

# Seeking nature in the city: the implications of feeding wildlife

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## Abstract

Most people on earth now live in large cities, a trend set to accelerate. This intensification of urban living has a multitude of implications including the possibility of a significant alteration of human relationships with, and perceptions of, nature. The apparently increasing distance between people and the natural world – as suggested by concepts such as the ‘extinction of experience’ and ‘nature deficit disorder’ – may have profound consequences for the way humans perceive, understand and value animals, both domesticated and wild. There is growing evidence that many people equate even familiar wildlife species with fear and danger while others express strong desires to reconnect with nature. Possibly the most widespread and popular form of direct interaction with wild animals is that of wild bird feeding. Numerous surveys indicate that between one-third to one-half of households attract birds to their house yards by making food available. This activity appears to have started primarily as a form of humane assistance to starving birds during severe Northern Hemisphere winters. Today, however, millions of people provide vast amounts of seed all year round. There have also been some serious questions raised about this practice (especially in Australia), with particular concern centred on dependency, the spread of disease and the growth of unwanted species. Remarkably little is known, however, about the actual impacts on wildlife

bird populations. But what if feeding really does lead to negative impacts on the very birds being attracted? Is it possible to enhance the emotional benefits while minimising the ecological impacts?

The advent of the era of anthropocentric climate change has drawn attention to the capacity for human actions to influence the planet’s natural processes and transform the earth’s surface on a previously unimaginable scale. This planetary scale is now being seriously discussed at both spatial (e.g., the anthropocene concept) and temporal levels (Steffen et al. 2007; Dearborn & Kark 2010). However, while such conceptions may be simply too large to readily comprehend, some forms of human activity are all too obvious. As of about 2007, for the first time in human history, the majority of people on earth now live in large cities, a trend that is likely to accelerate (United Nations 2009). The processes and implications of urbanisation, for example, are all around us as people throughout the world move from the countryside to the city, with the suburbs sprawling outwards, engulfing productive farmlands and forests, and increasingly fragmenting whatever patches of the natural environment still exist (Cox 2010). Because of these impacts, urbanisation has now been recognised as the most main cause of extinctions in the present century (Goddard et al. 2009).

The impact of urban development is often all too obvious in terms of habitat destruction, the increase of sound, light and chemical pollution, the profound impacts on biodiversity and the homogenisation of the species surviving in and around cities (Cox 2010). It is also important to acknowledge, however, that

having a large proportion of the population situated closer together in the city can have a wide range of environmental benefits: for example, there may be shorter distances to travel for work, education and recreation; public transport should mean less reliance on private cars; and a range of efficiencies associated with increased connectivity may accrue to the human residents (Owen 2009; Sanderson & Huron 2011). Of course, such benefits require careful planning, something far from evident in many of the new mega-cities. Moreover, because the changes to an area associated with urbanisation are typically rapid and comprehensive, the impact on biodiversity is almost always catastrophic: the majority of the original species will not survive (Chace & Walsh 2006).

Nonetheless, although the landscape is dramatically transformed from its original state to one dominated by the presence of people and their structures, 'nature' cannot be entirely excluded from the new anthropocentric environment. For example, a variety of animal and plant species have proven to be capable of thriving in the urban landscape. Species such as black rats, feral pigeons, house sparrows and numerous plants have successfully accompanied people as they have spread around the globe (Blair & Johnson 2008). A much smaller suite of native species have been able to successfully exploit the resources and opportunities provided by the urban environment: in Australia, these include magpies, noisy mynahs and common brushtail possums (Jones 2002); in New Zealand, silvereyes (wax eyes), grey ducks and tui are now typical of many urban parklands (van Heezik et al. 2008).

For people living in cities, the perception of 'nature' and 'natural' will be the product of a wide variety of influences, though the most salient appears to relate closely to the landscape in which we grew up (Goddard et al. 2009). Even in Australia and New Zealand, the landscape in which most people now live is almost certainly degraded or simplified in terms of the diversity of biodiversity present even a few decades previously (Miller & Hobbs 2002). While this may be regarded as virtually inevitable, some environmental psychologists are now becoming concerned about the implication for human perceptions, the most widely discussed being called 'environmental generational amnesia' (Kahn 2002). This concept proposes that the environment which

people experience as children becomes the baseline against which future experiences are compared. Thus, environmental expectations are continually being lowered; we lament only the conditions we apparently remember as children and not what may have been lost over a longer time frame and more objective perspective.

