

Wildlife Gardening Forum Newsletter October 2013

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1. Forum News

Steve Head: Forum Coordinator

Many thanks to Kate Bradbury for putting this newsletter together. Her new book "The Wildlife Gardener: Creating a Haven for Birds, Bees and Butterflies" published by Kyle Books, came out in May. I haven't seen a copy yet, but we are hoping Chris Baines will provide a review for the next newsletter.



Did you notice? We have a new or at least revised logo. As part of the website construction, we have had the benefit of a pro-bono design consultancy from BBC director and designer Dawn Parsonage-Kent. The new logo is a cleaned-up and sharper version of the previous one, with the text neatly encapsulated within the "soil" below the image. As a portrait format, it will fit better with letterheads and posters. The website is proceeding well, with nearly 50 people signed

up to contribute pages relevant to their specialisations. Most of the structural coding is complete, and the site will eventually have over 100 pages, with a considerable amount of additional material available through pdf file downloads.



The Wildlife Gardening Forum has been accepted as an Associate Member of Wildlife and Countryside Link, an

information sharing and lobbying body of more than 40 environmental charity members, including all the big players such as the RSPB, the CPRE, Butterfly Conservation and the Wildlife Trusts. Dr Andy Salisbury will be the Forum's representative at meetings, and our membership will help us build our expertise and influence to influence government policy towards gardens.

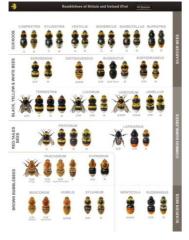
PLEASE continue to send your news, publications and stories to us for inclusion in newsletters. For the time being, please continue to send them to me at wlgf@stephenmhead.com, although we will be getting proper "@wlgf.org" email addresses soon.

2. New bumblebee identification app launches





The Bumblebee Conservation Trust is pleased to announce the arrival of the Nature Guides Bumblebee app for iPhones and iPads. Developed in conjunction with Habitat Aid, the app features:



- Beautiful illustrations by Richard Lewington¹, showing all forms for each species
- Multiple video clips for every species, showing interesting and characteristic behaviour
- All-species view organised to help rapid identification in the field
- Still photographs for every species, carefully selected to show key identification points
- Distribution maps and detailed text accounts including advanced identification
- Extensive introduction reproduced from David Alford's classic book Bumblebees
- Intuitive software that allows any species to be compared side-by-side

The app, "Bumblebees of Britain & Ireland" is available from the Apple iTunes App Store in two versions. A basic edition (£1.49) covers the eight species most frequently encountered in the UK and Ireland. The Pro edition (£9.99) covers all 23 species including scarcer bumblebees such as the great yellow and the recently reintroduced short-haired bumblebee.

¹ Author/illustrator of the excellent "Guide to Garden Wildlife" published by British Wildlife Publishing

3. Ministry of Justice keen to help bees



Thanks to help from a Bumblebee Conservation Trust (BBCT) volunteer who set up a meeting between BBCT Conservation Manager Gill Perkins and Ministry of Justice (MoJ) principal ecologist Phil Thomas, the MoJ is on track to create bumblebee habitats on its extensive land holding. The MoJ owns about one per cent of the total UK land, not just in areas around prisons, but land around County courts, stately homes and a variety of other rural and urban areas, some of which

are designated Sites of Special Scientific Interest (SSSIs).

The MoJ is keen to develop a partnership with BBCT, in particular training MoJ volunteers and staff to identify bumblebees, but also to ensure some of its land is managed for bumblebees. This news came from the BBCT e-newsletter - go to http://bumblebeeconservation.org/news/e-newsletter-sign-up to join.

