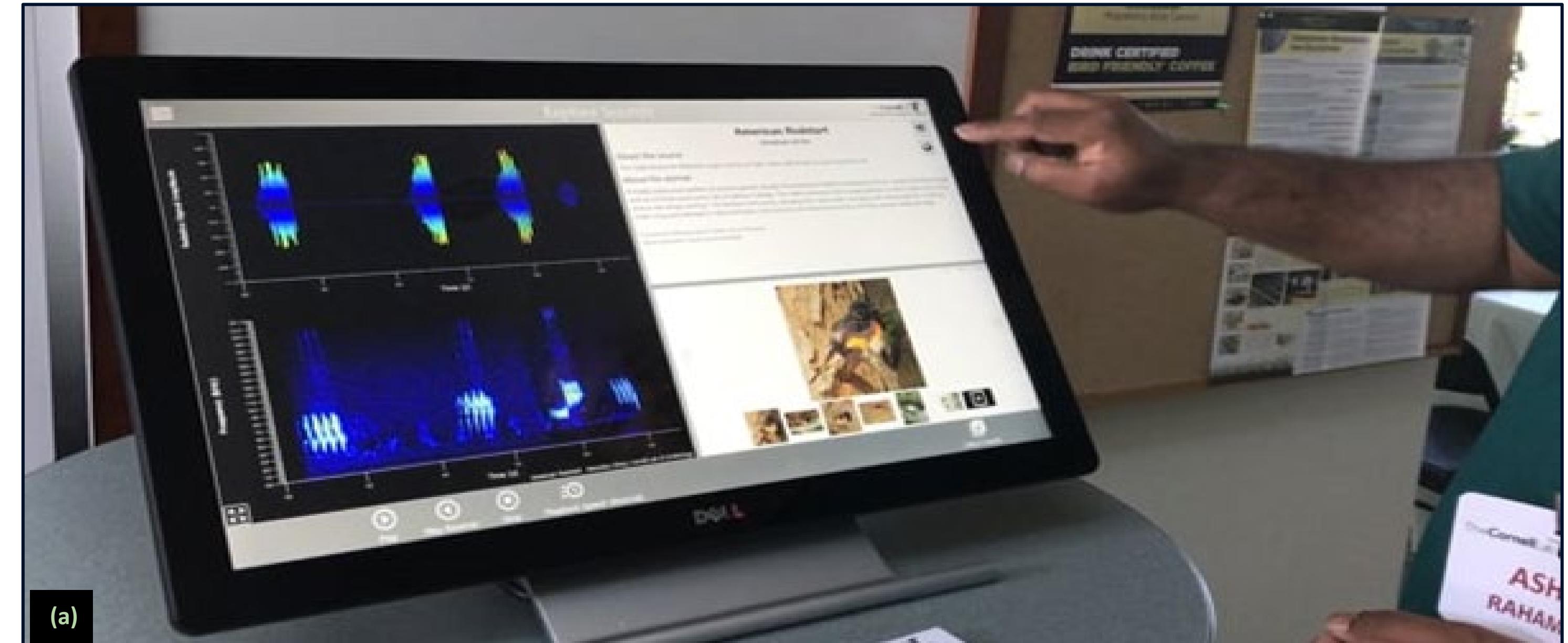


# Do You Have What it Takes to Customize a Raven Exhibit?

## Project Introduction

The goal of our [UConn NRCA Conservation Training Partnerships \(CTP\)](#) project was to assist Marvelwood School and Kent Land Trust in the creation of an interactive [Raven Exhibit](#) about the [Macedonia Forest Block Important Bird Area \(IBA\)](#) located near our school in northwest Connecticut.

Specifically, our task was to work with the [The Cornell Lab of Ornithology](#) to assemble the exhibit, document the journey via a blog and ArcGIS Story Map, and create "user-friendly" templates.



## Project Conception

It all started with an IBA Small Matching Grants Program award from [Audubon Connecticut](#) and a crazy idea generated by community partner and teacher, Laurie Doss, after she participated in a Sound Analysis Workshop at the Cornell Lab of Ornithology in the fall of 2018.

[Marvelwood School](#), was awarded the grant to purchase Swift terrestrial autonomous recording units to supplement other recorders loaned to us by the [Department of Energy and Environmental Protection](#) and document species within the IBA for the [Connecticut Bird Atlas Project](#).

Ms. Doss, Science Department Chairperson at Marvelwood, was introduced to the [Raven Exhibit](#) by Ashakur Rahaman at the workshop. Ms. Doss' wheels started spinning to see if she could extend the life of our atlas acoustic recordings to help educate the public about birds found within the towns located in the IBA. The Raven Exhibit project could fulfill part of our matching effort in the grant application and would allow us to share our knowledge and research of birds utilizing the IBA with the public in a fun and interactive way.

