

Understanding invasibility: Contributions to the war on exotic species

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From Immigrant to Invader



Zebra mussel



Leafy spurge



Kudzu

Potential Invaders

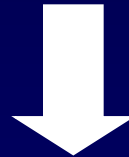


Naturalized

LTERR



Leafy spurge infestation



Lag phase

LTERR

Invasive

LTERR



Environmental change
Disruption of ecosystems

LTERR

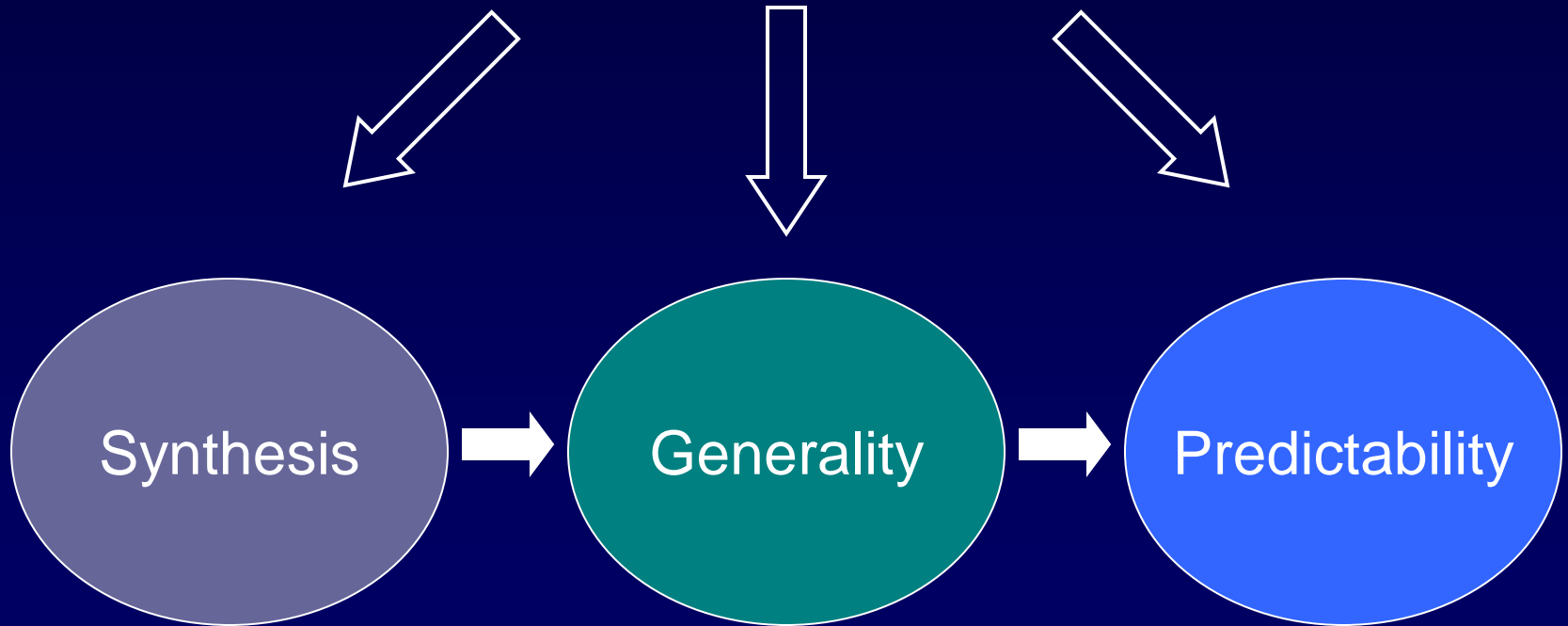
>\$137 billion per yr

Major Challenges

- Identification of attributes of invaders
- Control of present invasions
- Prediction of susceptibility of ecosystems to future invasions
- Management (prevention) of future invasions

Understanding Invasibility

LTFR Program



Value of the LTER Network

- Monitoring and research network
- Cross-site experiments on mechanisms of invasion
- Synthesis and prediction

