

EFFECTS OF SALT CEDAR CONTROL ON WILDLIFE



Pecos River Butterfly Survey

Why Sample Butterflies?

- ▶ **Contribute to terrestrial ecosystem processes: pollination, transfer of plant energy to higher trophic levels (i.e., stuff eats them)**
- ▶ **Butterflies are indicators of riparian quality**
- ▶ **Can be sampled economically**

Methodology

- ▶ **2 Saltcedar Treatment Sites & 1 Untreated Saltcedar Site**
- ▶ **Sampling Conducted 3X:
May, July, August**
- ▶ **Timed Area Searches in 2 ha plots**
- ▶ **Habitat variables measured**

	Untreated		
	Mechanical	Saltcedar	Herbicide
Black swallowtail	0	0	2
Checkered white	20	1	0
Orange sulphur	0	1	1
Sleepy orange	1	0	1
Southern dogface	0	0	1
Western pygmy blue	3	3	9
Variiegated fritillary	5	0	2
Painted lady	7	2	3
Sachem	1	0	0
Common checkered-skipper	0	1	0

Riparian Obligates

Purplish Copper

Gray Copper

Acmon Blue

Square-dotted Blue

Acadian Hairstreak

Leda Ministreak

Soapberry Hairstreak

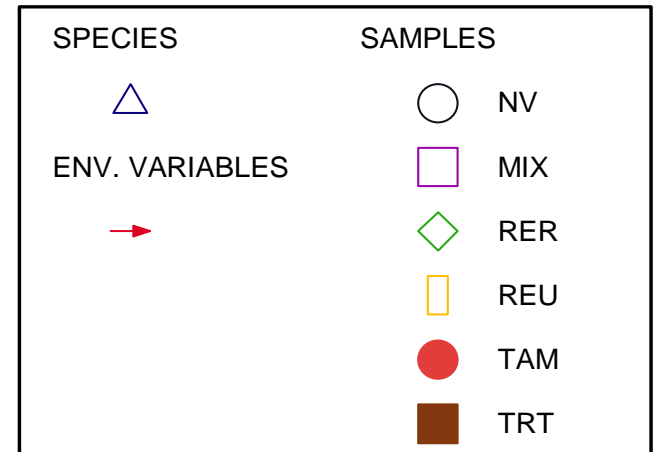
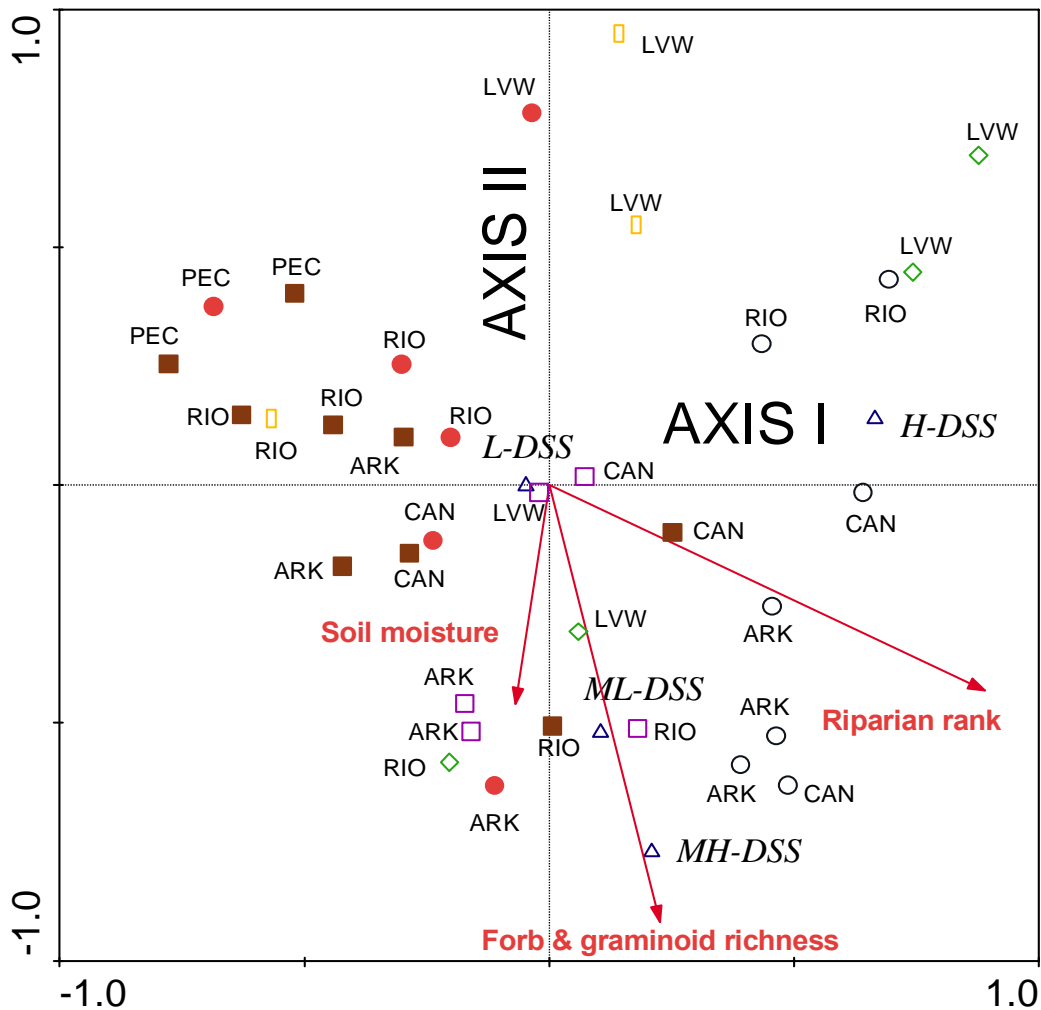
Sylvan Hairstreak