Because this was a massive undertaking, we decided to turn a portion of our work into a [UConn CTP](#) project. We hope you enjoy our journey and that it inspires your school and/or organization to customize your own Raven Exhibit.

## What is a Raven Exhibit?

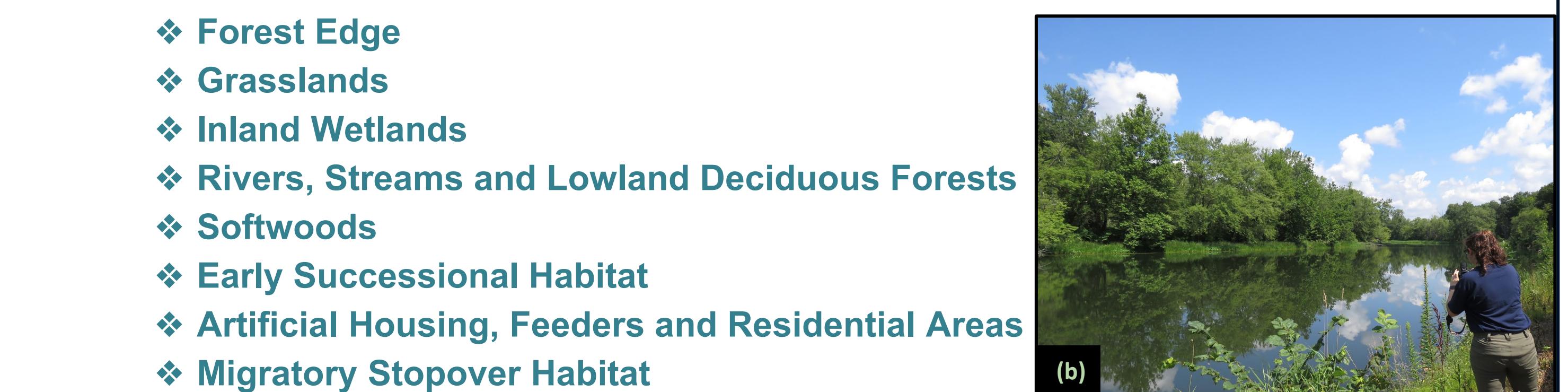
Although the name may suggest that a Raven Exhibit is simply an exhibit about a bird called the Common Raven, it is actually the name for an interactive display and sound visualization software system.

The software allows for customization - you can specialize your own Raven Exhibit on a topic you are passionate about, a problem in your community, or to showcase different local wildlife. Visual displays can be placed in areas such as science museums, zoos, aquariums, schools to educate visitors about biodiversity and/or conservation issues.

