

OVER LOOK ED

Prototyping ways to integrate design into other disciplines — a year-long collaborative project, gallery installation, and programming.

*By Inna Alesina
assistant professor, design, Stevenson University*



Photo: Elena Volkova

Symbolically, the beautiful collaborative processes such as lichen and mycelium found in nature become visible through this project and in turn inspired more symbiotic relationships between faculty from different schools.

Would you kill a valuable and useful asset that you discovered in your garden or lawn? What about the plants that you pass on a walk? Have you ever noticed the lichen or moss? We consider them beautiful in nature, but what if they appeared on your roof? Some time ago, grass — an artificial lawn — was branded as beautiful and the only way to show that you care about your neighborhood. When will people realize that “weeds,” such as dandelions and plantains, are beautiful and are an asset to the neighborhood? How do we set a trend that would make people realize that their lawn is a natural treasure trove?

Biomimicry is the human adaptation of nature’s problem-solving abilities. Velcro, inspired by burdock seedpods, and honeycomb structures are the most familiar examples of biomimicry. This installation invites viewers to look at biomimicry in reverse. What would happen if nature could borrow ideas from humans? What if nature could adopt human methods of promotion to make us care for its well-being?

Humans now recognize more brands than plants. In order to combat this trend, *OVERLOOKED* creates promotional branding for nature’s most common species. Branding can transform something unknown, making it visible, valuable, and desirable.

OVERLOOKED explores scientific narratives using the tools of design and branding. Participatory, visual, humorous, sculptural, weird, and multisensory, the work on display creates a surreal scenario in which nature borrows human ideas, activities, and environments. Nature’s interconnected cycles meet fashion, luxury, symbolism, iconography, mythology, and play in this exhibition.

Designers should recognize “interdependent relationships among people, places, things, and activities in a complex system;”

— American Institute for Graphic Arts, 2017



Photo: Elena Volkova

OVERLOOKED SPECIES ZOO

COLLABORATION WITH ADVANCED STUDIO PHOTOGRAPHY CLASS,
STEVENSON UNIVERSITY, SPRING 2018.

Professors:

Inna Alesina and Elena Volkova

Students:

Julia Clites, Rachel Davies, Taylor Guerin, Destiny Hadel,
Megan Herren, Corrin Johnson, Zachary Olsen, Angelica Perez,
Jennifer Quinn, Stephen Schlegel, Michaela Sonntag,
Nora Stroh, Keagen Thomson.

In this series, students gave organisms the stylization of a magazine advertisement to showcase their important—but often overlooked—role in the environment. Each poster juxtaposes an organism with everyday objects in an unexpected way to create a surreal scenario in which nature has borrowed human ideas and environments. This dissonance is both humorous and thought-provoking.



OYSTER MUSHROOM

(Pleurotus ostreatus)

IDENTITY: TRUE RECYCLER

NATURE

Pleurotus is a genus of gilled mushrooms that plays an important role in the environment by decomposing dead matter and make it available for consumption by other living things. Not only are these mushrooms edible, but they have also been used to clean up oil spills and farm runoffs.

HUMANS

The current system of recycling is not working. We use downcycling, resulting in a recycled material that is of lesser quality or functionality than the original. Much of this material is now being dumped into landfills due to market conditions. Oyster mushrooms provide a unique solution. They are used to break down diesel-soaked matter, making it usable by other organisms and truly recycling our waste.

Oyster mushrooms are part of the cycle of life and death. Mycelium—the “roots” of fungi—are now used in the burgeoning biomaterial movement, which makes products and packaging from agricultural waste.

Photography: Keagen Thomson and Corrin Johnson



installation in the gallery Photo: Elena Volkova



Photos: Elena Volkova



Oyster mushrooms plush toy



Photo: Elena Volkova

GREATER BURDOCK

(Arctium lappa)

IDENTITY: THE ORIGINAL VELCRO

NATURE

Burdock is an invasive plant in North America, but has some beneficial properties. It's roots are edible and may be used medicinally as a macrobiotic to purify the blood. Burdock flowers provide nectar for bees, which in turn help in pollination.

