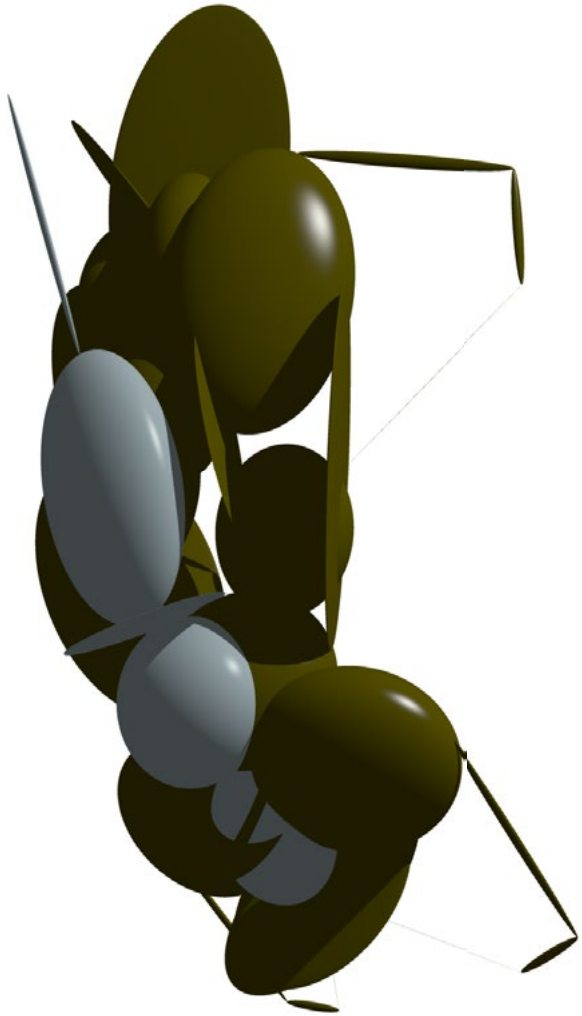
GIFT

Field Experiments in Agriculture and Biodiversity



NEUE SCHULE
FÜR FOTOGRAFIE.
BERLIN

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GIFT

Field Experiments in Agriculture and Biodiversity

Touring Exhibition

„Gift“ originally meant „the given“ or „the gift“ in Old High German, before the meaning changed to „deadly gift.“ The title of the exhibition, which deals artistically and documentarily with the themes of agriculture and biodiversity, refers to biological diversity as a gift that is passed on from generation to generation - and at the same time also to the acute threat to our livelihood.

Background

In the Anthropocene era, humans have become one of the most important factors influencing biological, geological and atmospheric processes on Earth. Yet the multitude of images transported worldwide through the media to convey the themes of agriculture and biodiversity revolve around a few simple and obvious motifs, which are repeated in variations and now seem clichéd and worn out.

The aim of the exhibition project „GIFT - Field Experiments in Agriculture and Biodiversity“ is to break this visual cycle. To this end, students and alumni of the Neue Schule für Fotografie Berlin have developed new and surprising perspectives on these topics based on an intensive exploration of content and visuals.

Exhibition Venues

Leibniz Institute of Agricultural Engineering and Bio-economy Potsdam (14.3.-8.4.2022); 15. Environmental Photography Festival „horizonte“, Zingst (20.5.-10.9.2022); „Silent Springs: Global Histories of Pesticides and our Toxic World“, Conference by Rachel Carson Center, Akademie Schloss Tutzing (16.-19.10.2022); Heinrich Böll Foundation/European Month of Photography (3.3.-31.3.2023); Federal Environmental Agency Dessau (n.n. 2023)

About Neue Schule für Fotografie | www.neue-schule-fotografie.berlin

The Neue Schule für Fotografie Berlin (Internationale Akademie für Photographie e.V.), organized as a non-profit association, has existed since 2007 and, as a private supplementary school, offers training as a photographer with an artistic focus as well as an English-language International Class. At the NSFB, we provide our students with in-depth knowledge for the successful pursuit of their future profession. We are convinced of the transformative power of photography and encourage our students to also engage with ecological, social and political issues. In 2020, we became the first photography school in Germany to establish a focus on environmental photography.

The exhibition project „GIFT - Field Experiments in Agriculture and Biodiversity" was developed in cooperation with Heinrich Böll Foundation, the World Food Institute, Grün Berlin, GLS Treuhand, Hahnemühle, the Berlin State Agency for Civic Education, and Brodowin eco-village.

Project Coordination

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Content

Our Biosphere (17-part series), **Johann Karl**

The series provides a look behind-the-scenes of various biodiversity research projects. Near the Hainich National Park in Thuringia, the „AquaDiva“ project is investigating how local geology and land use influence the biodiversity of underground habitats. In the „iDiv Ecotron“ research platform near Leipzig, each of the 24 „EcoUnits“ can simulate or host one to four independent ecosystems. Here, the goal is to manipulate diversity in above- and below-ground food webs and to explore the effects on many ecosystem functions. Other projects featured in my photographs are the „EcoMetEor“, Ecometabolomics Platform for Ecology & Biodiversity Research, the High-Performance Computing (HPC) Cluster, and the Global Change Experimental Facility (GCEF).


