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Centennial Symposium:
"100 years of Vogelwarte: celebrating bird science"

Friday 21 June - Saturday 22 June 2024

Sempach Festhalle

Programme

Friday, 21 June 2024 (Solstice!)

time	theme	speaker
09:00	**Registration**	
10:00–10:10	Welcome	Gilberto Pasinelli

Session 1: Population Biology
Understanding changes in species abundance and distribution requires detailed knowledge of demography and how it is influenced by the environment. A particular challenge for studies in this area is imperfect detection, which can be addressed by specific sampling protocols and statistical models. In this session, Res Altwegg (University of Cape Town) will talk about how species checklist data are used to model the distribution of South African bird species. Rob Robinson (British Trust for Ornithology, BTO) will show how the BTO uses data collected by birders to understand changes in bird populations. Ellen Martin and Marc Kéry (Vogelwarte) will illustrate the link between demography and population change, and Ricardo Carrizo (Vogelwarte) will show novel approaches to understanding individual movements from abundance data. Finally, Michael Schaub (Vogelwarte) will demonstrate the use of demographic models to assess the future management of reintroduced bearded vultures in the Alps.

10:15-10:45	Studying bird distributions when detection is not perfect	Res Altwegg, South Africa
10:45-11:15	Making 50,000 birders count: understanding population changes in birds	Rob Robinson, UK
11:15-11:30	Gentle introduction to the quantitative study of populations and communities	Ellen Martin & Marc Kéry, Switzerland
11:30-11:45	Movement-based models for abundance data: inducing auto-correlation through individual-following	Ricardo Carrizo, Switzerland
11:45-12:00	Demographic assessment of the reintroduced bearded vultures in the Alps	Michael Schaub, Switzerland
Lunch		

Session 2: Ecological Research

In a fast-changing world, understanding the ecological mechanisms underlying avian population dynamics is key to predict future changes in species distribution and to develop species conservation plans. Environmental factors act on reproduction, survival, and dispersal behaviour to shape demography and genetic characteristics of populations. Marion Nicolaus (Groningen University) will open the session by addressing dispersal in the context of behavioural syndromes. Then, we will give four insights into the broad range of studies conducted in the "Ecological Research Unit" of Vogelwarte. Ying-Chi Chan will talk about the lunar cycle as an underestimated factor driving dispersal behaviour in a nocturnal raptor. Benedetta Catitti will unravel the mechanisms of how conditions in the nest translate to later life-history stages affecting survival of individuals in a long-lived diurnal raptor. Fränzi Korner and Sebastian Dirren will present ecological mechanisms associated with reproduction and survival in a high-elevation specialist songbird. Finally, Reto Burri will give a deep insight into genetic mechanisms resulting in convergent plumage coloration in closely related songbird species.

13:45-14:30	Eco-evolutionary consequences of avian dispersal syndromes	Marion Nicolaus Netherlands
14:30-14:45	The effect of the lunar cycle on natal dispersal timing in little owls	Ginny Chan (Ying-Chi Chan), Switzerland
14:45-15:00	Behavioural basis of early-life effects on survival in a long-lived raptor	Benedetta Catitti, Switzerland
15:00-15:15	Survival in a warming world of a survivalist in the cold	Fränzi Korner & Sebastian Dirren, Switzerland
15:15-15:30	A crowd-sourced mosaic of modular genetic variation underpins convergent plumage coloration	Reto Burri, Switzerland
Coffee		

Session 3: Bird Migration

Bird migration, a fascinating natural phenomenon, is now rapidly being unveiled through method advancements for its study. Bird tracking and radar observation enable deeper insights into migration of individuals and into environmental factors affecting aerial movement, respectively. DNA-based methods give unprecedented insights into evolution and regulation of migration. Still, avian migrants show particularly fast declines, a process that must be halted across their distribution range. Kristen Ruegg (Colorado State University) will first present how genetic information can be used to identify anthropogenic impacts on the demography of migratory birds. Hazell Thompson, a conservationist and former Director at BirdLife International, then addresses migrant conservation from an African perspective. Baptiste Schmid, Christoph Meier and Martins Briedis from Vogelwarte will finish by demonstrating the strengths of radar monitoring and individual tracking.

