

SOIL SYMBIOSIS

Joshua trees are threatened by climate change and may be extinct from their namesake park within a century. Through a combination of field, lab, and studio research, I study the complexities of species interactions under climate change in Joshua Tree National Park, and work with agencies and advocacy groups to advise conservation. Soil Symbiosis is an interdisciplinary integrated practice that explores the complexity of critical species interactions. Here I highlight material reuse, and seek to better understand the form and function of the organisms that I study while sharing the hidden beauty of these threatened species interactions with others. This series of paintings has exhibited at the Black Rock Gallery in Joshua Tree National Park, The Santa Cruz Museum of Natural History, California Academy of Sciences, New York Hall of Science, and the Sesnon Gallery among other locations.



Low elevation fungi and Joshua tree root symbiosis

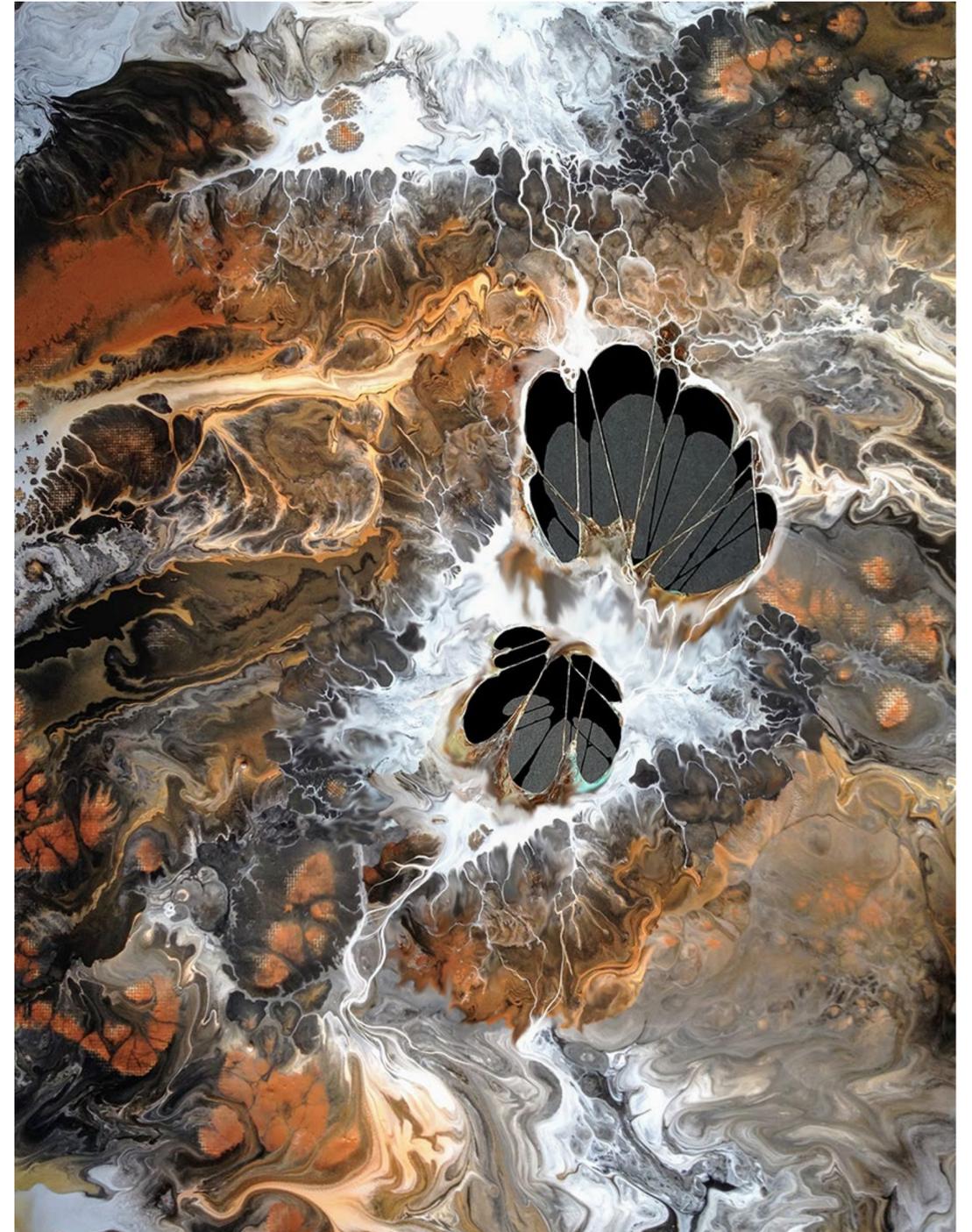
2018. Acrylic, alcohol, Joshua tree seed oil, Joshua tree fibers, on 18"x24" canvas

