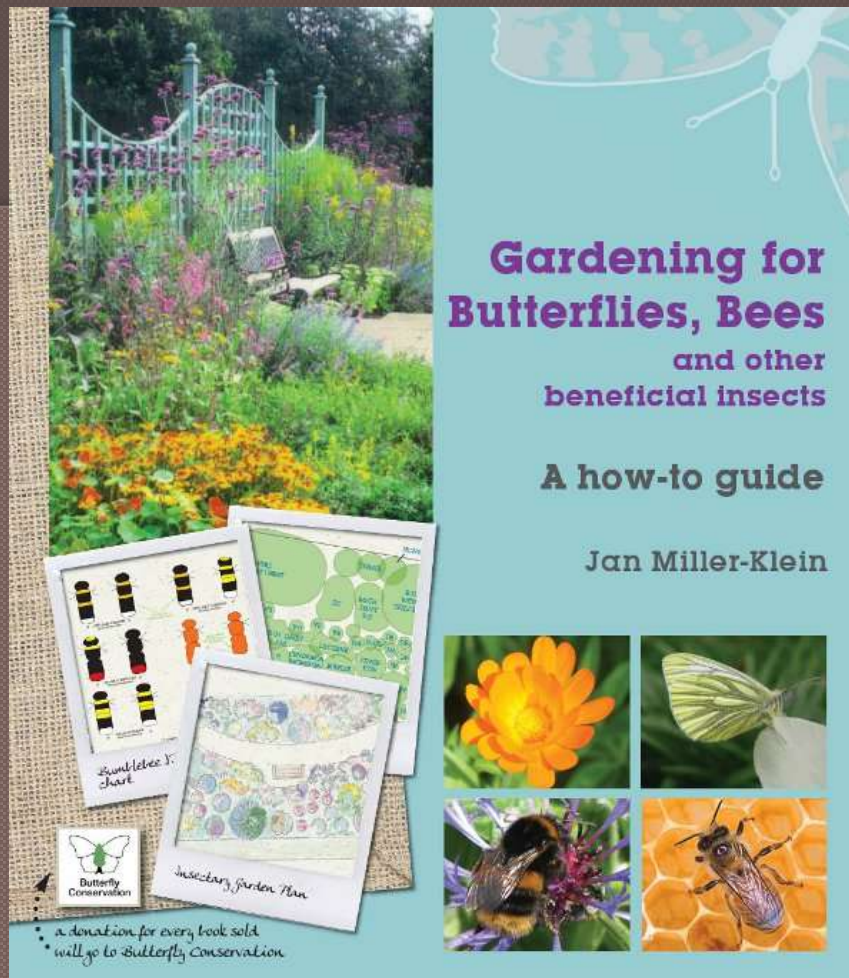


Getting public support for conservation through Gardening

Jan Miller BSc.

bridging the gap between natural sciences and gardening



Public interest

- There is increasing interest in wildlife gardening. especially among city dwellers
- The honeybee colony collapse disorder has emphasised the importance of insects to them.
- The UK public spent 5.2 Billion pounds on their gardens in 2011. This can have a huge influence on conservation that we should be tapping into more.
- I have written a book to appeal to the gardening public .
- I sell plants on the internet for wildlife gardens in the UK.
- I help schools and communities plant butterfly gardens.
- I would like to extend this campaign into other areas of Europe to speed up the pressure on governments and landowners to take conservation seriously.

Why do we need public support?

