



Wildlife in Sugarcane Fields of the Everglades Agricultural Area

Elise V. Pearlstine, Michelle L. Casler, Wendy M. Bear, Frank J. Mazzotti and Kenneth G. Rice



Purpose

- Study wildlife in agriculture
- Describe habitat characteristics
- Study management practices and effects
- Provide educational material to growers and public



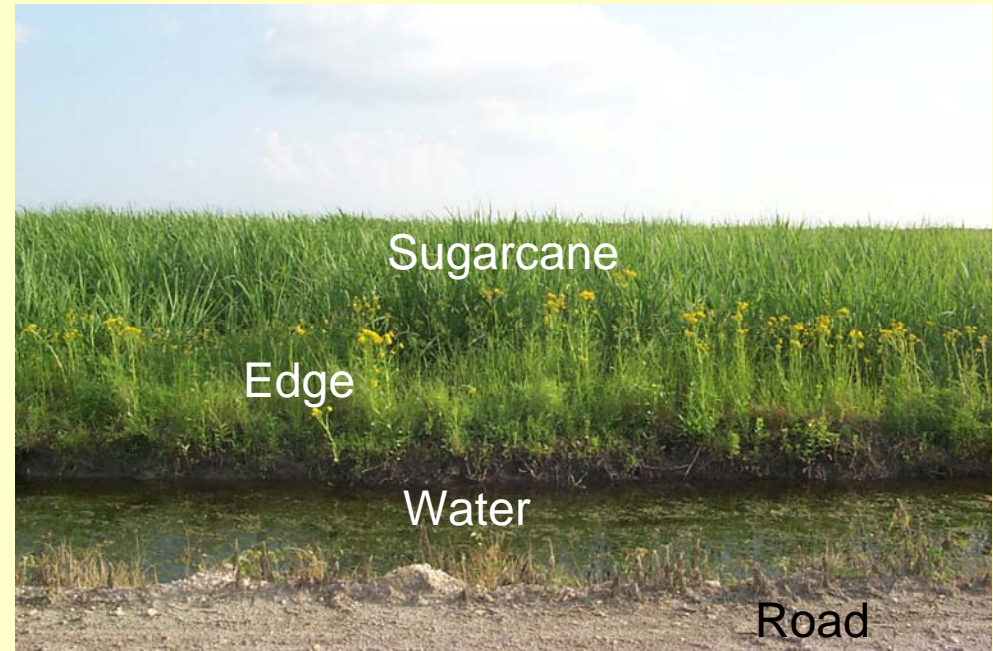
Everglades Agricultural Area





Sugarcane Characteristics

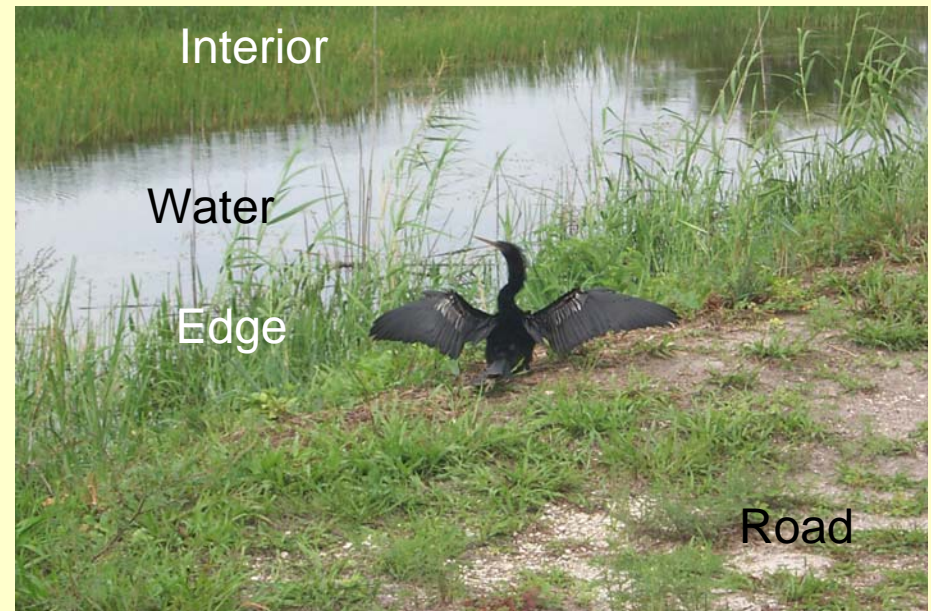
- Grown year-round
- Low input
- Dense vegetation
- Associated water features
- Associated edge habitat
- Limited access





