, biodiversity would obviously include introduced species. These may be of economic and ecological importance.

In order to create consciousness about the every day interaction between humans and local biodiversity in and around urban or built-up environment, particularly amongst school students, an approach through observation and documentation has been envisaged. Learning through the process of discovery would also create a sense of urgent need to protect and conserve our urban biodiversity. This is an activity-based approach, which goes beyond just observations. Activities have been designed to allow the scope of investigation into urban ecology, ethnology and evolution or adaptation of wildlife in the urban context.

*Vikram A. Sarabhai Community Science Centre (VASCSC), Ahmedabad, India

Introduction

Wildlife per se is not only found in those areas such as forests or environment of wilderness but also in an urban landscape. In a typical metropolitan scenario, it is easy to spot wild animals, which have become tolerant to human activities. One telling example happens to be, the different kinds of birds and insects, which have adapted to an urban ecosystem, establishing themselves in a specialised niche. There are several such aspects of flora and fauna, which could be observed within the urban and semi-urban limits. But, little has been done to highlight urban ecological interaction for the purpose of generating interests among students in a hands-on manner. Learning through the process of discovery would also create a sense of urgent need to protect and conserve our urban biodiversity.

The urban landscape

Whether it is Ahmedabad, Chennai or Delhi or any other metropolitan city, the presence of open woodlands, scrubs, urban wetlands, horticulture and agricultural areas are a mosaic of ecosystems. These complex ecosystems contribute to the bio-geo-chemical cycle in an urban environment. Besides, green areas are also habitats for different animals, birds, insects as well as aquatic life forms, which have adapted to this system. Such areas are also aesthetically important in a built-up landscape. When our major metros are under the ever increasing impact of pollution, green areas play an important role in partially removing or recycling some of the pollutants, particularly carbon dioxide and oxides of nitrogen. In fact trees and other vegetation happen to be the lungs in an urban environment. Many organic wastes generated by the urban life style are acted upon by bacteria and other soil organisms to provide useful by-products to nourish the soil. Other scavengers right from jackals to crows and kites play the active role of janitors while, many kinds of insects and birds are pollinators and seed-dispersal agents in the city landscape. Fresh water turtles also perform the function of keeping the water clean by feeding on decaying materials. Reptiles such as snakes and house geckos are vital biological pest control agents. These are just some of the visible merits of wildlife within an urban ecosystem. Urban biota could also be biological indicators of the health of the environment.

Yet an ever growing population and the demands of human needs in a typical metropolitan city puts pressure on the local flora and fauna. The impact of industrialisation and real estate, the uncontrolled waste disposal and propagation of alien plant species, overexploitation of natural resources and habitat loss has already altered the composure of the urban ecosystem drastically. Presently many cities have only what may be called as “ Green Islands ” or precious patches of “ in - city wilderness ” which as indicated earlier is important from a functional point of view.

The ecosystem in the urban context happens to be a mosaic. Basically two distinct ecosystems could be identified. Namely:

1. Terrestrial ecosystem – consisting of open spaces with wooded areas, scrubs, strip plantation, agricultural land, horticulture gardens and parks
2. Aquatic ecosystem – consisting of lakes, ponds and rivers or urban wetlands. Urban areas near coasts would also comprise the marine environment such as creeks, bays and lagoons

Educational Interaction

The most important component in any conservation happens to public awareness. This could be initiated at the school level. The National Policy on Education (NPE-1986) specifies that environmental studies is mandatory in the curricula. But it is necessary to reflect this practically through field experiences. For this purpose schools should use the medium of urban environment to observe and understand the way the ecosystem functions. Besides many of the urban issues are also exposed to the learner. At the school level, particularly from standard 5 to 8, a number of environmental concepts are being covered as part of the curricula. Such concepts can be highlighted through examples found in the environment. Thus an urban environmental education programme is required at all levels cutting across socio-economic backgrounds. For this a communication strategy needs to be developed. A strategy which will also provide incentives to those who translate awareness to action. The role of NGOs is important. These are the agencies who could be catalytic as change agents.

A handbook of educational strategy with co-curricular emphasis is presently envisaged for the purpose of creating awareness and action. This resource material will have activities focusing on floral and faunal representatives particularly found in the respective urban ecosystems. Presentation of teaching-learning concepts and activities would be in a reader-friendly manner with the element of “wow” factor. Though intended to be kept at the student level, some of the activities, which could be in the form of surveys, data collection and documentation could be useful for conservation planning in the urban context. Such findings could be made available to the municipal authorities.

The material will provide instruction on the methods of scientific observation and documentation. Besides it would also have investigative questions which will provoke the thought process in students. Such an approach will also encourage students to study the behavioural ecology of urban wildlife beyond mere observations.

The three principal curricular concepts being treated in this handbook, are:

1. Ecology
2. Ethnology
3. Evolution (adaptive responses in animals to urban environment)

The activities would be designed in a generic manner so that it has wider application in other urban areas. While the term “urban area” is typically used as a synonym for “city”, the two are not the same. All cities are urban areas, but not all urban areas are cities. “Urban” is a statistical concept defined by the country’s government. A city on the other

hand is more than just large numbers of people living in close proximity to one another, it is a complex political, economic and social entity (World Resources, 1996).

Conclusion

Since urban ecosystem is an important aspect of the built-up environment, this approach to encourage students to recognize, understand and act could be ideal for the purpose of environmental conservation. At the same time it is also a method by which the student community could collect valuable data on urban wildlife. This could prove to be an important data base for the purpose of urban development and particularly town planning.