

Keynote Lecture: The nature of sustainable city living

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ABSTRACT

Of all the people on the Earth today, one in 100 lives in the British Isles. In such a crowded and urbanised society it is all too easy to lose touch with nature. Certainly there is little room for wildlife as a sentimental luxury.

This keynote paper emphasises the essential role which the natural life support system needs to play if the quality of life in towns and cities is to be enjoyable and sustainable. Encouraging a nation of gardeners to enjoy nature on the doorstep has led to a wide-ranging recognition that wildlife in the city has a vital and far wider role to play as functional green infrastructure. By brokering partnerships from amongst the commercial construction industry, public parks, private sector house builders, water and other utility companies, domestic garden owners, school and nature conservation charities and a host of other 'strange bedfellows' it is proving possible to rebuild the green integrity of urban areas, to make creative use of a wide range of resources, and to involve a very broad cross-section of the general public.

This has been made possible through a number of UK initiatives, and the support of institutions, including Chelsea Flower Show, the Green Gym, the Greenleaf Housing Awards, sustainable urban drainage, brown roofs, urban forestry, horticultural therapy, Learning Through Landscapes, The Heritage Lottery Fund, the Urban Wildlife Partnership, the Big Garden Bird Watch, International Dawn Chorus Day, the world daisy chain championships, and the Rebuilding Biodiversity initiative.

Of all the people on the Earth today, one in a hundred lives in the British Isles. Coming from such an urbanised and overcrowded society, it has always seemed obvious to me that we should take much more account of nature in the city, though even in the UK there is a strong-held establishment view that wildlife is still predominantly a rural issue.

The popular image of New Zealand is one of wide-open country with spectacular wilderness and endless open space. It is therefore worth remembering that, in New Zealand too, well over 80% of people live an urban lifestyle. There is a worldwide trend towards urban and suburban living, and if the experience of the UK is anything to go by, this means that more and more people will find it convenient to put nature out of sight and out of mind.

Urban living makes it easy to pretend that we

can somehow manage without natural life support systems but, of course, we can't. We may believe that we can disregard nature, but in the past year or two, at least in the UK, we have had some startling wake up calls.

Of all our many recent 'food scares', Bovine Spongiform Encephalopathy (BSE or Mad Cow Disease) is probably the most alarming. This is a deadly disease, transferable to humans through the food chain, with an unknown incubation period and no means of detection. It appears to have its very origin in our loss of contact with the fundamental laws of nature. Ask almost anyone from two years old and upwards what cows eat. 'Grass,' they will say, 'and buttercups, and daisies.' In the quest for cheap food and smart technology, scientists decided that this was inefficient, and that cows would improve their outputs if they were fed on animal protein. Unfortunately, when 'Buttercup' and 'Daisy'

were fed chopped up dead sheep some of them contracted spongiform encephalopathy — and the rest is a history with consequences that have yet to be fully revealed (Fig. 1A,B).

Another high profile example of disengagement with nature is the escalating incidence of urban flooding. Homes and high streets in the UK are being devastated by ever more frequent storm-water inundation (Fig. 2). The pundits tend to blame global climate change, and it is true that weather patterns are becoming more extreme. However, a more fundamental cause of urban floods is the loss of natural absorbency in the upstream countryside. We have lost our woodland, or converted it to sterile coniferous plantation. Land drainage has speeded up the rate at which rainfall now leaves agricultural land, and the bogs and marshes that would once have served as natural sponges and reservoirs have been drained or destroyed.

Clearly there is an urgent need for us to re-establish our respect for nature, and that process needs to take place close to home. We need more opportunities for simple contact with the natural world and, in its simplest form, this means fostering the wildlife in our city parks and our suburban gardens.

Twenty years ago, I chose to bravely go where no environmentalist had gone before. I designed and built the first wildlife garden at the Royal Horticultural Society's Chelsea Flower Show. At that time nature in the garden was generally categorised as 'a weed,' 'a pest' or 'a disease,' but my accompanying book *How to Make a Wildlife Garden* (Baines 2000) leapt into the top ten best sellers list, and it seemed as though the spell might be broken. Gardening with wildlife became respectable, even fashionable, and now wildflower meadows, woodland glades and naturalistic ponds are de rigueur at every Chelsea Flower Show.