HUMANS

Many cultures believe that burdock provides magical protection. However, the most familiar application of the plant is as the inspiration for the invention of Velcro by Swiss engineer George de Mestral in 1941.



Burdock as a hook and loop fastener

Burs are used as tailor's pins to connect parts of a garment. Can you think of other everyday objects that were inspired by nature?



BROADLEAF PLANTAIN

(Plantago major)

IDENTITY: ANTISEPTIC AND NATURAL BANDAGES

NATURE

Broadleaf plantain is found on lawns with the grass is not treated with herbicides. It does well in all soils. It is believed to be one of the first plants to reach North America due to European colonization.

HUMANS

Edible and known for its medicinal properties, the plantain is used throughout the world as an antiseptic bandage for first aid. The edible seeds and leaves of the plantain provide vitamins A, C, and K, and act as an astringent and pain reducer, allowing for soothing and healing.



Plantaid /plantain antiseptic bandages.

The Broadleaf plantain is used as a healing bandage and beauty mask in this photograph.

Photography: Michalea Sonntag and Destiny Hadel



Photo: Elena Volkova

COMMON GREENSHIELD LICHEN

(Flavoparmelia)

IDENTITY: AIR QUALITY TEST

NATURE

Lichen is actually two organisms: fungi and algae that survive in a symbiotic relationship. Neither organism can exist independently of the other, but together they represent one of nature's most beautiful partnerships.

HUMANS

Lichen is beautiful if you look closely but they typically go unnoticed in the natural environment and are considered unsightly on the roof or side of a house. Unfortunately, they've acquired the bad reputation that they can destroy a tree or eat away a roof. Among the good qualities of lichen is that they are sensitive to air quality changes and they are used in the detection of air pollutants.



Lichen as a roll of wallpaper.

Beautiful and beneficial lichen are shown here as decoration that make a human dwelling feel more natural.



LOCAL MOSSES

(*Bryophyta*)

IDENTITY: THE MOST NATURAL GRAFFITI PAINT

NATURE

Mosses are not just beautiful year-round, they produce energy through photosynthesis and some can even create nitrogen compounds through nitrogen fixation. These tiny, ancient plants are key components of ecosystems. They serve as a food source for certain organisms, and also regulate soil climate.

HUMANS

In places where not much else will grow, mosses provide year-round green cover, making them a great solution for green roofs.

There are mosses growing in the natural spaces around us. The local moss species are depicted here as a mark of spray paint to represent claims that moss can be applied as natural graffiti.

Photography: Nora Stroh and Rachel Davies



Photo: Elena Volkova



BAKER'S YEAST

(Saccharomyces cerevisiae)

IDENTITY: WORLD'S BEST FLAVOR PRODUCER

NATURE

Yeast is everywhere. If you mix flour and water in a container and leave it open, the mixture will start bubbling. This is fermentation caused by yeast that is present in the air.

HUMANS

Yeast in the air of Owings Mills was used to create a sourdough starter, which created the loaf of bread shown in this picture. The pattern on the scarf in the photo was inspired by microscopic images of the starter, examined by a Stevenson University biology class. Yeast preserves food and contributes to the flavors of food and drink, including chocolate, beer, sake, and coffee.



Yeast pattern on a scarf and yeast cell shaped porcelain container "world's best flavor producer".



In addition to the images of yeast in the photograph porcelain sake bottle is made in the shape of a budding yeast cell.

Photography: Megan Herren and Zachary Olsen

Photos: Elena Volkova



EARTH WORM

(*Lumbricus terrestris*)

IDENTITY: EARTH HELPERS

NATURE

Millions of earthworms live in the soil, working hard to make the soil better for plants. Red worms are not native to, but have successfully integrated into the ecosystem and very beneficial.

HUMANS

The hard work of the worms in a compost pile turns organic matter into wonderful nutrients for plants.



Photo: Elena Volkova

This photograph depicts surreal scenario in which worms are worshiped by the Worm Queen. Did you know that a teaspoon of soil contains more living organisms than the number of people on Earth? Vermicompost (soil made by worms) is precious and alive.