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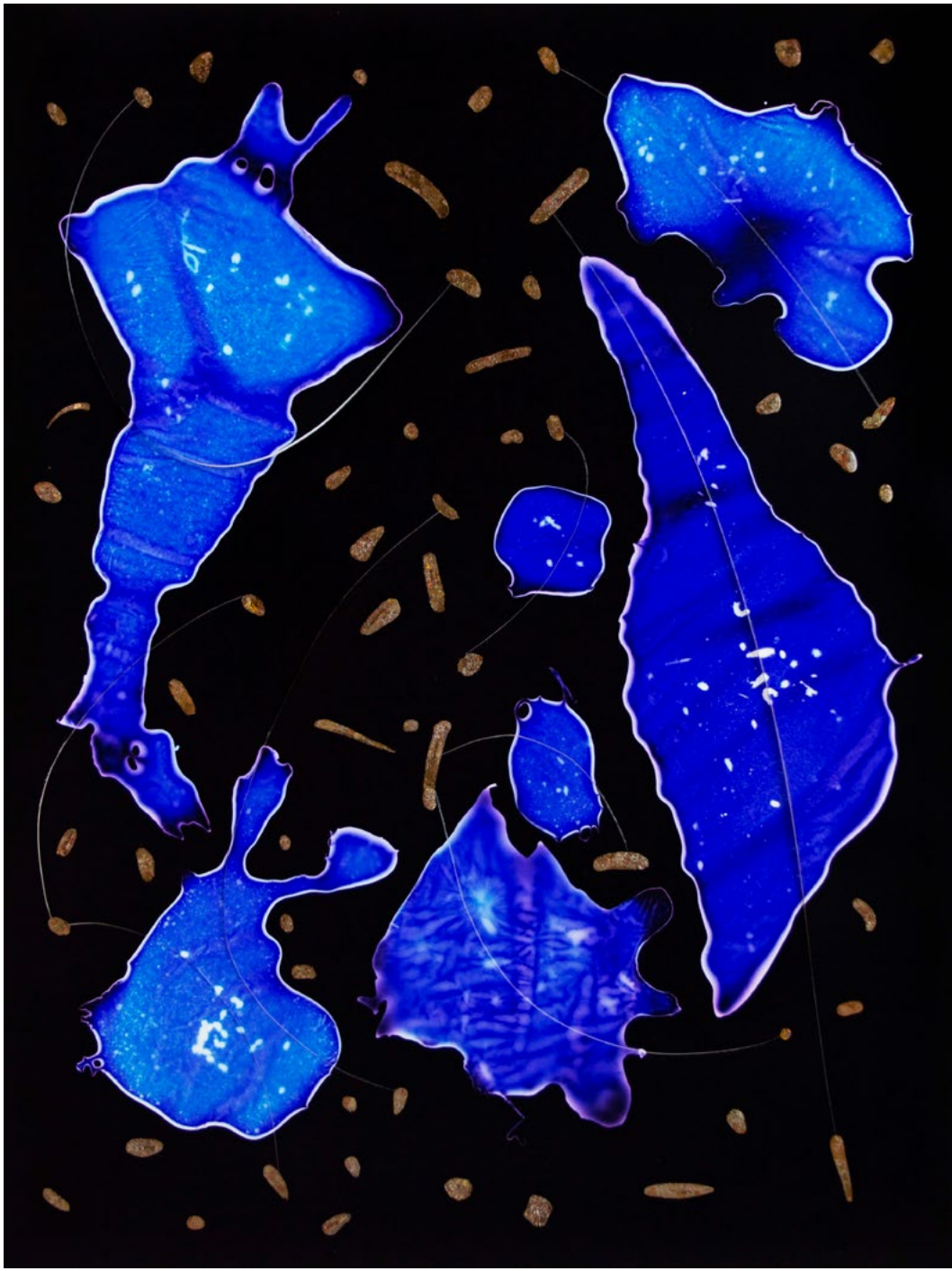
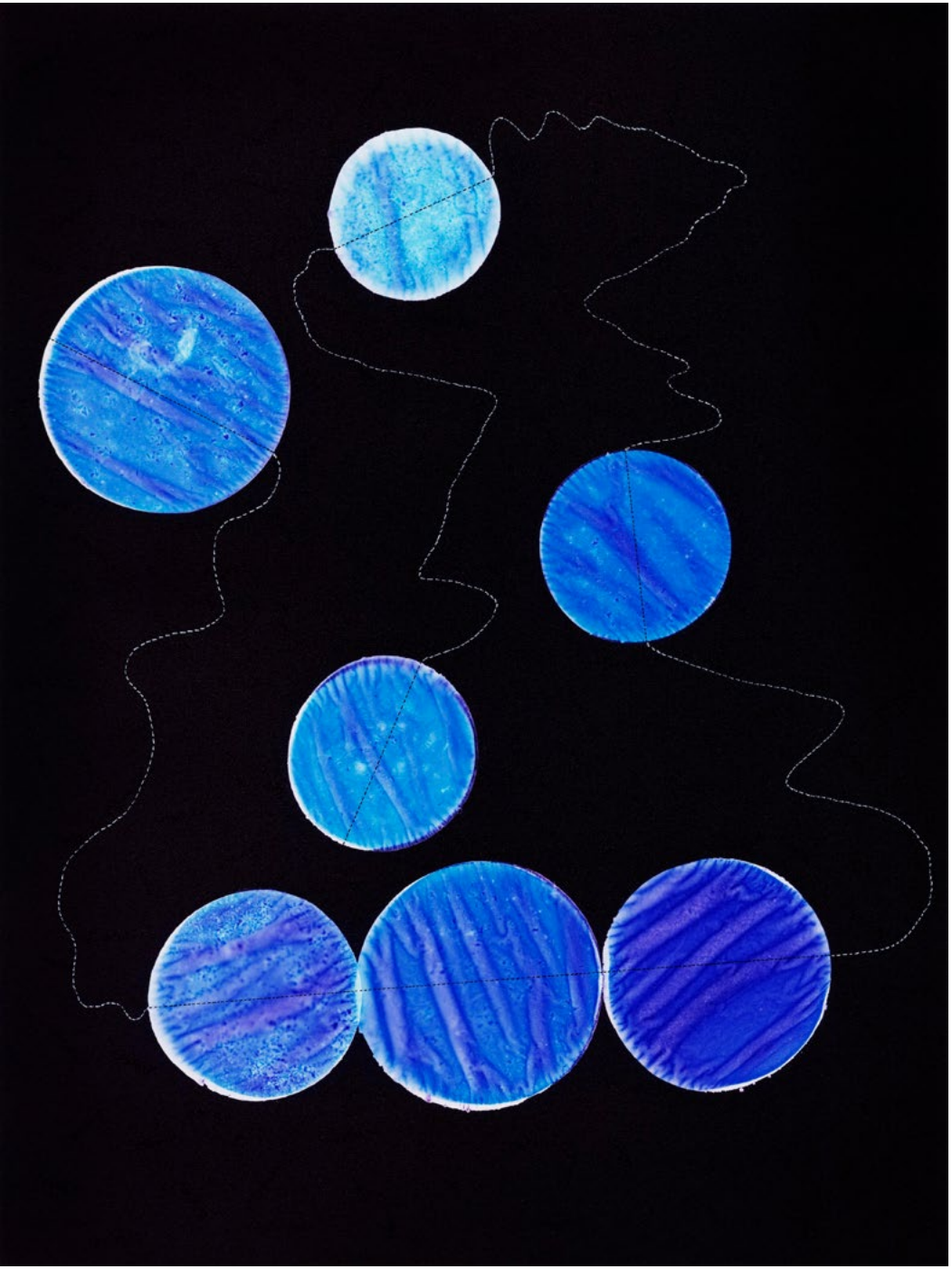
„Glyphosate bonding“ (10-part series, photography and text), **Eun Sun Cho**