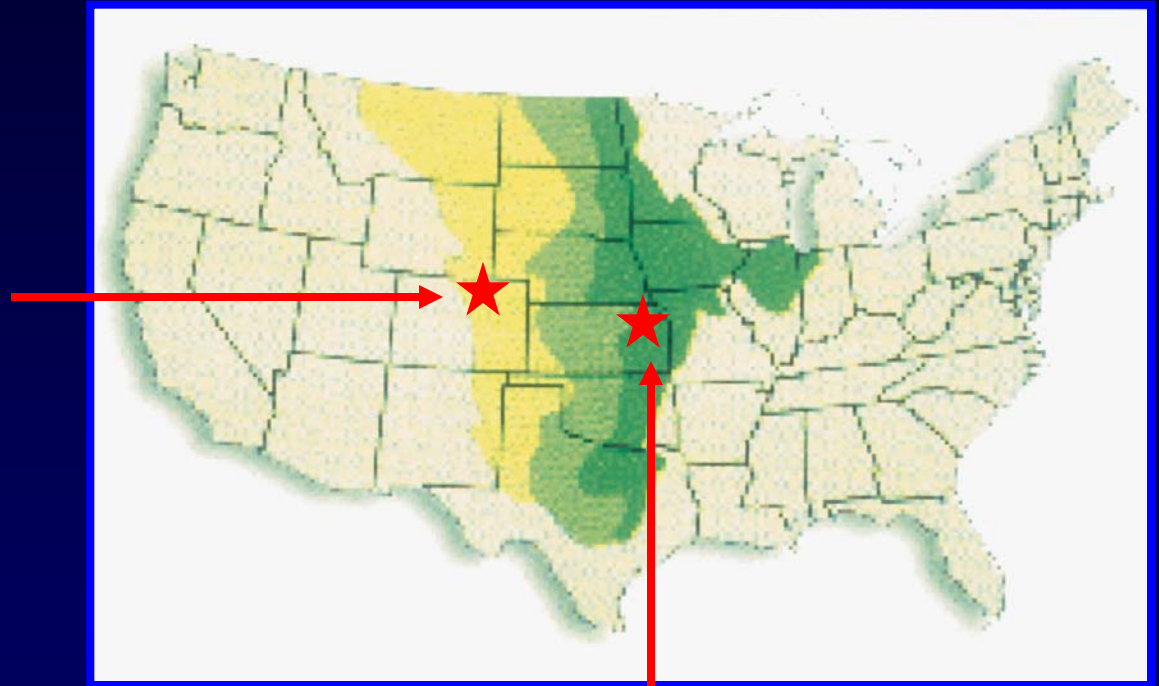


ILTER Activities

- Invasive species workshop at the LTER 2000 All-Scientists' Meeting
- Network office funded invasive species follow-up workshop
- Ongoing interagency partnerships (USGS monitoring programs)
- Invasive species theme for Fall 2002 LTER CC meeting
- Individual site studies

