A tiny world and countless compositions in it

Museum Kranenburgh (Bergen, The Netherlands)
December 2020 – April 2021
A tiny world and countless compositions in it takes the marine micro-organisms known as plankton as the subject matter for an exploration of matter and scale through investigative drawing which address environmental change through one of the most important elements of marine ecology. The project continues my interdisciplinary work with scientific research, which involves ecological explorations with specialists in the field and in research laboratories, producing drawings, and field notes from the many conversations with scientists which form part of my exhibitions and publications.

A tiny world and countless compositions in it is the outcome of a 12-month project focusing on marine micro-organisms known as phytoplankton. The project is my second collaboration with the Royal Netherlands Institute for Sea Research (NIOZ), a world leading marine research institute which studies seas and oceans around the world. My work was embedded in the work of the lab led by Professor Katja Philippart, whose research focuses on the coastal ecology of the Wadden Sea and the phytoplankton as the primary producers in shallow seas. During monthly visits to NIOZ, I collected samples from the sea and analyse them together with researchers in an exploratory mode. This sets up the framework for me to use a combination of drawing and writing processes in situ, exploring the physical properties and effects of phytoplankton which have a great impact on the earth’s climate, as well as learning from the research community at NIOZ. My particular interest in marine micro-organisms developed during research for my project Indexing Water in 2017, which focused on colour studies used by marine scientists and was developed in dialogue with Marcel Wernand, one of the leading scientists from NIOZ. My primary references were the Secchi disc, a 30cm diameter disc mounted on a pole or line, which is lowered into bodies of water to measure its visible depth, and the 21 colours of the Forel-Ule scale, used to measure the properties of natural waters in which the colour is caused by different elements. I learnt during this project that the green part of the scale is related to the presence of plankton and that these organisms, when viewed under a microscope, were visually very remarkable and intended to return to explore them further.

Plankton consist of microscopic plants (phytoplankton) that live in both salt and freshwater environments and are crucial to ocean biology and climate. Phytoplankton are responsible for approximately 50 per cent of all photosynthesis on earth, consuming carbon dioxide and releasing oxygen. They are the foundation of the aquatic food chain, the primary producers, feeding everything from zooplankton to multi-tonne whales. Living at the sea surface the phytoplankton are particularly sensitive to changes in sea surface temperature, which is influenced by the air temperature above. Planktology is a crucial field of study as changes in the productivity of plankton could have a significant influence on biodiversity, fisheries and the human food supply, and the pace of global warming. The visibility of the project aims to call attention by means of artistic practice to these organisms that are so relevant to our environment and yet so hidden to the human eye. The project highlights the
importance of the research carried out in the scientific field and the urgency to protect the organisms and the ecologies in which they live.

Throughout a year, I made monthly visits to NIOZ during which my explorations and conversations are recorded in drawings and notes. The number of drawings was every month, depending on the samples I could collect according to weather and sea conditions; thus, charting the changes over the annual cycle. The variation and irregularity of each month reflects the process of making and the seasonality of the plankton. The main focus of my drawings is to explore and visualise these changes in response to the samples which are inconsistent from one day to the next, due to the aleatory aspects of working with live specimens.

The framework for this project was to work within the 12-month period and with the seasons, posing the question of whether I can, as an artist, visualise the physical changes of the organisms. The drawings are responsive to the conditions of the samples, with chance an important factor in how the compositions are produced. Written notes are used to record how to do things so certain lab procedures can be repeated each month, and secondly to document the thinking that only comes into existence when drawing.
series of 38 drawings
watercolour on paper, 30 × 30 cm
1 II

Notes
pencil and watercolour on paper
variable sizes: 1: 30 x 30 cm; 4: 30 x 24 cm; 73: 24 x 18 cm

que paso + harto. en lo recurso y lo recuerro
la muestra es desoladora no hay casi nada
lo que esto y lo rodeado de dosto
como un látex del ojo?
se ponen bastante las muestras entre
si. lo des igualmente bien
La naturaleza ha progresado en el proceso de hacer cosas, y se materializa más tarde en observaciones. La naturaleza es la historia que se puede leer en el proceso de hacer cosas, y de hacer todo. El exceso de material no se genera como una prueba única, sino... producido de conocimiento científico.
July 2019

2a. 11/07

Sobre que ser reformado

¿Qué crees que nos de otro beneficio?

Arañar en un lienzo

3a. 11/07

María, que os veo a esta hora

Hay Compuestos atractivos por un momento

3b. 11/07

En el zoopláncton, pesa y la despeñadura todo, así

Ver con buen humor el deseo

En el zoológico de comportarse así

Ver en el zoológico en donde

Colgar el detal de
1st October

not very successful so an attempt but I guess nowhere good to try it and got in trouble with the problems and was worth than before. It could be due to the lack of color and practice but also may possible in the change of ink and lack of light on the paper or coloration used.

what I thought or rather wonder.

might actually be necessary to first take picture before it starts going badly by tiny wrinkles and lines worn in the paper. It might happen that picture like going to grid. I also like again the random companions it fings. So I'm sure I want to go ahead.

October 2019
iii
*Water columns, 2020*
glass
60 cm × 30 cm diameter / 150 cm × 30 cm diameter
Irene Kopelman
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Dedicated to:
Marcel Wernand

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