

BIOCHROMATIC STUDIES IN A RHINE FLOODPLAIN

Artist duo ARJA HOP and PETER SVENSON have been working since 2015 on analogue photographic research projects in which they aim to give a voice to nature and, in particular, the plant world.

As a duo, ARJA HOP and PETER SVENSON working on long-term projects that depict the colours of plants and their habitats with determining the corresponding influences on the tonality of the dye, the specific compounds and meaning it contains...

“Gleich mit jedem Regengusse
Ändert sich dein holdes Tal,
Ach, und in demselben Flusse
Schwimmst du nicht zum zweitenmal.”
Dauer Im Wechsel, J. W. Goethe

Since 2015, we have been working on a series of linked projects under the working title *Rhine Ecologies*. It is a place and time setting where, via the plant world, we examine the natural environment and unavoidably, how humans relate to the earth. The Rhine, upon which many a soul reflection is projected, economic lifeline, where old myths wander and new ones arise is the central figure. The river that pierces Europe with its cadence, Tiel–Mannheim, 60 hours, 10 km p/h. A constant until in the summer of 2022 the always solid and stately stream almost stopped flowing around the Loreley due to lack of water. The water that by nature has no colour but in the river passes by us not colourless.

Long ago, the Rhine spread across Europe as a wide swampy area, then was transformed into an almost straight line through ingenious interventions, but now is gradually taking on a more organic shape again through human intervention. Flood plains are being created these are reservoirs that can fill up in times of high precipitation. This gives the river more space and also acts as a buffer for the inhabited world during high water. These areas have great ecological value. Due to the fluctuation of water which constantly enriches the soil, a great diversity of specific species of plants and animals establish themselves.

Kastenwört forest, the site where our project is located, is in such a flood plain along the Rhine near Karlsruhe. In this project natural plant dyes, so called *Florachromes*, are the author and actor we are looking at. By comparing many colour samples of the same plant species for the intensity of shades of a plant-specific colour, an internal plant language appears. What do these colours express? Can the mutual tonal differences be traced back to certain circumstances? Perhaps how they are influenced by environmental conditions, and maybe in this case specifically subterranean water systems? The outcome is a biochromatic map of a specific floodplain area namely the Kastenwört forest. The repetitive approach is necessary because it is precisely the very small differences that reinforce each other. It calls to mind two quotes from Deleuze:

“Repetition is to exhibit a certain behavior, but with respect to something unique or singular that has no equal or equivalent.”¹

“The difference is not the diverse. The diverse is given. But the difference is that by which the given is given. The difference is not the phenomenon, but the Noumeen, things-in-themselves, that is closest to the phenomenon.”²

Specifically, our working method has similarity to the research of a biologist / ecologist. If the concept is clear we start with fieldwork, observing, identifying and collecting plant material and data around a specific location. Our research material is chromatic, the colour dyes we extract from the gathered flora and process in our laboratory to colour transparencies on acetate film. We number it and organising it in archival folders. Our work results in archives of plant dye reproduced on analogue film material with background information and references to their context. In this process we follow a strict constant procedure.

For this specific project we have taken two times 100 samples (\pm) of plant material from the same species of plant, the *Acer Pseudoplatanus* (leaves/ yellowish) and the *Quercus robur* (bark/ reddish) in a grid over one square kilometer, 9 columns/ 11 rows. The plant colours we process from this grid are represented in a corresponding grid with the intention of making the soil conditions and possibly the position of the subterranean water system visible as a chromatic map. For choosing appropriate tree species, we sought the advice of Dr Mareike Roeder, Scientist at the KIT's Department of Wetland Ecology. The *Acer pseudoplatanus* was suitable due to its abundance and rapid spread and the *Quercus Robur* due to its age, deep root system that can withstand flooding for up to 100 days at a time.

To create the grid, we accurately determined the longitude and latitude. Starting every day from a starting point tree sequential 1-9, we followed a straight line through the foliage using a compass, sometimes coinciding with a path.