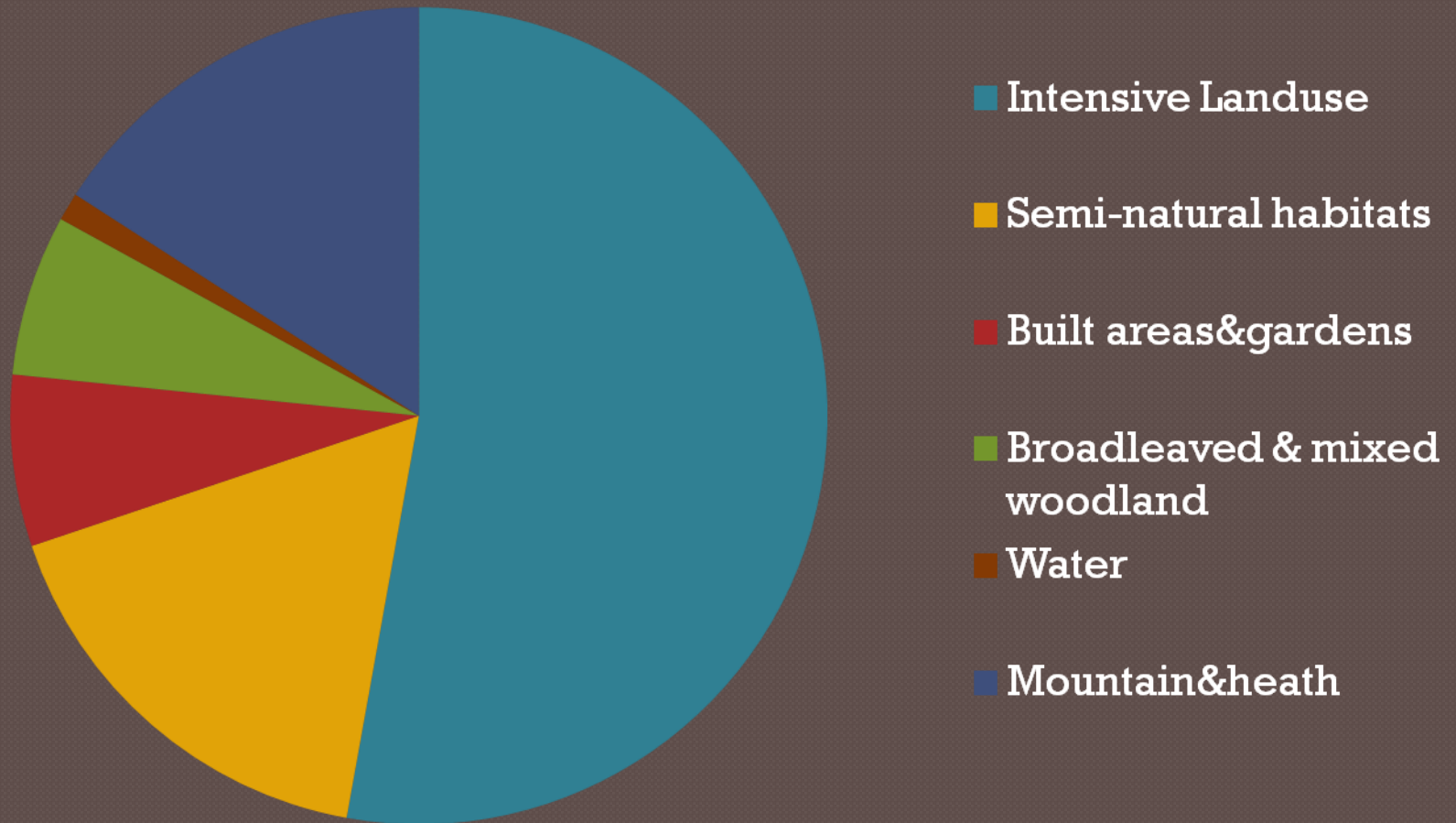
- ◉ We get less opposition to conservation projects
- ◉ More funding
- ◉ More political influence
- ◉ More support from farmers and landowners

Getting across the importance of conserving insect biodiversity

- More of the world's population now lives in cities than in rural areas.
- They need ecosystem sustainability
- Pressure on food production means more people growing own veg.
- We need to show insects as assets rather than pests!
- People need contact with nature.
- Pollination – one third of the food we eat is pollinated by insects – NOT JUST HONEYBEES!
- Insects are also pest predators, and food for other wildlife
- In the UK Brownfield sites now contain as many Red Data invertebrates as ancient woodland (12 – 14%)

Broad habitats in UK 2011

Final Report for LCM2007 – the new UK Land Cover Map D. Morton, et al. Centre for Ecology & Hydrology
(Natural Environment Research Council) July 2011



Why use gardening?

- The gardening market in Europe is worth 5 billion Euros per annum
- That means a large audience, and large potential funds for conservation.
- More of the world's population now lives in cities than in rural areas.
- Those people respond best to a positive message that they can do something to help

Urban habitat area is rising

It isn't going to go away.

