Gallery Guide

Plankton Paintings: Footprints of the Invisible

Jess Holz
Solo Exhibition

Jan. 8 - Feb.19, 2026

Welcome from the Curator

Welcome to *Plankton Paintings: Footprints of the Invisible.*

This guide is here to help you slow down, look closely, and enjoy the art in front of you. Feel free to:

- Flip through and stop wherever something catches your eye.
- Look at the art first, then read a small section, then look again.
- Skip any words that feel too technical; or check the Glossary at the back.

Jess Holz uses microscopes, video, and photography the way a painter uses brushes: to explore color, shape, movement, and emotion. As you read, keep asking yourself:

- What feelings do these images or videos bring up for me?
- What stories about bodies, water, and change do I see?

At the back of this guide, you will find a short Glossary that explains some of the scientific words (like "copepod" or "diatom") in plain language.

Thank you for spending time with this work. I hope it leaves you with a sense of wonder about the tiny lives that share our local waters—and about how art can make the invisible visible.

Gabriella E. Melchiorri

-- Gabriella E. Melchiorri, Crossings Gallery Curator

Harvard Ed Portal - (617) 496-5022

Why Plankton Matter

Plankton drive oxygen production, carbon cycling, and the flow of energy through aquatic food webs. Individually small, they respond quickly to environmental change. Collectively, they shape the living conditions of water—and the life that depends on it.

The next time you pass a pond, river, or harbor, imagine the invisible crowds of plankton beneath the surface—breathing, feeding, dying, and helping support life far beyond the water's edge.

The plankton illustrations in this guide are by David Seamer *(davidseamer.com)*

Artwork for Sale

Selected works are available for purchase. For inquiries or commissions, please ask or staff.

This exhibition is hosted in partnership with Artisans Asylum - (617) 800-9010

Glossary

Algal bloom – A rapid growth of algae or cyanobacteria in water, often turning it green or brown. Some blooms can be harmful to other life.

Bacteria – Very small, single-celled organisms. In water, they help break down dead material and recycle nutrients, and they can also be food for other tiny organisms.

Ciliate – A single-celled organism covered in tiny hairs (cilia) used for swimming and feeding.

Copepod – A tiny crustacean (a small relative of shrimp and crabs) that lives in water and can jump very quickly.

Diatom – A type of microscopic algae with a hard, glass-like shell. Their shells have beautiful patterns.

Dinoflagellate – A single-celled plankton that often has two "whip-like" tails to swim. Some can glow in the dark or make toxins.

Flagellate / phytoflagellate – A tiny cell that swims using one or more long, whip-like tails called flagella. Phytoflagellates use light for energy like plants.

Microplastics – Very small pieces of plastic, often too small to see easily, that come from broken-down plastic objects or fibers.

Microcosm / mini-ecosystem – A small, contained example of a larger ecosystem, such as a jar of pond water that holds many interacting organisms.

How These Images Are Made

Timelapse Works: Worlds Drawn by Movement

The lines in these images are not imagined! Each "plankton painting" begins with a small drop of water under the microscope. As organisms inside swim, feed, and spiral, the artist records their movement via timelapse photography.

Plankton move in different ways: Some pull food into spinning currents, some burst forward, and others glide slowly forward. Timelapse under the microscope captures the behaviors of organisms too small to see with naked eye. Think of each image as a kind of "group self-portrait" of everything that moved in a drop of water.

All water samples in this exhibition come from Boston Harbor, Chandler Pond, Halls Pond, Millennium Park, Faxon Pond at the Arnold Arboretum, and the Charles River at Christian Herter Park. These waters change as the climate warms. Milder winters shorten ice cover and affect plankton growth, while heavier rainstorms wash more material into the water.

Despite pollution and urban pressure, each site was remarkably active. As you look at the images, imagine how many lives are packed into a single drop.

Did you know?

A large share of the oxygen we breathe comes from microscopic plankton in waters like these.

A Chamber of Light, Memory, and Water

Fluorescent Micrographs

In fluorescence microscopy, the sample is lit with very specific colors of light. Certain molecules absorb that light and then glow in new colors. Chlorophyll glows red, shells shine pale blue, and microplastics fluoresce with brightness. Organisms in decay can emit unexpected hues as their chemistry shifts and microbes take hold. You are seeing not just the shapes of organisms, but the "secret colors" of the chemicals inside them.

Two Videos: Intimacies of Water and Body

1. Blood and River Water
A small drop of the artist's blood is mixed with water from the Charles River. Material from inside the human body enters the river's microscopic world as a foreign presence crowding plankton, drifting through the water, and being pulled into feeding currents. The work presents human and river life as physically intertwined, forming a fragile, unsettled ecosystem rather than a stable or harmonious one.

2. Death Reel
This video follows plankton and microscopic animals at the end of their lives. Copepods slow and leak their cells; Bosmina are consumed from within by ciliates; tardigrades and rotifers become trapped as the slide dries. Around dead bodies, bacteria multiply into dense clouds; a ciliate ruptures and disappears. The sequence ends with amoebas and rotifers chemically fixed on preserved slides, held in an unnatural stillness.

