

# Urban wildlife management – it's as much about people!

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## ABSTRACT

Many everyday decisions by people in urban areas influence wildlife management in urban environments. To date, wildlife conservation managers and facilitators have relied largely on anecdotal information in assessing the capacity of urban communities to contribute to the protection and conservation of wildlife in urban areas. Research conducted by New South Wales National Parks and Wildlife Service in 2001-2002 investigated how urban residents in NSW relate to living with wildlife. The study revealed that the mainstream community is relatively unengaged with the principles that underpin wildlife conservation initiatives. The research findings can be used to design and evaluate new approaches to urban wildlife management, to engage a wider audience, and to support people to have more positive experiences of wildlife in their own backyard and neighbourhood.

**Key words:** community conservation, urban renewal, wildlife attitudes, urban wildlife.

## Taking conservation into the mainstream

The persistence of wildlife in urban environments is critical for conservation in Australia. This does not simply derive from the presence of populations of listed threatened species. Rather, its importance lies in the fact that 85% of people in Australia live in urban areas. The nature of the engagement that urban residents have with the local environment is likely to influence their view of conservation. The decisions made by this very large proportion of the population has a major influence on the future directions for natural and cultural heritage conservation.

Urban wildlife forms part of the remnant, modified and artificial ecosystems present in cities, suburbs and towns. For many people, urban wildlife is their most common experience of the natural world. This experience is important in forming community standards for urban wildlife management.

In this chapter, the term “conservation” means “choosing to help protect our living environment”. It includes a community gaining fulfilment from maintaining or creating a healthy environment. Conservation outcomes are the ones that people find meaningful and important.

Conservation has both biological and social dimensions. With great clarity, much of the biological aspect has been articulated. There is now an urgent need to address the social dimensions of conservation. There is evidence that the current prescription of knowledge, skills, attitudes, and behaviours required for an urban wildlife manager may not be embraced by the wider urban community. As a result, some wildlife managers in urban areas are confronted with a community who they perceive as having poor commitment to conservation and an unwillingness to live in harmony with urban wildlife. Can conservation be more inclusive and less dogmatic than this approach?

Having information about the needs and attitudes of a target audience allows people conducting community education and involvement programs to work more accurately and strategically in facilitating positive behaviour using a combination of incentives, such as persuasion, encouragement and regulation. This chapter discusses some of the social dimensions of conservation described by the findings of research carried out to identify issues for urban wildlife management in New South Wales [<http://www.nationalparks.nsw.gov.au/urbanwildliferesearch>]. It examined how urban wildlife can become a point of engagement in conservation for more people. The research findings exposed differences between the understanding of conservation of many urban residents and the knowledge, attitudes and behaviours required to be an effective contributor to conservation. However, the findings also powerfully indicated which conservation language and concepts are meaningful to most people. The findings also pointed to ways to invite people to adopt actions to support the protection and conservation of wildlife in the urban environment.

## Discovering how the community understands conservation

Effective campaigns to change behaviour rely on a cycle that identifies the environmental need to be addressed; identifies the need for change in the target audience; sets objectives; designs the initiative; implements; monitors; evaluates; reflects and re-plans. Reliable information is useful throughout the cycle. Wildlife managers are familiar with obtaining biological but not sociological information. There is anecdotal evidence of a wide range of responses to conservation issues in urban communities. Customer service and information officers in environment

and wildlife conservation organisations often spend their entire day responding to calls from people seeking information, advice or assistance with urban wildlife. Callers tend to fall into two categories: those who value wildlife and those who find wildlife disrupts their urban lifestyle. Based upon this anecdotal evidence, one might conclude that people are either “for” or “against” wildlife conservation in urban areas.

