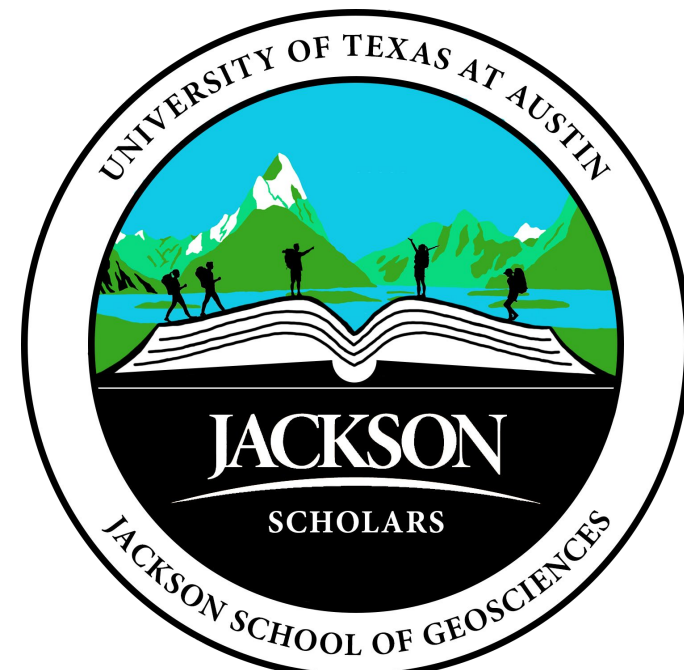


Discovering Opportunity During COVID: Geoscience Outreach in the Virtual World



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INTRO

- The COVID-19 pandemic changed how we bring science outreach to secondary school students, who could use the motivating wonder of the study of our planet now more than ever.
- We aim to bring new perspectives on a variety of topics in the geosciences not traditionally covered in the classroom based on our own undergraduate research and experiences. Our goal is to introduce these experiences to students who would otherwise not be exposed to the geosciences, as well as inspiring motivation to learn about the world around them.

