

Habitat Partitioning of Sympatric Ocelot and Bobcat in Southern Texas

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Background... Ocelot (*Leopardus pardalis*)

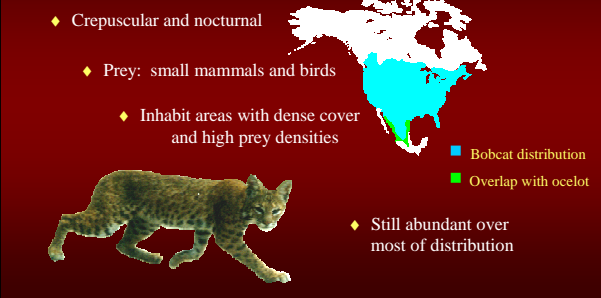
- ◆ Crepuscular and nocturnal activity
- ◆ Prey: small mammals and birds
- ◆ Inhabit areas with dense cover
- ◆ Endangered 1982 (USFW)



■ Ocelot distribution
■ Overlap with bobcat

Background... Bobcat (*Lynx rufus*)

- ◆ Crepuscular and nocturnal
- ◆ Prey: small mammals and birds
- ◆ Inhabit areas with dense cover and high prey densities
- ◆ Still abundant over most of distribution



■ Bobcat distribution
■ Overlap with ocelot

Justification

- Gause's (1934) Competitive Exclusion Principle
 - ecological equivalents cannot stably coexist

Type of Partitioning* _____ Current Knowledge

Temporal.....both crepuscular/nocturnal

Food type.....>90 % overlap

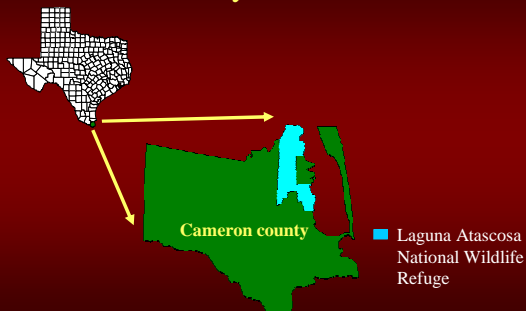
Habitat..... ?

* Described by Schoener (1982)

Objectives

- Determine if differences in habitat use could be detected where ocelots and bobcats co-occur
 - Macrohabitat: community scale vegetative associations
 - Microhabitat: structural components within communities
- Relate any differences to differences in population status of ocelots and bobcats

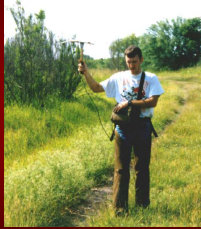
Study Site



Methods... Habitat Use



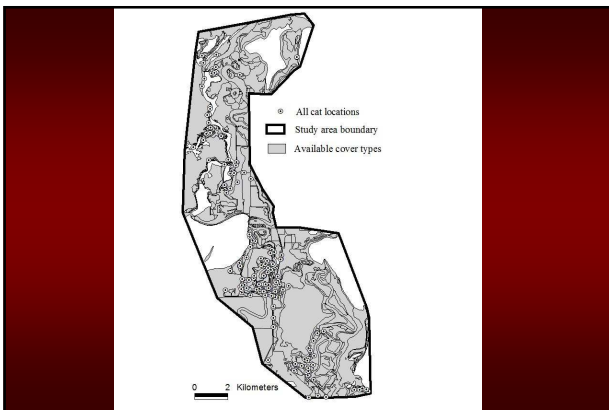
Cat capture



Radio telemetry



Microhabitat measurements



Macrohabitat Selection

Are ocelots and bobcats using the same general cover types?

- 4 Cover types* used by ocelots and bobcats
 - Closed, mixed, open, bare ground
- Scale of Selection
 - Placement of home ranges within the study area
 - Selection of habitats within the home range
- Selection Ratios
 - Compares proportion used to proportion available

* Determined by relative canopy cover and major vegetative associations

Microhabitat Use

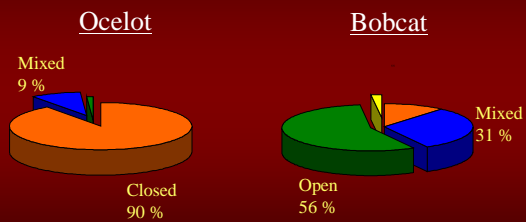
Are ocelots and bobcats using the similar vegetation structure within the same cover type?

- 7 Structural Variables
 - Canopy height
 - Horizontal cover
 - Profiles: <1 m; >1 m; Total
 - Vertical cover
 - Profiles: <0.5 m; 0.5 m - 1 m; 1 - 2 m

Results

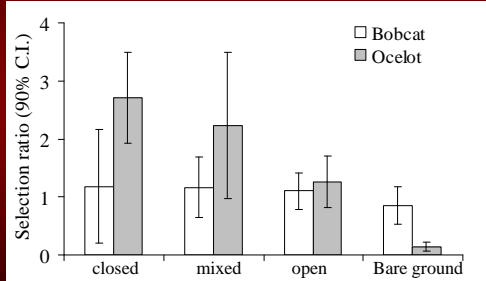
- Cat Capture
 - 10 ocelots (4 female and 6 male)
 - 8 bobcats (3 female and 5 male)
- Telemetry
 - 191 locations (96 ocelot and 95 bobcat)
- Habitat Separation
 - Significant differences at both macro and micro scales

Percent of Locations by Cover Type



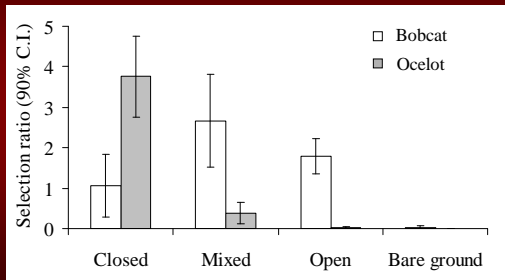
Cover Type Separation...

Home range placement compared to study area



Cover Type Separation...

Use of cover types within the home range



Microhabitat Separation

- Within the same cover type, ocelots used sites with:

1. Higher canopies
2. Greater canopy cover >1m
3. More screening cover



Conclusions

- Ocelots and bobcats used different habitats at both macro and micro-scales
- Differences were related to vegetative cover >1 m
 - canopy height, horizontal cover >1 m, vertical cover 1-2 m, woody debris
- Habitat partitioning may serve to reduce interspecific competition between ocelots and bobcats



Conclusions (continued)

- Theories of Resource Partitioning
 - Partitioning may result from evolutionary adjustments
 - Partitioning may result independent of competitive pressure
- Important Management Implications
 - <1 % of Southern Texas supports closed canopy thornshrub preferred by ocelots