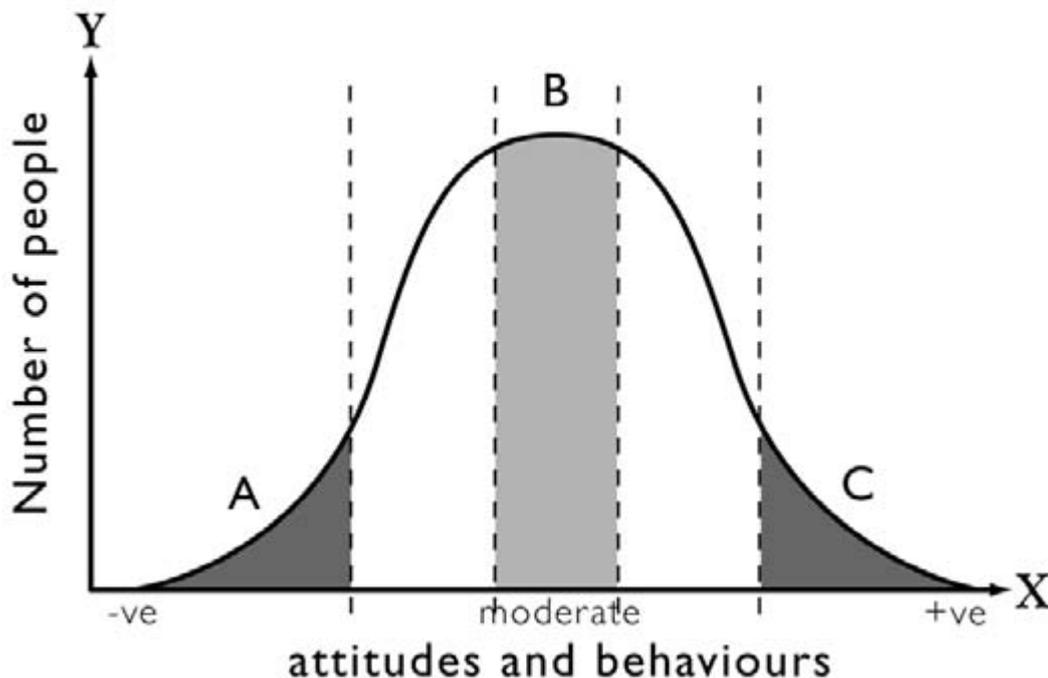
Numerous non-government organisations, state government departments and local governments are committed to supporting communities to adopt more positive attitudes and behaviours towards conservation in urban environments. This presents a conundrum. How best to provide support to a community that seems to be polarised?

These divergent understandings of urban wildlife represent opposite ends of a spectrum of attitudes and behaviours. Yet these extreme views, held by relatively few, gain most publicity as they are frequently portrayed as a conflict situation – thereby setting an all-or-nothing agenda. More moderate attitudes of the majority of the population remain unknown to urban wildlife managers. A probable distribution among the urban population of NSW of attitudes and behaviours towards urban wildlife conservation is that it is normally distributed. The “community norm”, shown as a lightly shaded zone at the middle of the curve (Figure 1), is the set of attitudes held by most of the population. We would expect this group to have moderate and indifferent attitudes and behaviours to urban wildlife. Mobilising positive attitudes and behaviours in this large part of the population is an important goal for wildlife managers. We need to use a new approach to engaging the mainstream.

## Research to discover community understanding of urban wildlife conservation

The social research to investigate the community understandings of urban wildlife has been the first of its kind in New South Wales [<http://www.nationalparks.nsw.gov.au/urbanwildliferesearch>]. Focus groups and in-depth interviews were used to systematically gather community information of a qualitative nature. This established the ‘lie of the land’ in relation to community understandings of urban wildlife issues. A semi-structured interview guide was used to ensure the discussion ranged widely across the issues. These findings informed the preparation of the survey questions. It indicated the sort of language and concepts that were used and understood by the community in discussing urban wildlife. In turn, the findings helped to interpret the subsequent quantitative survey results.

The quantitative phase used telephone interviews of 20-30 minutes conducted among 1000 residents in urban NSW. The survey used quotas to ensure a representative sample of age, gender and residential location. The survey sample was compared to census information for representativeness. The results were analysed to make statistical generalisations about the population from which the sample was drawn. The quantitative phase was used to confirm the existence of themes and trends identified in the qualitative phase. This study also included the ability to analyse results by criteria, such as pet ownership, preferred outdoor recreation activity, and level of concern for the environment, type of dwelling, postcode/location, location and density of urban areas and type of outdoor areas around the home.



