

Original/Review Articles

Urban Wildlife Habitat— Present and Future

David Tylka

Many kinds of wild animals can become adapted to living in cities, provided that the right kinds of habitats are available and that their presence is accepted by city-dwellers. Suitable habitats can be furnished by traditional parks, tracts of "wild acres" set aside by cities, linear parks, cemeteries and golf courses, and transportation corridors. Buildings, rooftops, and institutional grounds can also provide habitat for animals like birds and butterflies. Suburban areas can encourage the growth of local wildlife by neglecting to mow common grounds, or allowing sections of individual lawns to grow up with wild vegetation.

Zusammenfassung

Viele Arten von wilden Tieren können sich an das Leben in Städten gewöhnen, vorausgesetzt dass die richtigen Arten von Habitat vorhanden sind und dass die Anwesenheit von Tieren von den Städtern akzeptiert wird. Angemessener Lebensraum kann durch traditionelle Parks oder wildnisartige Landflächen von den Stadtgemeinden bereitgestellt werden; ebenso durch "lineare" Parkanlagen entlang Wasserläufen, Friedhöfe und Golfplätze und bepflanzte Durchgangsstrassen. Gebäude, Dächer und Anlagen im Umkreis von Gebäuden eignen sich auch als Habitat für Tiere wie Vögel und Schmetterlinge. In den Vororten kann das Gedeihen von Wildtieren durch Unterlassung des Mähens von Gras auf Gemeindegrund oder durch Förderung wilden Pflanzenwachstums auf privatem Grund.

Introduction

I'm proud to be an urban biologist. I am part of a small but increasing number of common biologists who are situated in metropolitan areas across the country. I believe that, with sufficient education of urbanites, these city biologists can have some impact on our lifestyle.

In this paper, I will discuss urban wildlife—wild animals found in and around cities and towns—small animals and large animals, warm-blooded animals and cold-blooded animals. What

do all of these urban animals have in common? They have adapted to living around people. Generally speaking, animals in the city are those that have resisted extermination or those that occupy niches that are compatible with human interests. Wildlife generally fits into this latter category. In fact, many studies have revealed that the presence of wildlife in urban areas is not only compatible with the presence of people, but is even highly desirable (e.g., Brown *et al.*, 1979; Kellert, 1979; Witter *et al.*, 1981).

Mr. Tylka is an urban biologist at the Missouri Department of Conservation, St. Louis Metro Office, 1221 S. Brentwood Blvd., St. Louis, MO 63117. This paper was presented at the Symposium on Wildlife Management in the United States sponsored by the Institute for the Study of Animal Problems on October 14, 1981, in St. Louis, MO.

Where is urban wildlife found? To respond simplistically, urban wildlife is found wherever there is a suitable wildlife habitat. If one analyzes the urban environment, it will be noted that a large amount of habitat diversity exists in metropolitan areas. A vegetative cover map of Kansas City, MO, was developed under the direction of the Kansas City urban biologist, Joe Werner. This map indicated where various types of wildlife habitat exist and also where most of the wildlife management opportunities can be found.

I would now like to discuss what I consider to be the main categories of wildlife habitats that can presently be found in the urban environment across the country, and to use examples that I am familiar with to illustrate these categories. Finally, I would like to discuss the future of urban wildlife management and how this urban resource can be enhanced.

Present Categories of Urban Wildlife Habitat

Traditional Parks

When traditional parkland has been acquired in cities, all the understory is typically removed and then maintained in mowed grass and big trees—a condition referred to by many biologists as the “neatness syndrome.” There are a few urban animals that can adapt to this traditional park, especially if people bring food into the park and if there is water available from a source like a leaky drinking fountain.

In a few of these traditional parks there are sections that have been allowed to retain some natural quality—wilderness sections where wildlife can proliferate. Most of these wilderness pockets in traditional parks exist simply because the area cannot be easily maintained, such as the wooded ravine in O’Fallon Park in North St. Louis. The creek in this ravine is one of the few

areas in this part of the city where children can go to get their feet wet while chasing a frog. The only planned wilderness area in any of the parks in the city of St. Louis is a 90-acre portion of Forest Park named Kennedy Woods. The vegetative diversity of Kennedy Woods makes it the “hottest” birding area in the city, especially for warblers.

Urban Wild Acres

In Missouri, a new program called Urban Wild Acres has been initiated by the Missouri Department of Conservation. Natural areas such as Steyermark Woods in Hannibal, MO, are purchased and set aside as urban wildlife habitat and for activities such as nature enjoyment and environmental education. As urban development continues, the importance of these Urban Wild Acre tracts will increase as people become more reluctant to drive long distances to enjoy natural, outdoor experiences that are available close to home.

Linear Parks

Through good urban, open-space planning—or through neglect of nondevelopable land—many municipalities across the country have allowed areas along watercourses to remain natural, whereas other cities have officially designated these sections as linear parks. Denver and its surrounding communities have developed linear “greenbelts” along some of the creeks and rivers. These greenbelts not only protect the character of the natural watercourse and furnish excellent wildlife habitat, but the linear configuration also lends itself to many recreational pursuits not easily provided by rectangular parks. Rock Creek Park in Washington, DC, is another fine example of a linear park. Here, wildlife observation, nature appreciation, and hiking are facilitated by trails maintained by the Potomac Appalachian Trail Club.

Linear parks can also be situated along larger rivers. Across the Missouri River from St. Charles, MO, is a floodplain linear open space called the Earth City Greenbelt. Many riparian species of animals can be observed here.