Pearly Crescentspot

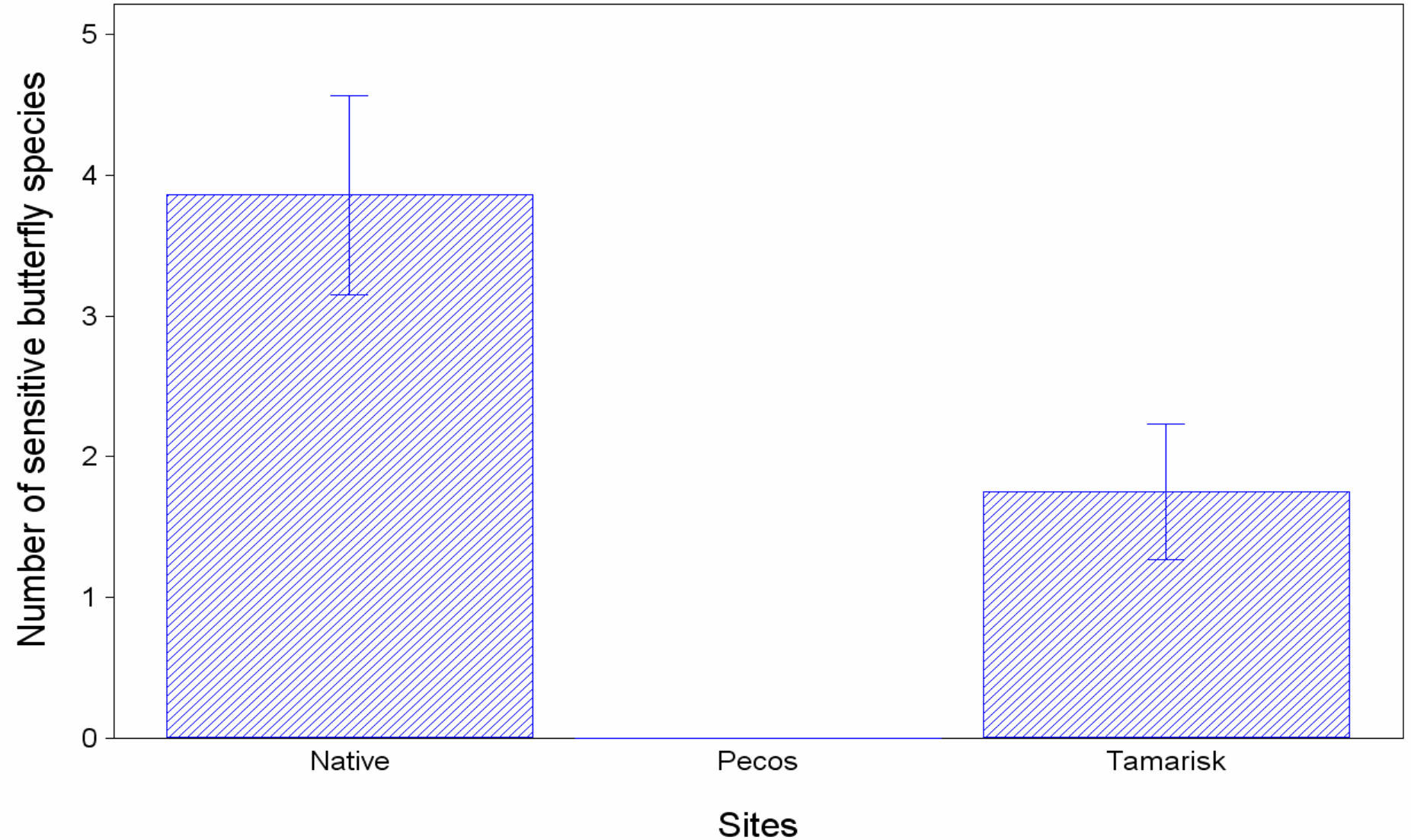
Viceroy

Weidemeyer's Admiral

Relationship Between Butterfly Species Assemblages & Environmental Variables



SW Native & Tamarisk Habitats vs. Pecos River Sites - # Riparian Obligate Species



Conclusions

Invasion of sites by saltcedar & subsequent treatment techniques reduce #'s sensitive/riparian obligate butterfly species

Assumption that invasive species removal is sufficient to recover sensitive species is not true. Sites must be revegetated.