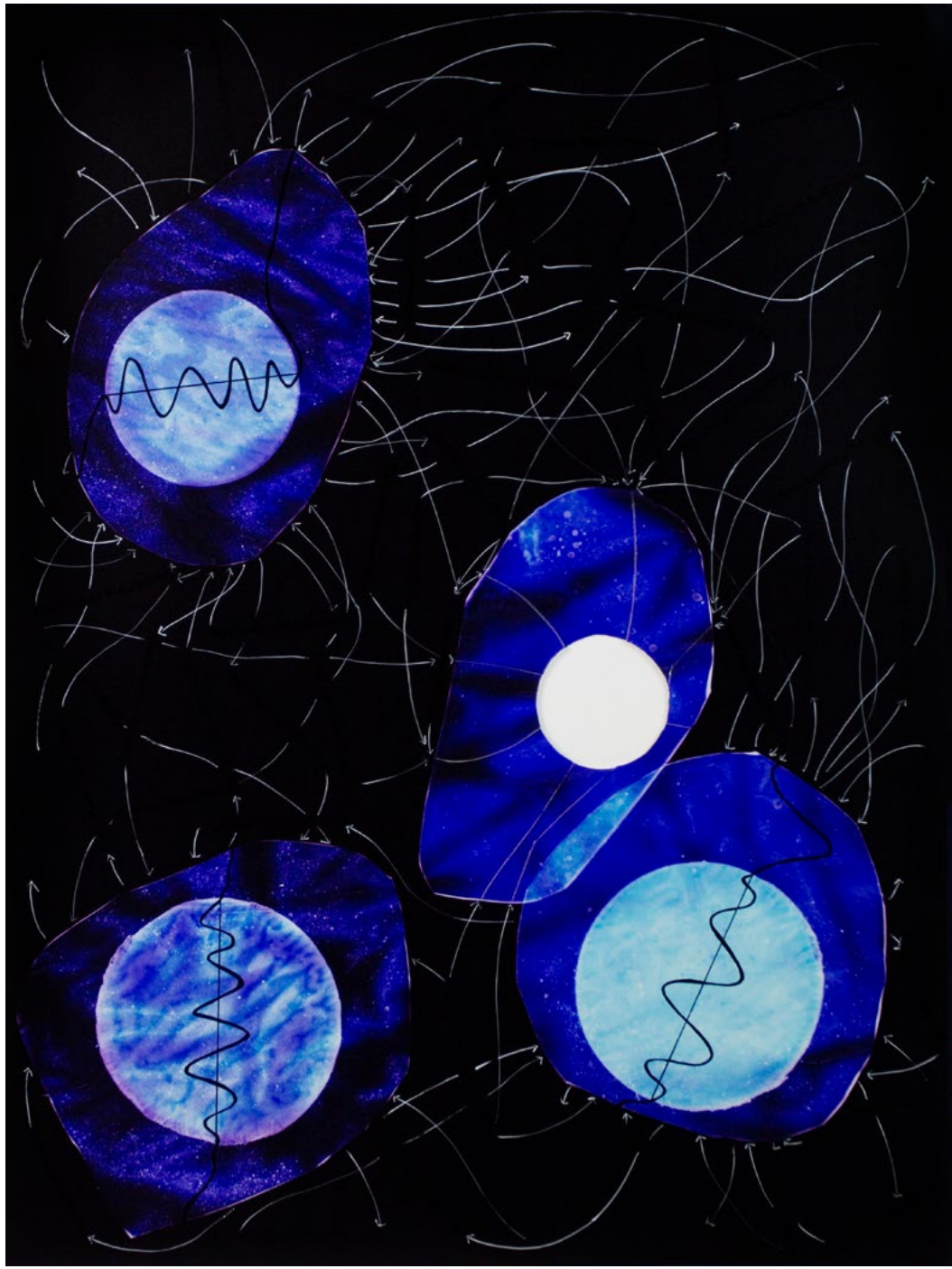
The basic principle of glyphosate as a herbicide is based on the inhibition of the shikimate pathway. The shikimate pathway is a seven-step metabolic pathway used by plants to biosynthesize aromatic amino acids. By bonding manganese, which is an essential component of the enzyme, and glyphosate, the shikimate pathway is inhibited and plants are dead with immediate effect. „Glyphosate Bonding“ uses artistic and scientific means to visualize the interactions between various organisms and glyphosate at the molecular level in three chapters.