3. "My Side of the Fence: The Natural History of a Surrey Garden" Reviewed by Steve Head

Journalist, conservationist and photographer Jeremy Early has recently published this book about the wildlife of his Reigate garden. The garden is quite large, about a third of an acre, but less than a kilometre from the centre of Reigate. As the Google



Maps image shows, it is a leafy area, close to a substantial public park. His current species count includes 13 mammals, 53 birds and 22 butterflies, and Jeremy has spent the last five years establishing habitats and nectar-rich plantings for invertebrates. To date he has identified over 200 bees, wasps and hoverflies, which comes

remarkably close to Jenny Owen's total of 94 hoverfly and 121 bees and wasp species over 30 years in her Leicester garden².

Jeremy's book is a personal record rather than an instruction manual or a detailed scientific work, but it is a fascinating and passionate account of what a keen observer can discover from paying attention to the wildlife in his garden. After introducing the principal habitats and plants in his garden, Jeremy gives accounts of the mammals, birds, pondlife, butterflies and moths. The book comes into its own when he moves on to the bees, wasps and flies which make up nearly a third of the book, and the accounts of nearly 60 species of flies are particularly useful, since this is an

² Jennifer Owen 2010. Wildlife of a garden, a thirty year study. RHS publications.

understudied group. There is a good section on beetles, then a summary of other invertebrate species. I was delighted to see the illustration of the house spider *Tegeneria* showed it next to a bath plug, which is where I usually find it.

Above all, the quality of the abundant photographs is outstanding, providing a real aid to identifying common species in Jeremy's favoured groups. The index is also substantial and thorough. A recommended book, worth reading for pleasure rather than just for reference.

5. Dr Ken Thompson is in the BES Hall of Fame



Forum Trustee and Founder Member Ken Thompson has had an exceptional professional honour. As part of the British Ecological Society's celebration of its 100 years of The Journal of Ecology, it has published a list of the 100 most influential papers published in its scientific journals. No less than three of Ken's papers made the list, putting him level with the great Charles Elton in the league table.

Two of the papers cover the ecology of seed germination and seeds in the soil "seed bank". The third, with Mark Davis

and Peter Grime, provided the first theory of what makes plant communities susceptible to invasive species, and has been cited in nearly a thousand subsequent papers.

6. What's going on with wasps?

In July the Daily Telegraph published an article suggesting (social) wasps were nowhere to be seen³. Professor Jim Hardie, director of science at the Royal Entomological Society, is quoted blaming the cold, wet spring. This, he suggested, meant there were fewer caterpillars when queen wasps were emerging from hibernation and many early nests will have perished before the weather improved. Then, in September, the press was full of stories of 'swarms' of wasps ruining barbecues. So have wasps had a good year, or a bad one?

It turns out they were just very late. Quoted in the Guardian⁴, Stuart Roberts, chairman of the Bees, Wasps and Ants Recording Society (BWARS), said that, rather than appearing in great plagues, social wasp numbers were actually fairly average this year. Thanks to the bad weather over the previous few years, we had just got used to not seeing that many and so it seemed that they were descending in plague-like proportions.

³ www.telegraph.co.uk/science/10197780/Theres-less-of-a-buzz-in-our-gardens-this-summer.html

www.theguardian.com/environment/blog/2013/sep/05/threatened-plauges-wasps-summer

Roberts also suggested the cold winter may have been good for wasps: "In a cold winter, hibernation is more successful, and more mated queens are likely to have survived. The delayed Spring means that instead of peak numbers of wasps emerging to forage in early August, they are emerging in early September. So the perceived increase in numbers at this time of year is actually normal colony progression — it's what you expect. And the good summer means wasps have been able to forage, more nests are able to be established and reach maturity and there is a ready supply of insects in the warm summer months."

7. Government considers making bee-friendly planning laws

Over the next 10 years the Government plans to increase wildflower habitats for pollinators by 200,000 hectares⁵.

As part of an 'urgent review' of current policy, Environment Minister Lord De Mauley has suggested that councils could be banned from cutting grass verges in early summer and developers will be forced to put in place new nesting sites for solitary bees when they knock down buildings, as part of plans being considered by the Government to boost insect numbers⁶.

