



GRESHAM COLLEGE  
*Founded 1597*

## **Wildlife Gardening Transcript**

Date: Monday, 7 March 2016 - 1:00PM

Location: Barnard's Inn Hall

07 March 2016

## **Wildlife Gardening**

Professor Justin Dillon

### **Summary**

Growing concern for the environment has encouraged us to see that we can make a contribution to biodiversity by changing how we design and use our gardens. This talk will look at the emergence of wildlife gardening in a number of locations ranging from homes to schools to businesses. A number of examples from around the world will help us to think about the potential of London's gardens to biodiversity.

### **Introduction**

The writer AA Gill noted that the English believe that 'nothing man-made is as beautiful as a garden' and that England's great gardens aren't a recreation of Eden so much as 'what Eden would have grown to look like if only God had had the foresight to exempt the English from expulsion.' But while we spend a huge amount of time thinking about how to garden we devote precious little to thinking about why so many of us garden. Growing concern for the environment has encouraged us to see that we can make a contribution to biodiversity by changing how we design and use our gardens. In this talk I will look at the emergence of wildlife gardening in a number of locations ranging from homes to schools to businesses.

Ten years have elapsed since my last talk at Gresham College. During that time the nature of the challenges facing the environment has become clearer and the urgency with which we must address them is all too apparent. The first part of my talk draws on an excellent study - London: garden city? - carried out by Chloë Smith on behalf of London Wildlife Trust, Greenspace Information for Greater London (GiGL) and the Greater London Authority.

The headline facts and figures from the report are as follows:

- 37,900 hectares (ha), approximately 24% of Greater London, is comprised of private, domestic garden land.
- Of that garden land, 57% - or 22,000ha - is vegetated cover (lawn, tree canopy and other vegetation).
- Therefore, approximately 14% of London is garden greenspace.
- There are an estimated 3.8 million individual private garden plots (counting front, back and other kinds separately)
- There are estimated to be 2.5 million garden trees in London.

The picture, though, is ever-changing:

#### 1. Changes resulting from garden design and management

- The area of vegetated land present in 1998-99 had dropped 12% in 2006-08, a loss of 3,000ha.
- On average, an area of vegetated garden land the size of 2.5 Hyde Parks was lost each year.
- The amount of hard surfacing in London's gardens increased by 26% or 2,600ha.
- The area of garden buildings increased in area by 55% or 1,000ha.
- The amount of lawn decreased by 16% or 2,200ha.
- Overall vegetation in gardens decreased by 12% or 3,000ha

#### 2. Changes resulting from development requiring planning permission

- An average of 311 reported housing developments per annum occurred on private garden land each year.
- On average, 500 gardens, or part gardens, were lost to development per year (we don't know how many new gardens were created in association with development)

### **Key messages**

A number of key messages emerge from the study:

- Gardens in London have changed significantly in recent years

- Garden vegetation - including lawns and garden trees - is being lost
- The losses are due primarily to changes to garden design and management
- While development can have a big impact locally, the loss due to development across London is relatively small
- Collectively these losses have implications for London's wildlife and our ability to adapt to the impacts of climate change

### **What's the problem?**

Gardens are valuable for both people and wildlife in that they provide a significant amount of London's open space and habitat. Climate change means that the extent and quality of gardens may become increasingly important as they also have a role to play in keeping the city cool and in preventing surface water flooding. But, until now, the character and scale of London's gardens as a green space resource have not been fully documented.

A prevalent social discourse concerning climate change, loss of biodiversity and the importance of nature to human health currently dominates news articles, television programmes and political comment. These anthropogenic impacts on the natural environment question humankind's predominant relationship with nature; particularly in western developed cultures where people are usually perceived as separate from nature rather than part of it. Whilst the world's declining iconic species catch media attention, it is often local and indigenous wildlife that become the focus of communities at a local level. As a result, conservation organization membership has increased over the last 5 years alongside a strong retail sector which encourages people to purchase, for example, wild bird food, bird feeders and nest boxes. As interest in feeding the wild birds that visit gardens has increased, so too has an appreciation of the need to conserve the wider aspects of the ecosystem such as plants, insects and amphibians which attract and support the birds and mammals that have become more welcome visitors to our gardens. There is also increasing recognition of the health and psychological benefits that wildlife gardening can bring to individuals and communities.