**Figure 1.** A schematic representation of conservation attitudes and behaviours in the NSW adult population. The right hand end represents the proportion with positive attitudes and behaviours that will readily become engaged in actively conserving wildlife in urban areas. The majority or “mainstream” remains relatively unengaged and their attitudes and behaviours are unknown. The community norm (B) is the most frequently held attitude and behaviour set, comprising moderate or indifferent attitudes and behaviours. The left-hand end of the curve (A) represents the proportion of the population with negative attitudes and behaviours.

## Using research findings to grow conservation in urban communities

In 2002 NPWS published the results of a study in a report entitled “Urban Wildlife Renewal - Growing Conservation in Urban Communities”<sup>1</sup> (<http://www.nationalparks.nsw.gov.au/urbanwildliferesearch>). The following discussion examines some of the findings to identify how to involve the community in helping to protect and enhance wildlife in urban areas.

## Urban wildlife – family favourites and the undesirables

People in urban areas tended to group native fauna into three categories, primarily based on its perceived ability to happily coexist with people:

- Some types of native wildlife are desirable and appropriate in urban areas and people would like to encourage these species to visit their neighbourhoods and gardens.
- Other species are seen as desirable but inappropriate in an urban environment, principally because they might come to harm.
- The final group was fauna considered to be undesirable in and around the backyard.

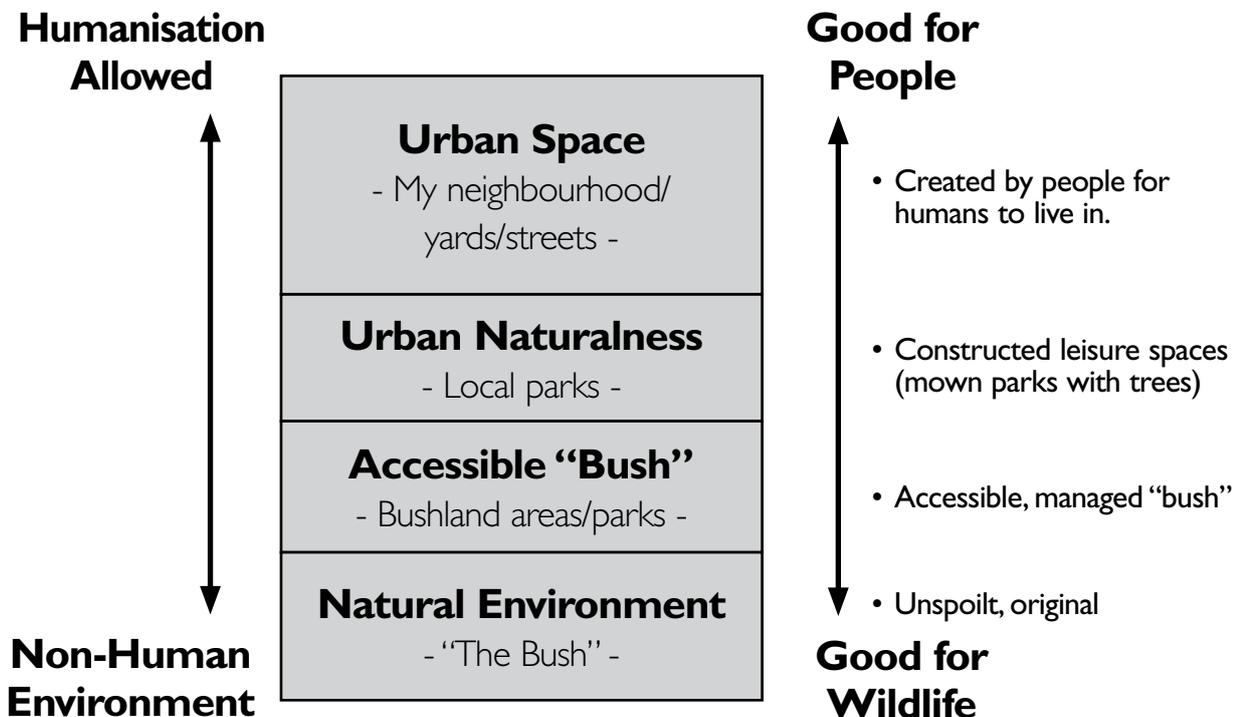
When categorising animals in terms of desirability, a range of factors was taken into account. In some cases, attributing characteristics to various animals was not done as a result of personal experience, but based on general perceptions. Desirable attributes nominated by participants included:

- having a cute appearance (koala, lorikeet, and blue wren)
- having a good image or good “reputation” (blue tongue lizard, kookaburra)
- being recognised as making a positive contribution to the urbanised environment (earthworms)
- imparting status value to a property (parrots, koalas)

The undesirable attributes nominated by participants included:

- potential to cause harm to humans (snakes, spiders, wasps, magpies)
- noisy (cockatoos, possums)
- smelly (bats, possums)
- potential to cause damage to homes or gardens (cockatoos, caterpillars, possums)
- dirty, unhealthy (cockroaches, bats)
- annoying (possums, flies, and mosquitoes)

The range of attributes used to assign animals to each of these categories was based on a principle of “what’s good for me” and how it would affect an individual’s lifestyle. There was also a sense of animal welfare in the mix. In deciding whether animals should be encouraged in urban spaces, there appeared to be little evidence that broader environmental issues were taken into consideration (Table 1). Participants in the research also considered that areas that are “right for humans”, and areas that are “right for animals”, are functionally separate spaces (Figure 2).



**Figure 2.** Participants in the focus groups partitioned the world around them into four types of spaces, each of which could be described and discussed for its suitability for people and for wildlife.

<sup>1</sup> NGIA qualitative research (1999) unpublished.

**Table 1.** Responses to a question aimed at determining whether people would like to have particular animals living around their home. Respondents were encouraged to answer as though it would be possible, even if they thought it unlikely or impossible, for those animals to live there.

	Like a lot	like a little	not like at all
	%	%	%
Small birds (like finches)	80	17	3
Butterflies	77	18	5
Lorikeets	69	22	9
Earthworms	66	21	13
Kookaburras	66	26	8
Koalas	55	28	17
Blue tongue lizards	50	29	21
Frogs	43	32	25
Cockatoos	41	37	22
Magpies	31	30	39
Possums	26	35	39
Caterpillars	22	39	39
Bats	16	22	62
Moths	11	28	61
Spiders	10	31	59
Snakes	5	16	79

**A. Urban space:** The dimension of “urban space” consisted of neighbourhoods, backyards and streets. It was perceived as part of the landscape that was constructed for human habitation. Respondents were positive to the ideas of encouraging certain types of wildlife into urban areas. For example, 52% agreed strongly that they would “love to think their backyard was suitable for wildlife”, and 41% agreed strongly that they would like to play a part in bringing back wildlife to the neighbourhood. At the same time, many believed that in this type of space, which was designed to suit people, native animals were out of place to the extent that it was seen to be dangerous for the animals to roam free. Some wildlife could create a nuisance in urban areas or be harmed, and for that reason it may be better not to encourage wildlife into urban areas.

**B. Urban naturalness:** This part of the landscape was identified as consisting of maintained local parks with leisure spaces with mown grass and planted trees and 43% of respondents agreed strongly that they “would really object if the council stopped mowing the grass in my local park and let it go back to natural bush”. These areas

were thought to be there for the enjoyment of people and therefore had to be safe; providing a home for native animals was seen as a secondary function.”

**C. Accessible “bush”:** This part of the landscape, seen as managed native parkland, often within the urban area or accessible for recreation, was characterised by the presence of tracks and trails. This area was felt to be appropriate for both native wildlife to roam and for humans to enjoy.

**D. Natural environment:** This was described as being the natural bush, which was not managed or controlled. It was thought to be unspoilt, original, and was the place for our native plants and animals.

The tendency of participants to partition the world into these four different types of space underpinned a number of attitudes and behaviours, such as humans had created urban spaces and urban naturalness for themselves. As a result, the principles underlying the development and maintenance of these urban spaces appeared to be primarily influenced by considerations of what is “right” and “best” for the human inhabitants. Making a distinction between areas that are “right for humans” and areas that are “right for native animals” has the effect of diminishing any sense that wildlife conservation may occur within urban spaces or places of urban naturalness. Wildlife conservation more logically takes place in areas that are “right for animals”. The other important implication of this partitioned view of the world is that the natural environment is seen as distant from urban communities. The natural environment is viewed as a place to visit rather than live. The concept of humans being separate from a living environment, rather than part of it, is reinforced through this partitioning (Table 2).