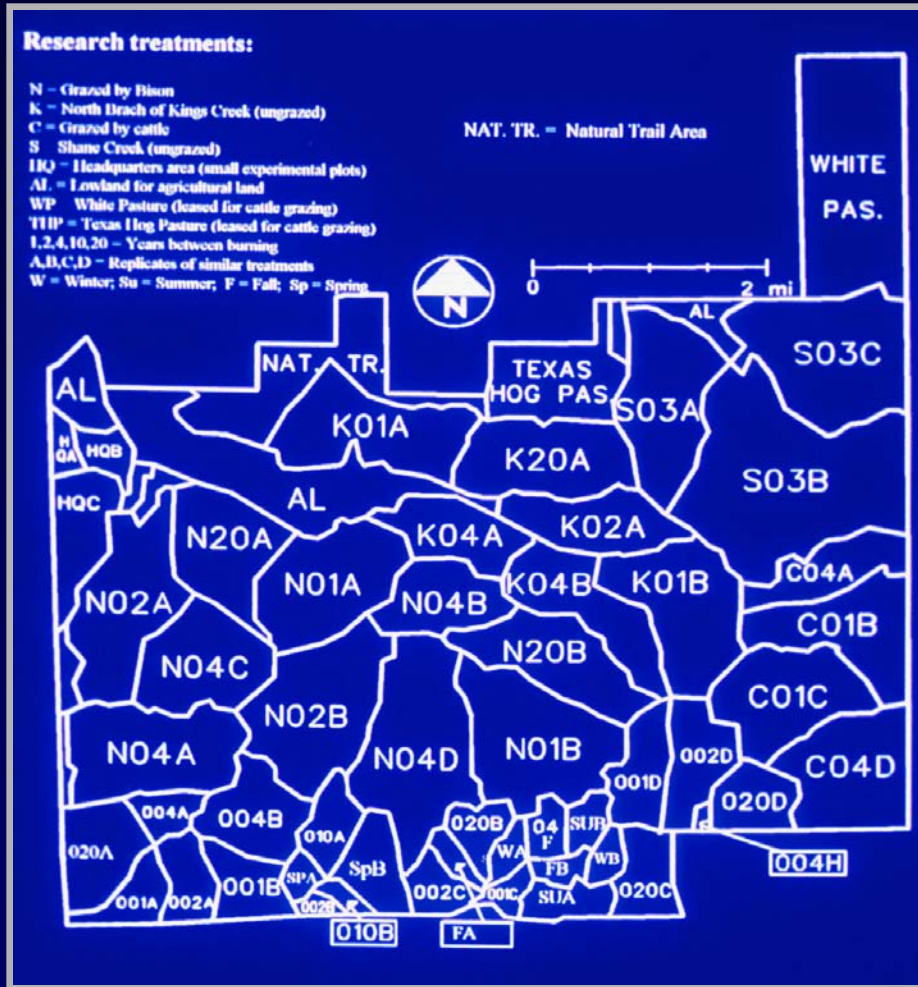
Invasive Species Research

Shortgrass
Steppe