De Mauley said the Government would also consider issuing advice to councils on how to ensure habitat is better protected, as well as instruct them on planting nectar-rich flowers on municipal flower beds.

A new National Pollinator Strategy will be published by November.

8. Scientists discover what's killing our bees and it's worse than you thought

Scientists at the University of Maryland and the US Department of Agriculture have found that a cocktail of pesticides and fungicides are taken back to honeybee hives in nectar and pollen⁷. While this does not identify a specific cause of honeybee decline or Colony Collapse Disorder (where honeybees seem to mysteriously disappear from their hives), this new research adds to existing evidence suggesting that man-made chemicals are harming our bees.

The scientists found:

 When pollen from bees pollinating cranberry, watermelon and other crops was fed to healthy bees, those bees showed a significant decline in their ability to resist infection by a parasite called *Nosema ceranae*.

 The pollen was contaminated on average with nine different pesticides and fungicides, though scientists discovered 21 agricultural chemicals in one sample.

www.telegraph.co.uk/earth/earthnews/10148561/Council-grass-cutting-ban-to-protect-bees-is-planned.html

⁶ Wouldn't it be amazing if for once some joined-up Government thinking produced guidance for developers on the whole gamut of garden wildlife? [Steve]

⁷ http://qz.com/107970/scientists-discover-whats-killing-the-bees-and-its-worse-than-you-thought

 Bees that ate pollen contaminated with fungicides were three times as likely to be infected by the parasite.

Widely used, fungicides were thought to be harmless for bees as they're designed to kill fungus, not insects, on crops like apples. Labels on pesticides warn farmers not to spray when pollinating bees are in the vicinity, but such precautions have not applied to fungicides.

9. Fast moving snails spread dog disease parasite across UK

As well as destroying our beloved plants⁸, slugs and snails are now being blamed for spreading a parasite that is deadly for dogs.

The past few wet summers have proved the ideal breeding grounds for gastropods. According to the Royal Horticultural Society (RHS), snail numbers increased by 50 per cent last year.

The lungworm parasite, *Angiostrongylus vasorum*, infects dogs when they eat slugs or snails. The parasite has spread significantly in Britain over recent years⁹ Researchers at the University of Exeter were commissioned to look into the scale of the threat by the Be Lungworm Aware campaign, which was set up and funded by Bayer Animal Health¹⁰.

The scientists attempted to track the movements of snails in garden situations. To do this they attached tiny, multicoloured LED lights to the backs of about 450 snails and used UV paint to track their movements. They found that the snails could cover distances up to 25m in a 24-hour period. Many snails followed the slimy trails laid by others. Dr Dave Hodgson of Exeter University says it is all about conserving energy. "We know that snails use about 40% of their energy budget producing slime. Given a chance, a snail will prefer to follow a trail that has been laid by another, it is a form of cheating like slipstreaming."

10. Butterflies bounce back after hot summer

UK butterfly numbers have benefitted from the long spells of warm weather this summer, according to the 2013 Big Butterfly Count. The survey attracted a record 46,000 participants, who spotted a total of 830,000 butterflies. The small white was at the top of the list of sightings, followed by the large white and the peacock. Sightings of small tortoiseshells and peacocks rose by 388 per cent and 3,500 per cent respectively on 2012 figures¹¹.

⁸ Remember some slugs are carnivores and eat the problem molluscs gardeners dislike!

⁹ Morgan E. and Shaw, S. 2010 *Angiostrongylus vasorum* infection in dogs: continuing spread and developments in diagnosis and treatment. Journal of Small Animal Practice 51:616-621

¹⁰ www.bbc.co.uk/news/science-environment-23798012

www.bbc.co.uk/news/science-environment-23798012

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www.bbc.co.uk/news/science-environment-23798012

The sustained warm weather over the summer provided 'perfect' conditions for a boom in butterflies and day-flying moths according to experts. "Butterflies are cold-blooded creatures that rely on the warmth of the sun in order to be active," said Butterfly Conservation's survey manager Richard Fox. The warm weather also saw an abundance of migrants from the Continent including the clouded yellow, painted lady and silver Y moth.