A spoonful of soil contains more living organisms than the number of people on Earth.

Photography: Stephen Schlegel and Taylor Guerin



Text on the wall, likely a description of the artwork or exhibition.



Photo: Elena Volkova



Photo: Elena Volkova

OVERLOOKED TEMPOS

CONTEMPLATIVE SAND BOX

NATURE

Some processes take a set amount of time. The gestation period for a human is nine months. You cannot speed that up. Think of repeating patterns in nature, such as the rings of a tree or layers of sediment. These are nature's tempos.

HUMANS

Are you in tune with your biological clock? Everything is supposed to happen in the right moment, but what is that timing supposed to be? If you want things quickly, it will take energy and fast doesn't always mean better.



Photo: Andrew Boone

OVERLOOKED TEMPOS invites you slow down and be mindful of this moment.

Think of repeating patterns in nature, such as the rings of a tree or the gills underneath a mushroom.



Photo: Elena Volkova



Photo: Elena Volkova

OVERLOOKED STRUCTURES

HANDS-ON BIOMIMICRY EXPLORATION

NATURE

Nature took millions of years to resolve clever structural solutions. Snails hide in spiral-shaped shells because a linear shape would break. Honeycomb is more than just a structure to live in—it is an organizational tool.

HUMANS

We have borrowed nature's designs for their structure integrity and aesthetic appeal. The invention of corrugated cardboard used a honeycomb structure to create a lightweight packaging solution that reduces the use of trees in production.



Photo: Andrew Boone

OVERLOOKED STRUCTURES invites you to study natural artifacts and identify how humans have employed similar structures in everyday objects: honeycomb could have informed corrugated cardboard; mesh looks like the structures of polypore fungi. Biomimicry is also more than just looks: "greenwash" is a marketing technique in which companies pretend to be green—or good for the environment. We have much more to learn from nature.



Photo: Elena Volkova



Photo: Elena Volkova

Looking with a magnifying glass at nature's structures such as polypore fungus spore surface and imagine what human-made structures can benefit from nature's engineering.



Photo: Andrew Boone

Participatory station where public was asked to "blend" waste and food in a marble-run game to learn about circular economies.