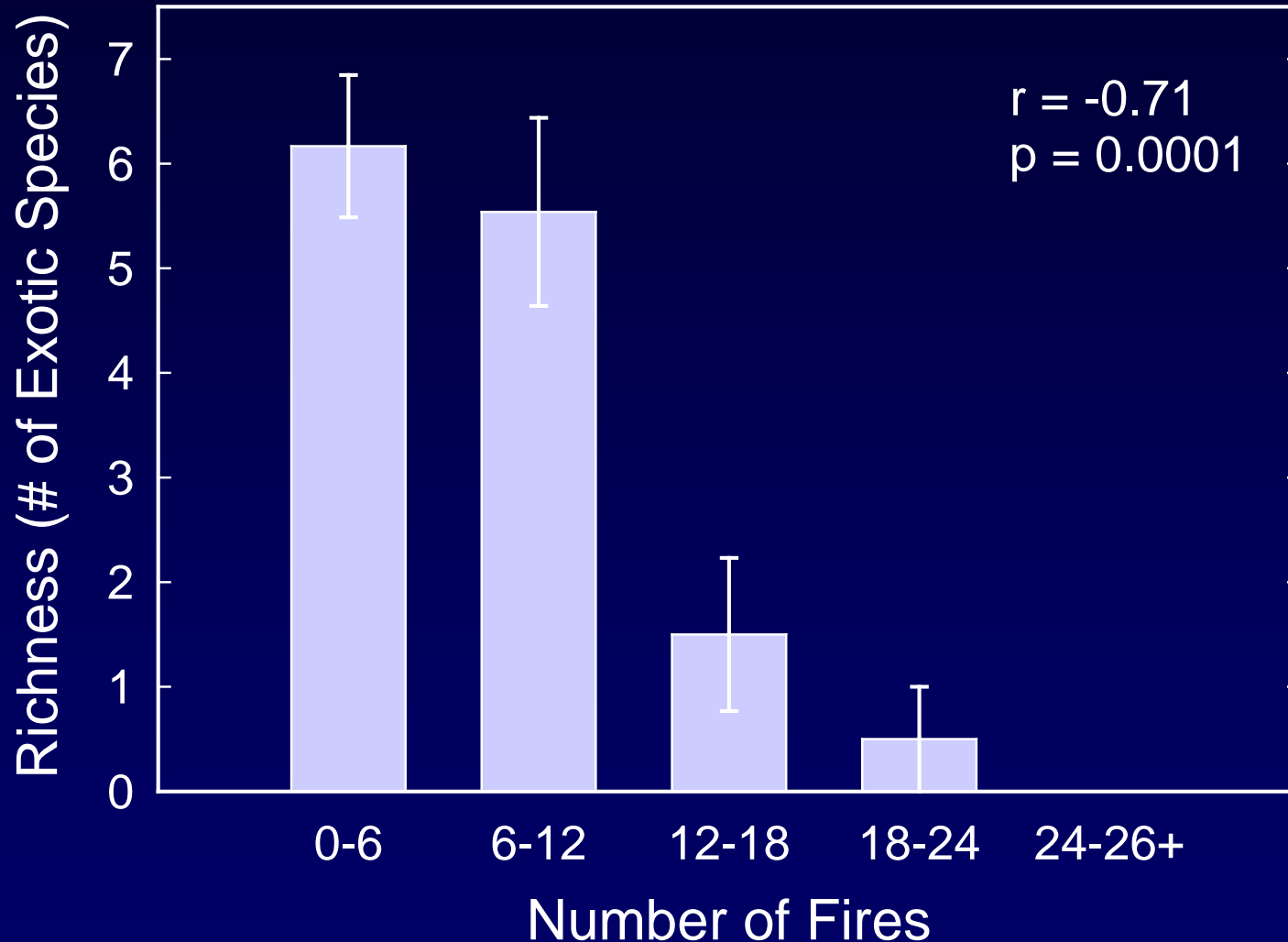


Konza Prairie

Konza Prairie LTER

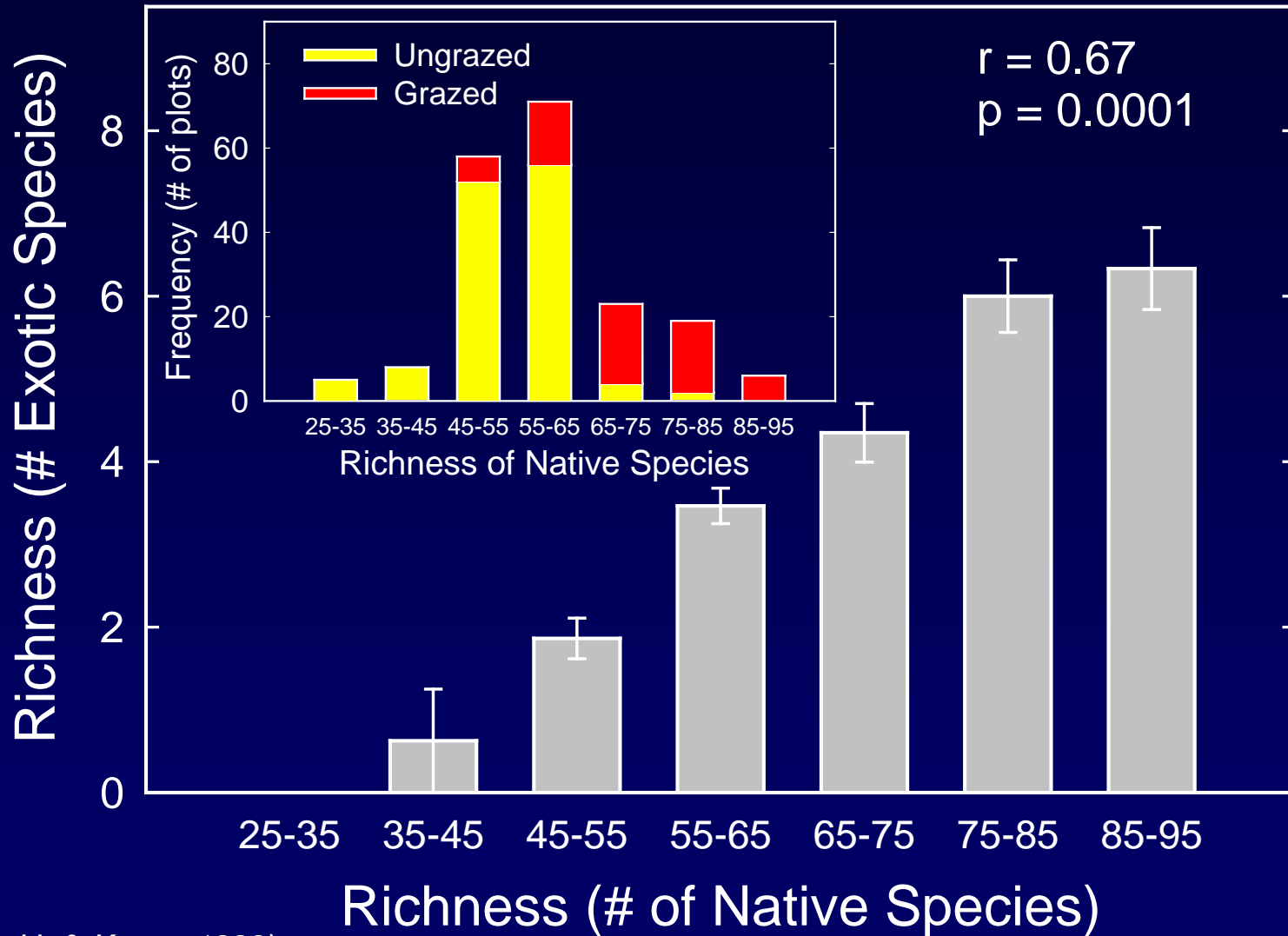


