Presentation to the UK-MAB Urban Forum by Ken Thompson on 7th March 2006 at the University of Sheffield.

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Thompson, Ken(2006). *No Nettles Required: The Reassuring Truth About Wildlife Gardening*. Eden Books / Transworld Publishers, London. ISBN 1903 919681. pp. 183.

Summary

The book consists of a Preface and nine chapters, plus acknowledgements, a listing of BUGS publications, and an index of flora and fauna.

The first chapter, 'What is garden wildlife?' discusses possible recent biases towards mammals —foxes, badgers, hedgehogs— and birds. The author argues that the wildlife gardener should really be interested in *all* wildlife occurring within gardens. Using insects as an example, he talks about a hypothetical pyramid of numbers, with creatures such as nematodes, below insects, still being worthy of consideration. It is argued that the concentration on mammals and birds is patronizing. In reality, there may be many more fascinating creatures observed even on a daily basis within gardens.

The second chapter, 'Investigating garden wildlife?' firstly pays tribute to Jennifer Owen (the researcher on one Leicester garden, for 30 years), then sets out one of the problems in assessing garden wildlife. The garden wildlife of an average garden is simply not known. One of the aims of the Biodiversity in Urban Gardens (BUGS) project (www.bugs.group.shef.ac.uk) was to investigate the flora and fauna of quite average gardens. 161 gardens were selected in Sheffield, and these were eventually narrowed down to 61, ranging in size from 32 to 940 square metres (average size of a study garden was 151 square metres). They ranged in altitude from 40 metres to 250 metres above sea level. The gardens were mapped, and then various sampling techniques were adopted for invertebrates on the sites: (1) pitfall trapping; (2) collecting samples of litter and extracting them in Tullgren funnels; (3) Malaise traps to catch flying insects were set in 24 gardens (one of which was lost to thieves) —these were found to be good at intercepting most flying insects but not butterflies and moths; (4) aerial pitfall traps. In addition, observations were carried out to detect leaf-miners, and other natural history field surveys were made to complement the sampling programme.

In chapter three, ‘What the ideal wildlife garden doesn’t need’, and based on the central finding emerging from BUGS that ‘gardens are stuffed to overflowing with an enormous diversity of largely unseen wildlife’, a critical view is taken of exactly what is needed to encourage ‘wildlife’, broadly defined, in gardens. Set against farmland, gardens are generally rich in wildlife. Some ‘garden myths’ are then dealt with: ‘only big gardens are good for wildlife’, ‘town gardens are useless for wildlife’, ‘are native plants better for wildlife?’, and ‘wildlife-friendly plants?’. This includes much discussion of the relative merits of native versus exotics. The author concludes that many native species, and the merits claimed for them, are rather obscure. Set against this, is evidence that many insects will feed quite happily from introduced exotic species. Evidence for this argument, is drawn from BUGS work, and a further context given is that of work coming from the United States. The chapter concludes by stating that the failure of the BUGS study to find much effect of garden size and location, or of ‘exotics’ versus ‘native’ plants, almost behoves a need to find something which has a positive effect on garden wildlife. This is revealed in the next chapter.

‘Lies, damned lies and compost heaps’ reveals that a consistent result from the BUGS work was the effect of trees and shrubs on garden wildlife. Essentially, these enhance wildlife by supplying another physical (and biological) layer on which creatures can feed. The second consistent effect found was that of an altitudinal gradient, in relation to garden flora and fauna, within Sheffield. For example, invertebrates such as beetles, spiders and wasps were more abundant and diverse in the lower, drier warmer parts of the city, than higher up. It was also found that altitudinal gradient had a powerful effect on the plants growing in garden lawns. Among ‘other useful findings’ the author cautions against the problems of drawing too many conclusions from a study where results from some invertebrate groups left 90 percent of the variation unexplained. He tentatively draws the conclusion that a high degree of natural and designed heterogeneity within a garden will encourage more wildlife, whereas ‘dull’ gardens, managed with excessive tidyness, will tend to deter wildlife. Compost heaps and ponds come in for special mention.

The next chapter, ‘Garden doctor: selling your garden to wildlife’ deals in a little more depth with planning for garden wildlife. The significance of leaving long grass areas, as potential breeding sites for both butterflies and bumblebees is highlighted. The chapter then looks at nettle patches, concluding that, because of the abundance of stinging nettles, generally, there is very little to be gained from growing it deliberately to attract breeding butterflies. The use of artificial bumblebee nests is also concluded to be of limited use: Queen bumblebees of hole-nesting species have been found to be quite choosy as to where they even look for nest sites, and this may be part of the explanation. Artificially made nests for solitary bees tended to be much more successful. Another factor regarded as being fairly essential to encouraging garden wildlife is deadwood, but here again, probably because of the recent origin and size of the wood put into gardens by BUGS, the results were rather more equivocal. Some further data is also given on garden ponds, with the conclusion that they are remarkably effective, even at very small sizes.

In chapter six, ‘It’s a jungle out there’, a discussion of herbivorous insects, plant defences and the interaction between the two, is entered into. Then information is presented about ecosystems, and the realities of predators and their interaction with prey, and the fact that badgers may not be useful animals to have in gardens, simply because of their predatory activities. The author discusses ‘the balance of nature’ and potential conflicts between pest control and wishing to foster desirable wildlife, and then the importance of being able to distinguish between major groups of insects. Finally, the significance of compost and leaf-litter to the organisms feeding comes in for emphasis.

Next, in ‘a chapter about birds’ the author draws on information taken from the British Trust for Ornithology’s (BTO) Garden BirdWatch scheme which has been running since 1995. Regional variation is species-richness implies that the ‘best’ 10 x 10 km square within the UK for plants is SY98, which contains Corfe Castle and Wareham within it. This is also a good square for butterflies. By contrast some Scottish localities will contain an inherently poorer species range. Therefore, from the starting point the wildlife gardener will be either advantaged or disadvantaged by the locality within which she or he is working. One of the BTO findings comes in for some criticism: that rural gardens were better for birds than suburban gardens which, in turn, were better than urban. The author wonders whether part of this finding (which differs from BUGS findings on invertebrates) is due to an inherent bias in the respondents to the BTO survey. Predictably enough, there were more birds in gardens with shrubs and trees. Lists of plants for encouraging seed-eating birds and caterpillars for other bird species are given.

In ‘The best thing since sliced bread’ the background flora and fauna of gardens is dealt with, in some detail. These are the pre-existing species, or incoming ‘volunteer’ species found colonising gardens. Most of these wild species, it is emphasised, tend to be common. Rarities are mostly planted. There will be few rare species from semi-natural habitats which will easily or naturally colonise gardens. The chapter gives final recommendations on larval foodplants to put in for butterflies, and the butterfly species most likely to occur as an integral part of the garden fauna are listed in descending order.

In the final chapter, ‘Why you should care?’ several reasons are given for wishing to foster wildlife in gardens. The main reason cited is diminishing biodiversity. Almost as an aside, the notion of ‘wildlife corridors’, e.g. railway and canal routes, is then mentioned but dismissed, since gardens in urban areas will be much more likely routes along which wild plants and animals will travel. The ‘perfect wildlife garden’ is then discussed. It is emphasised that perhaps a diversity of gardens will be better, than one single, utterly formulaic ‘wildlife garden’. Finally, the author argues that ‘reconnecting with nature’ is one of the best reasons for gardening with wildlife. This centres on the innate human affection for nature (termed ‘biophilia’ by Edward Wilson) and its need to be re-kindled.