

The Sonic Feather

By Mika Johnson

Backstory

Dawn Chorus is a citizen science project, launched in 2020, so that individuals could help scientists better understand issues in avian biodiversity by recording bird songs with their phones, which they then uploaded to a website. Prior to launching the 2021 phone application, Marcel Karnapke and I were invited to create an artistic feature that expanded the project into the realm of art, with the goal of encouraging *Dawn Chorus* participants to create something visual, using their recordings, so as to make art that would reconnect them to nature. As Marcel and I are strong believers that scientific data, when transformed into art, can be a powerful tool, we accepted the challenge. Previous to *Sonic Feather*, we had scanned trees to recreate them in VR, so that users could fly into a simulated world of mycorrhizal fungal structures and tree roots, beneath the ground, where they could experience the partnerships between forests and fungus. We also began work on a project that will take us to Eastern Greenland to scan a massive iceberg, in the hopes that by simulating the form in VR and allowing participants to get close to it, people will feel the emotional impact of natural forms that are quickly disappearing due to climate change. In both cases, the raw scientific data is part of our medium and the contributions of scientists to the fields of botany, mycology, and climatology are our inspiration.

In the case of the *Dawn Chorus* phone application, the primary medium is the sound file that you, the participant, capture with your phone. Our goal, as artists, was to create something that allowed you to experience that medium differently, in this case by transposing sound into something visual that you must co-author. But behind that goal was something greater, in this case the creation of meaning, which is why we believe art is important in the first place. Stated more boldly, we believe that art is necessary for our survival. It is an evolutionary adaptation. It is how we reimagine the world, which is extremely important right now as our planet's biodiversity is everywhere threatened. We began with the following questions: how to get people to think, feel, and hear bird songs in a way that they never did previously? And how to create a tool, by which users could both make and share art, but at the same time feel that in doing so, they were reconnecting to nature and not simply playing with their phone? With this in mind, Marcel and I began our own journey. From that first week on, the sounds of birds took on new meaning.

Inspiration and Creation

The *Sonic Feather* took its original inspiration from the feather, which like a snowflake is always unique, a fingerprint of the species from which it grows. We admire feathers because of their lightweight structure, beauty, symmetry, and mathematical complexity. But they also inspire wonder because they allow large animals to take flight. When we consider that birds evolved from dinosaurs, preceding our earliest sapien ancestors by over 65 million years and surviving through an extinction event that wiped out all non-avian dinosaurs, the feather becomes even more impressive. It is an object to behold, an echo of millions of years of adaptation and survival.

At its most basic form, culture is a reaction to nature, which is why the two continuously overlap, practically and metaphorically. The feather is no exception. Throughout history,

feathers were powerful signifiers for those who wore or gifted them in cultures throughout the world. The feather was also the principal writing tool in Europe for three centuries. Combining these separate attributes, the *Sonic Feather* was conceived as a brush, or pen, that emits sound rather than color, which you activate by touching your screen. Think painting, drawing, writing, or playing with an audio file, in this case on your phone, which becomes a two dimensional canvas. As you create your *Sonic Feather*, your audio file, now uncoupled from linear time, becomes an image, unique to your interaction with it. This new representation allows you to interact with the sounds of the dawn chorus in a way that classical audio playback cannot. We believe this experience adds yet another perspective to those found elsewhere in this project, allowing you to see, hear, think and feel differently about the sounds and songs of birds.

Like all other feathers on the planet, your *Sonic Feather* will be as unique as your fingerprint, but in this case tied to an awareness that sound is never just sound, but also creation. By sharing it online, you join a larger story related to how science, art, and awareness, coupled with technology, might remake the world -- no small thing when we consider that our smartphones now have more than 100,000 times the processing power of the computer that landed humans on the moon just 50 years ago. We should perhaps even imagine that the next stage of evolution might even combine humans and birds in ways unimaginable, as nature, science, and art coalesce and co-author new forms. The *Sonic Feather* is a hint in that direction. It is about inspiration and awareness. It is about science and art joining forces to celebrate the mystery and beauty that are birds and their songs. It is about creation. And in the end, it is about you.