

Finzi Trust Scholarship 2017

Bee-Sharp Honeybee Final Report ~ *by Rae Howell*

It is with great pleasure that I write this report, a detailed account of my experience on my project Bee-Sharp Honeybee.

This summer I spent 7 weeks in Minnesota, USA, where I undertook a self-designed art-science residency project, researching the sound of the bee-buzz frequencies, with the intention to write numerous 'Miniatures': chamber music works-in-progress, utilising the research data and field recordings of the bee-buzz as inspiration (and at times, direct rhythm & pitch ideas), for musical starting points.

Although an ambitious project to undertake, I knew it was worth the investment and risk. The most satisfying thing was not knowing how each step would unfold, the path forward completely mysterious, which is why it felt like the right thing to do.

During the first few weeks, I spent time meeting and working with hobby beekeepers, the University of Minnesota Bee Research Lab, the Bee Squad, scientists and researchers, who respectfully offered me access to bee-hives in a number of locations to conduct some dedicated field recordings. These personal connections added a new layer of meaning and depth to the project that I hadn't initially anticipated.

From my research, and the analysis of the field recordings in the form of spectrograms (visual colour maps of frequency details) and frequency line graphs, I made observations from the technical & musical patterns in the data, to experiment with pitch and texture possibilities in music.

I workshopped these starting points with The Laurels String Quartet over a number of sessions, and designed a graphic notation system that best represented the concept and process of Bee-Sharp Honeybee, based on the way a bee-hive works. All-in-all, I composed a number of Miniatures for strings (each between 30 seconds and 4 minutes), culminating in a 21 minute musical composition (including all Miniatures in succession).

The music scoring/notation system worked well, instructed by a more thorough verbal explanation of the reading/performing process for the musicians, which enabled them to interpret notes, textures and soundscapes individually, incorporating improvisation and more experimental techniques into the performance of the Miniatures.

The intention for the notation system was that I wanted to experiment with the process of creating the music, making it more visual (as per the field recordings and frequency maps I analysed), so as to develop more open sections & improvised segments, allowing the strings freedom in the way they approached the Miniatures. The main objective was that they all read from the same page (like they're in a bee-hive together), primarily to listen more carefully and get their eyes off the music as much as possible. Additionally, the scores were hand illustrated with stencils, to remove the reliance on computers and produce a more creative, free flowing score which potentially could be the backbone for a future animated version of the score.

Alongside the music making, I worked with the Independent Film Maker Project Minnesota, in creating a series of animation clips, also Miniatures, between 10 seconds – 30 seconds in length. This process included the making of the 3D claymation bees and flowers, 2D hand-illustrated backdrops that were then animated with stop-motion animation and after-effects computer programs.

The entire process, from the field recordings and music creation to the making of the animation films and performances, was captured on film, which is currently being edited for a short documentary about the project.

We performed the initial string quartet miniatures live at The Pollinator Party, on Thursday July 27, 2017, as well as a house-concert performance in Minneapolis the following evening. The stop-motion animation clips were performed with live music improvised by the quartet.

We had a fantastic response to the live performances. And I am so very happy with the outcome of the project so far, I'm eager to expand on it, digging deeper into the field recordings and buzz variations, to make further grounded, substantiated observations. I feel like I've barely touched the surface of the potential of Bee-Sharp Honeybee, so I am looking forward to seeing it develop into the next stage.

My long term intention is for the acoustic instrumentation to be expanded to chamber orchestra (maintaining the combination of experimental, improvised and notated music), with electronics~ the electronic component consisting of a pre-recorded element of bees (from the field recordings), and contemporary and abstract beats & samples derived and manipulated from the from the close mike recordings. The animations will potentially grow into an animated score that drives the final work on a visual scale.

The website for the project is:

<http://www.raehowellmusic.com/projects/bee-sharp-honeybee/>

And a link for the playlist of a few of the animations here:

https://www.youtube.com/watch?v=ekTDgl_wMDE&list=PLZyJ_y-v47X5kDzvU7tw8c3yJJPWs4Mf

On a final note, a huge thankyou for giving me the opportunity to pursue Bee-Sharp Honeybee. I see this as my primary focus for the next few years, so The Finzi Trust's generous scholarship contribution has propelled things forward considerably. Currently, and over the coming months I will be using the new material to seek further opportunities for Bee-Sharp, to continue developing and expanding it.

Thanks again and best wishes,

Rae Howell