Fifteen of the species in the Big Butterfly Count showed increased numbers, 12 of which were up by more than 50 per cent. Only four species had decreased sightings: the ringlet, marbled white, meadow brown and six-spot burnet moth¹².

Although conservationists are positive about the survey results this year they warn that the weather will not solve the problem for us. "UK butterflies are in long-term decline. Long-term studies going back to the 1970s show that three quarters of UK butterfly species have declined in range and many have also decreased in abundance," said Mr Fox. "The only way that we will be able to halt and reverse the long-term declines of these beautiful creatures is by redressing the damage that has been done to wildlife habitats across the UK landscape."

11. Terry Oliver's observations on butterflies and bumbles

Forum members have noticed the summer butterfly abundance. Writing in mid-September, Terry Oliver has sent Steve Head his records¹³ of 24 species in his West Sussex garden (the lucky man has white admiral or purple emperor and silverwashed fritillary). In 2012 he counted 146, in 2013 197 butterflies in his standard British Trust for Ornithology Garden Bird Watch (BTO GBW) samples, with 188 (2012) and 430 (2013) bumblebees. He comments:

On the whole they confirm what people have been generally been saying about this year being better for both taxa. A few points though:

- 1. The Early bumblebees and red-tailed bumblebees had a dreadful year in 2012 and it is great to see how they have recovered.
- 2. Two 2013 peaks for buff-tailed/white-tailed worker bumblebees may be related to abundance of nectar sources in the garden one coinciding with the early summer flowers, including meadow border, and the second with the high summer flowers.
- 3. The presence of butterfly species not regularly seen in the garden is possibly an indicator of a good butterfly year for 2013. (2006 was even better in this regard). The white admiral/purple emperor record (two sightings in the week) is interesting for two reasons: the attraction was a large maple tree on

 $^{^{12}}$ Ironically, I saw more marbled whites and meadow browns this year than I remember seeing for a very long time - Steve Head

¹³ Excel spreadsheet available on request

my boundary, presumably for the honeydew; and, purple emperors have had a brilliant year in Sussex. (My first sighting was too fleeting and the second, leaving the top of the maple tree, too far away for me to distinguish between the two species although Sussex Butterfly Conservation (SBC) think purple emperor the most likely.)

4. Seeing no final generation Speckled woods this year, so far, has been a bit of a surprise but I haven't seen many whilst working on the SWT reserves either.

Terry also offered two interesting comments on the use of gardens as fixed point wildlife record sources for the wider landscape. Note in particular the sentence in italics.

- 1. Surrey Biodiversity Information Centre have used my records, accessed from the BTO GBW database, to populate a tetrad on their 2012-2014 atlas which had been listed on their web-site as having few if any, butterfly records.
- 2. While gathering biodiversity evidence for our Neighbourhood Plan we established that BTO GBW and RSPB records are not included in the county database because they include personal data. (Anonymous records from Big Butterfly Count are included though). We therefore combined citizen science data with county records which added additional locations and species, and some more recent record dates. I followed this up by sending my garden species list, with the most record dates, for input to the county database with the aim that the records will now be part of the baseline data for any ecological assessment done for new developments in the vicinity. Getting anything other than protected species and habitats taken into account in the design or approval of development is another story though and whether this can be changed through neighbourhood planning remains to be seen.

12. Wild About Gardens Week



The Royal Horticultural Society (RHS) and The Wildlife Trusts (TWT) are spearheading a new initiative to help halt the decline of wildlife such as hedgehogs and butterflies in the UK, and are calling on the public to get involved in 'Wild About Gardens Week' (25-31 October, 2013).

