

Sword Fern Research Project

Progress Report

August 15, 2020



Haven

Ecology & Research

Accomplishments

Project Management

In July, I met with Kim Frappier for a site visit at Upper Luther Burbank Park. Although I had previously discovered several symptomatic sword ferns in the park, these were apparently unknown to her and were not associated with the initial die-off event. Kim's local knowledge was extremely helpful in identifying the primary area affected by the phenomenon. I also addressed several of her concerns about our research methods, such as the potential for contamination in unaffected areas, or the destructive nature of the sampling protocol. She seemed satisfied with our risk management strategy and explained that she will eventually need to report to her governing board on these decisions.

Research

No research has been conducted in the past month due to ongoing obstructions associated with the pandemic. However, after consulting with Dr. Ylva Lekberg at MPG Ranch, I have found a path forward with the metagenomic study with or without access to a laminar flow hood. If the re-opening plan for SoundBio remains ambiguous by August 21, I will proceed with sample preparation using basic sterile bench techniques in a clean room, as suggested by Ylva. Our schedule for field work is outlined below.

Next Steps

Timeline

We have scheduled fieldwork to begin late August, with the goal of having all samples delivered to MPG Ranch by September 15 (Table 1). Precise dates may change depending on weather, site conditions and other logistical factors.

Due to several delays and obstructions associated with the COVID-19 pandemic, we are not on track to complete our final report by September 15, 2020. Additionally, there remain some uncertainties that will likely affect any revised timeline. Our collaborators at MPG Ranch have reduced their laboratory staffing as a precautionary measure to reduce the risk of transmission. Additionally, MPG Ranch has temporarily paused their molecular analysis while they troubleshoot an ITS contamination issue. Completion of the metagenomic study is also contingent on the scheduling of the laboratory subcontracted by MPG Ranch for their sequencing services. We hope to complete the final report by November 15, 2020.

Date	City	Park	Notes
August 24, 2020	Seattle	Schmitz Preserve	Healthy
August 26, 2020	Seattle	Seward	Healthy
August 28, 2020	Seattle	Seward	Symptomatic
August 31, 2020	Mercer Island	Pioneer	Healthy
September 2, 2020	Mercer Island	Upper Luther Burbank	Healthy
September 4, 2020	Mercer Island	Upper Luther Burbank	Symptomatic
September 7, 2020	NA	NA	Backup day
September 9, 2020	NA	NA	Backup day
September 11, 2020	NA	NA	Backup day

Table 1: Timeline for fieldwork.