2006 Pecos River Acoustic Bat Survey

Use of Saltcedar, Native Riparian & Treated Sites

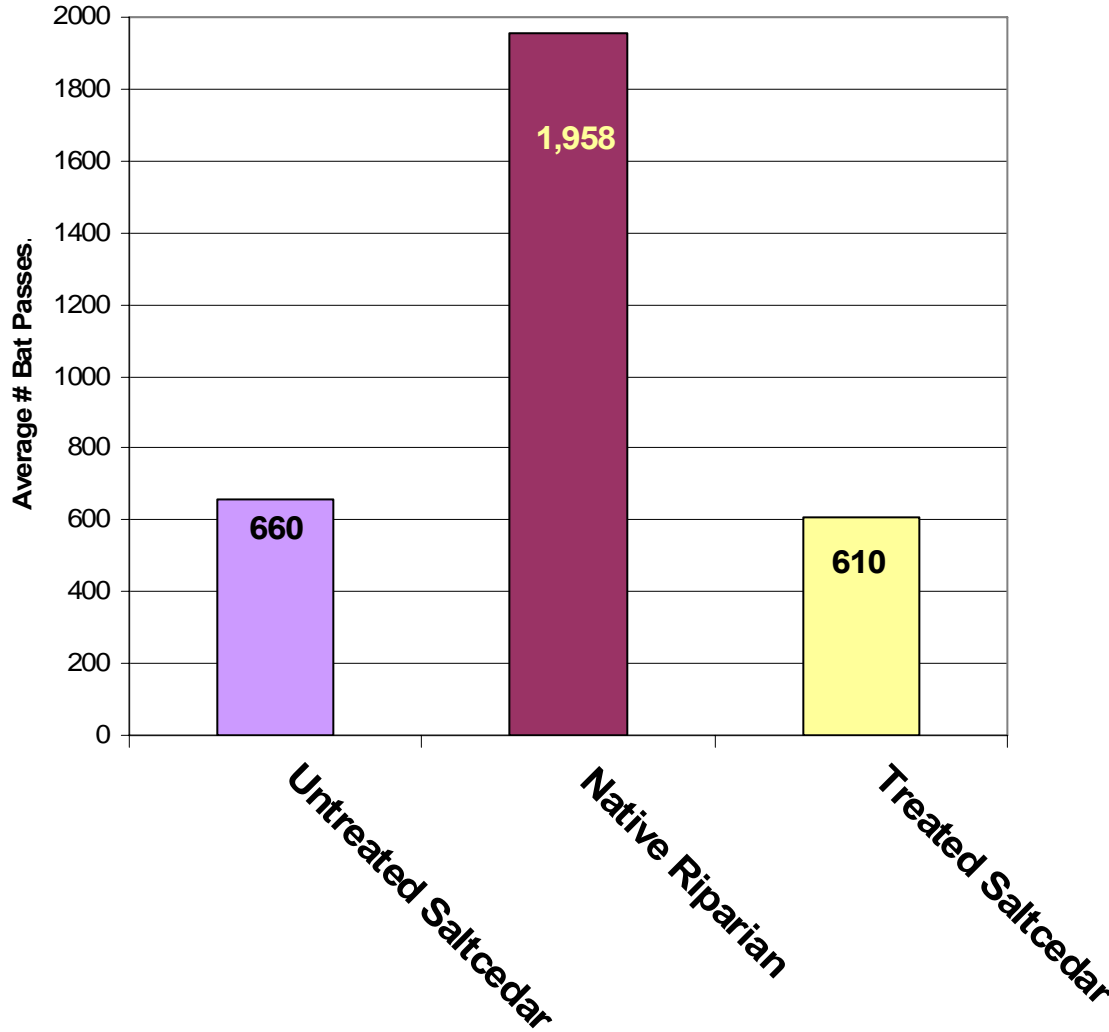


Methodology

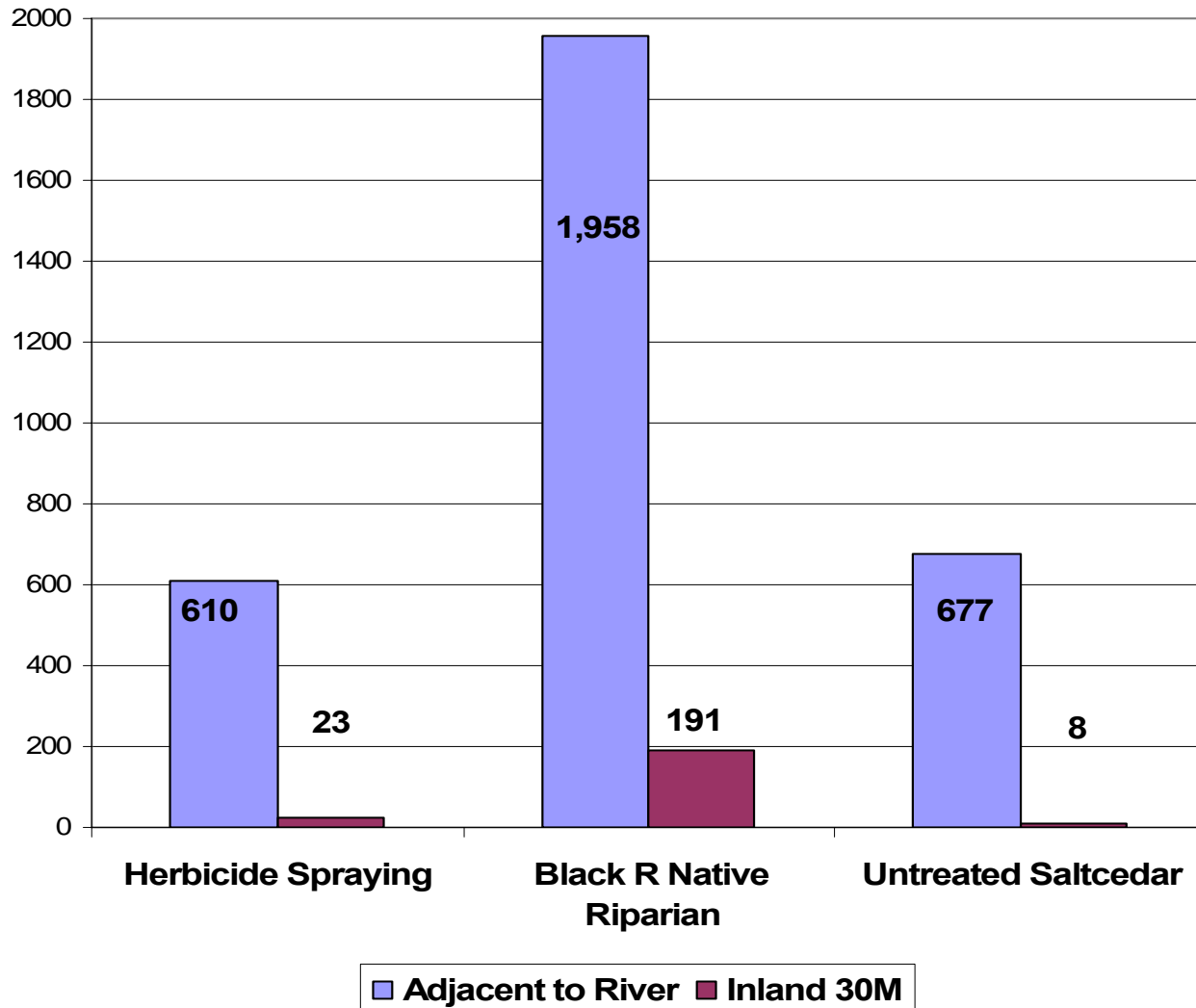
- ▶ **Acoustic Bat Surveys using Anabat Bat Detectors Conducted During Late May, Early June & Late June**

- ▶ **Treated Saltcedar, Untreated Saltcedar & Native Sites Sampled**

Pecos River 2006 Acoustic Bat Surveys



COMPARISON # BAT PASSES ALONG RIVER VS INTERIOR



Conclusions

Saltcedar & treated habitats less productive for bats compared to native riparian & desert upland vegetation.

Even very narrow strips of vegetation (one tree wide) as on the Black River are more productive.