As a result, we see two monochrome images (\pm 70 x 90 cm), the intensity of the colours in the grids of 99 x *Acer pseudoplatanus* and 79 x *Quercus robur* transparencies, most likely, corresponding to the conditions under the ground,

the constitution and possibly the presence of subterranean waterways.

The process is documented using digital and analogue media. As captured movement of the research, several layers of information were gathered, the material itself, locating and determining the tree species, notable features in the vicinity of the tree species that reveal more about the habitat. We collected maps from various organisations in the field of geology, geography and ecology in Germany / Baden-Württemberg (FVA, ForstBW, LGL, LUBW, LFV).

Previous spectrophotometric tests have shown that a hue from the same plant species gives a similar response, distinguishing itself from another species, hence, to test the accuracy of the plant material from the species we have collected, we make these measurements on liquid plant dye from the two tree species.

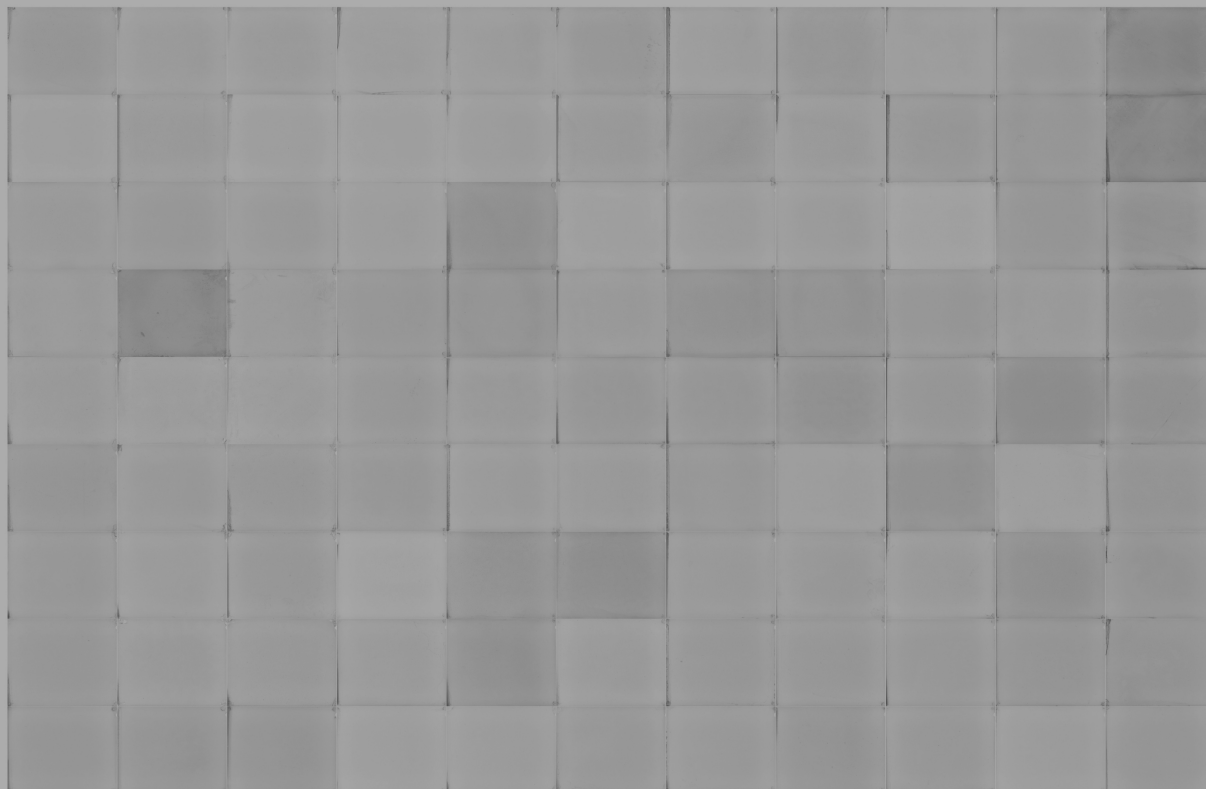
In this research process, physically undergoing the environment and the origin of the subject is essential. Sensory perception and (unforeseen) interactions with the environment generate a deeper understanding, a stronger memory, and an physical engagement in the present, eye-to-eye communicating with the earth, the seemingly stable and inexhaustible, yet fragile and changeable background of our human actions, but it's dangerous to think that the earth is just scenery or supplier of resources. Humboldt (1769–1859) already mentioned that the economic forces and climate change are all part of the same system.³

1. *Difference and Repetition*, Gilles Deleuze, p. 17.