„Shikimate Pathway Part One (Chelator)“



„Shikimate Pathway Part Two (Engineered Pathway)“



„Circulation of the genetically modified organism and Glyphosate“

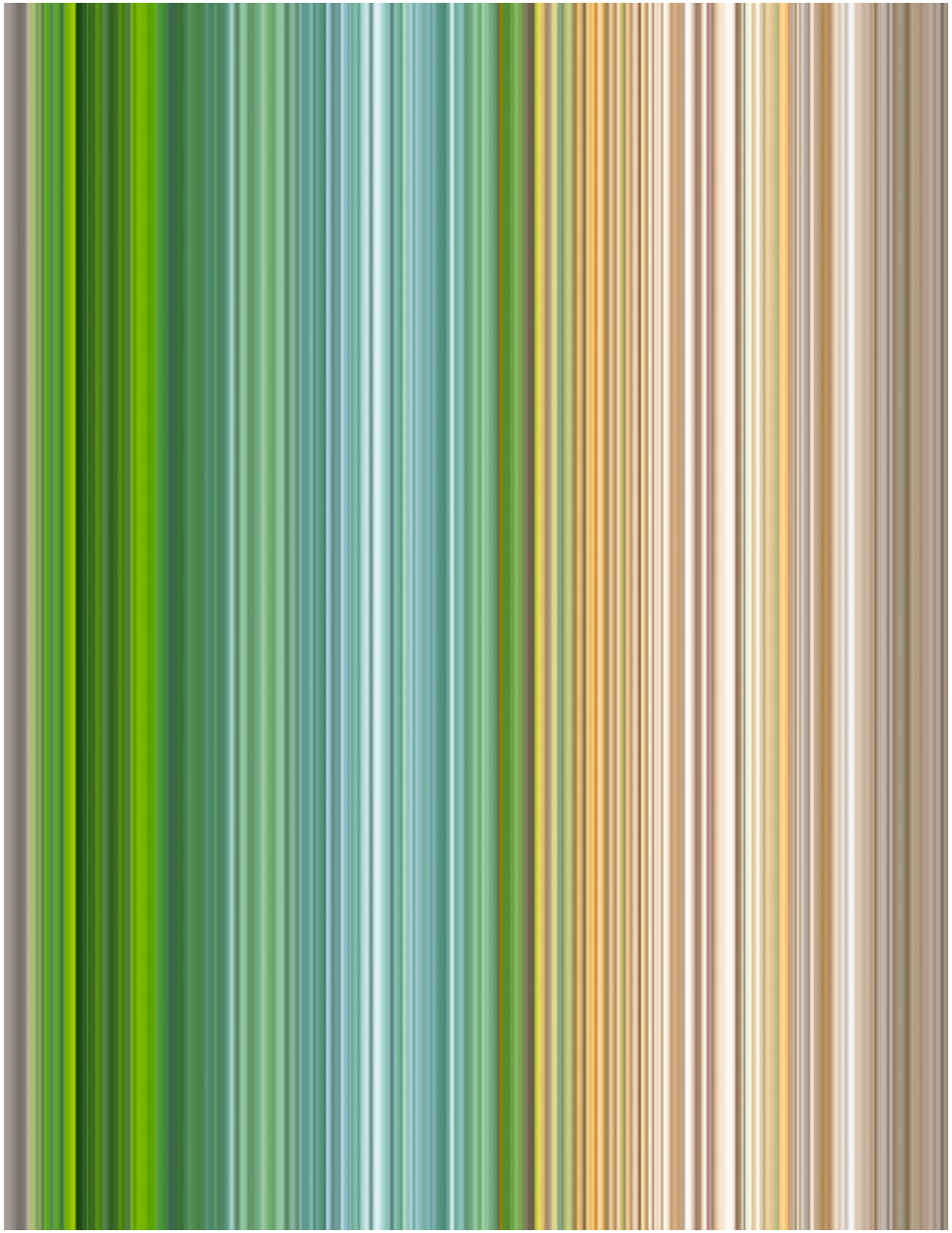
„Mischlaub 2042“ (9-part series), **Linda Kerstein**

„Mischlaub 2042“ is a future scenario in which we humans have acted too late to stop the loss of biodiversity. However, in order to preserve the appearance of diversity, plants are decorated and supplemented, false fruits are hung in bushes. Humans, furthermore busy with remnants of their plastic legacy, can only ponder what is still natural and what is not.

„Transects“ (2-part series), **„Field Pieces“** (10-part series), **Thilo Mokros**

The images, called „Transekte“, are an approach to show the biodiversity in a field condensed into a single and abstract image. Transect is a term from field research and refers to survey points that lead along a line through the terrain. The pictures called „Transekte“ show native weeds that were found and photographed along a transect through the fields during the summer of 2020. In the digital image processing, lines were also laid through the photographed flowers. The colors isolated in this process are pictorially transferred into stripe patterns. In this way, it becomes obvious at a glance that many wild herbs find a habitat in organic farming. Under the heavy use of herbicides, however, weeds may be completely absent. In the case of industrial agriculture shown here, only the colors of the rye remain. They change from green to beige throughout the year.