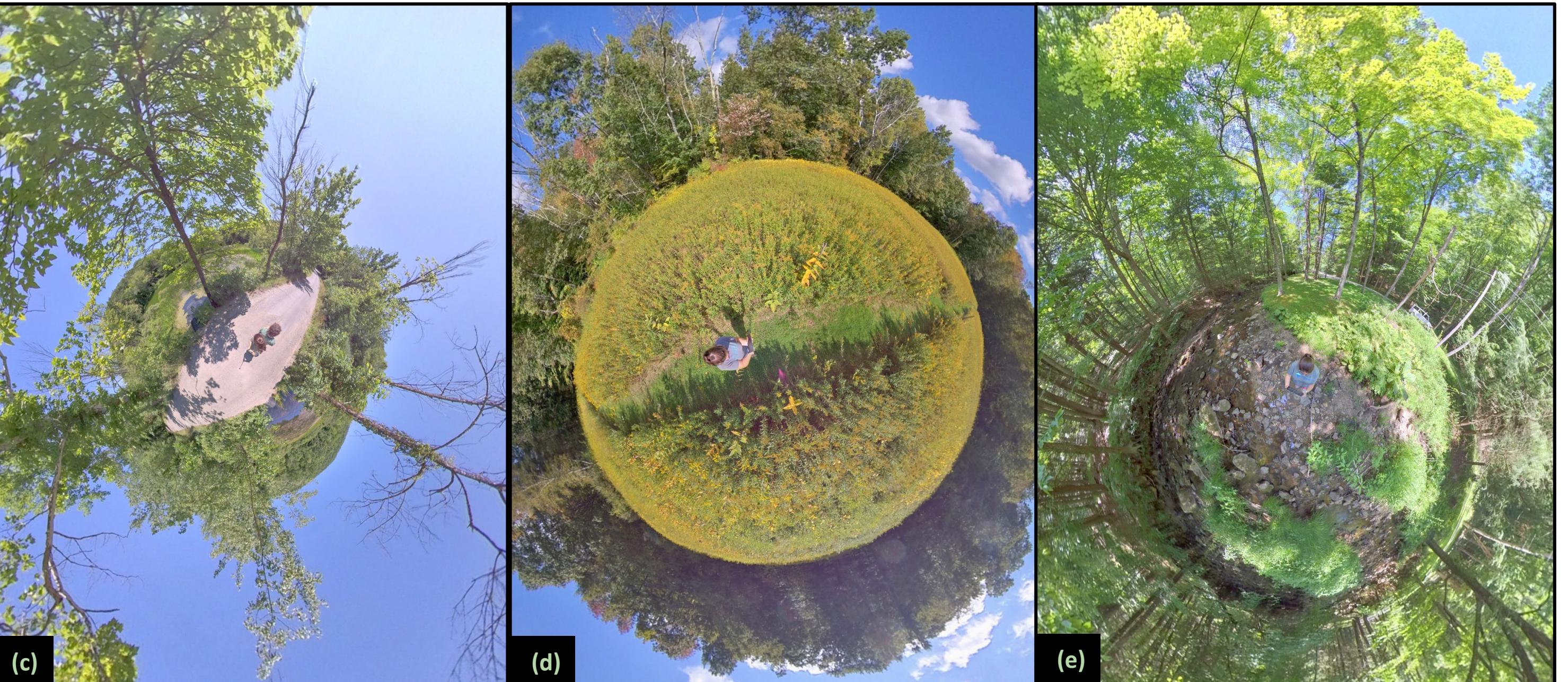
## Our Raven Exhibit Theme

We decided to customize our Raven Exhibit to focus on **habitats** and the **bird species** that depend on them. This would help the public learn to identify birds in their community more quickly by focusing on fewer bird species at a time within the different habitat types. Specifically, we focused on:

- ❖ Forest Gaps/Open Woodlands
- ❖ Forest Interior
- ❖ Forest Edge
- ❖ Grasslands
- ❖ Inland Wetlands
- ❖ Rivers, Streams and Lowland Deciduous Forests
- ❖ Softwoods
- ❖ Early Successional Habitat
- ❖ Artificial Housing, Feeders and Residential Areas
- ❖ Migratory Stopover Habitat



(b)



(c)

(d)

(e)

## Objectives

- To **educate** the public about the Macedonia Forest Block and raise awareness about the incredible avian biodiversity found within the IBA
- To **inspire** others to take action and get involved in protecting birds
- To **teach** others how to make their own Raven Exhibit
- To **facilitate** bird identification in the community by focusing solely on the birds usually associated with a particular habitat



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Raven Exhibit Aiding STEM Education

- by Olivia Pignataro '21 from Marvelwood School in Kent, Connecticut.



Using the STEM Model to Customize a Raven Exhibit for The Macedonia Forest Block Important Bird Area.

This blog is a guest post from Olivia Pignataro, a high school junior (Class of '21) at Marvelwood School in Kent, Connecticut. This is the first post in a multi-part blog from Olivia and her instructor Laurie Doss, Science Department Chairperson at Marvelwood School. The blog explains how student groups and other organizations can create customized Raven Exhibit demonstrations for their own communities. This project takes place at the Macedonia Forest Block Important Bird Area, a northwest corner of Connecticut and is part of a Conservation Training Partnership Project through the University of Connecticut's Natural Resources Conservation Academy and Kent Land Trust.

While the name might suggest that a Raven Exhibit is a place to visit in a zoo where one would see a bird called the Common Raven (*Corvus corax*), it actually is the name for an interactive display portal that can provide an immersive and educational experience on a topic of your choice!



(h)