- Steve Head , Wildlife Gardening Forum says; Yes! We MUST conserve what small areas of natural habitat remain
- urban Gardens and Green Space (GAGS), has an army of habitat managers (ie gardeners) who are free, keen, and can encourage its wildlife.
- The challenges for the future include:
 - increasing the biodiversity value of GAGS with the support of gardeners
- Building biodiversity into new development design.
- Putting GAGS central to climate-change policy as corridors

Butterfly Conservation online

Butterfly Count project

- ◉ 34,000 people logged on last year
- ◉ 322,000 records submitted
- ◉ Can print off simple ID chart and submit records online
- ◉ No paperwork to handle in the office
- ◉ Data already online for analysis
- ◉ Public Relations more important than scientific validity!

In Europe there are over 400
species of wild bees that do not
sting and are better pollinators
than honeybees (Breeze et al, 2011)



Nigel Dunnet Sheffield university; Examples in community spaces

Brownfield
Sites

Olympic
park
surrounds



Dusty Gedge & John Little green roofs – not only sedums!



Pictorial Meadows loved by the community= reduces vandalism



Flowering lawns

- creation of “wildflower meadows”
difficult to maintain longterm
- but diversifying the sward?
- White clover lawns – drought resistant
and no mowing!
- not verge cutting so often!

garden connectivity for species migrating under climate change.

- Jennifer Owen, ('Wildlife of a Garden; a 30 year study'), had up to 54% of the animal species known for the UK in her sub-urban garden.
- of 214 alien insect species, 42.5% were of southern European or near middle eastern origin.
- The BUGS urban garden research project in Sheffield (Thompson et al.) had similar results.
- These are species that will become ecologically appropriate to the UK with global warming.
- Chris Thomas (York univ.) says maybe the northern parts of Europe will have to become the reserves for previously southern species.
- The garden habitat is ancient, diverse, abundant, under-studied and has growing significance for conservation, communities and climate change - don't treat it as third-class for conservation.

Book
has photos of
Larval
Foodplants
and
Best nectar
for many
insects



Honesty with Orange Tip

Spring

White Family Shape



Honesty

garden plant

Lunaria annua

Hardy Biennial

Purple flowers in April and May provide nectar for the earliest butterflies. Foodplant for the Orange Tip caterpillar.

Masses of silver-penny pods for dried arrangements in autumn. You can leave these in the border and help the wind strip the outer pods by hand, then lots of little mirrors flash in the sun. As they are biennial plants they will die after they have flowered once and made seed, so you can also pull them up in May after the flowers have finished and put something else in their place for Summer colour.

To grow:

Sow seed in pots and leave outside or in an unheated greenhouse through the winter; it needs a cold spell to break dormancy and will start to germinate in Spring. Or sow in open ground. It does not like to stay in pots past May as it needs to get a deep tap-root down, so plant out early. Honesty grows in sun or shade, and will make a large mound of foliage without flowers the first year, flowering the following spring.

book also shows pest predators

- Lacewings, hoverflies and Ladybirds eat large numbers of aphids; they need certain flowers too



What would the book for your country include?

- ◉ Simple ID charts
- ◉ List of the best flowers to attract species
- ◉ List of larval foodplants (with pictures)
- ◉ Plans to copy
- ◉ Butterfly gardens to visit in your region
- ◉ List of suppliers (fund raising opportunities through sponsorship)
- ◉ Info about your conservation organisations

Publicity and Public events

- There are many ways to get people involved.

Family wildlife gardening days – in a churchyard or city park – you can also sell plants, seeds, charts to raise funds



Get a local Tv personality to open a new butterfly garden
in a public park





Butterfly Garden I made in Colwyn Bay

Won 'Britain in Bloom' competition silver and gold medals for several years as part of the biodiversity category.



Local Councils love the good publicity you can
help them achieve



Even Royalty visits!



A WALK ON THE WILD SIDE

with Jan Miller

WE had a wonderful 'Save Our Butterflies' event for the North Wales Branch of Butterfly Conservation in Old Colwyn.

I took some guided tours round the three butterfly-attracting gardens I have designed and planted in public parks there, and the weather helped us see a lot of butterflies – including, to much amazement, the scarce white-letter hairstreak whose caterpillars have to feed on elm trees, and so has declined drastically since Dutch elm disease killed so many trees in the 1970s.

This butterfly is not often seen in open countryside where there are still some elms, never mind in a public park in a built-up area! Credit to Cliff Prout and the Old Colwyn Environment Federation for all the fund-raising and project direction.

When Mr and Mrs Gibson bought an old manor house with chicken farm at Abergwyngregyn, between Conwy and Bangor, they didn't know what a journey of discovery they were embarking on.