The photo series „Field Pieces“ uncovers the hidden „treasures“ in a field of organic farming in north-eastern Germany. In total, more than 30 native wild herbs could be observed in a rye field within one summer. Most of them are small and live hidden among the crop plants. In order to make these herbs and thus the biodiversity in organic farming visible, the series shows portraits of the wild herbs from the basement of the rye field. Only 200 years ago, about three quarters of the German population worked in farming. People knew the wild herbs from their daily work in the fields. Around 1900, about 38 % and today only approximately 1.4 % of the working population work in agriculture. In addition, wild herbs are almost completely absent due to the heavy use of herbicides in industrial agriculture. Thus, native biodiversity is disappearing almost unnoticed because hardly anyone is still aware of the original richness of native plant (and animal) species.



Transect 1, conventionally grown rye

Transect 2, organically grown rye

Anagallis arvensis

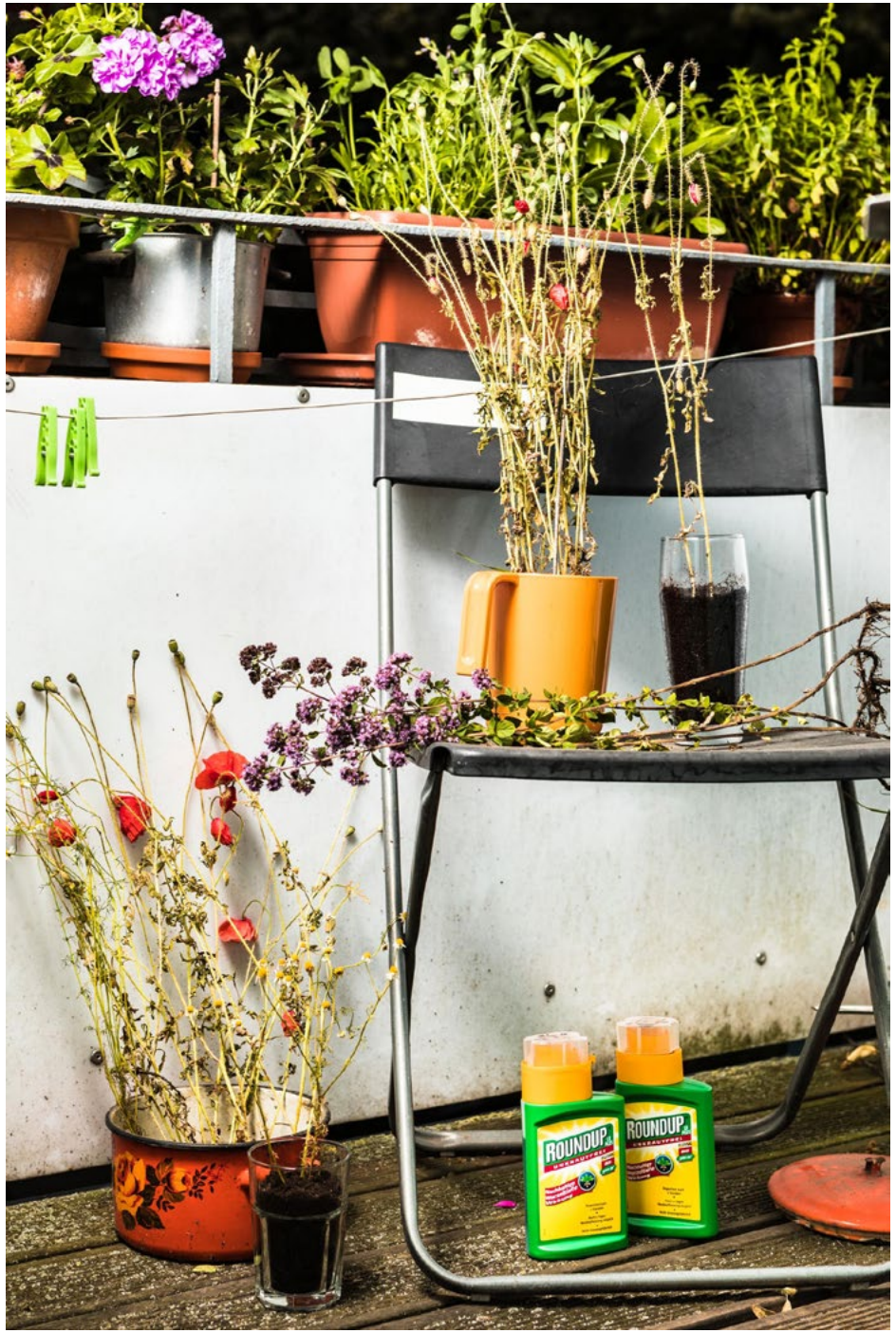
Anchusa arvensis

Lamium amplexicaule

Euphorbia helioscopia

„Biodiversity - An Approach" (13-part series, photography and text), **Sabrina Radeck**

What happens when you're approached for an exciting photo project and no idea wants to come at all? And if an idea does come, how far are you willing to go to make it happen? If the idea was to poison a poppy with glyphosate, would that be the long-awaited inspiration or cold-blooded murder? What to do if the answer was „cold-blooded murder" but the deadline for the project loomed? In her work „Biodiversity - An Approach" Sabrina Radeck makes the artistic process visible that often remains hidden in connection with projects. The representation of making becomes the work - and still holds a surprise at the end.

