

25 August – 29 October 2023

EXPERIMENTAL ECOLOGY – Art x Science in Dialogue

About the Artists and Scientists



Ingo Niermann is a writer and artist. His debut novel, *Der Effekt*, was published in 2001. Following on from his essay collection *Umbauland* (Suhrkamp, 2006), he edits the speculative book series *Solution* (Sternberg Press). Niermann has initiated numerous projects: in 2000, he co-founded the revolutionary collective Redesigndeutschland; in 2007, he conceived a tomb for all people, the *Great Pyramid*, that made global headlines; in 2014, with Rem Koolhaas, he built a facility for public balloting, *Vote*, in Gwangju, South Korea. Since 2016, Niermann has collaborated with filmmaker Alexa Karolinski: *Army of Love*

(2016) premiered at the 9th Berlin Biennale and has since been shown in exhibitions at the Centre Pompidou, MACBA, Castello di Rivoli, the CCCB, and the Wiesbaden Biennale. Niermann's book *Solution 295–304: Mare Amoris* (2020) confronts humanity with creatures living in the ocean and provides the basis for his video *Sea Lovers* (2020) which premiered as part of a year-long exhibition at the Guggenheim museum. His podcast series *Ocean Wants*, commissioned by TBA21-Academy, followed in 2021.

Alex Jordan is a biologist leading the Behavioral Evolution Research Group at the Max Planck Institute of Animal Behavior in Konstanz. Jordan aims to answer a foundational question: how does social behavior evolve? He asks this question by situating his studies in the natural, often underwater, world. In pursuit of the answer, his research traverses borders of subject and scale—from the neurobiology of social interactions, to the development of cognition, to the evolutionary ecology of entire communities. Jordan harnesses recent advances in machine learning and automated tracking techniques but anchors them in behavioral experiments conducted in the wild environments in which animals evolved. His work takes him from ancient lakes in the African Rift Valley, through tropical reefs in the Pacific, to highland cloud forests in Costa Rica. Jordan has worked with artists and academics, such as SUPERFLEX, Tabita Rezaire, Tomás Saraceno, and TBA21 to explore the uncharted crossroads of animal intelligence, machine learning, philosophy, and human perception.



Sissel Tolaas is an artist and smell researcher, known for her work on diverse aspects of the topic of smell. From the beginning of 1990, she has researched the importance of smell in different fields of science, art, and many other disciplines, and has developed multiple archives (i.e. smell molecule recordings and replications; para sounds and phonetics). In 2004, Tolaas established the Smell Lab in Berlin, supported by IFF (International Flavors & Fragrances), Inc. She founded the Institute of Functional Smell Coding in 2010, and in 2016 she established the Future of Education Platform, a collaboration

with Nanyang Technical University, in Singapore, and The Future Education PF in Berlin. Since 1998, Tolaas has completed fifty-five City SmellScape research projects of, for, and with, major cities across the globe. She has worked on the topic of extinction and smell in numerous contexts, including human, and other animals, the world's biodiverse oceans, sensory ecology, and on projects on the morbidity and decay of Detroit (2018). She is currently working on a Smell Heritage archive for the ruins at Pompeii, Italy, and the Pearling Path in Muharraq, Bahrain.

Christina Agapakis Christina Agapakis is a synthetic biologist and an artist. In her scientific work, she has examined enzymes involved in the production of biofuels, ecological design principles for synthetic biology, and the evolution of microbial communities in the soil. As an artist, she has mapped the microbial diversity of California, isolated halophilic bacteria from the Salton Sea, and made cheese from bacteria living on human skin. She collaborated with Sissel Tolaas and Daisy Ginsberg to produce the scent of an extinct flower (*Resurrecting the Sublime*, 2019). Since 2015, she has worked as the creative director of Ginkgo Bioworks, where she engages with people, policies, and potential futures involved in synthetic biology, working towards more open, equitable, and renewable technologies.