(Curtin & Fox, 2014: 1025)

### **What makes an effective wildlife garden?**

It is a general misconception that a wildlife garden is an unkempt space where nature has been allowed to take over. Quite the opposite: Ryrle (2003) suggests that there is greater biodiversity in a well-managed wildlife garden which has a wide variety of plants and habitats rather than one which has been allowed to become tangled undergrowth. (Curtin & Fox, 2014: 1026)

There is no shortage of advice about ways to improve a garden for the benefit of wildlife. The Wildlife Trusts explain that you can:

Go wild in your garden! Large or small, ledge or yard, your garden can be a mosaic in a wider network of natural havens linking urban green spaces with nature reserves and the countryside. (<http://www.wildlifetrusts.org/how-you-can-help/wildlife-gardening>)

In partnership with the Royal Horticultural Society, the Wildlife Trusts promote their 'Go Wild about Gardens' project (<http://www.wildaboutgardens.org.uk>). Another initiative is the 'Gardening with Wildlife in Mind' database which aims to help people choose plants likely to attract wildlife. It also shows what eats what in the garden (<http://www.joyofplants.com/wildlife/home.php>).

Many of the online and written resources offer a range of strategies that 'anyone' can use:

Anyone with a garden can make a difference for wildlife, and that doesn't have to mean turning into a wilderness. Simple steps like not using pesticides and choosing certain types of plant will mean more ladybirds, butterflies and bees - or maybe you would like to create an area to benefit wildlife such as a pond, hedge or meadow. Whatever you would like to do, this database can help, whatever your level of gardening and the space you have available. (RHS/Wildlife Trusts, undated)

Not all changes are equally beneficial. Gaston *et al.* looked at the many recommendations which have been made for simple changes to improve their value for biodiversity.

... we report the results of replicated experimental tests of five such common recommendations, involving the introduction to gardens of (i) artificial nest sites for solitary bees and wasps; (ii) artificial nest sites for bumblebees; (iii) small ponds; (iv) dead wood for fungi and other saproxylic organisms; and (v) patches of nettles *Urtica dioica* L. for butterfly larvae. The broad conclusion is that whilst some methods for increasing the biodiversity of garden environments may be very effective, others have a low probability of success on the timescales and spatial scales likely to be acceptable to many garden owners. If one of the functions of small scale biodiversity enhancement is to develop and encourage awareness of biodiversity and its conservation, then encouragement to conduct particular activities must be balanced with a realistic appraisal of their likely success. (2005: 395)

It is important to choose what seems most appropriate rather than to try to do what simply appeals.

### **Some problems**

There are some criticisms of wildlife gardening. For example Cannon asks:

what is the real global conservation value of a British suburban garden, with its neat little lawns, nut feeders and nestboxes? In my garden, fledgling blue tits (*Parus caeruleus*), a species of no conservation concern, are busy devouring expensive imported peanuts whose production occupied prime agricultural land in a poor country. Pure entertainment, and a sentimental luxury. (1999, p. 287)

Some wildlife gardening 'improvements' may actually have a negative impact on wildlife:

In England, it is suggested that Trichomonosis in greenfinches and chaffinches is [spread through bird-feeders]. 'Disease transmission appears to vary according to the type of feeder used, the number of birds visiting it, and the habitat in which the feeder is located' (Robb et al. 2008, p. 481). (Curtin & Fox, 2014: 1035)

Orros et al. found that bird-feeding stations had an impact on the abundance of ground beetles in gardens:

We trapped significantly fewer ground beetles directly under bird-feeding stations than in matched areas of habitat away from feeders. Video analysis also revealed significantly higher activity by ground-foraging birds under the feeding stations than in the control areas. Small mammal trapping revealed no evidence that these species differ in abundance between gardens with and without bird feeders. We therefore suggest that local increases in ground foraging activity by bird species whose diets encompass arthropods as well as seed material are responsible for the reduction in ground beetle numbers. Our work therefore illustrates that providing food for wild birds can have indirect negative effects on palatable prey species under typical conditions. (2015: 465)

However, it is fair to say that the benefits probably outweigh the costs:

The fact remains that gardens are good for wildlife conservation. Over the past 50 years, the UK has seen the loss of 98 % of wildflower meadows, 50 % of ancient woodlands, 60 % of lowland heathlands, 80 % of downland sheep walks, and 50 % of lowland fens and mires [...] all caused by urban sprawl, overgrazing, grubbing out of hedgerows and intensified agriculture. This makes Britain's 22.7 million domestic gardens with a total area of 432,964 ha increasingly important for wildlife conservation... (Curtin & Fox, 2014: 1035)

### **Cats**

The issue of cats in gardens is one that causes a good deal of debate. There is no doubt that domestic cats are the most common mammalian predator in the UK. As urban areas grow, the impact of cats on wildlife increases. Some ecologists have suggested a cat-free zone around wildlife areas to act as barriers. Thomas et al. note that:

With the recent growth in interest in urban ecology, it has become clear that many populations of birds and mammals are on the edge of sustainability in these human-modified habitats (e.g. Blair 2004; Goddard et al. 2009), as urban animals respond to the challenges of living in highly altered and fragmented habitats. While native predators are still present in these habitats (albeit in lower densities, e.g. sparrowhawk *Accipiter nisus*; Chamberlain et al. 2009), human behaviour results in exceptionally high populations of an introduced predator, the domestic cat. This study, the first of its kind in the UK, demonstrates that to be effective in safeguarding important wildlife habitats, any zone of restricted cat ownership would need to be in the order of 300–400 m. (2014: 919)

Attitudes towards cats can be extreme:

Cats and birds simply don't mix [...] If cats had bells on their collars as big as half-crowns, and they dangled on the end of two inch chains, they would still be a pest on your premises, because it is not only on account of their killing propensities that cats are unwelcome. It is their actual presence which is the disturbing factor, even if they only kill one bird a year. (White)

### **The Centre for Wildlife Gardening**

No discussion of wildlife gardening in London would be complete without reference to the London Wildlife Trust's Centre for Wildlife Gardening which was established more than 25 years ago in Peckham. The centre describes itself as 'an idyllic garden within a quiet residential street [with] an award-winning visitor centre offering practical advice to city gardeners'. The site was at one point an old council cleansing depot but it is now home to an award-winning visitors' centre demonstrating innovative environmental building techniques, which provides a base for school parties.

### **References**

Curtin, Susanna, and Dorothy Fox (2014). Human dimensions of wildlife gardening: its development, controversies and psychological benefits. Horticulture: Plants for People and Places, Volume 3. Netherlands: Springer, pp. 1025-1046.

Gaston, K.J., Smith, R.M., Thompson, K., & Warren, P.H. (2005). Urban domestic gardens (II): experimental tests of methods for increasing biodiversity. *Biodiversity & Conservation*, 14(2), 395-413.

Orros, M.E., Thomas, R.L., Holloway, G.J., & Fellowes, M.D. (2015). Supplementary feeding of wild birds indirectly affects ground beetle populations in suburban gardens. *Urban ecosystems*, 18(2), 465-475.

Robb, G.N., McDonald, R.A., Chamberlain, D.E., & Bearhop, S. (2008). Food for thought: supplementary feeding as a driver of ecological change in avian populations. *Front Ecol Environ* 6(9):476-484.

Ryrie, C. (2003). *Wildlife Gardening*. London: Cassell Illustrated.

Thomas, R.L., Baker, P.J., & Fellowes, M.D. (2014). Ranging characteristics of the domestic cat (*Felis catus*) in an urban environment. *Urban Ecosystems*, 17(4), 911-921.