OVERLOOKED CYCLES

COLLABORATIVE MARBLE RUN GAME

NATURE

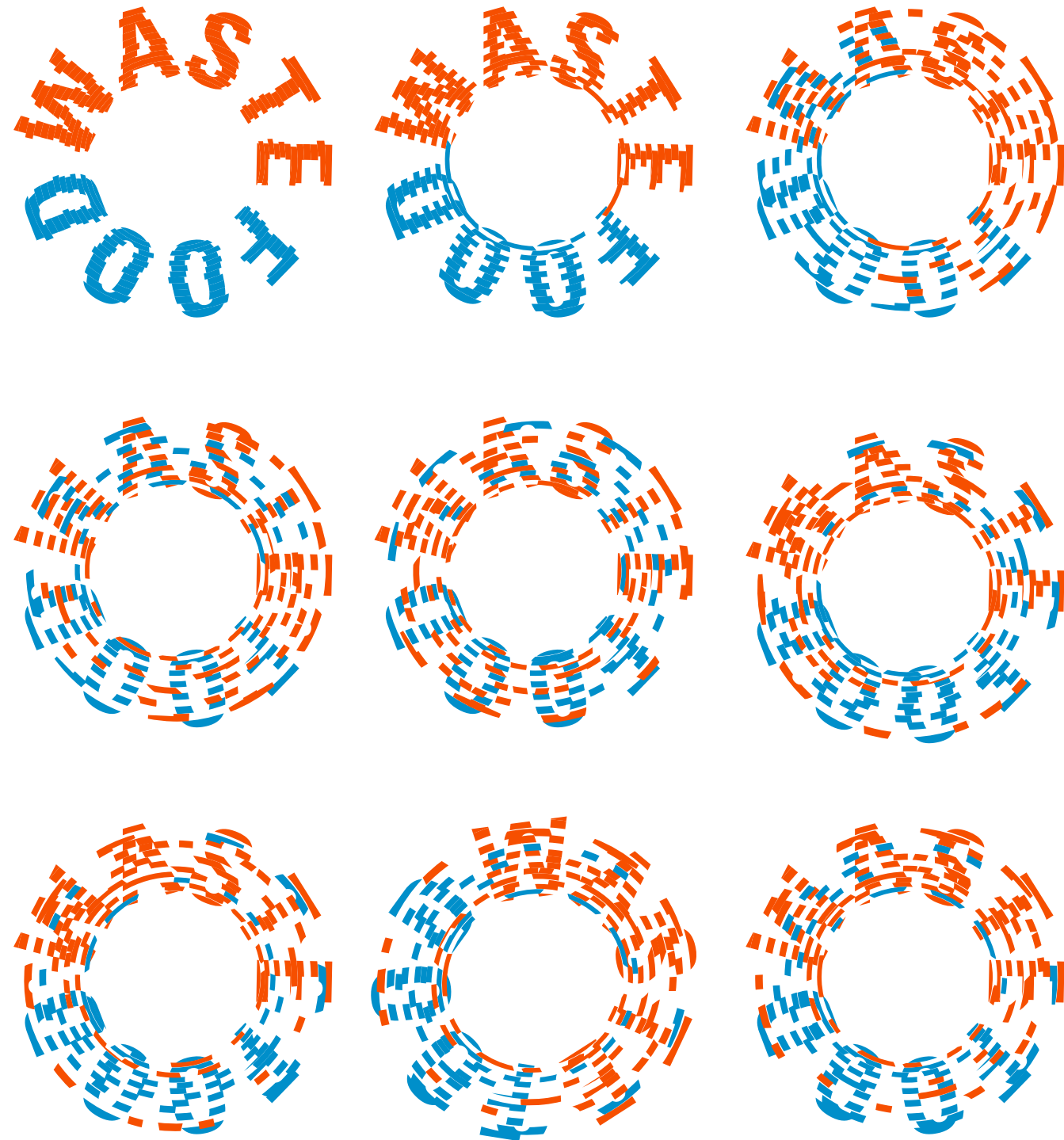
There is no such thing as waste in nature. In nature waste=food. Circular economies also work that way. It is called product lifecycle and known as "cradle to cradle" concept.

HUMANS

Making, using, and disposing of products is killing our eco system. Following this liner model is devastating the finite resources of our planet.

OVERLOOKED CYCLES invites participants to collaboratively play this marble game. Work carefully to run the marble around the groove and imagine the words "WASTE" and "FOOD" blending together. Discuss cycles that you have overlooked in your daily life.

Waste = Food is a basic concept of organic waste materials becoming food for bugs, insects and other small forms of life who can feed on it, decompose it and return it to the natural environment which we then indirectly use for food ourselves.



Looking with a magnifying glass at nature's structures such as polypore fungus spore surface and imagine what human-made structures can benefit from nature's engineering.

Photos: Elena Volkova



Photo: Elena Volkova



OVERLOOKED CONNECTIONS

PARTICIPATORY VISUALIZING

NATURE

Have you ever thought that the world is connected in more ways than is obvious? The idea that a small change can cause larger consequences in another part of the world is called the butterfly effect. Mycelium is part of a fungus that connects plants to food.

HUMANS

Thoughts are connected to words and actions. Sometimes humans fail to see the effects of their actions. How often do you think of the impact of your behavior? Everyone should realize that we are connected to each other and the natural world.



OVERLOOKED CONNECTIONS invites public to make designs by the connecting dots on the activity sheets. Participants write reflections about connections that they have overlooked in their daily lives.