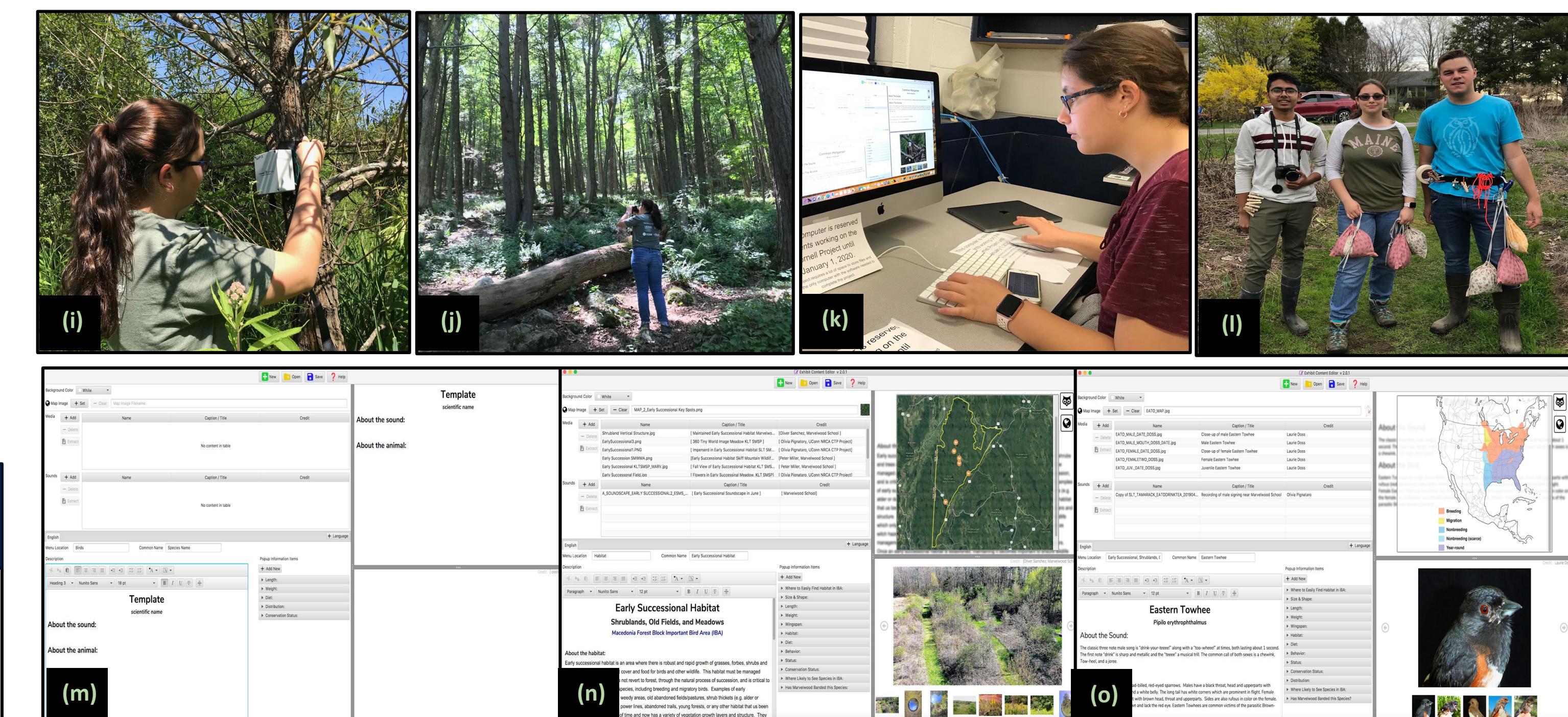
## How We Made Our Exhibit

After deciding the theme and communicating with the Cornell Lab of Ornithology, we built a team of about 10 people, including bird banders, photographers, and even artists, to assist us. We had different teams of students capture and/or collect the following media to use in our exhibit:

- ❖ Acoustic recordings of birds in different habitats using Swift and Wildlife Acoustics Passive Recorders
- ❖ 360° habitat photos using an Insta 360 ONE X Camera
- ❖ Habitat photos captured with a Canon Rebel 35mm camera and/or drone
- ❖ Photos of birds captured during banding and/or when birdwatching in different habitats
- ❖ Solicited photographs from local wildlife photographers

We then used our media, content from [The Cornell Lab All About Birds](#) website, [Frank Gallo's book: Birding in Connecticut](#), and [Cornell's Raven Exhibit Content Builder Software](#) to create informational pages for our Exhibit. We started with a template so that every page would be consistent.

The work was slow going and tedious at times, but we pledged never to give up!



## To Learn More

If you're interested in learning more about our project and/or customizing your own Raven Exhibit, please see our [ArcGIS Story Map](#). It illustrates, in step-by-step detail, the process used for our Macedonia Forest Block IBA Exhibit. The Story Map also provides links to tools such as:

- ❖ Tips for building a customized Exhibit page
- ❖ Tips for assembling a team
- ❖ Tips for operating and using Swift Recorders
- ❖ Tips for processing acoustic files
- ❖ Organizational and storage suggestions



(p)

## Photo References

a) Cornell Raven Exhibit Screenshot

b) River habitat photography

c-e) 360° camera "tiny world view" habitat photos

f-g) Student artwork by Joseph Westgate

h) Our Cornell blog on making a customized exhibit

i) Setting up acoustic recorders

j) Softwood habitat photography

k) Building a content page

l) One of the student bird banding and

photography teams

m) Content page template

n) Customized habitat content page

o) Customized bird profile content page

p) Raven Exhibit Story Map cover page

Olivia Pignataro<sup>1</sup>, Laurie Doss<sup>1,2</sup> & Ashakur Rahaman<sup>3</sup>

<sup>1</sup>Marvelwood School; <sup>2</sup>Kent Land Trust; <sup>3</sup>The Cornell Lab Center for Conservation Bioacoustics