Renovations to the house, with its strange watch tower, revealed a tunnel leading from the cellar down towards the sea; a mosaic floor was underneath a flower bed, the foundations of a huge gatehouse lay beneath the drive.

When Edward I finally conquered Wales, he wanted to eradicate every trace of the Welsh Royal Family. This included not only destroying their Great Seal and all documents, but also sending any children that had claim to the Welsh 'Crown' into convents or prisons so that no further descendants could be born.

So also, the palace of the Llewelyns was altered, hidden. There is still dispute over exactly where it might be, but it is known to have been in this village, and the Gibsons have painstakingly researched the area.

The books of Sharon Penman; Here be Dragons, Falls the Shadow, The Reckoning, and of Edith Pargeter (alternative nom de plume of Ellis Peters); The Brothers of Gwynedd and The Heaven Tree, all made use of Mrs Gibson's research, and are fascinating books if you want to sort out the complex history of the Welsh and English interaction. They are also a cracking good read!

Nearby is the beautiful walk to Aber Falls, up the track through a deciduous wood of oak, ash, hazel, alder (once grown here for clog-making), blackthorn, willow and birch.

These make a dense canopy in



summer, but in spring, bluebells, primrose, wood sorrel and wood anemone can flower before the light is lost from the floor. A core from one of the oaks has shown it to be 220 years old. Birds here include dippers in the river, raven and peregrine on the cliffs, tree pipit and redstart along the woodland edge, and pied flycatcher and wood warbler in the oak woods.

This is the steepest river in the whole of Wales and England, the fall measures up to 100 feet.

The mountain over which the falls pour was made by an igneous intru-

sion of micro-granodiorite, a hard rock similar to that seen at the Stone Age axe factory area above Penmaenmawr, which is, in fact, probably connected at depth. The local rock below (slate) was weathered away more easily by the melt water from the Ice Age, to leave the steep drop.

The falls are an impressive sight, and a huge pothole at the base made us wonder just how much water must have once poured over them to make such a feature.

More than 150 historical and archaeological sites have been found

in the Cedydd Aber National Nature Reserve – as well as the famous court of the Welsh princes; there is evidence of man's involvement in the landscape over periods between 4,500 and 2,000 years ago.

The first site excavated last year seemed to be a tall standing stone, a cairn and a levelled platform typical of the Early Bronze Age about 2500 BC. Digging revealed a more complex history of a variety of uses over a long period of time, including the processing of grain.

The second site is a smaller burial cairn with a stone cist, a kerb of stones and a prehistoric flint tool.

This is all being investigated through the Aber Revelation Project, which is part of CCW's Visitor Facilities Development Project for National Nature Reserves which is funded by the European Union's Objective One scheme.

A second phase of work will involve aerial photography, a study of place names and folklore and mapping of trees and field boundaries to find out more about how people in the past managed the land.

All the information will eventually be used to update the visitor centre and add enormous interest to a walk in this valley.

© Jan Miller 2006



Look out for ***

Moelyci Environmental Centre, Fferm Moelyci, Lôn Felin Hen, Tregarth, Bangor, Gwynedd, LL57 4BB; 01248 602793 office@moelyci.org; Open Day, August 20

Saturday, August 19, 10.30am: Heathland Wildlife Walk. A rambling walk to enjoy the heather and gorse at their peak, on the Mountain and Parc. About four miles, some rough and steep ground, but a slow pace with lots of stops for the wildlife. Old Colwyn Environment Federation, c/o C Prout, 15 Hesketh Rd, Colwyn Bay LL29 8AT; 01492 512740

More information about butterfly gardens and the Penmaenmawr Stone Age axe factory can be found in Jan's book, as well as all these columns from 2003 to 2005: A Country Diary for North Wales is available from local bookshops.