When developing urban wildlife education and involvement programs for mainstream urban audiences, it is important not to ignore these partitions. Programs should not favour wildlife at the expense of amenity for people, rather programs should assist people to gain personal benefits from having wildlife in urban environments, such as by taking everyday actions which translate into wildlife conservation gains.

## Underlying needs operating in the area of wildlife renewal

The research sought to uncover the underlying human needs operating within the domain of urban wildlife renewal that could potentially act as either barriers or motivators. Focus groups aimed to discover the needs underlying people’s attitudes, choices and behaviour. The study investigated the relative strengths of the

**Table 2.** Responses to a survey question investigating the proportion of people who believe the community should try to encourage native animals to live in areas that correspond to each of the four types of areas identified in figure 2.

	definitely encouraged	encouraged to some extent	not encouraged at all
	%	%	%
Suburban backyards	14	50	36
Local parks	23	52	25
Local bushland	35	28	7
Unspoilt bushland	87	12	1

needs identified in the focus groups and interviews. The most important human needs in relation to urban wildlife renewal centred on independence and freedom, and the need for safety and security. Also important were the need for self-actualisation (the feeling of reaching full potential), the need for social interaction, and the need to be a nurturing (caring and helping) person. Participation in urban wildlife conservation programs can expect to be greatest when people satisfy these needs and the experience does not prevent other underlying needs from being met.

### Knowledge, language, and concepts of conservation

A starting point for this research was the observation made by many practitioners in urban wildlife management that initiatives tend to engage only with those showing an enthusiasm for wildlife and thus preach only to the converted. Most focus groups in this research involved people from the mainstream with generally moderate and indifferent views about wildlife renewal in urban areas. In many respects, this provided a first opportunity to hear the way in which people described experiences and impressions of living with wildlife. The language used in discussions was an important outcome of the research.

Certain terms carry particular meaning, and even our use of the word “wildlife” can be surrounded with some complexity. “Wildlife” is most likely to bring to mind larger animals, especially mammals. While many people will automatically think of birds, reptiles and amphibians as well, few would think of fish and invertebrates. “Ecosystem” and “Biodiversity” are seldom spontaneously added to a discussion of wildlife. Wildlife is generally thought to refer to animals that roam free. It can include introduced animals, such as foxes, rabbits and deer, as well as native animals. The concept of wildlife is also strongly associated to places other than Australia (e.g. African wildlife). The use of words such as “Native” or “Australian” are important to remove these ambiguities.

In preparing an information and advisory service to promote plants that can attract native animals, the Nursery and Garden Industry Association (NGIA) conducted their own market research<sup>2</sup>. In testing possible names for their program, they compared “Wildlife Garden” to “Flora for Fauna” among others. In this context, “wildlife” evoked images of animals wilder than people would wish to encounter in their garden. NGIA avoided this concern by establishing a national program to promote the relationship between native plants and attractive native animals in the garden under the name “Flora for Fauna”. While some people may be uncertain which is which, the terms, used together, are generally well understood. Figure 3 depicts the network of ideas and concepts that researchers suggest contribute to people’s construction of meaning in the term wildlife.

The specifics of urban wildlife conservation lacked personal relevance for many participants in the groups and the interviews. Concepts, such as biodiversity and natural ecosystems, were distant issues placed under some global category. These terms were often dismissed as being in the domain of “environmental experts” and may contribute to disengagement with a topic when used prominently in communication with a mainstream audience. Most people in the research study had given little thought to their meaning and as a consequence they are misunderstood within the mainstream audience.

The concept of urban ecology was poorly understood. People did not readily recognise that some native plants and animals might be unique to their area. In that regard, there was no sense that the survival of these native plants or animals may depend on our ability to live with them or to maintain their natural, modified or artificial habitats in urban areas. Native flora or fauna surviving in urban areas was seen as being a “left over” of the original natural environment, rather than belonging there, and was often seen as being somewhat out of place in urban areas. This finding is consistent with the partitioned view of the world. The findings indicated the limited meaning that specialist language has for mainstream audiences. Indeed, some of the terms and concepts that are common in discourse about urban conservation are poorly understood or, even worse, alienating to many target audiences.