ARM Loxahatchee NWR

- Managed for wildlife
- Native plants encouraged
- Water management wildlife friendly
- Exotic species control
- Visitation controlled





Methods

- Point Counts
 - Road, ditch, canal and field
 - Five minutes at sunrise - birds
 - Five minutes after dark plus ground search - anurans
 - All individuals heard and seen





Methods

- Minnow Traps
 - Canals and ditches for small fish
 - Overnight
 - Also used observation and throw nets for large fish





Birds

- Sugarcane
 - More individuals
 - More species
 - 72 species
- Impoundments
 - Fewer individuals
 - Fewer species
 - 54 species

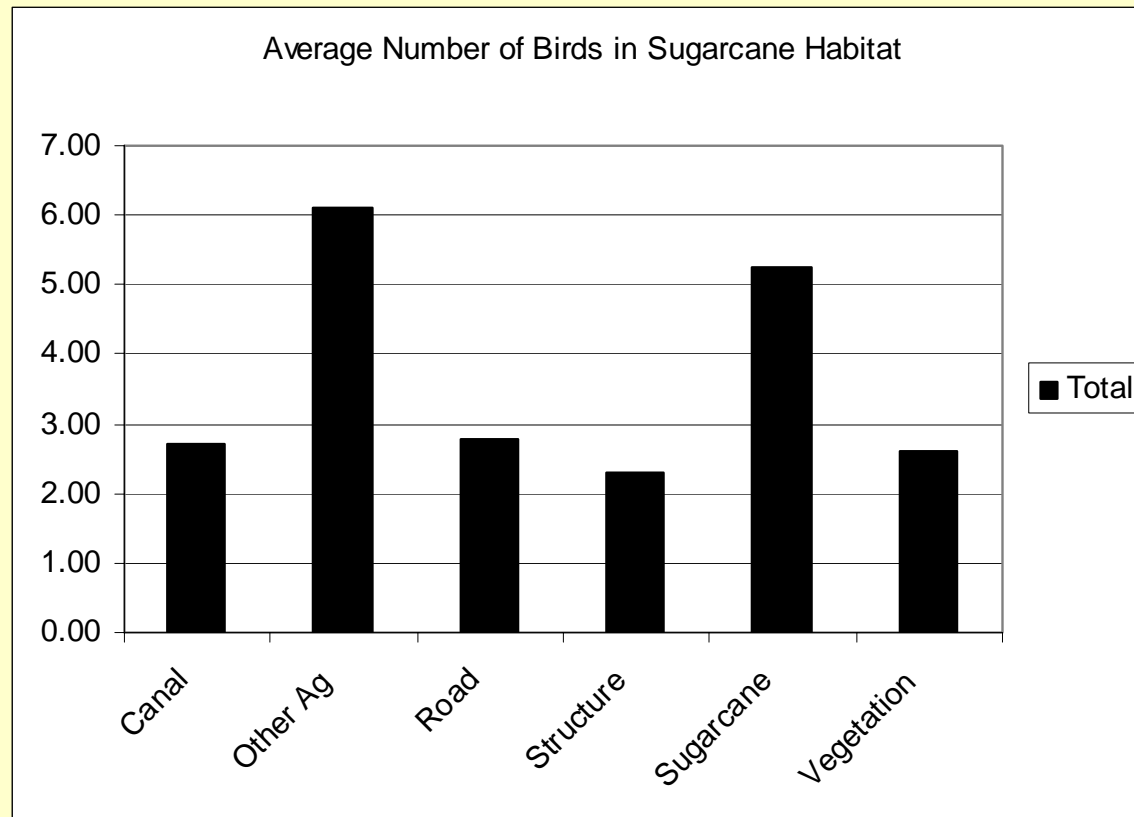


Birds

- Sugarcane
 - 29 species associated with water (40%)
 - 39 species associated with land (54%)
 - 4 species land/water associations (6%)
- Impoundments:
 - 23 species associated with water (43%)
 - 28 species associated with land (52%)
 - 3 species land/water associations (5%)

