Leibniz-IZW Academy



ONLINE WORKSHOP: BAT CONSERVATION AND ARTIFICIAL LIGHT Wednesday, 3rd March 2021

Bats are sensitive to artificial light. Since both habitats and roosts of bats can potentially be affected by artificial light through outdoor lighting, the conservation of bats must be considered in approval procedures for lighting projects. In a one-day online workshop of the Leibniz-IZW Academy, participants will learn how bats respond directly to different lighting sources, light colours and brightness, how they are indirectly influenced through their prey (mainly insects) and how the mostly negative impact of artificial light on bats can be avoided or mitigated. Practical examples will be used to illustrate how sustainable lighting concepts can be established from the perspective of bat conservation. The workshop is designed for representatives of authorities, consultants and experts.

Lecturers:

PD Dr. Christian Voigt is head of the Department of Evolutionary Ecology at the Leibniz Institute for Zoo and Wildlife Research and has been researching the impact of light pollution on bats for more than a decade. Under his guidance, the first guidelines for consideration of bat conservation in outdoor lighting projects were written (EUROBATS Publication Series #8 "Guidelines for consideration of bats in lighting projects").

PD Dr. Franz Hölker is leader of the Research Group of Light Pollution and Ecophysiology at the Leibniz Institute of Freshwater Ecology and Inland Fisheries and since 2009 has been studying the effects of artificial light at night on a wide range of biological processes, from gene expression to land-water interactions and ecosystem functions. Franz Hölker was head of the research platform "Loss of the Night" and chair of the European COST Action "LoNNe" (Loss of the Night Network).

Guest speaker:

<u>Dr. Emma Stone</u> co-leads the Bat Conservation Research Lab at the University of the West of England and has established an international bat research centre in Malawi African Bat Conservation (<u>www.africanbatconservation.org</u>) funded by ICLEI and Bat Conservation International. Emma Stone identified a gap in the field of the ecological impacts of artificial lighting and developed a novel field-based approach which demonstrated the first evidence of negative impacts of street lights on bats.

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Programme:

- 09:00 09:10 Welcome Christian Voigt, Franz Hölker
- 09:10 09:40 Introduction of participants all
- 09:40 10:40 **Types of lighting** *Franz Hölker*
- **10:40 11:00 Coffee break**
- 11:00 12:30 Impacts of artificial light on insects Franz Hölker
- 12:30 13:30 Lunch break
- 13:30 14:30 Response of bats to artificial light Christian Voigt
- 14:30 15:00 Experimental studies reveal species specific responses of bats to artificial lighting – *Emma Stone*
- 15:00 15:20 Coffee break
- 15:20 16:20 Avoidance, mitigation and compensation Christian Voigt
- **16:20 17:00 Discussion** *all*

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