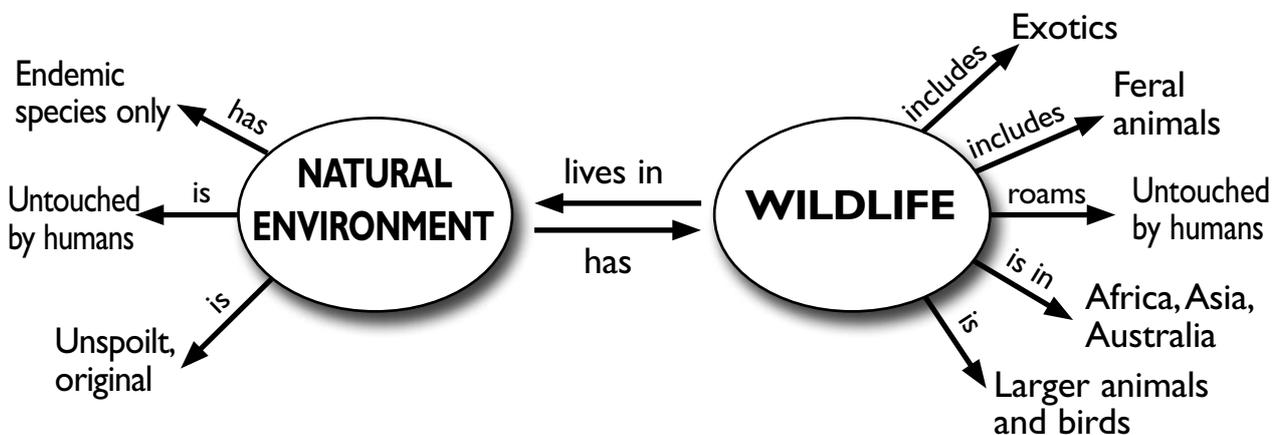


Figure 3. Hypothetical model of paths and concepts associated with natural environment and wildlife.

## Responding to these research findings in practice

Using the research findings, National Parks and Wildlife Service (now part of the Department of Environment and Conservation) developed a new approach to education and involvement in urban wildlife conservation. The “Backyard Buddies” program uses appropriate concepts and a fresh look, feel and style to present urban wildlife information and advice to the wider community and to take conservation attitudes and behaviours beyond those who are “keen and knowledgeable” and into the mainstream.

Backyard Buddies aims to heighten people’s interest in the wildlife that is common in many backyards, streets and parks. The program aims to support people to become more confident to live with wildlife by equipping people with knowledge and skills to anticipate and manage animals’ natural behaviours. Building people’s capacity to manage their interactions with wildlife helps people to enjoy the “living” quality that it brings to urban life, providing first-hand learning experiences.

The term “Backyard Buddies” was tested with the target audience, and it successfully tapped into ideas of people working together to improve their backyards. The term was understood to apply to the native animals that visit and live in our backyards, streets and parks. At the same time, it was understood that people and their domestic pets can be backyard buddies, when they choose to make even simple changes in their everyday practices to help protect wildlife in their backyard and neighbourhood. Backyard Buddies emphasises the contribution wildlife

makes to having a nice place to live, and invites people to find their own reasons to take practical actions that help protect and enhance wildlife in urban areas. In this program, people find relevance and meaning for their role in conservation as an integral part of their everyday life.

Wildlife management requires an analysis of biological and sociological information. The resolution of most urban wildlife management issues is intertwined in the behaviour of people living in urban areas. Ultimately, urban habitat values for wildlife are influenced by the choices people make as individuals – the garden plants they choose: the garden chemicals used; the way they manage their pets; the way they drive their motor vehicles. The research supports the view that a living, healthy urban environment is seen as part of a quality of life enjoyed and valued by people in towns, cities and suburbs of New South Wales.

These research findings can inform wildlife management by better understanding the way people make positive choices about living with wildlife. Wildlife managers can re-cast the discourse about urban wildlife conservation, making it more engaging for more people. Education and involvement initiatives, which are designed on the basis of research, can reach out and effectively engage and support the mainstream community. Gaining the personal benefits of enjoyment and confidence in wildlife interactions through enhanced knowledge and skills can influence community attitudes to be more positive toward urban wildlife and can reduce the extent to which people perceive negative experiences. More positive community norms provide a powerful basis to ultimately change the nature of urban wildlife management.

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