METHODS

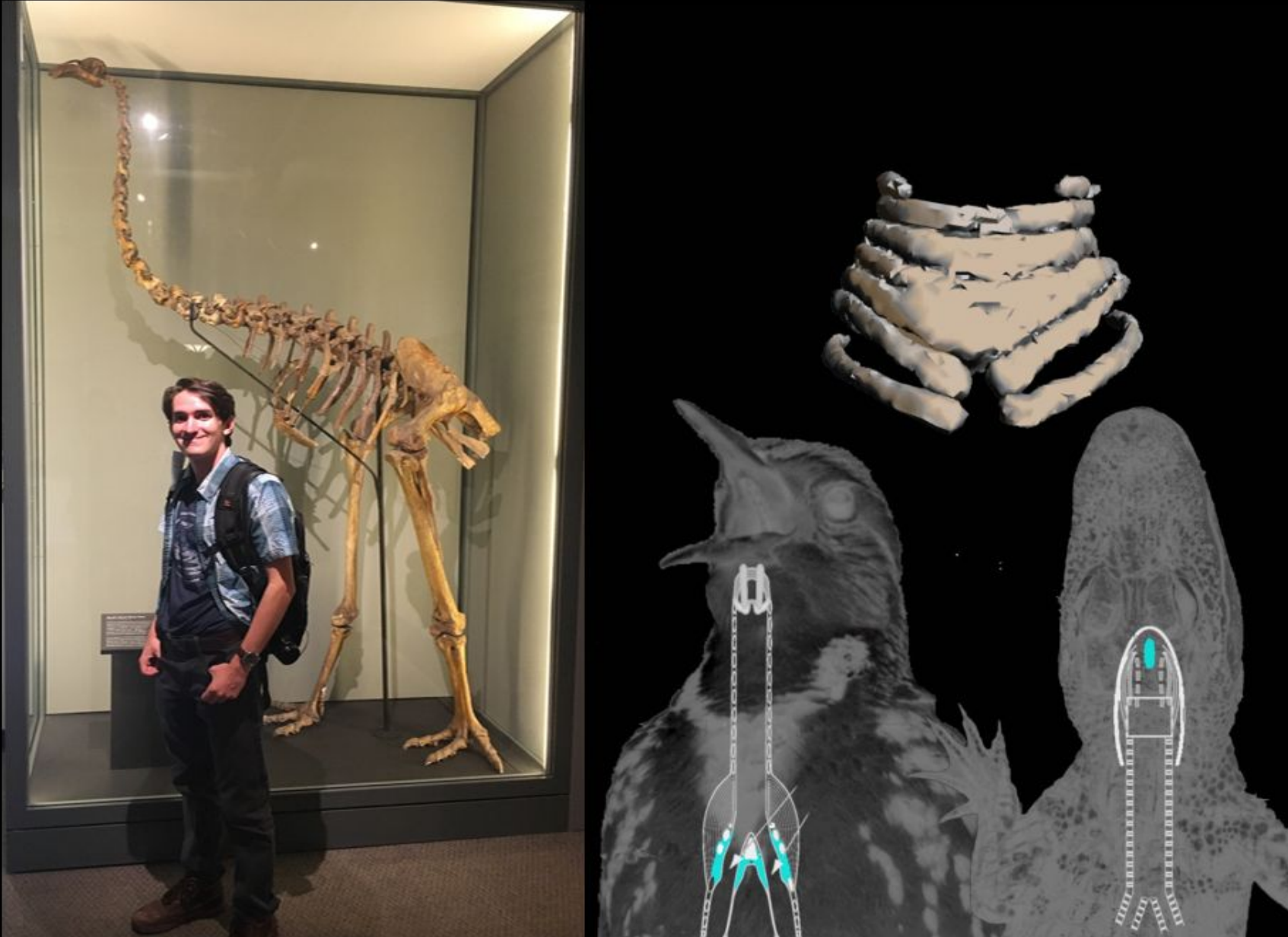
- We created a modular presentation that may be adjusted based on availability of presenters, target age group, and topics of interest based on the group we present to. This allows for the easy introduction of new presenters, allowing this program to transcend individual groups of presenters.
- Presentations are given virtually via Zoom or Google Meets. This allows us to present while being COVID safe, and allows us to present to schools where travel is impractical due to distance in the future.
- Presented to three schools so far (2 high schools, 1 intermediate school)
- Schools chosen for initial trials due to presenters being alumni or having established relationships with staff.

Virtual Outreach provides new opportunities to encourage **interest** in the **geosciences** in grade school students.