Cumulative Effects of Fire

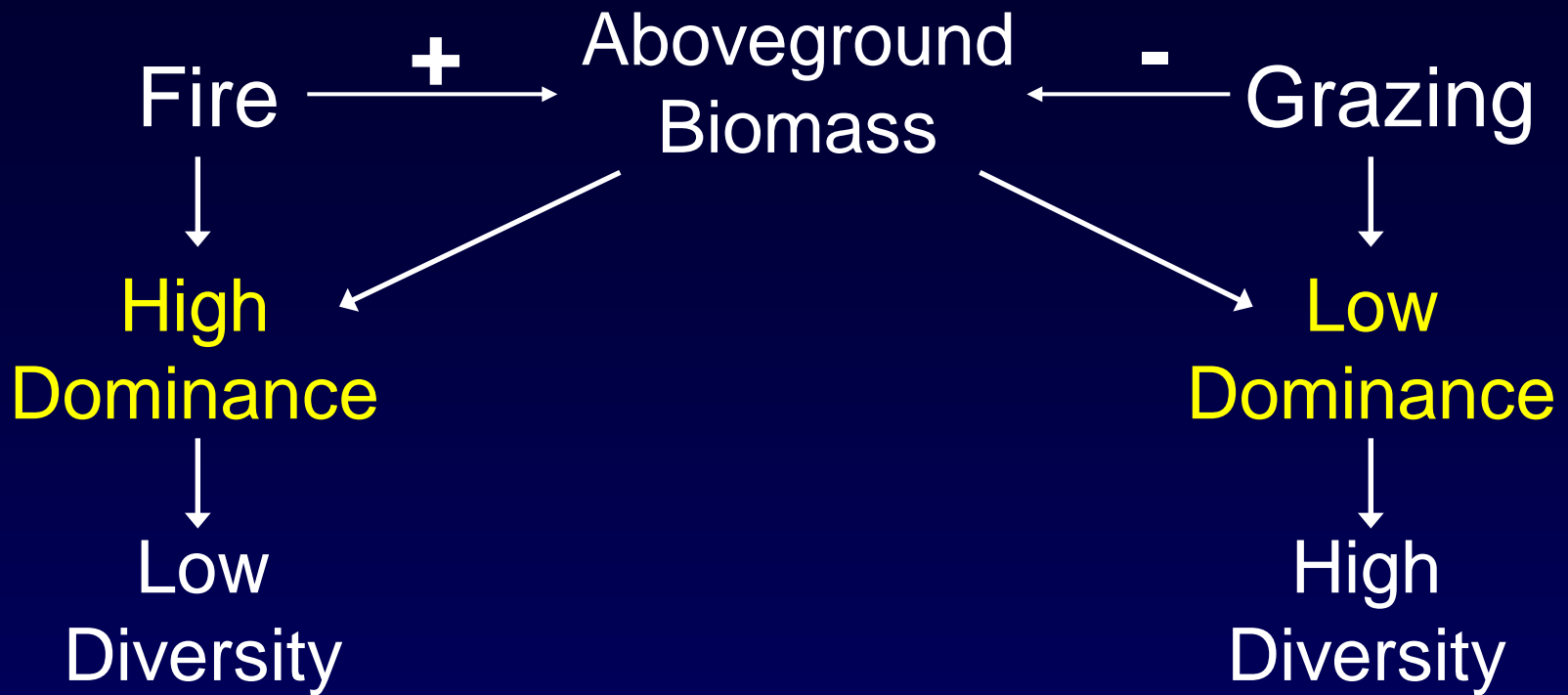


(Smith & Knapp 1999)

