

## **GfÖ Awards ceremony, Wednesday 23.11.2022, 17:00 to 17:30**

- **Tobias Sandner, Uni Marburg (Germany), Winner of the GfÖ Award 2022**

### **Talk title:**

#### **Aspects of life in small populations: inbreeding, environmental stress and phenotypic plasticity:**

Plants growing in small populations face several challenges. When environmental conditions change, plants have to adapt or respond plastically. Moreover, they can only choose their mates from the small pool available, so inbreeding is more frequent than in large populations. When pollinators are declining or not attracted by the few plants of a rare species, plants may even have to completely rely on selfing for reproductive assurance. As a consequence, inbreeding reduces offspring fitness ("inbreeding depression") and can influence plant functional and reproductive traits. However, environmental change and inbreeding depression usually are not independent, and it is often assumed that inbreeding depression generally increases under stressful conditions. In my research I am taking these aspects of small populations into the greenhouse or common garden to study the effects of inbreeding and environmental stress on various aspects of plant life under controlled conditions. I will present evidence from different plant species to show which types of stress do or do not increase inbreeding depression, and I will explain effects of inbreeding on phenotypic plasticity, and modifying effects of plant size on inbreeding-stress interactions. Finally I will bring these findings back to natural populations and discuss the effects of inbreeding on the success of ex situ plant conservation.

- **Julia Ostermann, Uni Halle (Germany), Winner of the Host-Wiehe Award**
- **Ariel Firebaugh, University of Virginia (USA), Winner of the most-cited research paper in Basic & Applied Ecology Award**

*Ariel Firebaugh & Kyle J. Haynes 2019. Light pollution may create demographic traps for nocturnal insects. Basic and Applied Ecology 34:118-125.*

- **Bea Maas, University of Vienna (Austria), Winner of the most-cited review paper in Basic & Applied Ecology Award**

*Bea Maas, Ingo Grass, Camila Cassanod, Alice Classene, Deborah Fariad, Pierre Gras, Kimberly Williams-Gullén, Matthew Johnson, Daniel S. Karp, Valerie Linden, Alejandra Martínez-Salinas, Julia M. Schmack, Sara Kross 2019. Experimental field enclosure of birds and bats in agricultural systems – Methodological insights, potential improvements, and cost-benefit trade-offs. Basic and Applied Ecology 35:1-12.*