Problem Investigated:

Anthropogenic development leads to the conversion of native habitat, resulting in landscapes characterized by a mosaic of agricultural fields, human settlement, and forest. A large body of research documents the negative consequences of habitat conversion on native wildlife. However, recent studies suggest that some species may respond positively to human dominated landscapes. This study looks at how wetland dependent birds respond to habitat conversion by investigating their distribution across three classes of land cover: urban/suburban, agricultural, and forested.

Background:

- Approximately 40% of land in CT is developed for agriculture and urban/suburban settlement
- Land conversion is typically associated with declines in biodiversity
- The negative response of forest songbirds to habitat conversion is well studied; however, the response of wetland-dependent birds is less known

Methods:

- Selected 16 wetlands varying in surrounding land cover
- Used GIS to quantify proportion of land cover types in 200 m buffer around each wetland
- Based on dominant land cover, assigned each wetland to one of three categories: urban/suburban, agricultural, or forest
- Conducted point count surveys to record all wetland dependent birds at each wetland
- Conducted surveys in summer 2006; repeated surveys in spring 2007

Conclusion:

- Wetlands situated in human dominated landscapes support larger and more diverse communities of wetland dependent birds.
  - In particular, wetlands encompassed by agricultural landscapes support the highest richness and abundance.
- Potential mechanisms contributing to the outcome might include:
  - Food resources might be more abundant in developed wetlands
  - Bird communities may become concentrated in human dominated wetlands as conversion of surrounding landscapes decreases overall wetland abundance
- Response of wildlife to anthropogenic development is context dependent
- Developed landscapes may offer opportunities for meeting conservation objectives