Using the science findings from my ecological research to inspire the creation of a unique art form, I manipulate the physical and chemical properties of paint, and include Joshua tree fibers, seed oil, and the spines as painting tools. Colors and shapes in the paintings are matched to data on soil nutrients, temperatures and fungal species that I discover in my research along different elevations and displays the low elevation Joshua tree and fungal associations

Mid elevation fungi and Joshua tree root collaboration

2020. Acrylic, alcohol, Joshua tree seed oil, on 18"x24" canvas

Using the same process as above, this painting demonstrates the unique fungal landscapes found in Joshua tree roots at mid elevations. I tear into and re-stitch the canvas using Joshua tree fibers to create symbolic representations of the tension inherent to symbiotic species interactions (mutualism and parasitism), but also evoking the tensions between ecosystems and humanity.



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Mid elevation fungi and Joshua tree root collaboration

2020. Acrylic, alcohol, Joshua tree seed oil, on 18"x24" canvas

This work represents an in-depth collaboration with Joshua trees and fungi. My quantitative ecological data drives decisions in the colors (temp, nutrients), while scans of fungal inoculated Joshua tree roots from my greenhouse studies determine the root placement and canvas tearing. As before, these tears symbolize the critical interactions happening between the roots and fungi along a symbiotic spectrum. Stitching patterns change based on novel fungal species that I have identified with DNA sequencing analysis. The trees are inspired by real trees from my field sites (and are also featured in my social-practice art project www.HeyJtree.com – an online dating site to meet and interact with Joshua trees).

SOIL SYMBIOSIS



High elevation fungi and Joshua tree root collaboration

2020. Acrylic, ink, alcohol, Joshua tree seed oil, on 11"x14" layered vellum paper

Working with layers of vellum paper the painting is built from the painted soil background and workign forward to the hand-inked layers of roots. Roots are inspired by studies of Joshua tree roots grown with high elevation soil fungi and grown in glass viewing chambers to see the development of rooting patterns and the corresponding plant form. The Joshua tree figures are painted to reference trees at my field sites in Joshua Tree National Park and painted onto multiple layers of vellum to take advantage of the haunted transparency to the work which is another way that I invite the viewer to reflect on species loss and Joshua tree death.

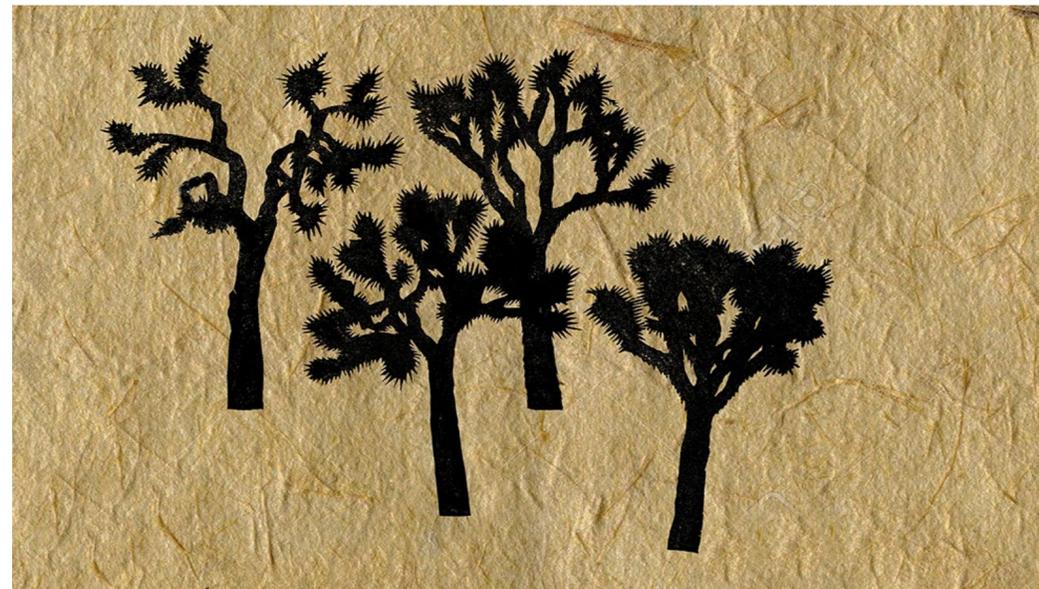
*Image on left is documented with a flatbed scanner; image above is captured with natural light from behind to demonstrate the transparent properties of the layered vellum..