Karin Pittman is an internationally experienced marine biologist, who has published continuously since 1982. She has worked in fisheries and aquaculture in Europe, North America, and in many developing countries, under NORAD, FAO, and various other NGOs, as well as bilateral programs. She received the Hordaland Inventor prize in 2013, and the Norwegian Thon national award for Excellence in Teaching in 2016, the same year she won a global prize from the Global Aquaculture Alliance for Aquaculture Leadership and Innovation for the invention of Mucosal Mapping technology, now trademarked as Veribarr™. She has taught fish culture and larviculture in many countries and has developed the first fish-based health standard focusing on mucosal barriers. As a researcher, she has studied egg and larval development, and metamorphosis of marine species, epigenetics, nutrient

uptake, marine ecosystem changes, and aspects of fish health. She is the producer and librettist of the award-winning metal science opera *Fish to Mars* (2017–ongoing). She is a Professor at the Department of Biological Sciences (BIO) at the University of Bergen, Norway, Chief Scientific Officer of the startup QuantiDoc, and the developer of an ethical role play about science,

The multidisciplinary work of artist **Michelle-Marie Letelier** embraces orchestrated transformations of natural resources, alongside extensive wide-ranging, interdisciplinary research into the landscapes where their exploitation and speculation have taken place. Through her work, Letelier blends different epochs, regions, and societies: examining political, economic, historical, and cultural aspects. Her work carries socio-political overtones as it reflects on globalization, the increasing scarcity of raw materials, and the crisis of the neoliberal model. Letelier spent her early life in the mining town of Chuquicamata, in the Atacama



Desert. Rich in copper deposits, the area had been mined since pre-Hispanic times. Annexed by Chile in the Saltpeter war, it became home to one of the largest copper mines in the world. By 2001, under new mining policies, the town was due to be abandoned, and Letelier returned to document the process—a pivotal moment in her artistic career. Since 2007, she has established herself in Berlin and been particularly invested in the examination of specific natural resources: coal, copper, saltpeter, wind, and salmon.



Zheng Bo is an art maker, researcher, and teacher. He is known for his unorthodox approach to more-than-human relationships. He creates gardens of weeds, living slogans, and eco-queer films. In his biophilia films, such as *Pteridophilia* (2016–present), *Le Sacre du printemps* (2021–present), and *Samur* (2023), he investigates the co-existence of humans and plants, based on mutual understanding and pleasure.

Matthias Rillig is Professor of Ecology at the Institute of Biology at Freie Universität, Berlin. His versatile field of research is in soil and plant ecology, where his interests include the symbiosis of fungi with plants, and its effects on soil-born ecosystem functions. His research group examines the effects of multiple global change factors on soil processes, biodiversity, and terrestrial ecosystems. His group uses fungi as model systems to test ecological principles. Rillig heads several joint projects, including μ Plastic, which studies the effects of microplastics on agricultural soils.



Riikka Tauriainen is interested in ecology, postcolonial theories, and gender issues. In her installations, videos, and performances, she navigates the boundaries between art and science, between fact and fiction. Her *Hydrocommons series* deals with hydrological phenomena, and with a post-humanist world of ideas, in which she explores the extent to which our kinship with other bodies can be understood as a deeply materialistic relationality. Tauriainen works as a lecturer and mentor at art schools and universities in a transnational context: among others, at Zurich University of the Arts; F+F School of Art and Design, Zurich; Ecole de Design et Haute Ecole d'Art du Valais, Sierre; University of Cologne; University of Potsdam; HyperWerk, Basel Academy of Art and Design FHNW; and ETH Zurich (Art and Architecture).

Environmental scientist **Meike Vogt** is a senior scientist at the Institute for Biogeochemistry and Pollutant Dynamics within the Environmental Systems Sciences department at ETH Zurich. She is a marine ecosystem modeler, who assesses the links between marine ecosystem structure and function, in terms of global biogeochemical cycling. Her work pairs ocean observations with statistical and numerical marine ecosystem models to reveal the drivers of present and future global plankton biogeography and biodiversity, and to understand the impact of anthropogenic climate change on these systems. In recent years, Vogt has pioneered the use of statistical and machine-learning models to understand global plankton biogeography, based on in situ data.