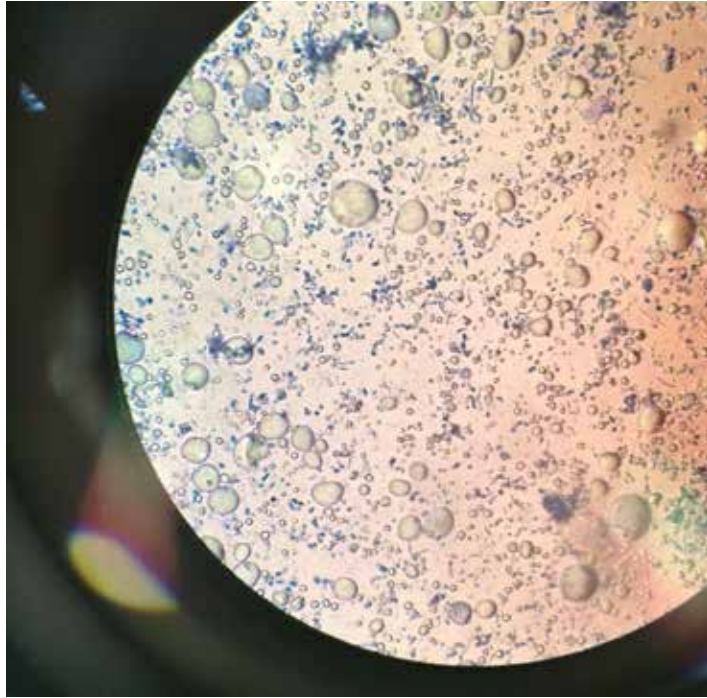
WORKSHOPS & PROGRAMMING

Using participatory activities and multisensory events where public can taste, smell, and make artifacts, **OVERLOOKED** installation continued at people's kitchens where they finish baking the bread they stated at the gallery or on the nature walk where they identify fungi or a plant.



Photos: Hailey Collins

Participants of the Overlooked sourdough bread making event learned about yeast and common edible weeds while making bread in the gallery.



BIODIVERSITY BIOBLITZ WALK

Integration of design had to be facilitated by scheduling groups of students from different disciplines to explore nature together. One example was a nature walk with students from Biodiversity and Digital Design classes. This was not a co-taught class but a cross-disciplinary event that worked with both classes scheduled together. Biodiversity students conducted a BioBlitz while Digital Design students found objects in nature and used them as patterns for design exercise. Both groups worked together and later reflected on the role of the species in the ecosystem, both from human and non-human point of view. Dipping in to Diversity of Life class to look at SCOBY (Symbiotic Culture Of Bacteria and Yeast), sourdough yeast and other kombucha organisms under the microscope created opportunity to show a new perspective to students on why fungi are important and worth learning about.

Overlooked nature walk and BioBlitz with design and science students.



Photography by Elena Volkova



Overlooked Lichen jewelry workshop.
Participants studied lichens with help of microscope and used watercolor to replicate lichen texture and color.

Photos: Hailey Collins



Photo: Elena Volkova

MYCELIUM RUNNING

THIS WORK IS THE RESULT OF A COLLABORATION WITH
DR. KIM PAUSE TUCKER.

SPECIAL THANKS TO STEVENSON UNIVERSITY LAB SERVICES.


Various experimental shapes were grown with mycelium in
the environmental science lab and green house at Stevenson
University's Beverly K. Fine School of Sciences.

**Mycelium growing on various media in the shape
of lampshade.**

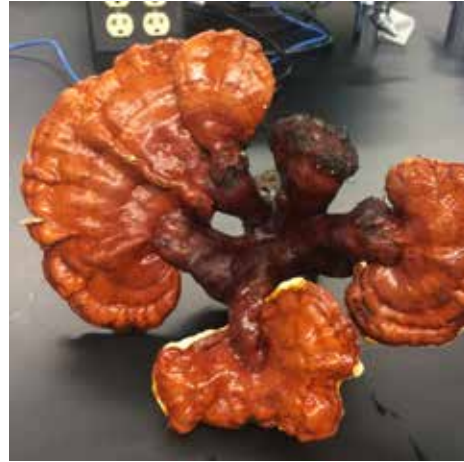
**Media: Sorghum straw, hardwood sawdust, coffee grounds,
wood chips, and fungi (Reishi).**



Photo: Elena Volkova



In recent years we have observed an emergence of multidisciplinary programs and experimental initiatives that brings designers and scientists together. Many design schools established some sort to interdisciplinary labs and maker spaces. What makes these new initiatives slightly different from other maker spaces is an addition of living materials and newly recognized need for engaging in “organic systems ethos” (Dubberly) and their even bigger focus on sustainability. Looking at the university as a system to identify opportunities for collaborative lab spaces and projects, I initiated a faculty research project to experiment with already existing techniques of mycelium-based materials. A year-long collaborative project tapped onto the expertise of biology faculty and laboratory services for bio-material experiments and hands-on workshops.