HEY JTREE

Falling in love, one tree at a time



Meet the trees at www.HeyJtree.com



Invasive prints

2018 - ongoing. Handmade paper with Joshua tree fibers and invasive grasses, ink

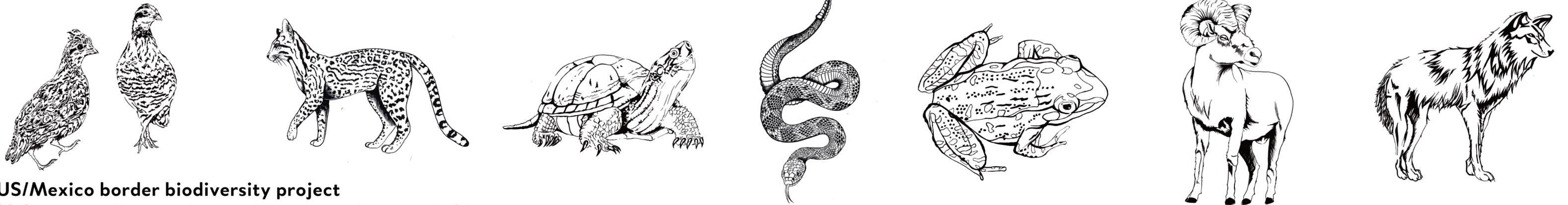


Hey Jtree - mock online dating site to meet Joshua trees

2018 - ongoing

Hey JTree is an ongoing social practice project and mock on-line dating site for meeting Joshua trees and contributing to Joshua tree research. With this work I am interested in how an art practice that is tied to ecological research can impact social change. The goal of Hey JTree is to actively enhance interaction between research, visitors to Joshua Tree National Park, and online audiences, by using collected data from individual trees and text, photographs, art, and Joshua tree music videos. By playfully co-opting the tools that often separate us from the natural world (eg social media) HeyJtree is a provocation to connect with iconic threatened species. This project includes curated contributions from over 50 artists, writers and musicians and has reached thousands of participants. The public can participate by sending love letters to their favorite trees, contribute to research collection by joining me in the field, adding observations to iNaturalist, or by attending a public art making event (making tree paper and relief printmaking). As park visitation is soaring to record highs, the need to teach people how to respectfully visit the desert is vast and urgent. This includes counteracting irresponsible social media posting that shows images of visitors violating park rules that are intended to promote conservation.

BORDER BIODIVERSITY PROJECT



US/Mexico border biodiversity project

2018 - ongoing. Photography, digital illustration, silkscreen, ink, fabric

To build a US/Mexico border wall is a costly political act shrouded in misunderstandings that will have direct and damaging consequences for humans as well as many ecosystems and species that exist at or near border habitats. Through my environmental arts company SymbioArtlab, I created the Border Biodiversity Project, a social practice arts project to draw attention to and inspire dialogue about this issue among students, community members, and political and environmental organizations. Working closely with UC Santa Cruz students, we research and create illustrations of the organisms that will be impacted by the creation of a US/Mexico border wall. This work is informed by onsite visits to border locations and in consultation with international ecologists working at the border as well as the organization Defenders of Wildlife (<https://defenders.org/wall>). Accompanied with educational information and public discourse, our illustrations are screen printed at public events onto garlands of small handmade flags inspired by the “papel picado” tradition. We send them to activists and educators in Mexico as a symbol that unites us was opposed to divides us, while also representing a passable boundary as opposed to a solid wall. We also handprint cards in collaboration with the immigrants rights group YARR, fill them out with resources on immigration rights, and send them in solidarity to Mexican refugees detained at the US border.

