## Hex A.

Alameda, California

## Will it pigment?

Watercolors on paper

You would think I should have painted flowers. It's funny to think about; that's like turning someone's body into paint and then making a portrait of that same person. I find myself almost never thinking of a finished project, rather what I want to do. "I have had a itch to try this, use this." I wanted to make paint without having to buy material, but instead using things you could find in a backyard. Most of my work was just taking flowers and boiling them down to make simple watercolors. Does It work? I don't know, so I tried it to see what each flower has going for it. Because of how sensitive the colors were, a simple change in pH could change the color drastically but they still were just like watercolors overall. My idea was to represent the struggles of wasting good paint by making still lives of common materials we buy, like tubes of paint. The painting of a blank canvas is meant to simply show the hesitation of making art. Would I say the solution is to make your own paint so you can freely draw? Not necessarily, even with the paint, the paper I had available was high quality and expensive, which gave me the hesitation to work with it. Maybe if I could make my own paper it might ease the hesitations, but also just being aware of being hesitant let me snap out of it. I started just drawing anything I wanted, having fun with my materials and overall making something I really like just because I lessened my hesitation. There's also something about making my own tools that just brings me joy.

## Will It Pigment?



Hex A.
The Oxbow School

OS4

## Will It Pigment?

Writer's note: Plants differ based on area, in some ways you can think of that as a style. And commonly flowers are known to be used for dying, but if they can make a mark on cloth then some can work on paper as well. In this paper I will be showing my documentation on processing plants I have found around me, how to troubleshoot problems and use what I have.

There is always a desire to have top-grade paint, a strong color, high quality, and well-known by everyone. But what happens when getting that paint is too expensive, and when you get it you don't want to waste it? It can leave you frozen, fearful of missing your chance. But do you really have to spend money on art supplies? Look at your backyard: plants, flowers, tree bark, mud. It's all there to use. You don't have to know everything about a plant before using it. If it makes a mark, it works. The mark doesn't have to be the best thing you've seen. I wouldn't stress about it, because you spent no money, only your own time. Just make sure what you're using is safe.

## Day I, Monday

I've always wanted to make my own paint with what I could just find. I've done it once. Using camphor berries from the ground gave me 3 colors, but I did that in the form of almost burning them and crushing them up to make lake paints. I want to try other methods, but first I need to find plants and figure out what they are. Now, many of the plants I find are from a friend's garden in California. A lot are not native because a garden does not have to be limited to native plants, and
books I find are based on native plants, so I would have to dig and dig for just the name of that plant, and for me, that slows me down. My solution is to get one of the plant identification apps.

The one I got was called "Picture This." I'm gonna say it. I don't like it, and it is a little annoying, constantly asking me to try a free trial as a pop-up in the worst moments. Really what I'm using it for is to get the name of the plant, and, with that, I can get more info on it with other resources, mostly just quick Googling. I'm mostly just making sure the plant is safe or not. When I started looking around for plants, I started getting worried. In California, people are told that picking California poppies is illegal, but there is a little more to that, you can't pick plants on public grounds ("California Laws Protecting Native Plants").

## Day II, Tuesday

After thinking and planning, I was ready to start. I went around picking what I saw, but I never took all of it. I was also collecting leaves from trees, not that I would find any use for them but I still wanted to see. I was having some difficulty still taking some plants, still avoiding California poppies. But I still got a good amount. With all the flowers I got, I didn't want them to mold, so I needed to hang them up with the sun available. With no setup ready outside, I had to set something up in my dorm, (with my roommate's agreement, and help). We set up a string across the window using pins tied with string. We were still able to close the curtains, but not block the flowers from the sun. I think without proper outside air, it wasn't doing much, but it was better than having them sit in a basket all bunched.


I needed more flowers and in big bulk. Sometimes my dorm gets to go over to one of the teacher's gardens. So after getting my basket and meeting at the garden, my dorm helped pick plants. In the end, I was happy, the basket was full of colorful flowers (and smelled amazing). Now I just needed to think of the next step. Later that day I was able to get a drying rack set up, one I could move around if needed. The sun was already going down, and I would start moving the flowers tomorrow... But I had all those flowers in the basket, and it was 7 pm , so with the old setup I still had at the window, I crowded it completely full of flowers. It looked amazing, just that there was no more room, and I think I was starting to get allergies in the morning from all the pollen.


Day
IV,
Thursday

After breakfast, I started taking all the plants off the makeshift hanger in my room out to the studio where I had the drying rack. I spent a good hour or two putting the flowers on, re-tying, or regrouping them.


## Day V, Friday

The next few days were now just waiting and planning, and more research. A lot of pigments are made with metals, and in history the metals they used were dangerous. Green paints is the most toxic in history, using arsenic in 1775. A lot of lead was used in a large majority of paint. some without proper regulation get through today (dollar stores for example). A popular lead paint before it got banned in the 70s was white lead paint, made from cow and horse manure mixed with lead and sealed off for a while. It's a little scary with the number of things involved, like mangofed cow urine for yellow paint (luckily banned later because of animal abuse).

## Day VI, Saturday

I know some pigments from plants can change from pH levels, but I have yet to test that. On a different note, I got to go out with a friend to walk around in the mud, from a river close by during low tide, I have a hunch that mud has high deposits of iron, because it's dark gray, but the top layer is red. normally Iron is gray, but when introduced to oxygen, it turns red. If the top layer is red then that might be the introduction of air. I took some and I'm letting it dry to see if the top layer turns red again, but I don't know how long it will take.

