

Native Prairie Speaker Series

Title: How many birds will I kill in my lifetime directly vs. indirectly: Which matters more?

Speaker: Dr. Erin Bayne – Professor – Department of Biological Sciences – University of Alberta, Edmonton, AB.

Presentation Summary:

Every day birds and their nests are killed or destroyed. When people or human infrastructure cause this mortality, it is called incidental take. Incidental take is illegal under the Migratory Birds Convention Act. This has led to concerns from citizens and industry about how to be compliant with the law. Industrial activities during the breeding season are a focal point for incidental take because spring/ summer activities by industry do destroy bird's nests. Policy to reduce incidental take recommends timing activities outside the avian breeding season. While many industries try to meet such timing constraints, social and economic limitations make this difficult. Thus, during the breeding season many companies plan to avoid areas where there are high densities of nests, try to find nests in areas where they are operating, and buffer the area where known birds are actively nesting. Whether such an approach reduces incidental take remains unclear, which should be a concern given the financial costs involved.

In contrast, millions to potentially billions of birds are killed in collisions with the windows of people's homes and predation by their cats. From a conservation perspective, finding a solution to these issues may have a far greater "bang for the buck" than mitigating accidental nest destruction by industry. It also may be far more relevant to engaging the average person in avian conservation. I will show cost-benefit analyses that assess how money currently spent by industry to mitigate incidental take might be better spent on engaging homeowners in making their homes more bird friendly.

However, we can't forget the "elephant in the room". Industry's major impact is not the number of nests lost by summer land-disturbance rather the lost breeding productivity from landscape-level reduction of habitats for extended periods. As citizens who use the resources provided by industry understanding such effects is important if one is truly concerned about birds. Unfortunately, such issues often get lost in incidental take discussions and may be taking away conservation capital from effective land-use planning, setting of thresholds, and habitat protection. We must be cautious that perverse consequences do not result from focusing too narrowly on the issue of incidental take at the detriment of effective habitat planning. Examples of where this may be occurring will be discussed.

About Dr. Erin Bayne:

Education: B.Sc. (Hons.) – University of Regina; M.Sc. and Ph.D. (University of Saskatchewan). M.Sc. and Ph.D. done in collaboration with Environment Canada – Canadian Wildlife Service. Post-doc: University of Alberta

Overview: My research centers on understanding the cumulative ecological impacts of human activities on biodiversity. We use a combination of behavioral, population, and community ecology in combination with cutting edge techniques in wildlife monitoring, survey design, geographic information systems, and habitat modelling. Our goal is to provide recommendations on how biodiversity reacts to various types of human and natural disturbance with the goal of achieving better conservation outcomes. This includes understanding interactions between native and invasive species, interactions between climate change and land-use, and economic – ecological trade-off assessment. While many in the lab work on birds, there is no particular taxonomic bias to our research. We work closely with government, industry, and conservation organizations to facilitate better conservation decision making.

Publications: Author of 181 referred publications and 52 government/ industry reports. Collaborator on the Alberta Biodiversity Monitoring Institute, Integrated Landscape Management Group, and Boreal Avian Modeling Project at University of Alberta

Recent Awards: Elected member of the American Ornithological Union (2003) and Society of Canadian Ornithologists (2009). Fellow of American Ornithological Society (2016).

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