Photos and plantlists for the Old Colwyn Butterfly Gardens, plus local Butterfly Conservation events at www.northwalesbutterflies.org.uk

plant butterfly bed with school children in school or park



Areas can be left at edges of development;
then interpretation boards are useful



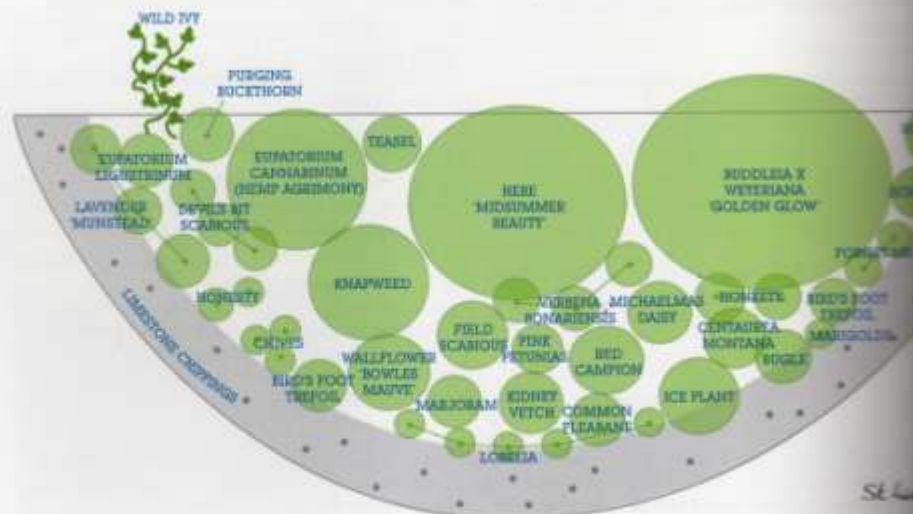
Raised beds with rubble



Butterfly Border plan



St Lukes, Crosby - in flower August 07 - S. Mathews



Book has
simple plans
to copy

With photos of results-
here in a churchyard

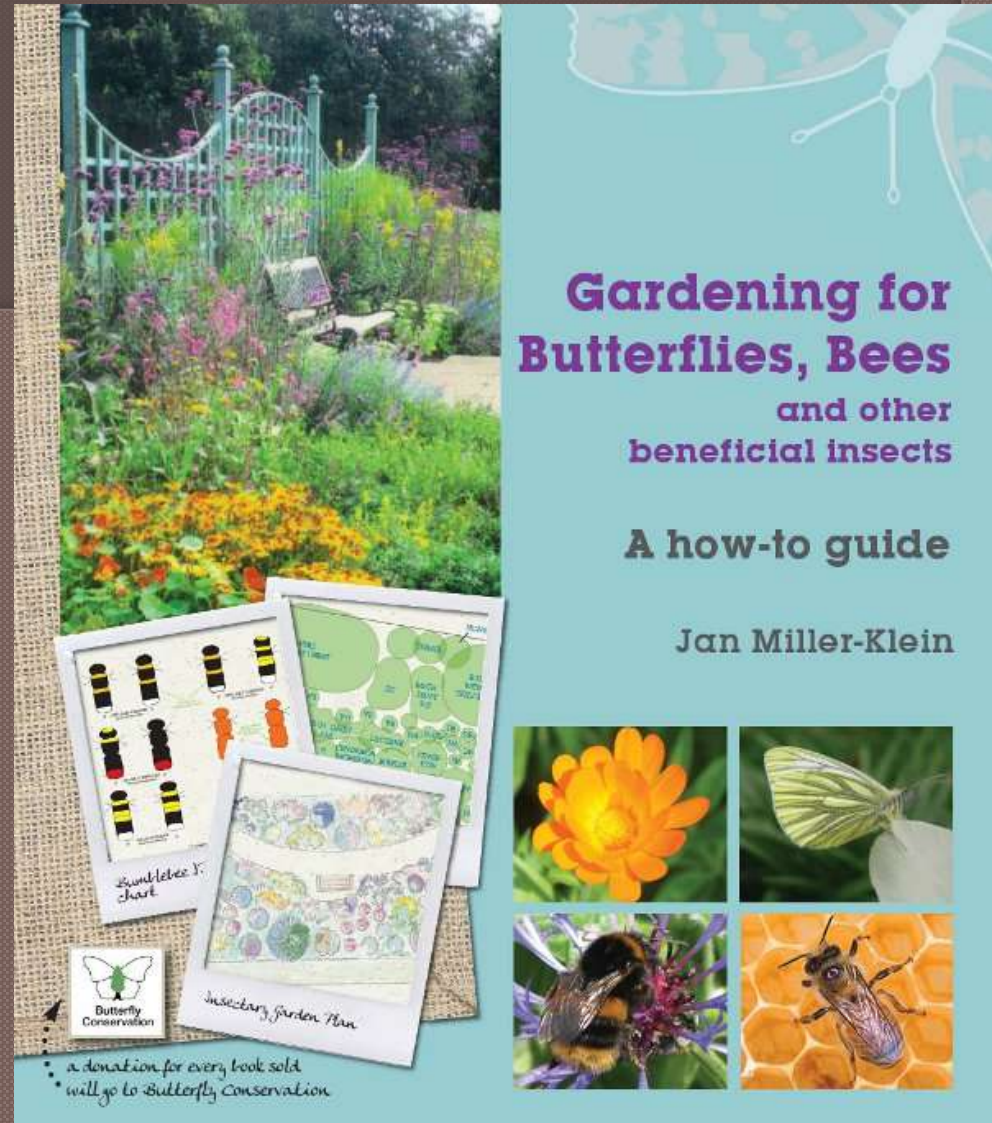


I need your help to produce versions for your own countries

- ◉ Written in easy to read local language
- ◉ Details about your particular species, habitats and conservation efforts.
- ◉ Lots of local beautiful photos!
- ◉ Funding for the design and printing is available.
- ◉ Distribution is your problem.

More information in;

Special deal; 10 Euros
in exchange for your
Business card
& feedback



References

- <http://www.shef.ac.uk/landscape/staff/profiles/ndunnett> marketing seed mixes through PictorialMeadows www.pictorialmeadows.co.uk
- **Countryside Survey Final Report for LCM2007 – the new UK Land Cover Map**; D. Morton, C. Rowland, C. Wood, L. Meek, C. Marston, G. Smith, R. Wadsworth, I. C. Simpson. Centre for Ecology & Hydrology, July 2011
- Head, S. 44 *ECOS 32(2) 2011* **What is the role of British gardens in biodiversity conservation?**
- T.D. Breeze, A.P. Bailey, K.G. Balcombe, S.G. Potts Pollination services in the UK: How important are honeybees?
- [Agriculture, Ecosystems & Environment Volume 142, Issues 3–4](#), August 2011, Pages 137–143
- Owen, J. (2005) *The Ecology of a Garden: The first fifteen years*. Cambridge University Press & *Wildlife of a garden* (2010) RHS.