Grazing and Invasion



(Smith & Knapp 1999)



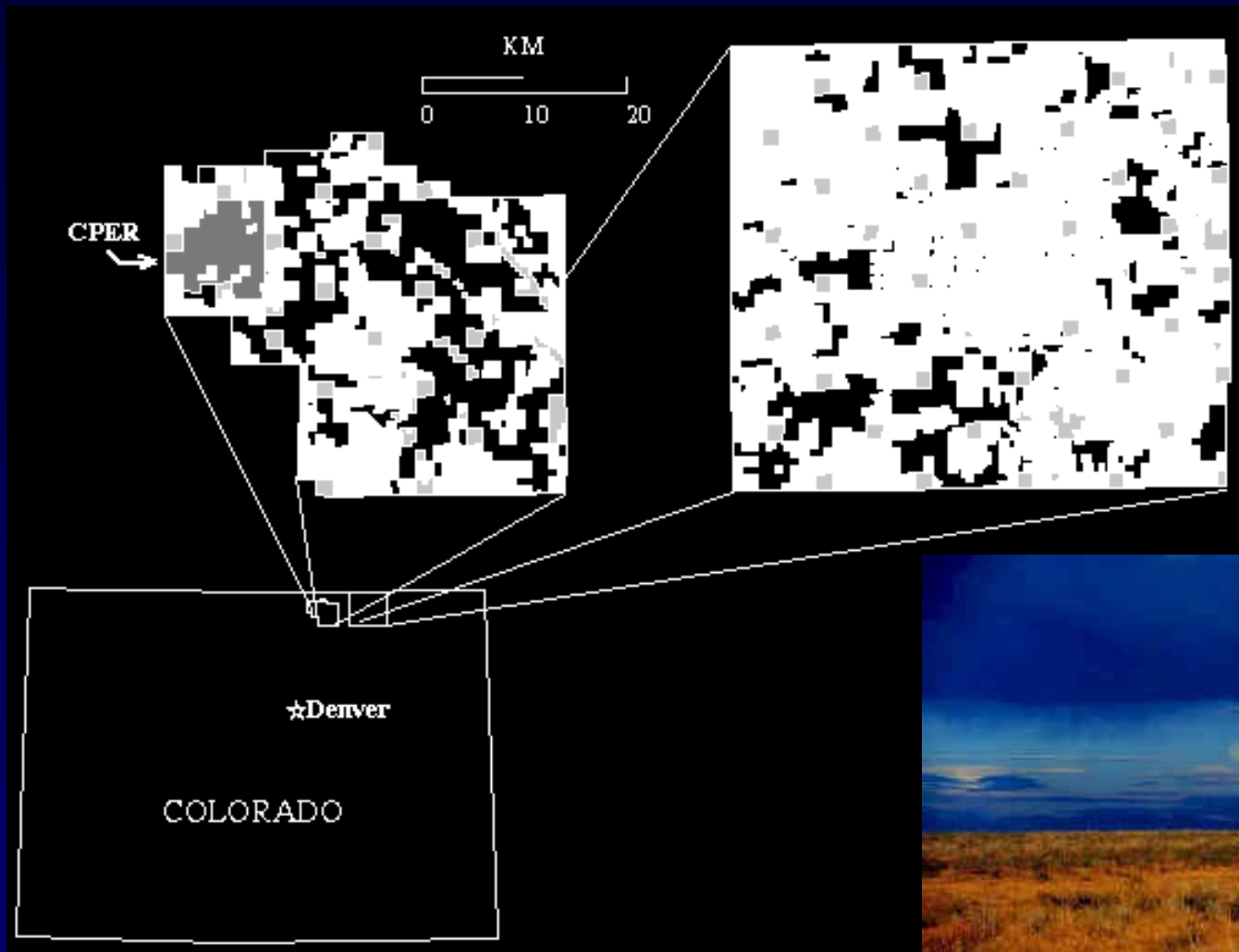
Invasibility