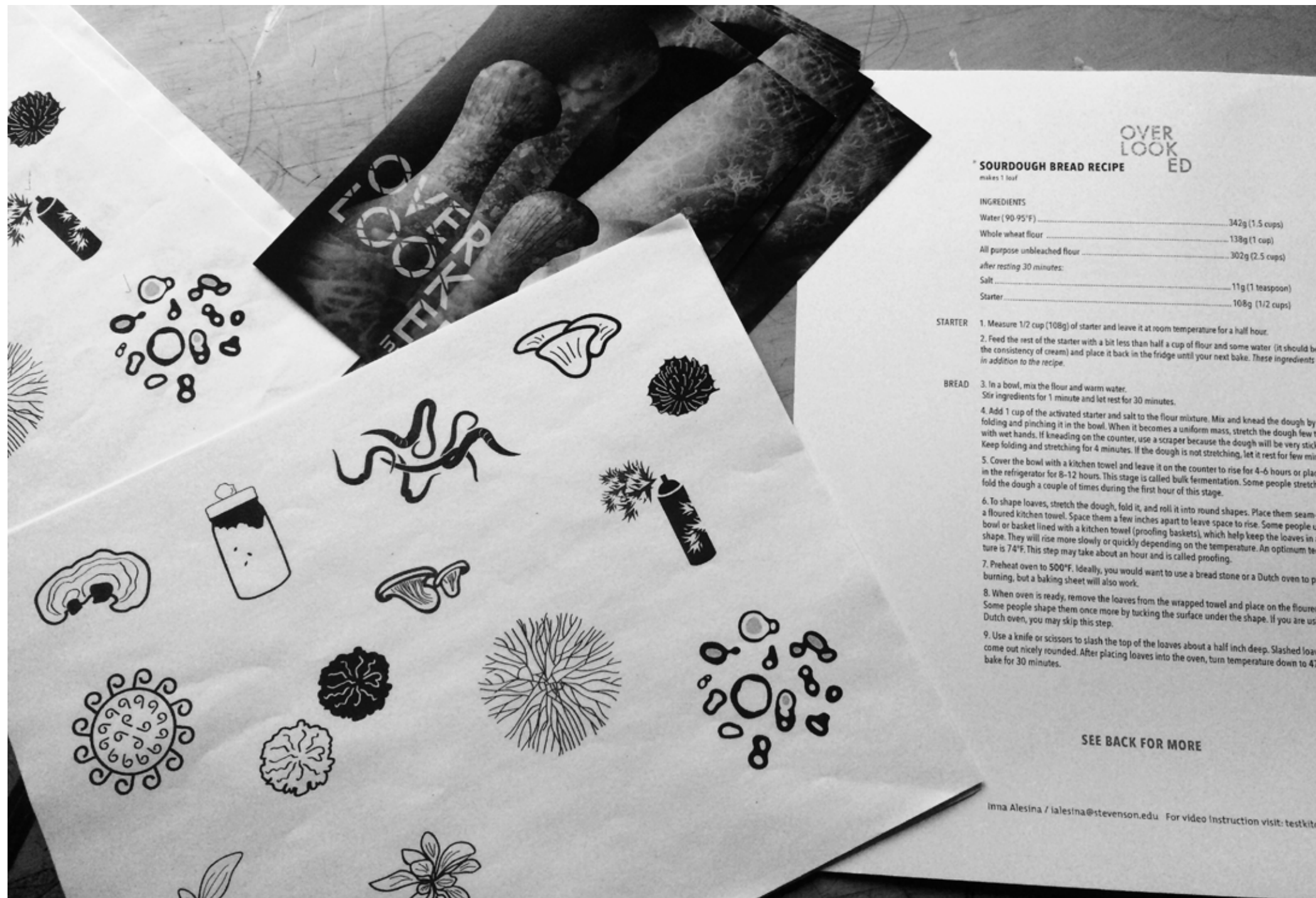


Getting access to the lab and greenhouse spaces was critical to this project. While working on multiple components of the project I approached it as an experiment, both literally in the lab and as an experiment on different ways to integrate design into other areas at the university. Using a nature's framework of symbiotic relationships, installation "OVERLOOKED", engaged students and faculty across such disciplines as photography, biology, digital media, graphic design, and advertising.

Experiments to solve various problems of growing mycelium in the lab.



There were more failed attempts than successes. All failed experiment were composted.



OVER
LOOK
ED

SOURDOUGH BREAD RECIPE

makes 1 loaf

INGREDIENTS

Water (90-95°F)	342g (1.5 cups)
Whole wheat flour	138g (1 cup)
All purpose unbleached flour	302g (2.5 cups)
after resting 30 minutes:	
Salt	11g (1 teaspoon)
Starter	108g (1/2 cups)

STARTER

1. Measure 1/2 cup (108g) of starter and leave it at room temperature for a half hour.
2. Feed the rest of the starter with a bit less than half a cup of flour and some water (it should be the consistency of cream) and place it back in the fridge until your next bake. These ingredients in addition to the recipe.

BREAD

3. In a bowl, mix the flour and warm water.
Stir ingredients for 1 minute and let rest for 30 minutes.
4. Add 1 cup of the activated starter and salt to the flour mixture. Mix and knead the dough by folding and pinching it in the bowl. When it becomes a uniform mass, stretch the dough few times with wet hands. If kneading on the counter, use a scraper because the dough will be very sticky. Keep folding and stretching for 4 minutes. If the dough is not stretching, let it rest for few minutes.
5. Cover the bowl with a kitchen towel and leave it on the counter to rise for 4-6 hours or place in the refrigerator for 8-12 hours. This stage is called bulk fermentation. Some people stretch the dough a couple of times during the first hour of this stage.