Both videos are accompanied by compositions by Senem Pirler, utilizing sounds sourced from Jess Holz's internal body and improvised live electronics, to emphasize the bodily-affective relationship between the observer and the observed.

Other zooplankton
Including other single celled protists, larval insects, jellyfish larvae, and fish larvae, depending on habitat.

Microbial Plankton

Mostly bacteria, the tiny recyclers of the water. The smallest and most abundant life.

Bacteria
Abundant in all waters, bacteria recycle nutrients, shape the chemical environment organisms live in, and serve as an important food source for protists and small grazers.

Phytoplankton – "Plant-like" plankton that use light for energy and help produce oxygen.

Radiolarian – A tiny ocean organism that lives in a beautiful, glass-like skeleton with many delicate spikes.

Rotifer – A microscopic animal that feeds by creating strong water currents with a ring of cilia (tiny hairs) near its mouth.

Umwelt – The world as an organism experiences it, based on what it can sense and how it lives.

Zooplankton – Plankton that eat other organisms, including tiny animals and single-celled predators.

Green algae
A diverse freshwater group ranging from single cells to filaments, sometimes forming colonies.

Zooplankton

Animal plankton and single-celled hunters that eat other organisms. Zooplankton include animal plankton and single-celled predators. They rely less on vision and more on sensing flow, vibration, and chemical cues.

Copepods
Tiny crustaceans capable of extremely rapid jumps, detecting minute water movements and chemical trails.

Rotifers
Microscopic animals that feed by creating strong currents, pulling food and information inward toward the mouth.

Water fleas (Cladocerans)
Small crustacean zooplankton that filter algae, bacteria, and organic particles from the water, capable of rapid population growth when conditions are favorable.

Ciliates
Single-celled protists covered in tiny hairs used for both movement and feeding, constantly responding to touch, flow, and nearby organisms.

Live Specimen:
The Altar

At the heart of the art in this corner of the gallery is a living microcosm, a live culture of organisms collected from the Charles and then evolved for months in the artist's studio, with populations shifting and reorganizing over time. A grow light and gentle bubbler keep this mini-ecosystem in motion. The 3D-printed sculpture is by the company Nervous System (Jessica Rosenkrantz and Jesse Louis-Rosenberg). It is a much larger model of a tiny ocean organism with a delicate, glass-like skeleton.

Two small dishes hold dried copepods. Behind them, images of a singular copepod collected from the Charles show its spiked legs and attached vorticella "flowers": one image captures its swirling interactions in timelapse, the other is rendered still and detailed, accompanied by a poem about copepod nightly migration through darkened water.

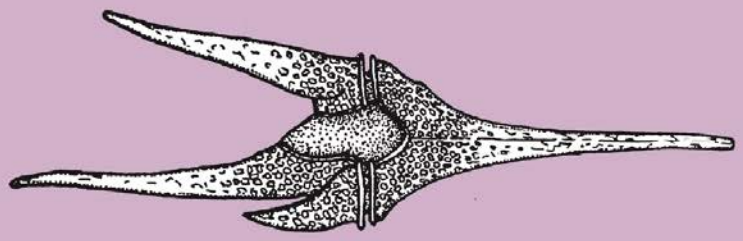
The *Umwelt* of Plankton Time

In German, “Umwelt” translates to “environment” but means beyond the English word. It describes the lived world of an organism, formed by its senses, its scale, and the signals it can detect in its environment. For humans, our *Umwelt* is shaped by what we can see, hear, smell, taste, touch, and remember.

For plankton, their *Umwelt* unfolds through sensing, reacting, and being carried. At their scale, water feels thick and resistant: starts and stops are abrupt, turns can be costly, and movement often happens in quick bursts followed by drifting. Information arrives as light and shadow, dissolved chemicals, touch, and tiny disturbances in the water. Sometimes this world is rich with signals; at other times it is quiet.

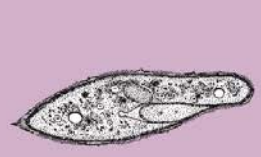
Did you know?

A single teaspoon of pond water can hold thousands of bacteria and other tiny organisms.

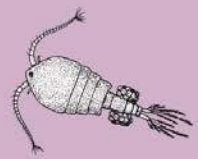


Dinoflagellate

Guide to Plankton



Paramecium



Copepod

Vorticella

Phytoplankton

“Plant-like” plankton that use light for energy. Most phytoplankton are single-celled, though some live in colonies. Together, they produce a large share of Earth’s oxygen and support nearly all aquatic food webs.

Diatoms
Glass-shelled algae whose intricate silica forms shape how they sink, drift, and interact with light.

Cyanobacteria
Photosynthetic bacteria among the oldest life forms on Earth, responding to light and chemistry and often reshaping entire waters through blooms.

Phytoflagellates
Small photosynthetic cells that swim with whip-like tails, weaving through the water toward light and food.

Dinoflagellates
Mostly single-celled plankton highly sensitive to light and disturbance; some glow when moved, others produce toxins or live in symbiosis with corals.