- Loram, A., Thompson, K., Warren, P.H. & Gaston, K.J. (2008) Urban domestic gardens (XII): The richness and composition of the flora in five cities. *Journal of Vegetation Science* 19, 321–330.
- Smith, R.M., Warren, P.H., Thompson, K. & Gaston, K.J. (2006) Urban domestic gardens (VI): environmental correlates of invertebrate species richness. *Biodiversity and Conservation* 15, 2415–2438
- Thompson, K. (2006) *No Nettles Required: The Reassuring Truth about Wildlife Gardening*. Eden Project books.
- Gaston, K.J., Warren, P.H., Thompson, K. & Smith, R.M. (2005) Urban domestic gardens (IV): the extent of the resource and its associated features. *Biodiversity and Conservation* 14, 3327–3349
- Thompson, K., Hodgson, J.G., Smith, R.M., Warren, P.H. & Gaston, K.J. (2004) Urban domestic gardens (III): Composition and diversity of lawn floras. *Journal of Vegetation Science* 15, 371–376.
- Loram, A., Tratalos, J., Warren, P.H. & Gaston, K.J. (2007) Urban domestic gardens (X): the extent & structure of the resource in five cities. *Landscape Ecology* 22, 601–615
- Mathew Thomas (2010) Starting in the cities; Biodiversity for all? *ECOS 31* : 60–62
- Crafer, T. (2005) Foodplant list for the caterpillars of Britain's Butterflies and Larger Moths. Atropos publishing
- Thompson, K., Austin, K.C., Smith, R.H., Warren, P.H., Angold, I.G. & Gaston, K.J. (2003) Urban domestic gardens (I): Putting small-scale plant diversity in context. *Journal of Vegetation Science* 14, 71–78.
- Gill, S., Handley, J.F., Ennos, A.R. and Pauleit, S. (2007). Adapting cities for climate change: the role of the green infrastructure. *Built Environment* 33, 97–115.
- Brenneisen, S. (2006) Space for Urban Wildlife: Designing Green Roofs as Habitats in Switzerland *Urban Habitats*, 4:27–36
- Miller-Klein, J. *Gardening for Butterflies, Bees and other beneficial insects*; Saith Ffynnon Books