In May, the State of Nature Report¹⁴, compiled by 25 wildlife organisations, found that 60 per cent of the 3,148 UK animal and plant species assessed have declined in the past 50 years.

¹⁴ www.wildlifetrusts.org/publications#state-of-nature

In response to this, the RHS and TWT have teamed up to raise awareness and are urging the public to get involved. The RHS will encourage its 3,300 community gardening groups, 17,250 schools, 145 Partner Gardens and the public to hold wildlife gardening events during the week. A microsite www.rhs.org.uk/wildaboutgardensweek will be set up for groups and individuals to log events. The first 200 registered groups* to add events will receive free bulbs from the RHS.

13. The state of brownfields in the Thames Gateway



This important new Buglife report was written by Jamie Robins, Sarah Henshall and Alice Farr

Brownfields, like gardens, are artificial urban habitats that can support a huge range of species, and are often the only remaining wildlife-rich space outside gardens in our towns and cities. Wildlife-rich brownfields develop as a result of abandonment and periodic disturbance, combined with lownutrient soils and introduced substrates, preventing fast-growing species dominating. Even small sites can contain mosaics of habitats, essential to the survival of many

invertebrates due to recent declines of semi-natural habitats such as flower-rich grasslands. Brownfields are becoming increasingly important within ecological networks, providing refuges and linkages to sustain biodiversity.

At least 15 priority species are strongly associated with Thames Gateway brownfields, including the shrill carder bee (*Bombus sylvarum*) and brown-banded carder bee (*Bombus humilis*). Thames Gateway brownfields support over 100 Red Data Book and 400 Nationally Scarce species, and a remarkable 74 per cent of the national fauna of bees and wasps¹⁵.

However, brownfields are increasingly being targeted for redevelopment as part of the Thames Gateway regeneration to provide homes and employment. Concerned at these losses, Buglife and Natural England collaborated on the 'All of a Buzz in the Thames Gateway' project¹⁶ between 2005 and 2008, mapping and assessing over 6,900 hectares of brownfield. The study found that 198 sites (over 40 per cent) showed High or Medium potential for invertebrate biodiversity. Buglife has since revisited these sites to quantify the rate of loss since their assessment between 2005 and 2007. Using aerial imagery and ground-truthing, the 198 High or Medium potential sites were reassessed as being intact, partially destroyed, destroyed or having planning permission granted (where interest would be lost). Over a six-year period, over half (51 per cent) of important brownfields

15 Harvey, P (2000), The East Thames corridor - a national important invertebrate fauna under threat, *British*

Wildlife 12: *91-98*16 Roberts, J., Harvey, P. and Jones, R. (2006) All of a Buzz in the Thames Gateway; Phase 1 project report. Report produced for English Nature.

within the Thames Gateway had been lost, damaged or were under immediate threat. Of the 198 sites revisited, only 98 remain intact and free of immediate threat. London showed the highest rate of development with over two thirds (69 per cent) of sites lost, damaged or with an outstanding planning permission¹⁷.

Development and regeneration are undoubtedly resulting in the loss of wildlife-rich brownfields across the Thames Gateway. Some 100 of the 198 sites identified as being of High or Medium potential for invertebrates between 2005 and 2007 were found to be lost or at immediate risk. The failure to protect over 50 per cent of the sites reviewed demonstrates that there is insufficient protection of high value brownfield sites.

The loss of swathes of high quality habitat is likely to have a significant impact on the rare invertebrates of the Thames Gateway. The loss of varied features and habitats across the landscape runs the risk of rare species being completely lost from the regional and national fauna.

The report highlights that the planning system does not deliver safeguards for brownfield habitats and invertebrates, and calls for greater protection and consideration of their value. The rate of development on brownfields is highly unsustainable, and without change, losses are likely to continue.

