Birds of the North Pacific

Project Title: Projected effects of climate change on the distribution and abundance of North Pacific birds and their habitats.

Brief Summary (Abstract):
The goal of this project was to aggregate existing bird observation data and model the distribution and abundance of 26 species of land birds in the southern portion of the North Pacific LCC .   The models were based on climate and modeled vegetation. Using the models, maps were created for the distribution and abundance of each species for current (late 20th century) conditions and future (2070) conditions based on five future regional climate models.   . The bird models were also used to create maps of conservation priorities for all species and for species indicative of four different habitat types: conifer forest, oak woodlands, grasslands and riparian forest. A web-based decision support tool was created that can be used to support climate adaptation planning.

Project Location: Northern California, Oregon, Washington

Partners: American Bird Conservancy, Klamath Bird Observatory

Background: This project addressed five specific goals of the NPLCC through:
1. The integration of avian observation data available within the region and new data that determined bird distribution and abundance.
2. The creation of an analytical interface using the data, providing users the ability to explore distribution and abundance of birds within different climate scenarios.
3. The production of interactive maps showing current and future high priority areas for focal bird species to identify needs and conservation opportunities.
4. Identification of the most important environmental determinants of current and future bird distribution and abundance.
5. Use of downscaled climate products to assess bird species and populations at greatest risk.

Project Goals:
1. Aggregate existing bird distribution and abundance data and spatial covariate data for the region
2. Ensure long term preservation and accessibility of the data
3. Analyze the data to build models accurately describing the relationship between birds and their environment in the region
4. Disseminate the results via online decision support tools, other websites, direct outreach to stakeholders in the region (e.g., webinars), and peer reviewed literature.

Strategy Goals Implemented: 1.1, 3.1, 4.1, 5.3

Climate Impacts Addressed: Changes in temperature and precipitation

Status of Project Implementation (Timeline, Milestones, Next Steps): Completed in December 31, 2012

Project Outcomes:

1. Added one million new bird records from approximately 25 studies or data sets to the Avian Knowledge Network (AKN) database.

2. Modeled the distribution and abundance of 26 species of land birds in the southern portion of the North Pacific Landscape Conservation Cooperative (NPLCC) region including CA, OR and WA.

3. Created maps of conservation priorities for all species and for four different habitat types: conifer forest, oak woodlands, grasslands and riparian forest.

4. Created a web based decision support tool where the results from the project can be viewed, queried and downloaded, including reports of model results for user defined regions.

Funding Sources: North Pacific LCC, Point Blue Conservation Science, BLM National Landscape Conservation System

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Photos/Attachments: Attached photo "Ballard2.jpg"

Photo/Figure Credits (do we have permission to print): Matt Lee, City of Albany Oregon – yes, permission to print.

Suggested Photo Caption: A Townsend's Warbler is one species of bird included in the web-based decision support tool