The secret of success with wildlife in domestic gardens is to plant and manage them as super service stations for the wildlife in the surrounding neighbourhood. If you grow nectar plants, maintain bird feeders, provide fresh drinking water and avoid the use of pesticides, then very

soon the birds and butterflies will seek out your garden and begin to visit regularly (Fig. 3).

People who attract wildlife to their garden are quickly made aware of the significance of the habitat network just beyond the garden fence. The numbers of birds, the variety of pollinating insects, and in Britain's case, the likelihood of visits from such popular creatures as hedgehogs, frogs and foxes (Fig. 4), will all be greatly influenced by the range and the richness of other nearby habitats, many of which will be beneficial by default. The big trees in the local park provide safe nesting sites for songbirds whilst local canals and reservoirs supply wetland wildlife to the surrounding neighbourhood. The wild, neglected land of derelict industry, the neglected cemeteries and the tapestry of other people's gardens all add up to a resource for wildlife which is difficult to match in farming countryside.

Once the ecological importance of the wider urban landscape is recognised, this often prompts a desire to influence the management of other land and to raise the wildlife potential of the less inspiring spaces. In the UK there is now a burgeoning urban forestry movement, with local people planting trees and managing community woods on suitable sites throughout the country. More and more public parks are switching some of their close mown grassland into meadow management, in order to accommodate the wildflowers and promote a little popular nostalgia. We are even seeing urban wetlands being introduced as positive features of a much more ecological approach to open space provision and stormwater management.

In campaigning for more nature in the city it has been important to keep emphasising the many benefits for people. Urban woodlands can slow down the wind and filter pollution from the air we breathe. Urban wetlands can serve as temporary reservoirs, reduce the risk from rainstorm flooding and clean up the surface water before it flows into local streams and rivers (Fig. 5). Even the scavengers — in the UK foxes, crows and pigeons — have a valuable role to play in 'processing' the waste food in our city streets.

Section 1: People, Biodiversity and the Urban Environment

The strongest case of all for urban nature conservation has been made by linking in to public health concerns. With one in six young children in the UK known to suffer breathing difficulties, it is clear that less polluted air would bring real benefits, whilst access to leafy green surroundings tends to encourage gentle exercise and reduced car dependency. Most persuasive of all, there is clear scientific evidence that access to a natural green environment reduces stress dramatically, and with stress related illness costing the UK economy billions of pounds every year, there is increasing recognition of the economic case for taking better care of green spaces in our towns and cities (Fig. 6).

It is still early days. The civil servants tend to stay secure within their silos. It is not easy to convert a public health service based on sickness management into one which aims to deliver healthy living through the urban greenspace network. There is similar inertia among engineers, who tend to prefer high cost civil engineering rather than the ecological approach when tackling flood defence. However, there is progress. The Green Gym and healthy walking programmes are forging links between some healthcare trusts and greenspace managers. Environmental protection agencies are also starting to embrace the functional role of nature in the city, and in

several parks and public open spaces, streams have been reshaped, harsh concrete culverts have been deconstructed, and new natural wetlands have been introduced, to serve as safety valves in time of flood.

Finally, even establishment figures in the nature conservation movement are beginning to acknowledge the importance of the wildlife in our towns and cities. The depth of ignorance has been exposed by such startling discoveries as the near extinction of London's house sparrows and the relative success of urban frogs when compared with their rural cousins and so at last the government agencies for nature conservation are commissioning research into urban habitats.

Most significantly of all, there is a gradual realisation that the future fortunes of our natural heritage will depend on valuing its relevance to people. In an urban society, political power lies in the cities and the suburbs. In the past there has been little effort to engage urban opinion formers with the need for nature conservation but, thankfully, this is no longer the case.

REFERENCES

Baines, C. 2000: How to make a wildlife garden. 2nd ed. (first published 1983). London, Frances Lincoln Publishers Ltd. 192 p.



Fig. 1A,B Farming practices that led to the terrible issue of Bovine Spongiform Encephalopathy (BSE) demonstrates our need to reconnect with nature.



Fig. 2 Loss of natural water retention reservoirs increases the risk of flooding in urban areas.



Fig. 3 Providing conducive habitats and maintaining bird feeders encourages regular visitors to the urban garden.



Fig. 4 Wild foxes encouraged to visit an urban garden.



Fig. 5 Urban and peri-urban wetlands provide wildlife habitats and reduce the risk of flooding.



Fig. 6 Urban parks and woodlands provide an important role in mental health — the 'Biophilia Effect'. Being outdoors in a motivating environment also encourages people to exercise.