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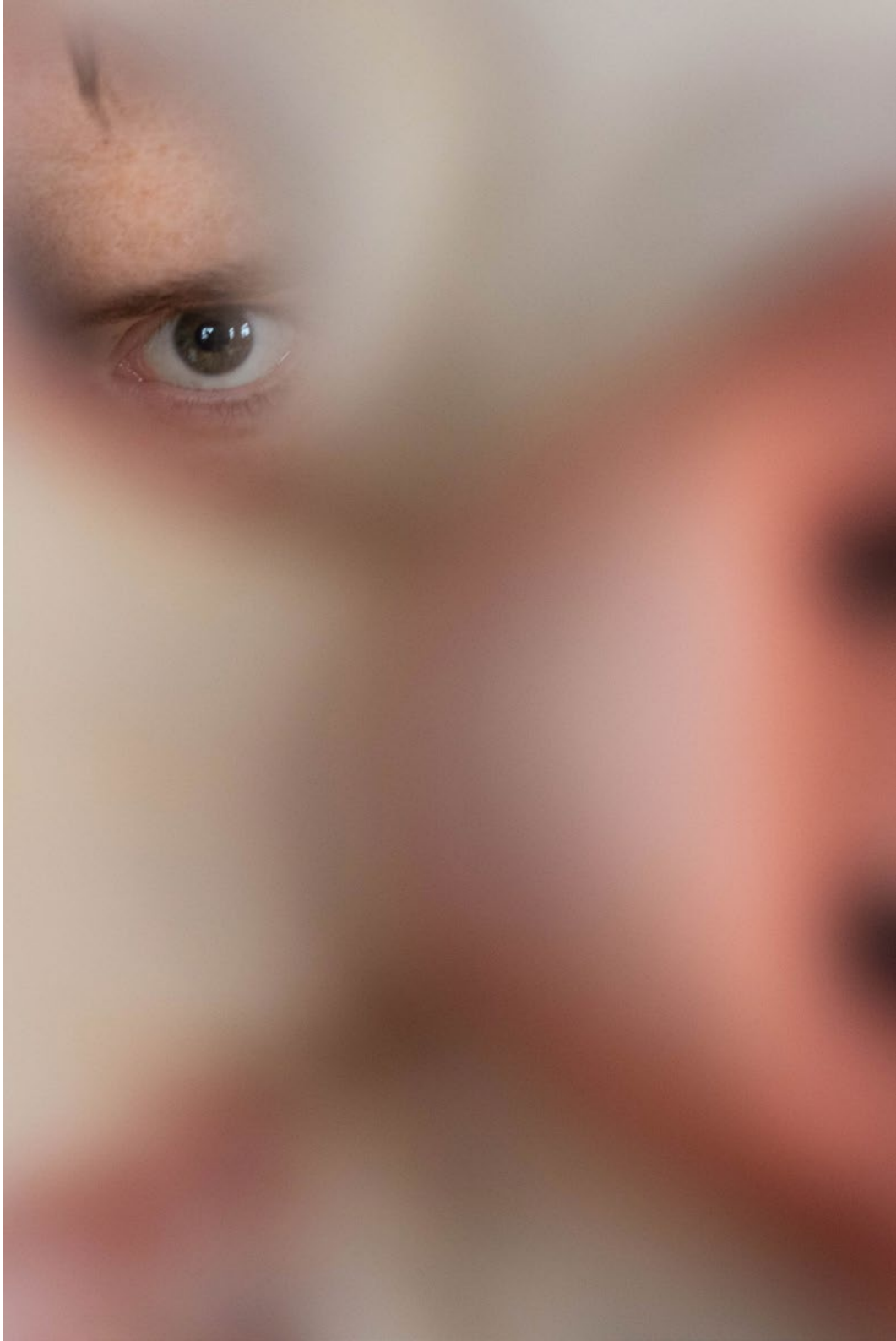
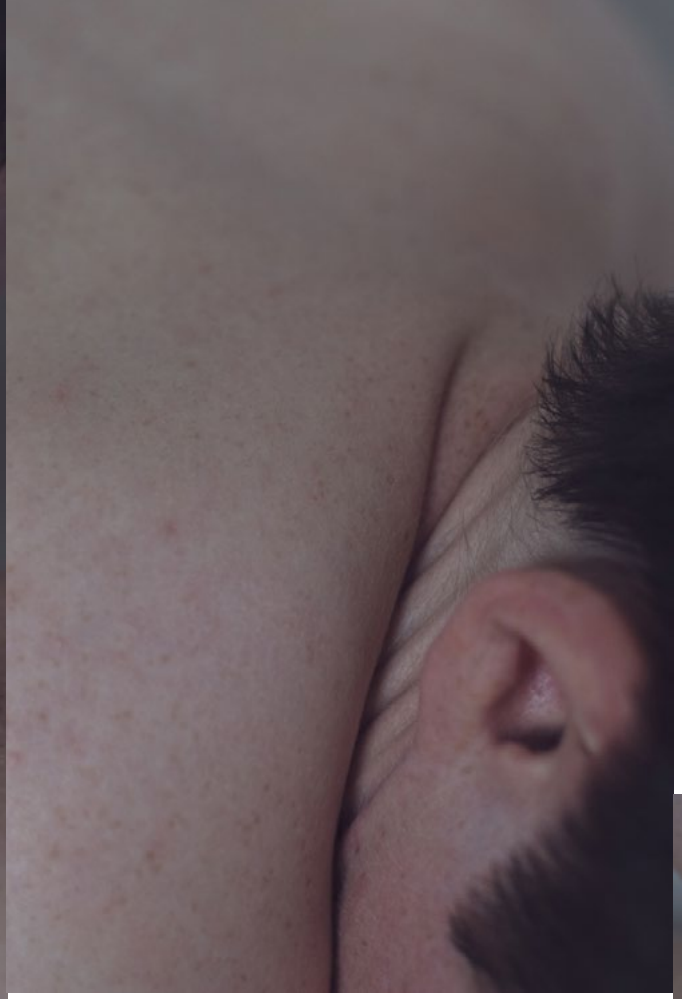
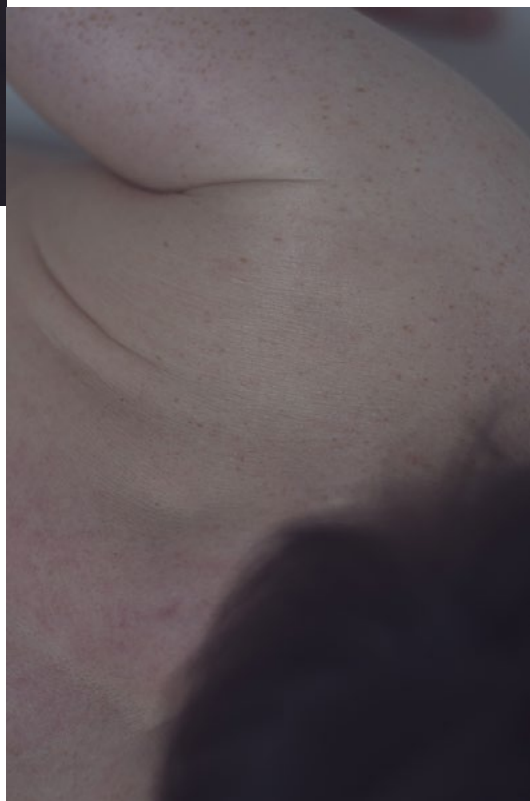
KODAK PORTRA 400