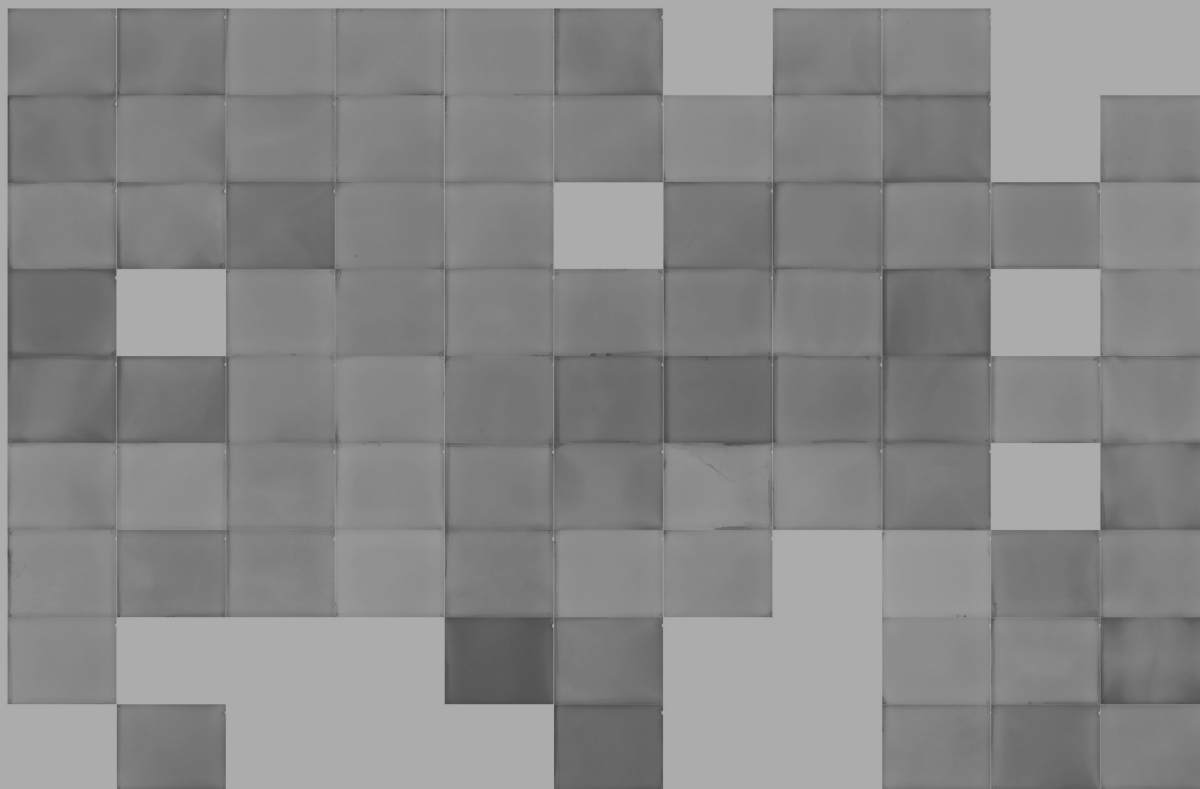
2. *Difference and Repetition*, p. 330.

3. *The Invention of Nature—Alexander von Humboldt's New World*, Andrea Wulf, p. 398.

Florachromes from the Acer Pseudoplatanus (leaves) from Kastenwört forest.



Florachromes from the Quercus robur (bark) from Kastenwört forest.



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CURATORS
PARTICIPATING ARTISTS

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