## Day VII Sunday

The plants are dry enough that I can trust they won't go bad or mold(as I'm editing this, in fact, they were not, please make sure they are not in air-tight seals until boiled and no fiber is left). I had enough jars for at least each plant and its stem to be separated. So I sat down in the shade and plucked all the petals, and leaves, and separated them. Overall there were about 10 plants, and I will most likely not boil the ones that are toxic. Overall, I boiled Lady Blanks, simply because it was the most petals I had to mess with. And so for about 15 minutes of boiling, the result was not much. There was a pigment from it, but it was too faint to be noticeable.

This chart is the things I've made, not all of them get used due to them being toxic, or just not having pigment. The way I found this information was by using the app, but I fact-checked with multiple searches and clarification, as the app does not list if a plant is toxic.

| Fool's Onion | edible |
| :--- | :--- |
| Common Freesia | non-toxic |
| Guelder Rose | poisonous |


| Topped Lavender | edible |
| :--- | :--- |
| Chinese Wisteria | poisonous |
| Lady Blanks | non-toxic |
| Three-Cornered Leek | edible |
| Common Lilac | edible |
| Bermuda Buttercup, Oxalis Pes-Caprae (Sour | edible |
| Grass) | toxic |
| French Lavender | Don't eat mud? |
| Mud from a river | toxic |
| Redwood tree bark |  |

## Day VIII, Monday

This time I'd decided to take out a portable stove top to boil, just in case the fumes might be bad. I tried the same flower but boiled it for about 40 minutes. It definitely was darker, but still not much. I've decided that boiling would take too much time, as I also tried it with Topped Lavender, but got nothing. I was starting to get worried. I wasn't getting many results, and I was running out of options. I've been thinking about how people will pound plant fiber on cloth. So I decided to take a flower and rub it on some paper, and what do you know? Vibrant purple right on the paper. I started trying it on all my plants, even the stems had beautiful greens, and different shades of
green in fact Sour grass was a fluorescent yellow, and Common Freesia had both red, purple, and yellow based on the part of the petal.

## Day IX, Tuesday (2)

This was a day I would take a break, mostly to write down everything I had so far. Now one thing I've been thinking has been what am I going to do now? I'd think that if the pigment can appear on the paper from scratching it on then it would give me the pigment from boiling. The thing is, stems don't give pigment when boiled even those they put green on the paper. On the other hand, I needed a tool to help hold the plant if I'm rubbing it onto paper. Maybe crush them up, let them sit in water, then dry them again in a line?

## Day X, Wednesday (2)

I needed to see if adding water again to dried flowers would do anything. For a good amount of them nothing necessarily happened. I will say I was being lazy and did not have much to work with at that time, due to being outside sitting on the concrete not wanting to get a cup of clean water. But the Lady Blanks I boiled for the first time were really just water with a glint of yellow, so I figured it was fine. Dipping dry plants and letting them sit to the side to absorb the water, did show to slightly help. It wasn't until I tried the Common Freesia that I started to get excited. Just from picking up the flower after letting it set, the dye was getting onto my fingers. I wanted to mess with this more. So I got more water and put some in caps (just testing in small amounts) and I let the flower sit in water. It definitely was leaking pigment, but then I recall trying to add lemon juice to the Lady Blanks ink I made so the water I was testing before had higher pH . So I got up and fetched a lemon. Adding the juice made the water pull out way more pigment, and not only
that. It was more vibrant colors: magenta, red, and orange. Just from rubbing plant fiber on the paper then painting lemon juice on the paper, the plant fiber displayed on the paper changed colors. I would have to do more testing the next day but I was very excited to see what I could get! And maybe Common Freesia will be the main floral to use for me. I'll try different amounts of lemon juice to see the variety of saturation. Then I'll see if boiling will concentrate it.


Day XI, Thursday
I have a hard time remembering what I did this day. I recall shaking jars? I was mixing flowers into them. I got a jar of lemon juice ready so I didn't have to keep cutting lemons daily. It seemed like the Common Freesia purple turned magenta when mixed with lemon, and the red gave an orange, but it was all severely diluted so I needed to boil it down further

## Day XII, Friday

I got a metal measuring cup to use as a small pot, and it worked just fine. I filled the cup halfway with water and stuffed Common Freesia into it and boiled it for half an hour. The pigment was strong. I did this to the purple Common Freesia, which looked like the same color, but the thing with the Common Freesia is that when boiling with water and no acid, you get yellow. The red Common Freesia when introduced to lemon juice should change the pigment. I started getting other flowers boiling, Sour Grass (Oxalis), the common yellow flower that you would eat as kids. Well, the petals are a great pigment, the yellow is fluorescent, and boiling it gives a bright yellow ink!


Now the rest of my work is trying all the roses. Some work some don't. A purple rose, for example, can rub purple pigment great on paper. Strangely enough, it doesn't transfer that into the ink, but the pot is stained with strong purple rings and still reacts to the lemon juice to make a
saturated magenta. That will have to be messed with more. Every plant has its own thing, the trick is to find it.

Now all materials have their uses and give their own effects and the floral plant can replace that. But also, there is something about making your tools that I find to be part of the art. Find a way to not be scared to waste your metals if it means you are not making art.


## Works Cited

"California Laws Protecting Native Plants." CDFW, https://wildlife.ca.gov/Conservation/Plants/Laws\#:~:text=Landowner\ permission,hig hway\%20rights\%2Dof\%2Dway.

Logan, Jason, et al. Make Ink: A Forager's Guide to Natural Inkmaking. Abrams, 2018.
"Plant Identifier App: Plant Identification Online." PictureThis, https://www.picturethisai.com/.