Misplaced (12-part series), **Caro Lenhart**

Skin. Low light. Confinement.
Factory farming has immense effects and ‚disfigures' not only our environment, but also the so-called livestock. We put social animals like pigs or cattle on slatted floors and remove their horns and tails so they can't hurt themselves or others in the confines of their stalls. In her photographic series, consisting of self-portraits, Caro Lenhart deals with the visual abstraction of this disfigurement and thus no longer wants to close her eyes to it.





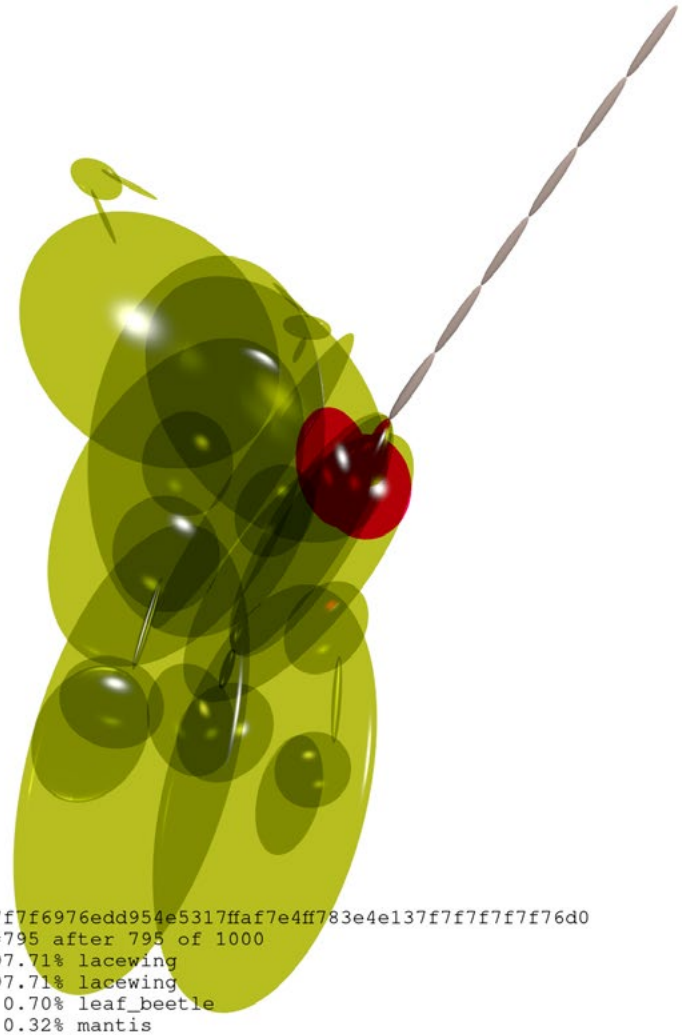


„Bug Resistance“ (9-part series, Animation Video, Flyer, Interactive Web App), **Jakob Wierzba**

New *digital* pesticides promise to reduce the collateral damage caused by their common biological-chemical counterparts. Machines are supposed to precisely *identify* and kill individual pests. In order to investigate this complex and fraught task of identification I program an evolution simulator. First it creates random 3D figures from a digital DNA. They procreate, their DNA mutates. The descendants are judged by a neural network: those who resemble insects the most are considered the *fittest*, and are selected for further procreation. This is repeated until they register as (photographs of) insects. The system is surprisingly successful; it works despite mistakes in its programming (“bugs”). It invents unexpected painterly techniques. It resists my attempts at controlling the evolutionary process. And it reveals human biases in its ostensibly objective “artificial intelligence”. My original idea was to subversively breed pests which would be resistant to digital pesticides. Instead, in my creations I recognize the strange circumstances of their genesis, my naiveté — and the beauty of “nature”.

