



Preserving insect abundance²

"The most likely cause of this insectageddon is that the land...has become hostile to them. The volume of pesticides and the destruction of habitat have turned farmland into a wild life desert."¹

The decline of insect populations across Britain appears to have started at the beginning of the 20th century, the trend accelerated in the 1960's but has only reached alarming proportions over the last two decades. Butterflies and moths are amongst the worst affected. Declines have also been witnessed in beetle populations and most infamously in bees.³ Within temperate regions the UK seems to have the largest documented declines with 60% of species threatened. Similar dramatic losses seem to be have been happening worldwide.

For instance, North America has 51% and Europe has 44% of insect species threatened.⁴

"The shocking collapse of insect populations hints at a global ecological meltdown."¹

Such significant declines of insects is important not just for their conservation but also to global biodiversity and the future health of Earth's ecosystems.⁵ It is shocking to realise that among the major issues that dominate our daily media this crucial issue - one that could potentially threaten the existence of much of life on Earth - receives little or no coverage.¹ Such grim facts simply cannot be ignored but should prompt worldwide decisive action to avert a cascading collapse of the world's ecosystems.⁴ Humanity needs to wake up to the seriousness of this crisis and undertake a total transformation of its current industrial and agricultural practices and save the insects from extinction.⁶

"Insects are critical to the survival of the rest of the living world."¹



After decades of destruction Nature across the UK is now greatly diminished. We urgently need to recreate habitat, restore degraded areas and ban the wholesale use of pesticides. But even this may not be sufficient to turn the tide and prevent the decline and extinction of many insect species.⁷

"Preserving insect abundance and diversity should constitute a prime conservation priority."²

Policy makers, environmentalists and we the public need to understand the vital role of insects in ecosystems and seek to preserve and enhance insect species diversity and abundance.⁸ It is imperative that governments - that we - stop this mass slaughter of insect life. It's time that our priorities are fundamentally changed to make life on Earth more important than *"returns to shareholders"*¹ Money will count for nothing when we have lost the living systems on which the survival of life on Earth depends.¹

"The world's insects are hurtling down the path to extinction."³

Insects are by far the most varied and abundant animals and are essential to the proper functioning of all ecosystems. More than 40% of insect species are in decline, and 33% are endangered.

Research suggest that if this trend continues insects *"could vanish within a century."*³⁰ The latest research confirms that the sixth major extinction event is *"profoundly impacting"* all life forms on the Earth.³

"It is increasingly obvious that the planets ecology is breaking...and there is a need for an intense and global effort to halt and reverse these dreadful trends."⁹

The grim fact that three quarters of the biomass of flying insects has disappeared in less than three decades should be a huge concern for us all.³ Thousands of species are now formally recognised as threatened or endangered. The vast majority face extinction because of human action - we are busy destroying habitats and repeatedly spraying the landscape with toxins. We forget that insects are irreplaceable! Dramatic steps are required. A formidable effort is required to increase public awareness of this serious situation and of the need for urgent worldwide action. People everywhere need to understand the seriousness of the loss of insect diversity. If mankind does not take such dramatic action and soon. *"...the extinction of much of the Earth's biota cannot be avoided."*¹⁰

"The conservation of insect diversity and abundance is of crucial global importance"¹¹



Insects have played a fundamental role at the structural and functional base of many of the world's ecosystems since their emergence at the end of the Devonian Period almost 400 million years ago. Unless immediate and positive action is taken to reverse current trends humanity - you and I - will be responsible for wiping out these whole taxa in a few short decades and the consequences of their loss for the planet's ecosystems will be catastrophic.⁴

Dean

- 1 Monbiot.G (2017)
Insectageddon: farming is more catastrophic than climate breakdown
The Guardian (20/10/2017)
- 2 Caspar A. Hallmann.C, Sorg.M, Jongejans.E, Siepel. H, Nick Hofland.N, Schwan. H, Stenmans.W, Müller. A, Sumser.H, Hörrén.T, Goulson.D, de Kroon. H (2017)
More than 75 percent decline over 27 years in total flying insect biomass in protected areas.
PLOS One – 18 October 2017
- 3 Carrington.D (2019)
Plummeting insect numbers "threaten collapse of nature."
The Guardian (10/02/2019)
- 4 Lister.B and Garcia.A (2018)
Climate driven declines in arthropod abundance restructure a rainforest food web.
PNAS October 30, 2018 115 (44) E10397-E10406
- 5 Butterfly Conservation (2015)
The State of the UK's Butterflies (2015)
Butterfly Conservation, Wareham UK
- 6 Kiedaisch.J (2019)
The staggering worldwide decline of insects is a warning of ecosystem collapse
Popular Mechanics (13/02/2019)
- 7 Hayhow DB, Burns F, Eaton MA et al. (2016)
State of Nature 2016.
The State of Nature partnership.
- 8 Miller.J (1993)
Insect natural history: Multi-species interactions and biodiversity in ecosystems.
Biodiversity and conservation 2. 233-241
- 9 Shadlow.M (2019)
In: Carrington.D (2019)
Plummeting insect numbers "threaten collapse of nature."
The Guardian (10/02/2019)
- 10 Ehrlich.P (1988)
The loss of diversity: Causes and consequences
In *Biodiversity* Wilson.E and Peter.F (Eds)
National Academy Press
- 11 Zou.Y, Sang.W, Feng.J and Dayuan.X (2011)
Insect diversity: Addressing an important but strongly neglected research topic in China.
Journal of Resources and Ecology 2011 2(4) 380-384