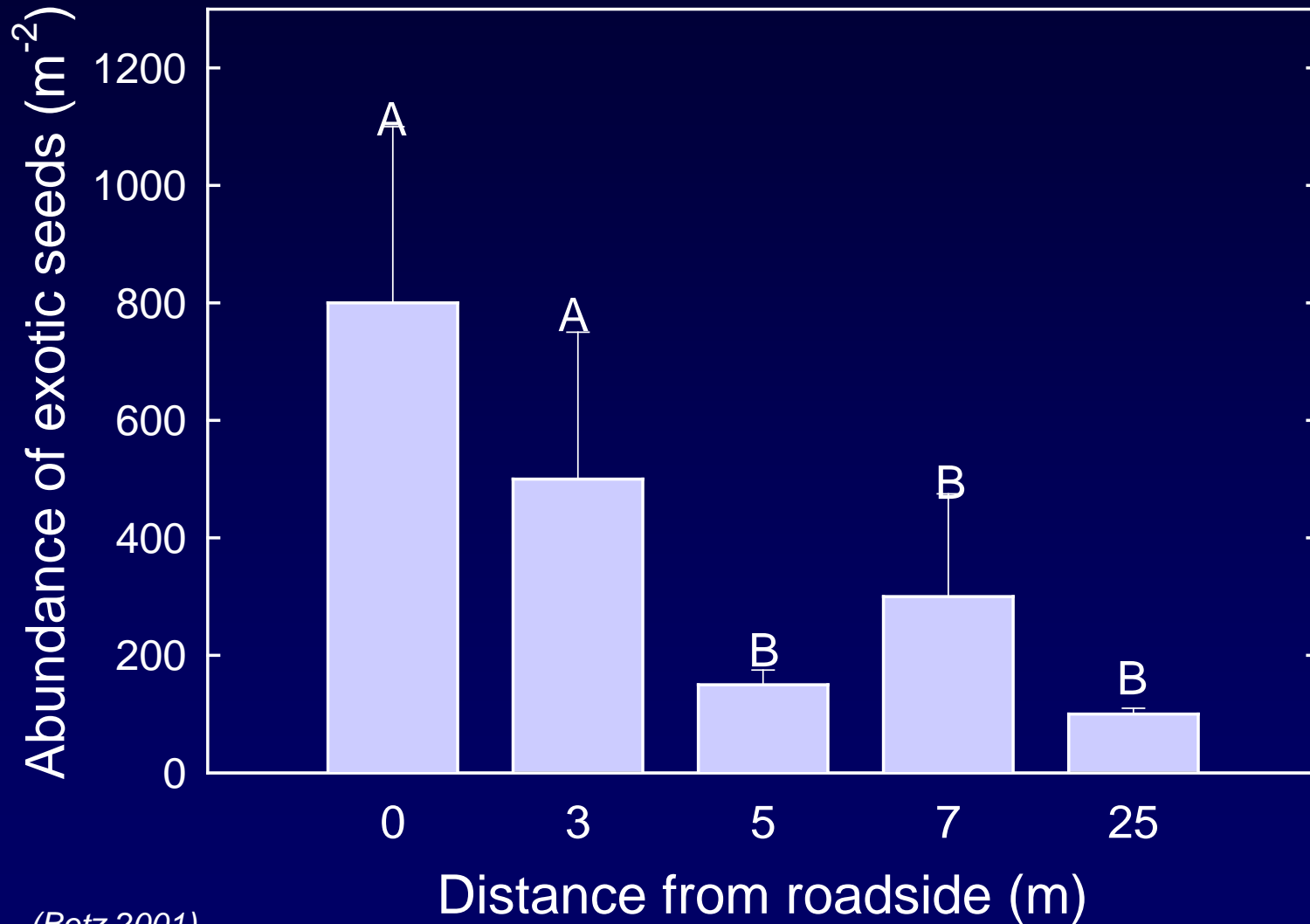
Species pool



Shortgrass Steppe LTER

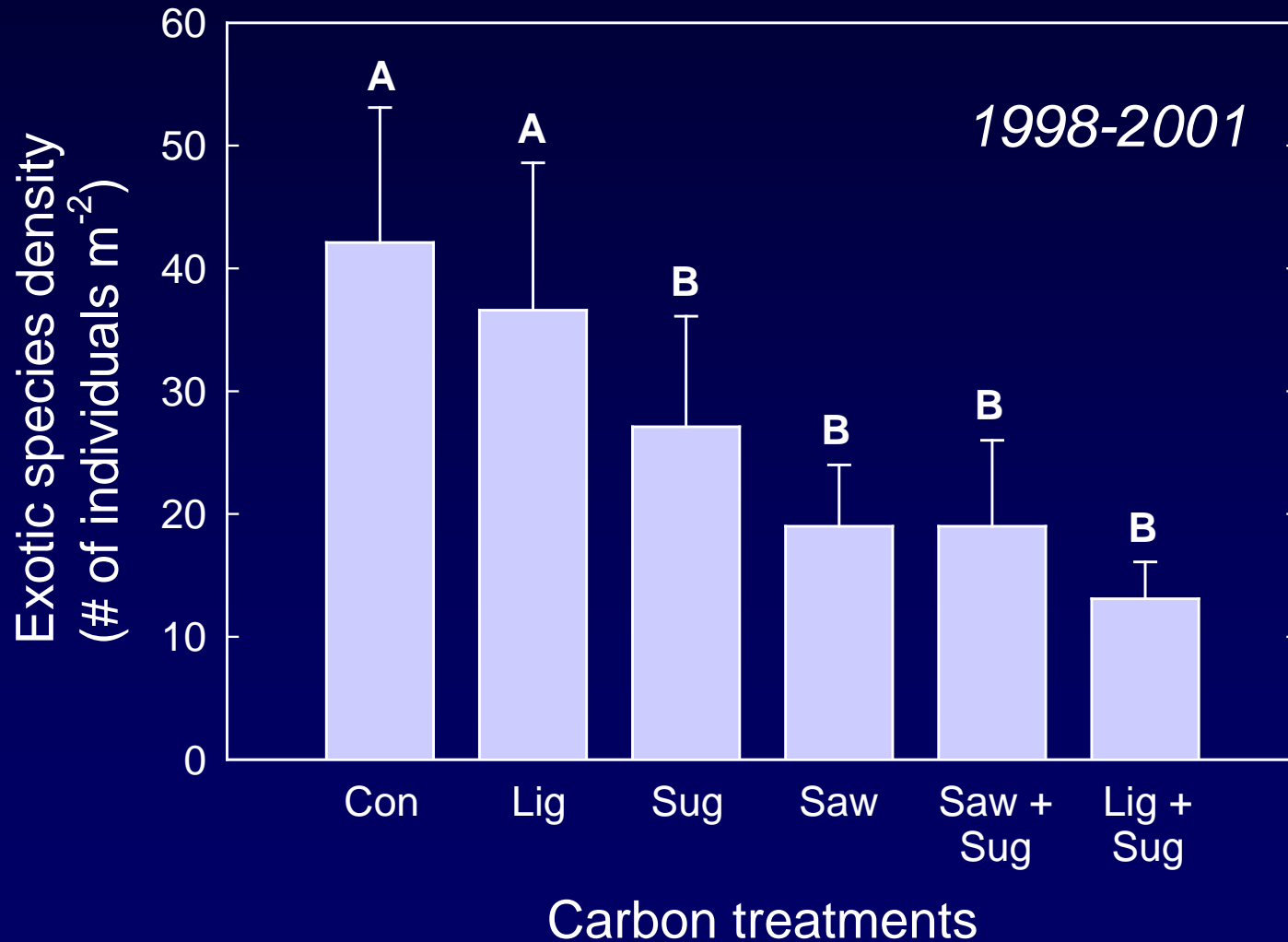


Invasion and Dispersal Limitation



(Betz 2001)

Invasion and Resource Availability



(Lowe et al., unpub. data)

LTFR Program

