

Observing the shapes, colors, and patterns that greet your eye as you look through a microscope can be one of the most exhilarating and gratifying experiences an artist can have. Recognizing the amount of detail in everything around us is an astounding realization; what nature has to show us is profoundly complex and beautiful. So, when given the opportunity to create anything I wanted, inspired by anything I wanted, and using any material I wanted, I was more than excited to wrap my whole being and soul around the project and take flight with whatever I managed to conceive and execute. While at first I found this to be a challenging task, as I am so passionate about so many different things, and could have spent years contemplating the endless possibilities, I eventually started to think of something that I really wanted to share with people, something that I wanted to uproot and study. I eventually came to find that the topics that most compelled me were observation in art, and the connections between art and natural sciences. I wanted to better understand the historical connections between science and art and the ways in which close observation of our living world fuels the collaboration of art and science. I chose to be inspired by the outdoors, by the natural patterns and beauty that can so easily go unnoticed or unappreciated.

I was given resources like the Cabinet of Natural Curiosities highlighting illustrations by Albertus Seba, chock-full of the wildly imaginative and detailed drawings and paintings depicting every creature imaginable. Seba, who was a Dutch pharmacist, zoologist, collector and artist from the late sixteen hundreds, collected and studied different animals, shells, insects, and more before very precisely recording and painting them. This work fascinated me; the amount of detail in every square inch of any of the hundreds of illustrations was impossibly small and obviously took the imagination of a very observant and dedicated artist. This made me think of all the artistic or scientific shortcuts that we live with in modern times. While it's not always a bad thing to be focused and move fluidly throughout our day, the fact that it has become less and less common for someone to just stop and recognize nature without distraction is a sad fact facing our culture. What happened to the days when children could entertain themselves for hours on end simply by sitting in a yard counting bugs or intently examining the dirt in the garden? Today children are presented with countless entertainment tools, and the truth is, not only children are suffering from this epidemic; adults are equally guilty of, at times, not noticing or understanding the environment we live in, and how it inspires so much in our lives.

Excitement

I began by conducting an experiment on myself, planting myself in the shoes of the great scientists, like Seba, to best understand their creative processes and artistic inspirations. The inspiration part came very quickly, gazing through the microscope; I couldn't help but jump up and down with excitement. The pure thrill of seeing common animals or plant life magnified in such a way was mesmerizing, and at times it literally took my breath away. Each slide I placed over the light was a surreal experience, and each time I felt like I was opening a drawer containing limitless files of unexpected textures, shapes and colors. The best part of this was that my excitement drew others in, sometimes with a little enthusiastic push, but mostly just drawn by their own curiosity. I got to share my observations and findings with my teachers and peers, to show them the uncharted land that

I had discovered, the completely unexpected movement or cell structure of any of the slides I looked at. Each slide was more surprising than the last and I was overflowing with joy and enthusiasm.

I never expected to find as much as I did. I would spend up to forty minutes on one slide, scouring my eyes across the material with fascination. While I intently gazed upon the slides my mind started to wander... I began to think of all the benefits of having artistic skills when working with natural sciences. The ability to directly record what you see allows a person to become most familiar with their subject, which could prove very beneficial. I decided to research this further and use all my resources to the best of my ability. That was when I called Dr. Amy Larkin, an 85-year-old allergist, one of the first female graduates from Columbia medical school, and skilled artist and who double majored in art and Biology as an undergraduate at Columbia University. She confirmed my suspicions that it comes in handy to have artistic talents when working in natural sciences. She mentioned that when teaching others, it is helpful for those students to articulate what they are learning through visual aids, and when assessing a problem, it is easiest to diagnose that problem when you already have a distinct mental picture of what it looked like beforehand.

Visual Feast

I first started my research with a camera, a microscope and a small clover, its roots still attached. It lay there, flat with translucent leaves, but as soon as I looked through the microscope I saw the big green and purple rectangular cells of the clover's leaf staring back at me. It amazed me, how something so small and simple could be holding all of these colors and shapes, only visible to the eye when examined under a microscope. And the excitement didn't end there. I was soon intoxicated by the spell that made me crazy with anticipation, whatever I could find that was even slightly transparent was a potential candidate for my addiction. Anything I could find made its way onto a slide. I would then hover over the lens, exploring the different depths to the hair on a spider's leg, or the edges of the studded bee wing, or the circumference of a piercing red drop of blood. All this was mesmerizing to me, and I soon became devoted to finding the most diverse object that would reveal the most unexpected texture under the microscope. At one point I even swiped a pomegranate seed from Stephen Thomas' desk, and after cutting out a small wedge, I was amazed to find a completely unexpected texture. The saturated pink was clustered in the shape of honeycomb; it was naturally beautiful and abstract. A couple dozen slides later I started recognizing patterns in what I was seeing. There were unexpected designs, shapes and colors, all of which were familiar from objects that we see every day.

Ernst Haeckel the Visionary Scientist

Ernst Haeckel was a German biologist, naturalist, philosopher, physician, professor and artist. I was first introduced to his artwork in our science class, and I was immediately stricken by the colossal amount of detail and artistry in the elaborate creatures that Haeckel had discovered and recorded in his artwork. My interest had been captured; I wanted to know more about the progression of this man's life and how it had been influenced by

nature, science, and art, how he had developed his knowledge of these subjects, and what interested him or motivated him. After some preliminary research, I was given the book Art Forms in Nature featuring hundreds of Ernst Haeckel's drawings and a whole preface delving in to the background of Haeckel's passion and ambition. What amazed me most about Haeckel was the fact that he was foremost known as a biologist and philosopher, while his artwork was just means of recording what he saw. Yet as I sat looking at his artwork, I was in complete awe of the minute technicality because, with the artistic standards of today's world, I find myself expecting less elaborate and detailed artwork.

The ultimate point of my project, the core and structure of the idea that I wanted to share, was to bring to light the dumbfounding similarities in patterns, shapes, colors and functions that are constantly surrounding or modern environment, all of which can be associated with nature. The inspiration between nature and art is everlasting; they feed one another and draw from each other. My simple request is that we all take the time out of our day to recognize these similarities between the two, and the unknown beauty that flows from their union. There are miraculous discoveries of texture, color, and shape that have yet to be made, and only pure joy will come from their discoveries—all that is required is the ability to observe.

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