

## Abstracts and Biographies| Gardening for Wildlife in a Changing Climate

Saturday 28 March 2020, 10.30am – 2.30pm

### Peter Gibbs

**Biography:** Peter Gibbs is a former BBC Weather Presenter and enthusiastic amateur gardener with more than 30 years experience as a professional Met Office forecaster. He chairs BBC Radio 4's 'Gardeners' Question Time' and is a regular reporter on the Radio 4 environment series 'Costing the Earth'.

Peter's first job as a meteorologist was running the weather observation programme at the British Antarctic Survey's remote Halley research station in Antarctica in the early 1980s, spending two consecutive winters on the ice.

Peter is a Fellow of the Royal Meteorological Society, and a Visiting Fellow at the University of Reading

**Title:** Impact of a Changing Climate

**Abstract:** The effects of climate change are already being felt in British gardens. The seemingly small rise in average temperature over the last few decades has resulted in a longer growing season, fewer frosts and more intense heatwaves.

So what can gardeners expect in future? What will the UK climate look like by the middle of the century and beyond? Science is showing some clear trends, with warmer wetter winters and hotter drier summers expected to become the norm. Updated projections by the Met Office have given us an idea of just how big those changes could be, but ultimately that will depend to a large extent on how quickly action is taken to limit our emissions of greenhouse gases.

### Dr Marc Redmile-Gordon

**Biography:** Marc Redmile-Gordon (PhD; FACTS). Senior Scientist for Soil and Climate Change, RHS, Wisley. Marc is a biogeochemist and co-author of the RHS's "Under Your Feet", an educational book for children on the role of soil in regulating climate. His work has led to patents for reducing pollution, and displacing dependence on fossil fuels. His experience in agricultural research (Rothamsted) and farm advice (Natural England) can help gardeners who seek ways to reduce their environmental and climate footprints.

**Title:** From the Soil Up

**Abstract:** The climate emergency highlights unprecedented need to slow our loss of biodiversity. Wildlife-sensitive gardening provides a habitat for both native, and regional biodiversity displaced by climate change — whilst at the same time creating a 'firebreak' against the spread of pests and disease from further afield. At the RHS we are investigating ways to optimise the use of plants, soil, and growing media to mitigate climate change and its impacts. These include ways to protect against extremes (e.g. droughts and floods), reduce greenhouse gas emissions, safeguard biodiversity, and improve the capacity of soils to provide vital ecosystem functions.

We will give practical advice on how to increase the ecological value of your soil and garden, linking them to the wider ecosystems in the UK and beyond. We will zoom in to soil under the microscope and draw on novel findings of work linking microbial glues (extracellular polymeric substances or 'EPS') to healthy soil structure and aboveground plant-cover (Redmile-Gordon et al., 2020).

Ecologically minded gardeners are playing increasingly important roles in repairing soil functions and protecting biodiversity. Understanding how our gardens 'connect' at microscopic, regional, and international scales will maximise our ability to deliver improvements for both wildlife and climate.

### References:

M. Redmile-Gordon, A.S. Gregory, R.P. White, C.W. Watts, 2020. Soil organic carbon, extracellular polymeric substances (EPS), and soil structural stability as affected by previous and current land-use, *Geoderma*, 363. <https://doi.org/10.1016/j.geoderma.2019.114143>

### Helen Bostock

**Biography:** Helen Bostock is Senior Horticultural Advisor for the RHS, spokesperson for the RHS' Plants for Bugs research investigating invertebrate abundance and diversity associated with plants from different geographical origin. Helen is an ex-trustee of the Wildlife Gardening Forum and works closely with The Wildlife Trusts on their partnership campaign with the RHS, Wild About Gardens. She is involved with other members of the RHS Science team in developing the RHS Plants for Pollinator plant lists and is part of Defra's Pollinator Communications Working Group. She is co-author of the RHS book *How Can I Help Hedgehogs?: A Gardener's Collection of Inspiring Ideas for Welcoming Wildlife*, 2019.

**Title:** What should we plant for a thriving garden? Planting decisions for wildlife gardeners in the face of a changing climate.

**Abstract:** We're only just beginning to understand the power plants can bring to the function of a healthy garden ecosystem. In the past gardeners keen to maximise their spaces for wildlife would have been advised to plant only British native plants. But are these always the right option for our gardens and our wildlife, especially now additional pressures of climate change start to be felt? Are there planting decisions we can take depending on what we most want to attract or the degree of nibbled leaves we're prepared to tolerate?

Do we need to cater for potential new garden species arriving in Britain or expanding their range? And choose plants that will better cope with the uncertainties of British climate? Should we be trying to extend our planting season for wildlife emerging earlier in spring or staying active longer at the end of summer?

Using the very latest findings from the unique Plants for Bugs experiment (an RHS study inspired by the Wildlife Gardening Forum investigating whether the geographical origin of garden plants affects the abundance and diversity of invertebrates the support), Helen Bostock explores the science around planting native and non-native plants. And offers some very practical take-home messages for gardeners wanting to make their gardens fit for purpose for both wildlife and people, whatever the weather.

### Dr Andrew Salisbury

**Biography:** Dr Andrew Salisbury FRES, Principal Entomologist, Royal Horticultural Society and Chair of the Trustees Wildlife Gardening Forum. As part of a team of entomologists and plant pathologists Andrew provides advice and research for the RHS on Plant Health and Garden Wildlife. Recent work included the Plants for Bugs project, investigating which plantings are best for garden invertebrates.

**Title:** Climate change and garden invertebrate fauna.

**Abstract:** Climate change is causing changes in distribution and abundance of invertebrates, gardens are not immune. Determining if it is climate or other factors such as changes in land use that is causing observed changes in distributions and the establishment of new arrivals is challenging. What will happen in the future is therefore uncertain although overall it is thought species will move northwards. We can expect to see changes in the invertebrate fauna that can potentially damage garden plants however, gardens are an important invertebrate habitat and have a positive role to play in mitigating the effects of climate change.

### Chris Baines

**Biography:** Chris Baines is an independent environmental consultant, horticulturist, naturalist and landscape architect. He is also an award-winning writer and broadcaster, was one of the first presenters of BBC Countryfile, and created the first wildlife garden at Chelsea Flower Show in 1985. He has been a national vice-president of the Royal Society of Wildlife Trusts for thirty years and is a leading champion of greener urban environments and their benefits for quality of life. Chris was awarded the RSPB medal of honour in 2004. His book 'How to Make a Wildlife Garden' is considered a classic.

**Title:** The importance of gardens in the landscape and how gardening for wildlife can mitigate the impacts of climate change.

**Abstract:**