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Backyard Birder: Delaware and Ohio Wesleyan University Birding/Nature Trail
GEOG 355: Geographic Information Systems & Science
2/14/10

1. **Project Goal:** Develop an interactive map of Ohio Wesleyan University campus and surrounding areas in Delaware showing natural habitats with bird species that can be found in each habitat type. Create bird species “playing cards” that correlate to each habitat type that will show a photo and facts about that bird species.
 - a. Audience: families, inter-generational, kids/teachers, appealing to multiple ages
 - b. Remove stereotypes
 - show that there can still be wildlife/nature in urban areas, contrary to what many people think
 - c. Contact with community members and nature
 - encourage people to go outside and experience nature, including the wildlife of the area
 - d. Education
 - encourage school-aged kids (from the local elementary, middle, and high schools, as well as scout groups, church groups, etc) to engage in outdoor activities, either individually or with their classes/groups
 - map will be an educational tool to use while exploring the natural world around the OWU campus and Delaware
 - map could be distributed to local schools and other children’s groups as part of an educational program encouraging classroom excursions to natural areas.
 - to be able to contribute to sightings, the general public needs sufficient skills to identify birds – our cards and map will direct them to books, courses, websites, and activities that will involve them with even more contact with nature and will better prepare them for bird-watching
 - e. **Long-term goal:** Provide these maps/playing cards to OWU students and the local community (including local elementary, middle, and high schools, scout groups, church groups, etc.) so that community members can learn to enjoy the natural world around them.

2. **Results of project**
 - a. Map with locations of certain habitat types and what kinds of birds could be found there
 - have icons on the map to link to playing cards (habitat, behavior, food, season, conservation, etc)
 - provide descriptions of habitat types on the front or back of map
 - include some roads (S. Sandusky St., Park Ave., Liberty St., Spring St., Jay-Walk, walkways between libraries, etc.), campus buildings (all dorms, all academic buildings, Ham-Wil, Chappellear Drama Center, Beeghly Library, Science Library, motor pool, Natatorium, Edwards Gym, etc.), walkways, etc. on map so people can orient themselves
 - on back of map, include activity ideas that include use of the map/cards
 - * Bird Scavenger Hunt: collect as many bird species cards as you can during a class field trip, or during OWU freshman orientation (this gets new students familiar with the OWU campus and Delaware community

as well as surrounding nature)

- * have kids in class pick their favorite local bird and find locations in the area where that species can be found
- * link our map to the Jane Decker Arboretum brochures so people can use both at the same time to see different birds AND trees on campus also on back of map, provide links to books, courses, websites, etc. that will provide tips on how to bird responsibly, what equipment you need, etc. (this will better prepare people for bird watching)

b. Cards with facts about bird species found in that habitat type (common vs. rare, ecology, behavior, food, etc.)

- fit cards in the many smaller spaces in the entire poster layout
- how many cards? maybe 10?
- Examples of possible icons for behavior, food, etc:



omnivore



cavity nester

- front of card: picture of the bird (Kristin and Michelle draw, or Pam Burt for professional photos (have contacted her for photos))
- layout: icons of habitat ON the map, then each bird card has one of those icons at top to show that that bird can be found in that habitat type
- include icon for which season(s) bird can be found here (snowflake if only found in winter, etc.)

Example of how layout could look:

- * Bird name (common and scientific) on top, with habitat, food, nesting, etc. icons next to name
- * Picture of bird below name
- * A few interesting facts about the bird (habitat, food, nesting, etc.)



c. Internet component (so public, teachers, scout leaders, etc. can access them for educational and recreational purposes)

- PDFs of map and cards
- link to website about birds for each species for more detailed information
- link to eBird website: <http://ebird.org/content/ebird/> where people who use the map can add their bird sightings (location, date)

- d. Future projects: Can add additional animals and plants to habitat map and update the habitat map if local habitats change (due to development, etc.)

2. **Resources:**

- a. GPS units: OWU Botany Department (Dr. David Johnson) and Geography Department (Will Ruzek)
- b. OrthoPhoto maps: can see habitats within 1 foot resolution, overlay our bird location map with these habitat photos
- c. Jane Decker Arboretum: Excel file with longitude/latitude coordinates of all trees on campus (with species, width; contact Greg Stull for file) AND Tree Guide prepared by Amanda Masters and Kate Ball
- d. Pam Burt for professional photos of birds
- e. http://www.allaboutbirds.org/guide/American_Robin/lifehistory for habitat icons

Examples of icons:



open woodland



forest

3. **Data Needs**

- a. collecting field data (need to determine how far from campus the map will show: want to include at least Woodward Elementary, Dempsey Middle School)
 - GPS coordinates of locations of certain bird species
 - * need to decide how many birds to include and which species (some possibilities are Northern Cardinal, American Robin, White-breasted Nuthatch, European Starling, Carolina Chickadee, American Crow, House Sparrow, American Goldfinch, Mourning Dove, House Finch, Song Sparrow, Dark-eyed Junco, etc.)
 - GPS coordinates of habitat types
 - * collect data from OWU campus, downtown Delaware, area between OWU campus and Woodward Elementary, area between campus and Dempsey Middle School, etc.
 - * need to develop criteria for determining habitat types or find out where to get standardized methods for local habitat assessment
 - * have contacted Dr. Amy Downing (OWU Zoology Department) for advice on where to get current standardized habitat criteria, or how to create our own methods to classify suburban microhabitats so that our methods are reputable and repeatable
 - Kristin Kovach and Kristen Lear will begin collecting GPS points of birds and habitats on 2/22/10 during ornithology lab

4. **Who's doing what**

- Paul/Michelle: collect information on common bird types for card facts, layout of cards
Kristin/Kristen: take GPS coordinates of habitats and bird locations during ornithology labs