Scenario

- Connections With Nature Initiative

- "How can we assist faculty, students, and the community to learn about and connect with the natural world?"

- A responsibility and an opportunity

Birds, Data, and Digital Resouces

Connections With Nature Initiative

Proposal by Jacob Covey

Proposal: PenCol Birds

A digital library (User Interface) and Database of the birds that visit our campuses and communities

Where be the bird data?

- WA Bird Species Summaries
- All Bird Species Statistics (measurements, habitat, etc.)
- WA bird sightings (for now 20,000 recent sightings)

Initial PenCol Birds Report


```
sqlite> .read listSightingsBySpeciesWithHeatLong.sql
Dark-eyed Junco|Junco hyemalis|Forest|75.2|18
Anna's Hummingbird|Calypte anna|Woodland|49|16
Pine Siskin|Spinus pinus|Forest|72.4|16
Steller's Jay|Cyanocitta stelleri|Forest|145.8|16
Chestnut-backed Chickadee|Poecile rufescens|Forest|61.1|14
Red-breasted Nuthatch|Sitta canadensis|Forest|66.4|14
Black-capped Chickadee|Poecile atricapillus|Forest|64.4|9
Downy Woodpecker|Dryobates pubescens|Woodland|91.3|8
House Finch|Haemorhous mexicanus|Shrubland|77.2|8
Bushtit|Psaltriparus minimus|Woodland|45.2|5
Northern Flicker|Colaptes auratus|Shrubland|151.8|5
European Starling|Sturnus vulgaris|Human Modified|128.3|4
Hairy Woodpecker|Dryobates villosus|||4
Rufous Hummingbird|Selasphorus rufus|Forest|40.7|4
Sharp-shinned Hawk|Accipiter striatus|Forest|181.6|4
American Goldfinch|Spinus tristis|Forest|69.8|3
Spotted Towhee|Pipilo maculatus|Forest|85.8|3
Varied Thrush|Ixoreus naevius|Forest|121.6|3
Violet-green Swallow|Tachycineta thalassina|Forest|115.5|2
American Robin|Turdus migratorius|Forest|127|1
```

```sql
listSightingsBySpeciesWithinLatLong.sql
 1   SELECT
 2       wb.common_name,
 3       wb.scientific_name,
 4       ss.Habitat,
 5       ss.WingLength,
 6       COUNT(ws.species_code) AS sighting_count
 7   FROM
 8       waBirds wb
 9   LEFT JOIN
10       waSightings ws ON wb.species_code = ws.species_code
11   LEFT JOIN
12       speciesStats ss ON wb.scientific_name = ss.Species1
13   WHERE
14       ws.LATITUDE BETWEEN 48 AND 49
15       AND ws.LONGITUDE BETWEEN -124 AND -123
16   GROUP BY
17       wb.species_code, wb.scientific_name
18   ORDER BY
19       sighting_count DESC
20   LIMIT
21       20;
```

Proposal

- PenColBirds an Open-Source GitHub project

- 8 hours for base version

- Limitless applications