Interactive web app: https://bugs.cyfta.com/

Detailed info with excerpts from the animation video: https://bugs.cyfta.com/about



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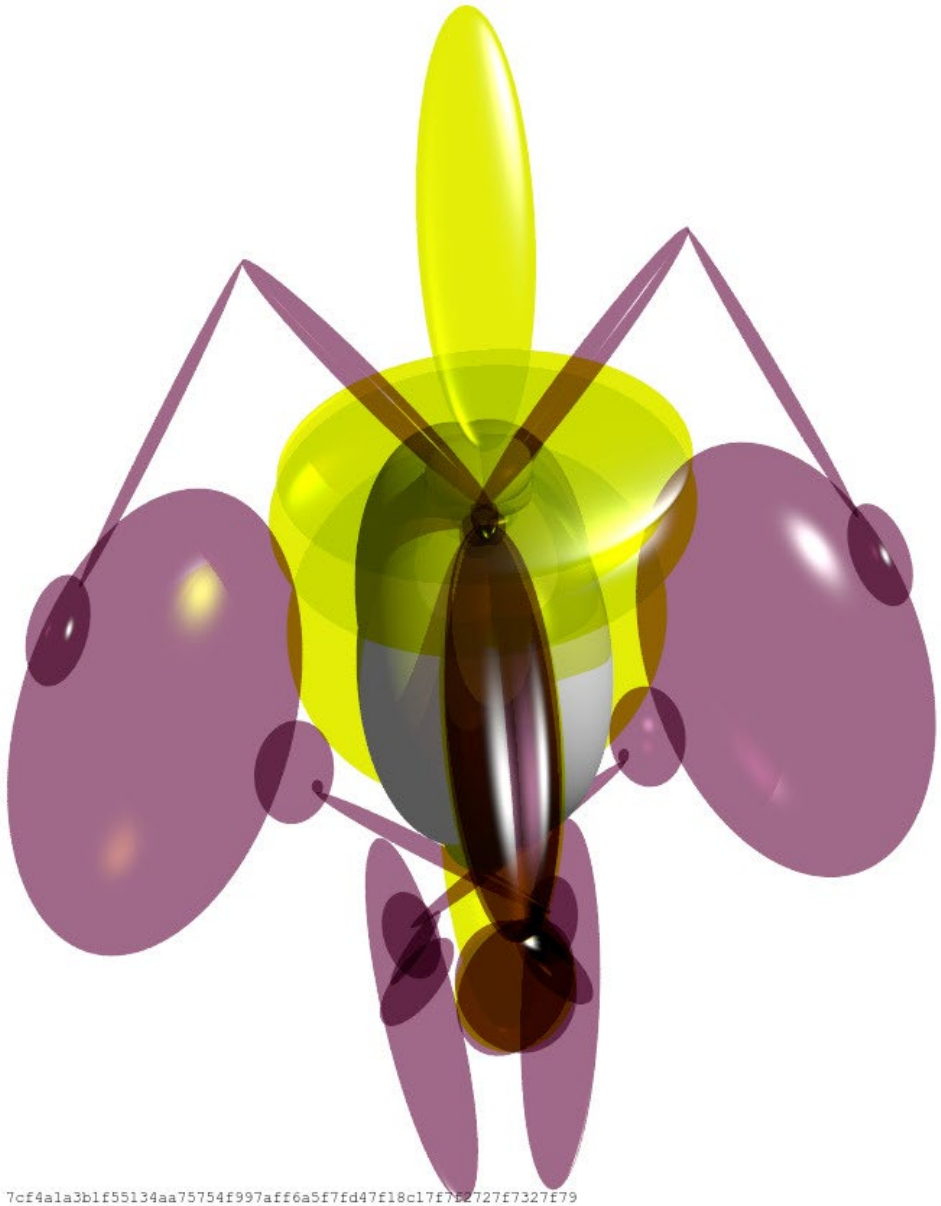

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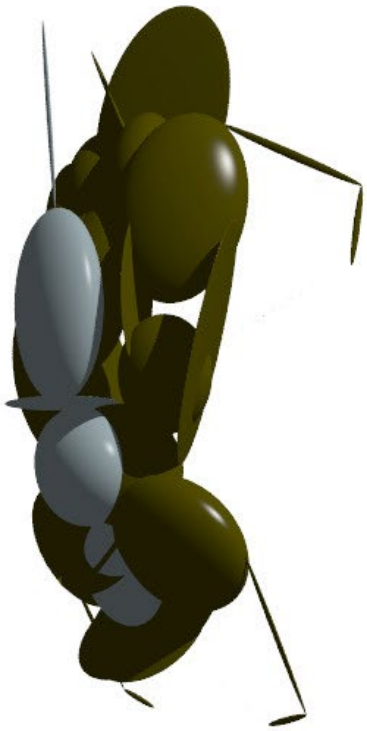

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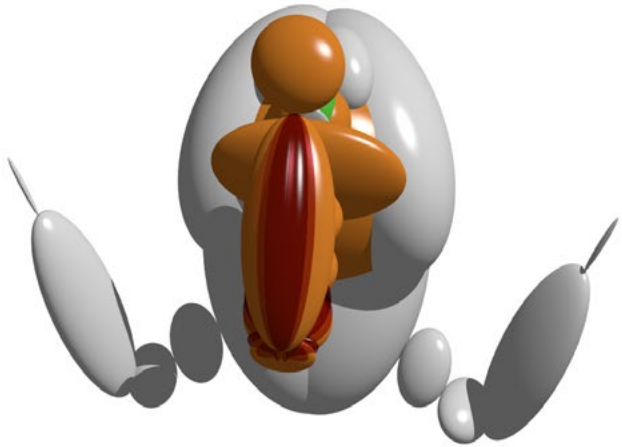

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Excerpt Family Tree