Examples of Modular Presentation Slides

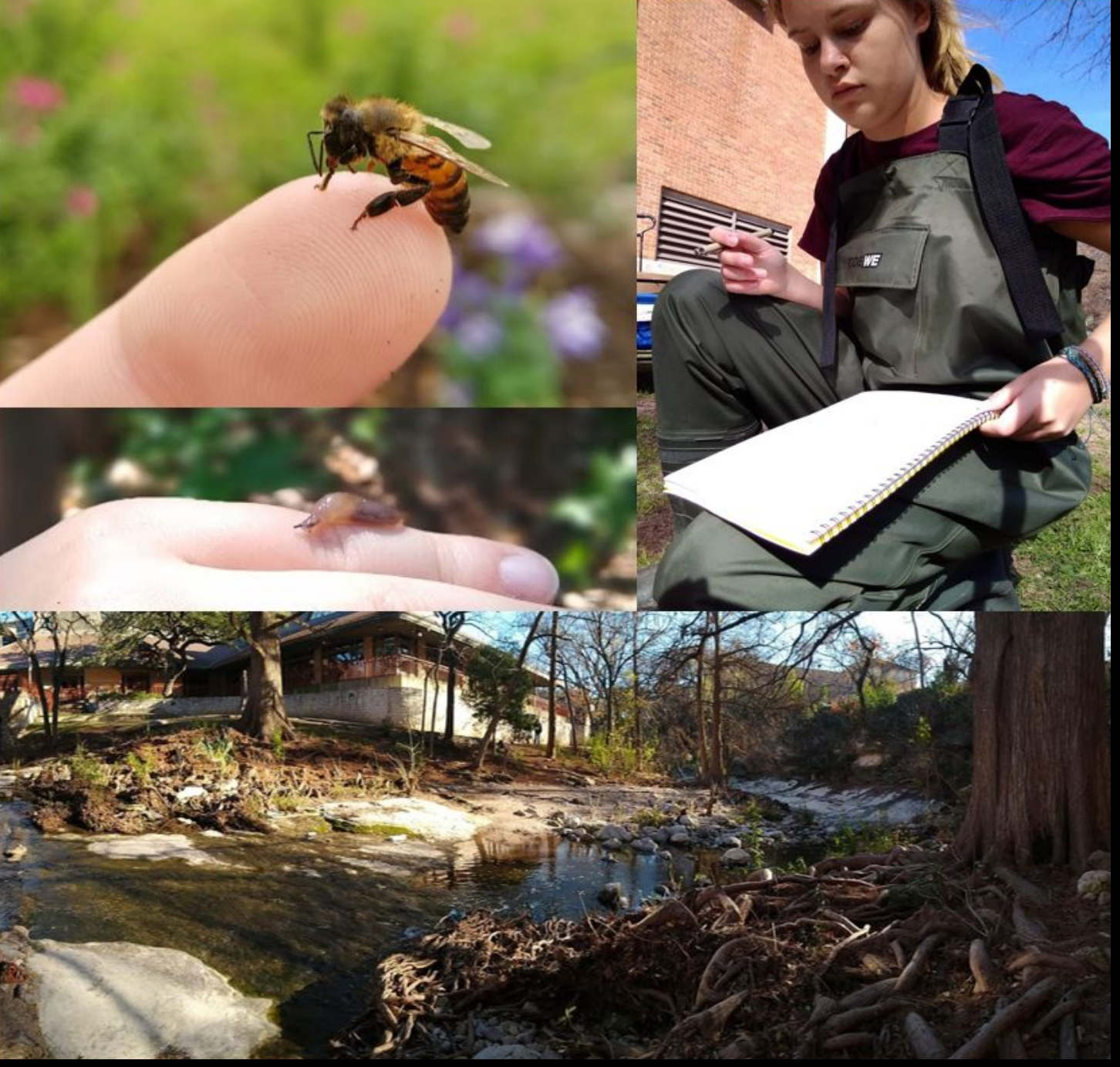
How did the Dinosaurs Start to Sing?

- Studying how modern bird vocal organs work in order to understand how they evolved
- Oldest fossil syrinx from Antarctica (Vegavis – 66 Million Yrs Old)
- What was the Mesozoic soundscape like?




Environmental Science
Preserving Nature in the City

Alicia Rusthoven




Geology in the Dark



Geochemistry

- Partnership of Geology and Chemistry
- From tiny scale to massive
- Some topics geochemists deal with:
 - Chemical reactions
 - Economic metal/mineral formation
 - Geochronology



RESULTS

- Reached approximately 78 total students to date
- This includes two 6A schools and one 3A school in Houston and Lago Vista, Texas respectively.
- Groups included a STEM honors society, a 5th grade science class, and a AP environmental sciences class.

Examples of Questions Asked by Students:

Questions about the Geosciences

- Do hydrologists study the appearance of blue-green algae in lakes?
- Can you use computational methods to estimate how severe volcanic eruptions can be?

Questions about Undergraduate Experience

- How easy was it for you to start doing research in college?
- How do college classes work during COVID?

Questions about DEI

- Do many women work in the geosciences?

FUTURE DIRECTIONS

- We plan to branch out to more schools, particularly in low income communities that are underserved by the geoscience community.
- Post-COVID, we would like to hold in-person events, but the virtual platform will continue to remain important.
- We will also incorporate more undergraduate presenters into our program, so that they can carry on the program even after the current group of presenters graduates and bring more perspectives into the presentations.

