

*Invasive Grasses in South Texas:
An Ecologist's Perspective*

Andrea R. Litt and Fred C. Bryant

Caesar Kleberg Wildlife Research Institute

Ecology

- Scientific study of the relationships between organisms and their environment

What influences these relationships?

How are relationships affected?

Invasive grasses



Changes in vegetation composition



Changes in vegetation structure



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Changes in animal species



Changes in insect communities

- Vegetation structure and composition important
- Decreases in pollinators and other plant feeding insects
- Important food resources for other species



Changes in small mammal communities

- Vegetation structure important
- Shifts in species composition
- Decreases in reproduction



Changes in avian communities

- Vegetation structure important
- Shifts in species composition
- Changes in nest placement and success



Changes in function

- Nutrient cycling
- Decomposition
- Pollination
- Disturbance



An invasive species can “alter the fundamental rules of existence for all organisms.”

P. Vitousek (1990)



T. Fulbright

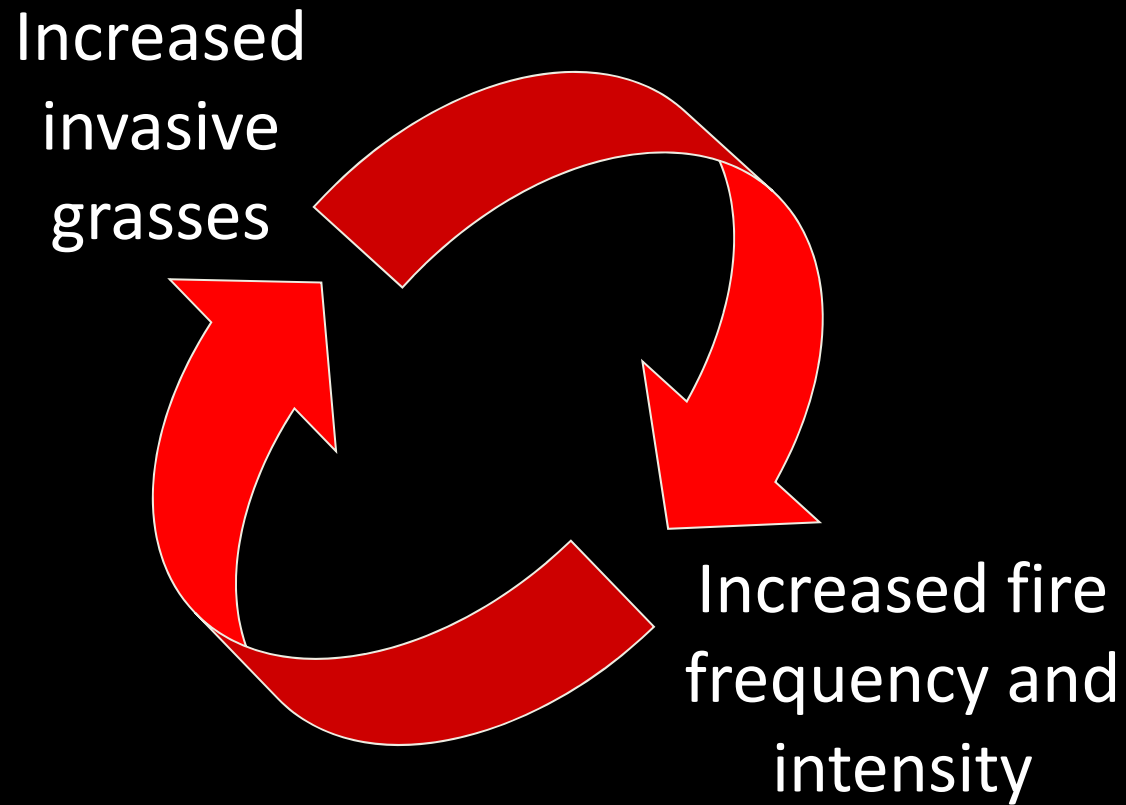


Interactive effects



T. Fulbright

Interactive effects



Interactive effects



Where do we go from here?

- Build on current knowledge



What can we learn from what we know?

- Composition
- Structure
- Function
- Response to disturbance
- Habitat requirements



Lehmann lovegrass vs. native grasses

- Higher biomass
- More homogeneous
- Smaller seeds





Perognathus flavus

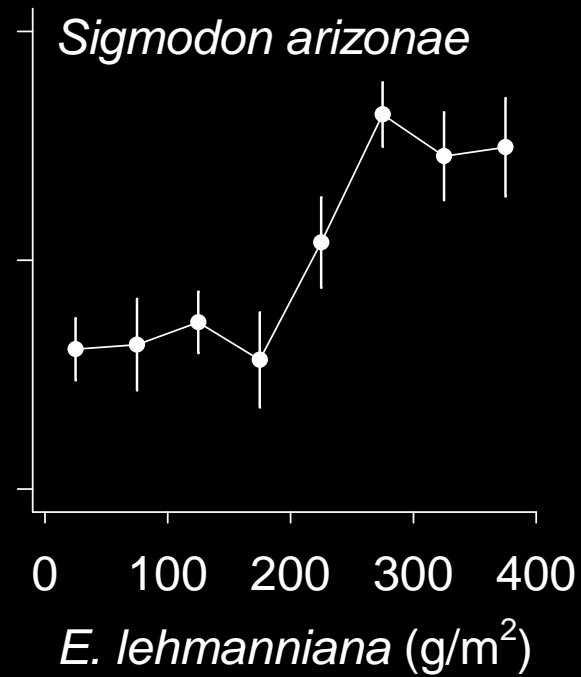
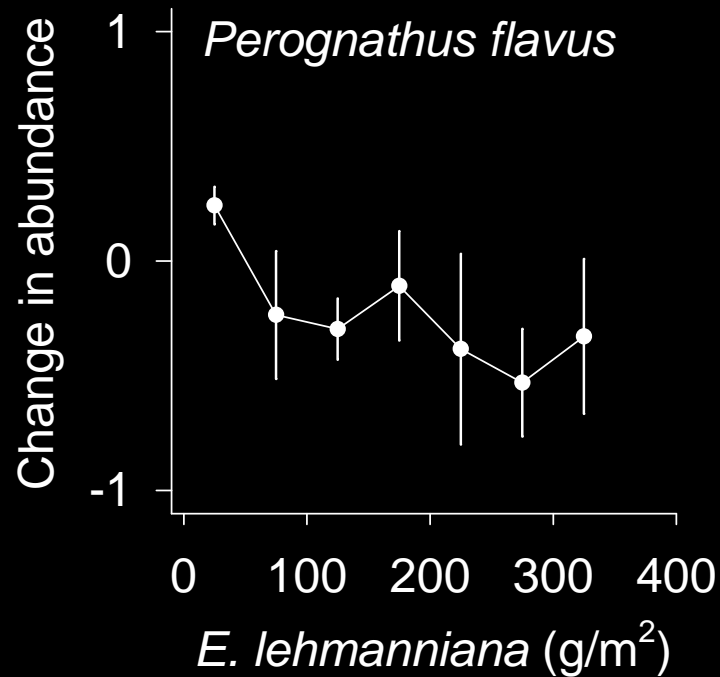
- Small body size
- Occurs in open areas
- Granivore



Sigmodon arizonae

- Large body size
- Occurs in high cover
- Omnivore

Changes in abundance



Where do we go from here?

- Build on current knowledge
- Develop research to fill gaps
 - Changes in “rules”
 - Interactions
 - Multiple invasive grasses