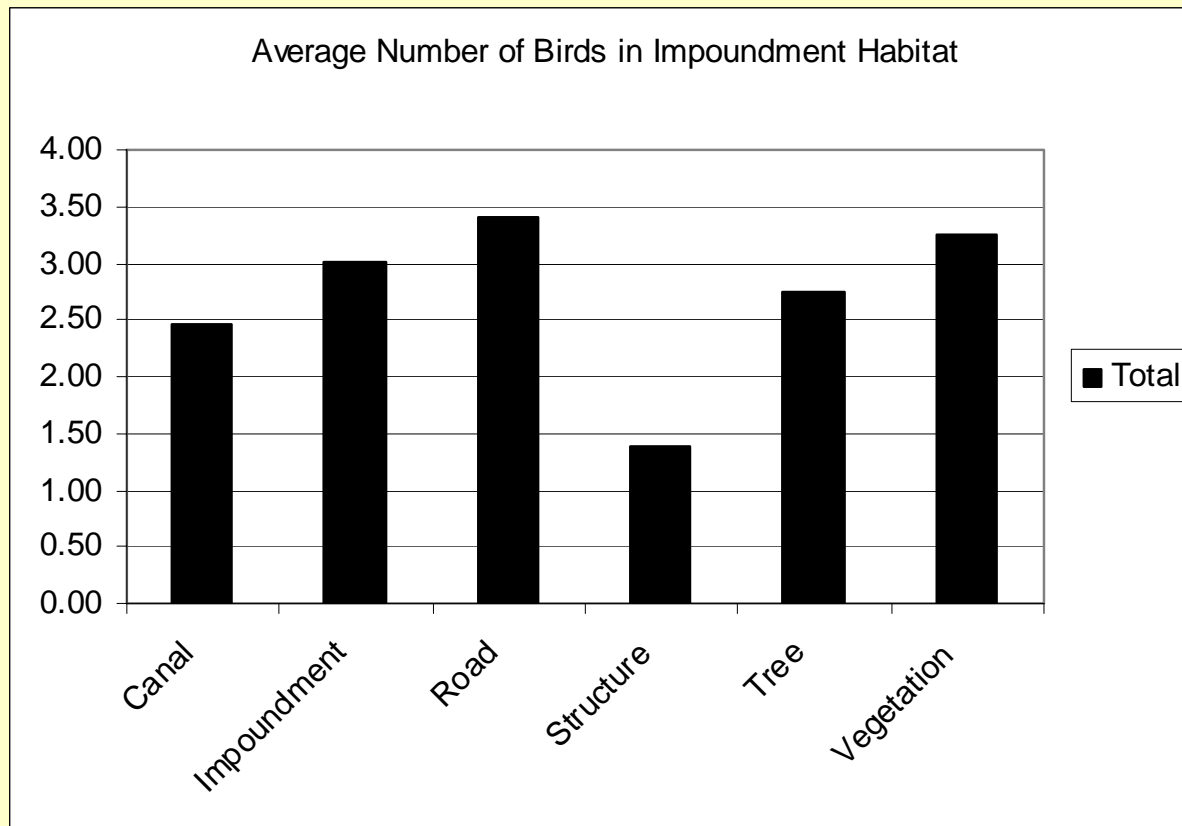


Sugarcane Microhabitat





Impoundment Microhabitat





Adjacent Habitat

- Fallow and Fallow Flooded Fields
- Rice Fields
- Some sampling sites adjacent to wildlife habitat



Fish

- Sugarcane
 - No difference in individuals
 - More species
 - 19 species
- Impoundments
 - No difference in individuals
 - Fewer species
 - 14 species



Anurans

- Sugarcane
 - Fewer individuals
 - More species
 - 13 species
- Impoundments
 - More individuals
 - Fewer species
 - 11 species



Reptiles

- Sugarcane
 - More individuals*
 - More species
 - 22 species
- Impoundments
 - Fewer individuals*
 - Fewer species
 - 8 species

*Not statistically tested



Mammals

- Sugarcane
 - More individuals*
 - More species
 - 12 species
- Impoundments
 - Fewer individuals*
 - Fewer species
 - 6 species

*Not statistically tested



EAA Characteristics

- Large size and proximity to natural areas
- Limited access and unpaved roads
- Abundant water – flooded fields and canals
- Low input of fertilizers and pesticides as well as low use of machinery



Results

- EAA good wildlife habitat for some species
- Wildlife use all components of agricultural fields
- Management practices
 - Ditch and canal management affect wildlife
 - Harvest does not affect wildlife populations



Questions?