ALGAE SOCIETY BIOART DESIGN LAB

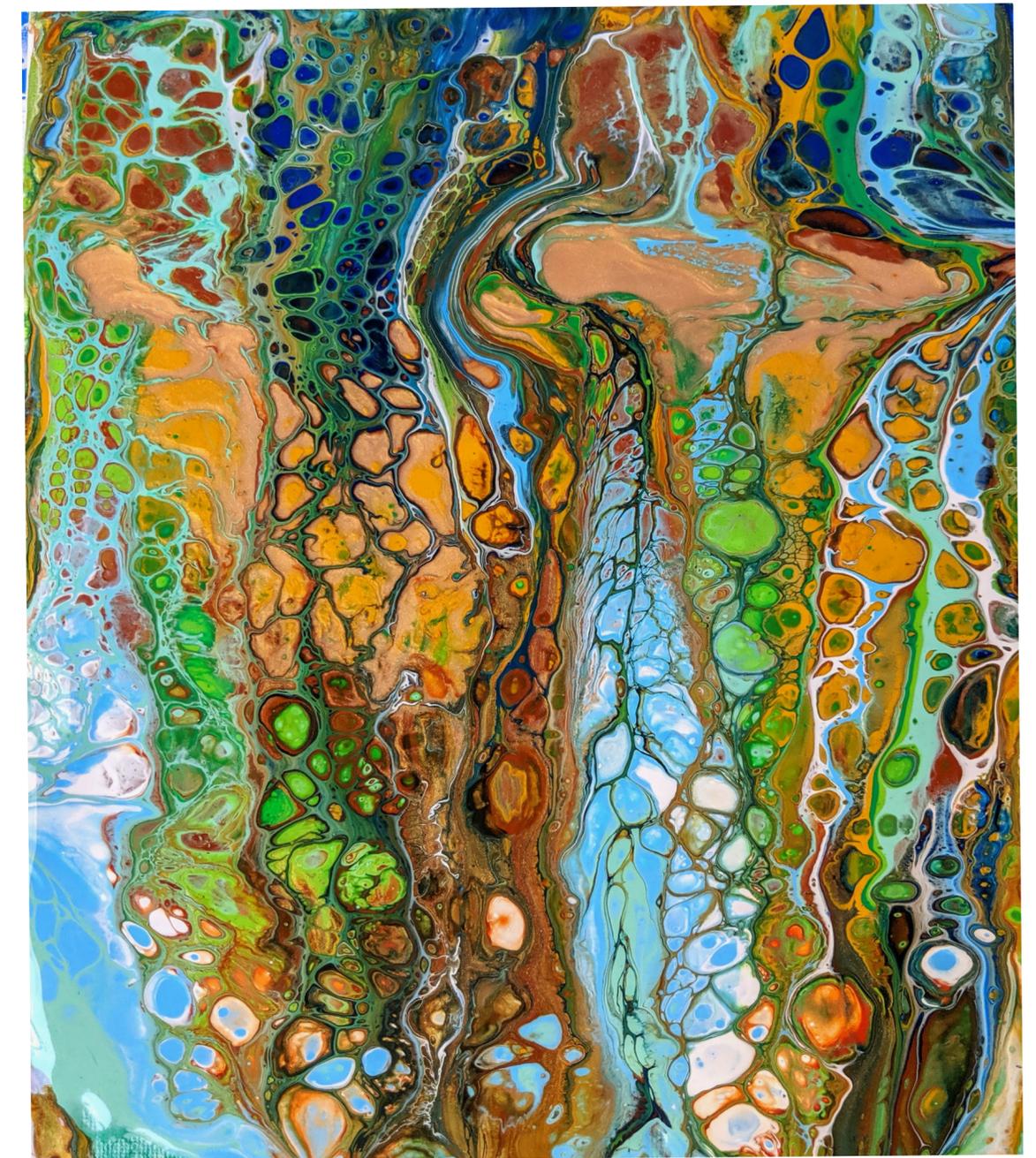
The Algae Society is a global collective of interdisciplinary researchers working together to establish a new community with algae as a non-human international research partner. As a founding member of the Algae Society, I aim to engage audiences on the importance of algae in ecological systems and the environmental threats they face. I focus specifically on illuminating and creating work with algae in desert ecosystems found in cryptobiotic crusts and lichen symbioses as well as algal systems impacted by human activities. This work has been exhibited at the MOXI Museum, Bellas Artes in Madrid, Spain, COP25 Climate Conference Spain, RMIT Australia, Cal Academy of Sciences SF, Sesnon Gallery as well as others.



MOXI Museum of Exploration and Innovation exhibition

2019. Mixed Media interactive exhibition

<http://algaesociety.org/>



Painting performance with algae

2019. Time lapse animation with algae powder, algae oil, acrylic paint, water

Image still from a time lapse of an acrylic painting collaborative performance with algae oil and algae powder to create the organic shapes of algal cells found under microscopes and in natural settings. The beginning pieces in the film symbolize healthy algal ecosystems while the later paintings take on the coloration of toxic algal blooms demonstrating a spectrum of different environmental states and the impacts of negative human influence. Film was shown in one of the peek-a-boo boxes in the MOXI exhibition (shown on left).