Looking for a site for a pilot linear park project in St. Louis County, public and private agencies studied the four major creeks of the area. A 3-mile section of Gravois Creek that runs through the industrial and residential areas of South St. Louis County was chosen, and the properties along this creek are now being purchased.

Cemeteries and Golf Courses

Although many cemeteries and golf courses have been landscaped with ornamental shrubs and large trees, with all of the other vegetation trimmed away, some of these plants can offer limited benefits to wildlife. However, in those areas of cemeteries and golf courses where there is some understory vegetation nearby, wildlife species may abound. In Boston and its suburbs, cemeteries make up 35 percent of the existing open space; and 4 of the 50 cemeteries of that vicinity have wildlife management programs (Thomas, 1974).

Many golf courses have been carved out of the woods, and the rough along the fairways has remained fairly rough and undisturbed—undisturbed as long as one keeps the ball on the fairway. In Denver and in many other cities across the U.S., the waterholes are meccas for geese and ducks.

Transportation Corridors

Roadside plants along boulevards, streets, and interstate highways offer some wildlife habitat. Kestrels commonly patrol the medians of highways in search of insects or mice. It would benefit more wildlife (not to mention the fuel and manpower savings) if just a strip of vegetation close to the road would be

regularly mowed. Along some stretches of roadways, mowing is impractical, so beautiful flowering plants grow up wild, thereby furnishing nectar sources for animals (at least until these plants are sprayed with herbicides).

Railroad right-of-ways sometimes provide the greatest diversity of plants found in the urban area. Certain butterfly and moth species that utilize only particular plants as larval sources can be observed along railroad tracks.

Building, Rooftops, and Institutional Grounds

Some building designs are destined to have animals attracted to them. Items such as vents, ledges, and chimneys, if not properly designed, constructed, or maintained, can furnish roosting or nesting spots for birds. It would probably be expensive to install a chimney guard over a school's boiler room chimney. Chimney swifts thus have access and commonly roost in tall school chimneys. It is believed that kestrels will fly into these chimneys to prey upon these swifts.

Various potted flowers and shrubs on rooftops can attract wildlife such as butterflies. Other winged creatures, such as nighthawks, may be found on the flat, rocky surfaces on the top of some buildings.

Landscape plantings on institutional grounds and around buildings may provide limited food and cover. Concrete pools on these grounds, such as this one located in front of the Department of Interior Building in Washington, DC, can support birds and turtles, if managed properly.

Water Impoundments—Lakes, Sediment Ponds, and Storm Water Retention Facilities

An urban lake can provide wildlife habitat for a few animals. However, cutting the vegetation right up to the water's edge and designing the lakes as deep-

water structures will limit the number of wildlife species that can use them.

Sediment ponds are usually designed as temporary structures to hold the sediment that runs downhill from a construction site. They are normally drained after construction is completed—typically, just about the time when vegetation starts to grow up and increase the diversity of habitat available to wildlife.

Some cities and towns now require storm water retention facilities in new developments. If these structures are designed as permanent shallow ponds or marshes, they represent a tremendous potential for inhabitation by wildlife.

Suburbia—Common Grounds and Private Residences

A substantial portion of the land within most metropolitan areas is residential, and the vegetation here is as diverse as the people. Typically, however, many housing developers have started off by leveling and denuding the land completely before building. Today, though, some developers have begun to lay out their projects according to the lay of the land and consistent with the slope of the watershed. Whenever possible, developers should conserve the topsoil, prevent undue erosion, and remove only that vegetation which is essential for construction.

Some developers take advantage of the existing natural vegetation on common ground. Homeowners in a subdivision in Columbia, MD, voted to discontinue mowing portions of their common grounds and allowed wild plants to invade these areas. These homeowners not only enjoyed the wildlife associated with these patches but also appreciated the reduced maintenance costs.

Homeowners can also enjoy a substantial savings of both time and money by permitting sections of their yards to remain natural. This natural lawn con-

cept has been incorporated into city ordinances.

Enhancing the wildlife habitat in the yard was the objective for creating the slide and tape program entitled "Backyard Wildlife." This program is used to explain some generalized concepts of wildlife management techniques around houses to homeowners associations, civic groups, sportsmen's clubs, church groups, and nature organizations. The program is available from the Natural History Section of the Missouri Department of Conservation, St. Louis, MO.

Future

This "Backyard Wildlife" program is only one small step in the process of making urban residents aware of the opportunities for enhancement of wildlife that are possible. At this point, however, we can only give recommendations about urban wildlife management that are based on observations, traditional wildlife management practices, trial-and-error experiences in urban settings, and common sense.

The task of categorizing urban wildlife habitats is only a beginning. We now need to take a detailed inventory of these habitats, to determine what factors are operating within these habitats, and to discover how these factors jointly influence urban wildlife populations. We must also investigate what factors, such as wildlife corridors, are operating outside of these habitats to affect urban wildlife populations.

Along with these research endeavors, we need to educate the public about urban wildlife. Health departments, humane societies, parks departments, nature organizations, and conservation agencies have a responsibility to inform the urbanite that providing urban wildlife habitat benefits people as well as wildlife. We also have a duty to teach urban

residents that animals such as bats and garter snakes are interesting and beneficial animals. They should be understood and appreciated and should not end up cut up into pieces inside a coffee can. And, to inform the public, we will have to become better informed ourselves.

Urbanization is here to stay. About three out of four people in the U.S. live and work in cities and towns and spend most of their lives there. How dull cities would be without wildlife habitat and the associated animals. A wealth of information concerning urban wildlife is yet to be discovered. By investigating and understanding the factors influencing urban wildlife habitat, humans can live in closer harmony with nature within the urban environment of the future.

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