An alternative response, though not necessarily mutually exclusive, to the appreciation that the natural environment is undergoing continuous degradation may be a heightened appreciation of 'nature'. There is considerable evidence in support of positive responses to nature in a wide variety of forms (Dearborn & Kark 2010). For example, exposure to nature in the form of pets, green space and even views of wooded parklands has been shown to accelerate recovery from stress and injury (Miller 2005). Moreover, there is recent support that such responses require 'real' nature rather than digital representations: people reported far more positive reactions to an actual view than a high-definition screen of the same thing (Khan et al. 2009).

For people living in expanding urban centres, the opportunities to interact with and even simply observe nature becomes limited and constrained, a phenomenon termed 'the extinction of experience' (Pyle 1978). This reduction in contact and familiarity with living components of the non-human world threatens to reverse the positive influences of generations of close, daily contact with nature, replacing experience with perceptions based on virtual representations and expectations. For increasing numbers of people, 'nature' becomes something only accessible through the filters of parents, peers and the media; there is virtually no personal interaction involved. Miller (2005) and many others worry that such perceptions are unlikely to lead to positive environmental attitudes: "If people no longer value nature or see it as relevant to their lives, will they be willing to invest in its protection?" (Miller 2005).

One of the most familiar examples of close contact with nature is that of wildlife feeding, especially among people living in cities (Jones & Reynolds 2008). While bird watching is often cited as the most widespread form of nature-based activity (Green & Jones 2010), recent surveys suggest that the practice of wild bird feeding may be even more popular (Jones 2011).

Certainly, the global scale of the bird feeding industry – annually worth \$US 4.5 billion in North America and around £250 million in Britain – indicates the active engagement by very large numbers of people.

The practice of bird feeding is strongly promoted and encouraged by most bird and conservation organisations in the Northern Hemisphere (Jones & Reynolds 2008). There is the explicit message behind the frequent statements along the lines of: “If you care about birds, you will feed them” (see e.g., Toms 2003). This sentiment alludes to the strong element of concern for the welfare of the animals, one of the key components of the motivation behind the impulse to feed. Most authorities agree that the modern massive feeding industry had its origins in a series of successively harsh Northern Hemisphere winters during the early 1900s when residents of large cities such as London and New York witnessed the deaths of large numbers of starving birds in their streets, parks and balconies (Weidensaul 2007; Birkhead 2008). The humane response led to the widespread distribution of recipes for “suet puddings” and seed balls which could be made at home and hung in the house yard (Toms 2003). The rapid growth in this activity and the demand for suitable ingredients and products perhaps inevitably led to commercial interest – thus was a new industry born (Anon. 2003).

While the humane response to the perceived plight of suffering individuals remains a key motivation for the practice, the shape of the contemporary scene is far more complex, with wider conservation and environmental themes being evident (Howard & Jones 2004). Nonetheless, many feeders also express concern about the potential negative impact of their activities on the birds they seek to assist (Howard 2006). Indeed, these concerns are especially pronounced in Australia where, almost alone among Western nations, the practice of wild bird feeding is unofficially but robustly opposed by government agencies and bird and conservation groups (Rollinson et al. 2003, Jones & Howard 2006). Despite this clear and widespread discouragement, Australian households continue to provide food for wild birds in rates almost identical to those of the UK and the US (Jones & Reynolds 2008; Jones 2011).

The strong clash of sentiments concerning the practice in Australia has forced a debate on the issues and an acknowledgment of the existence of opposing

views. Interestingly, when asked to articulate the key concerns associated with feeding, both proponents and those opposed to the practice list almost identical issues (Rollinson et al. 2003; Howard & Jones 2004). These include whether human-provided foods supply adequate nutrition, the potential for the spread of disease, the proliferation of already abundant species, and increased aggression among birds competing for the foods (Howard 2006). The most serious concern of both groups was, however, the possibility of animals becoming dependent upon anthropogenic foods (Jones 2011). While recent experimental studies (O’Leary & Jones 2006) and reviews (Jones & Reynolds 2008; Jones 2011) have concluded that there is almost no evidence for birds becoming significantly reliant of supplementary foods, these workers make it clear that we know remarkably little with certainty about most of the key issues associated with the practice (Chapman & Jones 2009).

The rapidly changing nature of human relationships with nature, especially wildlife, is becoming a key concern for many workers engaged in the promotion of biodiversity conservation (Miller 2005). While the biophysical and ecological impacts of urbanisation are increasingly appreciated and understood and there are many approaches to addressing the challenges, the impacts and implications for human perceptions are only just being considered (Goddard et al. 2009). Although the importance of such impacts has often been neglected and even trivialised, recent interest in the ‘human dimension’ of wildlife conservation and management has demonstrated the centrality of perceptions, beliefs and attitudes in developing successful policies and action plans (Khan et al. 2009).

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