14. Global study highlights how Green Infrastructure aids economic growth

Investment in multi-functional green space or Green Infrastructure (GI) encourages inward investment and can attract increased visitor spending at a local level, according to findings of a new research study 'Green Infrastructure's contribution to economic growth: a review'. The study found GI can also benefit national economic growth by helping reduce flood risk, improve air quality and provide health benefits which in turn boosts productivity.

The EFTEC (Economics for The Environment Consultancy Ltd) and Sheffield Hallam University report¹⁸, reviewed current national and international studies examining the link between green infrastructure and economic growth, and found qualitative and quantitative evidence to show six ways in which green infrastructure acts as a catalyst to growth:

- Attracting inward investment making a local area more attractive to business investors
- Attracting increased visitor spend making a local area more attractive to tourists and visitors
- Saving environmental costs improving air quality, reducing the urban heat island effect, filters diffuse pollution and helps to manage flood risk

¹⁷ www.buglife.org.uk/campaigns-and-our-work/habitat-projects/all-buzz-thames-gateway

¹⁸http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectI D=19056

- Providing health benefits impacting on health through improved air quality and surroundings which encourages activity and improves mental health and well-being
- Generating employment
- Promoting food production enabling increased productivity in the city.

(To which of course we will add the benefits of GI for biodiversity, and the role of biodiversity in generating some of the six economic benefits listed above.)

15. Pond Conservation becomes the Freshwater Habitats Trust



This month saw the end of an era for Pond Conservation, as the charity shed its old skin and reemerged as the Freshwater Habitats Trust.

Visit the new <u>www.freshwaterhabitats.org.uk</u> website to find out more about future plans, news, and research. You can also stay in touch by signing up to their e-bulletin, Ripples, or join in the conversation on Twitter and Facebook.

16. Climate extremes are 'unprecedented'

This report by Roger Harrabin appeared on the BBC website¹⁹

Earth experienced unprecedented recorded climate extremes during the decade 2001-2010, according to the World Meteorological Organisation. Its new report says more national temperature records were reported broken than in previous decades.

Its report, The Global Climate 2001-2010, A Decade of Climate Extremes²⁰, analysed global and regional trends, as well as extreme events such as Hurricane Katrina, floods in Pakistan and droughts in the Amazon, Australia and East Africa. The decade was the warmest for both hemispheres and for both land and ocean surface temperatures. The record warmth was accompanied by a rapid decline in Arctic sea ice, and accelerating loss of mass from the Greenland and Antarctic ice sheets and from glaciers.

Global mean sea levels rose about 3mm per year – about double the observed 20th century trend of 1.6mm per year. Global sea level averaged over the decade was about 20cm higher than in 1880.

Although overall temperature rise has slowed down since the 1990s, the WMO says temperatures are still rising because of greenhouse gases from human society.

• Every year of the decade except 2008 was among the 10 warmest on record.

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¹⁹ ww.bbc.co.uk/news/science-environment-23154073

²⁰ Available at http://library.wmo.int/pmb_ged/wmo_1119_en.pdf

• The warmest year ever recorded was 2010, with a temperature estimated at 0.54°C above the 14.0°C long-term average of the 1961-1990 base period, followed closely by 2005.

Greenland recorded the largest decadal temperature anomaly, +1.71 °C above the long-term average and with a temperature in 2010 of +3.2°C above average. Africa experienced warmer than normal conditions in every year of the decade.

Just to add to the significance of this report, last week the Intergovernmental Panel on Climate Change published their conclusion that "it is 95% certain that humans are the "dominant cause" of global warming since the 1950s"²¹.

17. Annie Gatti's wildflower bank



And finally, here are two lovely shots of forum member Annie Gatti's wildflower bank on a sandy slope between the drive and the pavement in her Surrey front garden. Annie says: "The first year of sowing with annuals predominating, second year with a mix of annuals and perennials".

Please send your news stories and other observations and comments for the next newsletter to wdg-@stephenmhead.com

²¹ www.bbc.co.uk/news/science-environment-24292615