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Born in 1964 in Pembury, United Kingdom

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PROJECT

The Ecology of the Night

Most animals are nocturnal. That is, they largely or exclusively confine their activities to the nighttime. By contrast, ecological researchers - those who study the abundance and distributions of species and the underlying mechanisms - belong to a diurnal (day-active) species and have focused their research predominantly on diurnal animals. Indeed, only c. 1% of recent published research papers in ecology concern nocturnal organisms. This project will address this imbalance, determining to what extent, and in what ways, this understandable and perhaps inevitable research bias has influenced understanding of the Earth's ecology. The project will particularly exploit recent growth in research on nocturnal ecology that has been stimulated by concerns about the effects of the widespread introduction of artificial nighttime lighting (especially from streetlights), which has in effect constituted a global experiment in the consequences of the erosion of the nighttime. Given the immense pressures and demands on natural ecosystems from a large and growing global human population, robust ecological insights are vitally important and increasingly depended on in making policy and management decisions. The project will evaluate in what ways a more appropriately balanced viewpoint might shape these insights and the consequences this might have.

Recommended Reading

Gaston, K. J. (2003). The structure and dynamics of geographic ranges. Oxford: Oxford University Press.

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Gaston, K. J. and Blackburn, T. M. (2000). Pattern and process in macroecology. Oxford: Blackwell Science.

PUBLICATIONS FROM THE FELLOW LIBRARY

Gaston, Kevin J. (Oldendorf/Luhe,2023)

Common ecology : Kevin J. Gaston; Introduction: Stephen J. Hawkins; Laudatio: William Sutherland

https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=1879904764

Gaston, Kevin J. (Chicago, Ill.,2019)

Nighttime ecology : the "nocturnal problem" revisited

https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=1671064836

Gaston, Kevin J. (Oxford,2019)

Climatic predictors of species distributions neglect biophysiologically meaningful variables

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Gaston, Kevin J. (Oxford,2019)

Skyglow extends into the world's key biodiversity areas

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Gaston, Kevin J. (Basel,2019)

Evaluating human photoreceptoral inputs from night-time lights using RGB imaging photometry

https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=1665892722

Gaston, Kevin J. (Amsterdam [u.a.],2019)

Colour remote sensing of the impact of artificial light at night (I) : the potential of the International Space Station and other DSLR-based platforms

https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=166507082X

Gaston, Kevin J. (Oxford,2018)

Nature, extent and ecological implications of night-time light from road vehicles

https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=1670529312

Gaston, Kevin J. (Basel,2018)

UAVs, hyperspectral remote sensing, and machine learning revolutionizing reef monitoring

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Abundance, biomass and energy use of native and alien breeding birds in Britain

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Gaston, Kevin J. (Hoboken, NJ,2018)

How ecological communities respond to artificial light at night

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