16:15-16:55	The Bird Genoscape project: unraveling anthropogenic impacts on migratory birds in the face of climate change and other stressors	Kristen Ruegg, USA
16:55-17:30	Migratory Bird Conservation in Africa – a personal perspective	Hazell Shokellu Thompson, Sierra Leone
17:30-17:45	Monitoring airspace by radar: from bird migration to animal aerial movement	Baptiste Schmid, Switzerland
17:45-18:00	Individual tracking exposes the complete annual cycle of Afro-Palearctic migrant birds	Christoph Meier & Martins Briedis, Switzerland
Dinner		
20:00-20:45	Evening talk Seeking solutions with science: evidence-based conservation action for birds in farmland, forests and flyways Thereafter: (Outdoor) drinks reception	Juliet Vickery, UK

Saturday, 22 June 2024

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Session 4: Monitoring & Situation of the Birds
Different bird species exhibit distinct environmental requirements and are susceptible to local but also large-scale population changes. Species composition and population developments serve as valuable indicators of environmental conditions and reflect how humans impact nature. With a growing community of skilled birdwatchers with excellent identification skills, birds are predestined to serve as indicators, offering insights into environmental states and changes. Bird monitoring, often conducted through the efforts of citizen scientists in the field, has become widespread. The findings attract significant public attention, spanning from individuals to governmental bodies. Ruud Foppen (Radboud University, former Chairman of the European Bird Census Council EBCC) will delve into the history of bird monitoring and its growing significance. Alison Johnston (University of St. Andrews) will shed light on a new ecological monitoring paradigm emerging from the availability of extensive bird observation data collected by citizen scientists. Samuel Wechsler, Nicolas Strebel, and Thomas Sattler (Vogelwarte) will highlight recent innovations in collecting and processing of bird monitoring data.

09:30-10:15	Bird monitoring, more relevant than ever. History and evolution of applications for science and conservation	Ruud Foppen, Netherlands
10:15-10:50	Birds and big data: a new paradigm of ecological monitoring	Alison Johnston, Scotland
10:50-11:15	Innovations in collecting and processing of Swiss bird monitoring data	Samuel Wechsler, Nicolas Strebel & Thomas Sattler, Switzerland
Coffee		
11:45-12:30	Short presentations by young reserachers of Vogelwarte	
Lunch		

Session 5: Human Impact & Applied Research
We have entered the era of the Anthropocene, marked by a significant increase in the impact of human activity on the planet's climate and ecosystems. No bird species now escapes the direct or indirect effects of human activities, and it is therefore becoming essential to be able to quantify and understand these impacts, as well as to put in place mitigation strategies. In this session, Davide Dominoni (University of Glasgow) will talk about the many consequences of life in an urban environment on the biology of birds, and more specifically about the effects of artificial light at night on biological rhythms, whereas Danny Karp (University of California, Davis) will talk about methods for harmonising bird conservation with food production. Pierre Bize and Bettina Almasi (Vogelwarte) will then be presenting the challenges facing the newly created "Anthropogenic Effects Unit" in quantifying the exposure of birds to stress factors of human origin and in understanding their consequences on bird health and fitness. Finally, Urs Kormann and Matthias Vögeli (Vogelwarte) will explain how the newly created "Applied Ecology Unit" aims to use scientific knowledge and ecological principles to mitigate human impact on bird populations.

14:00-14:35	Harmonizing bird conservation with food production across working landscapes	Danny Karp, USA
14:35-15:10	Biological time-keeping in an urbanising world: A role for light pollution?	Davide Dominoni, Scotland
15:10-15:25	Applied Ecology – the Vogelwarte perspective	Urs Kormann & Matthias Vögeli, Switzerland
15:25-15:45	Insights on research on anthropogenic effects at Vogelwarte	Pierre Bize & Bettina Almasi, Switzerland

15:45-16:30	Farewell lecture: Forty years of research on barn owls: from research to public engagement	Alex Roulin, Switzerland