6. To shape loaves, stretch the dough, fold it, and roll it into round shapes. Place them seam-side up on a floured kitchen towel. Space them a few inches apart to leave space to rise. Some people use a bowl or basket lined with a kitchen towel (proofing baskets), which help keep the loaves in a shape. They will rise more slowly or quickly depending on the temperature. An optimum temperature is 74°F. This step may take about an hour and is called proofing.
7. Preheat oven to 500°F. Ideally, you would want to use a bread stone or a Dutch oven to prevent burning, but a baking sheet will also work.
8. When oven is ready, remove the loaves from the wrapped towel and place on the floured surface. Some people shape them once more by tucking the surface under the shape. If you are using a Dutch oven, you may skip this step.
9. Use a knife or scissors to slash the top of the loaves about a half inch deep. Slashed loaves come out nicely rounded. After placing loaves into the oven, turn temperature down to 475°F and bake for 30 minutes.

SEE BACK FOR MORE

Imma Alesina / alesina@stevenson.edu For video instruction visit: testkitc

Overlooked sourdough bread recipe, scavenger hunt and other exhibition collaterals.



“Mycelium Running” installation shows the process of growing shapes using fungi mycelium and local straw.



Photo: Elena Volkova

THANK YOU

This work would not be possible without the collaboration with Dr. Kim Pause Tucker of Bevelry K. Fine School of Sciences and assistant professor at School of Design Elena Volkova, both at Stevenson University.

Students:

Julia Clites, Rachel Davies, Taylor Guerin, Destiny Hadel, Megan Herren, Corrin Johnson, Zachary Olsen, Angelica Perez, Jennifer Quinn, Stephen Schlegel, Michaela Sonntag, Nora Stroh, Keagen Thomson.

Event photos:

Andrew Boone and Hailey Collins