



Brown-headed Cowbirds and Willow Flycatchers

- Natural History of Cowbirds
- Effects on Willow Flycatcher
- Management Issues

BROWN-HEADED COWBIRD

(Molothrus ater)



BROWN-HEADED COWBIRD

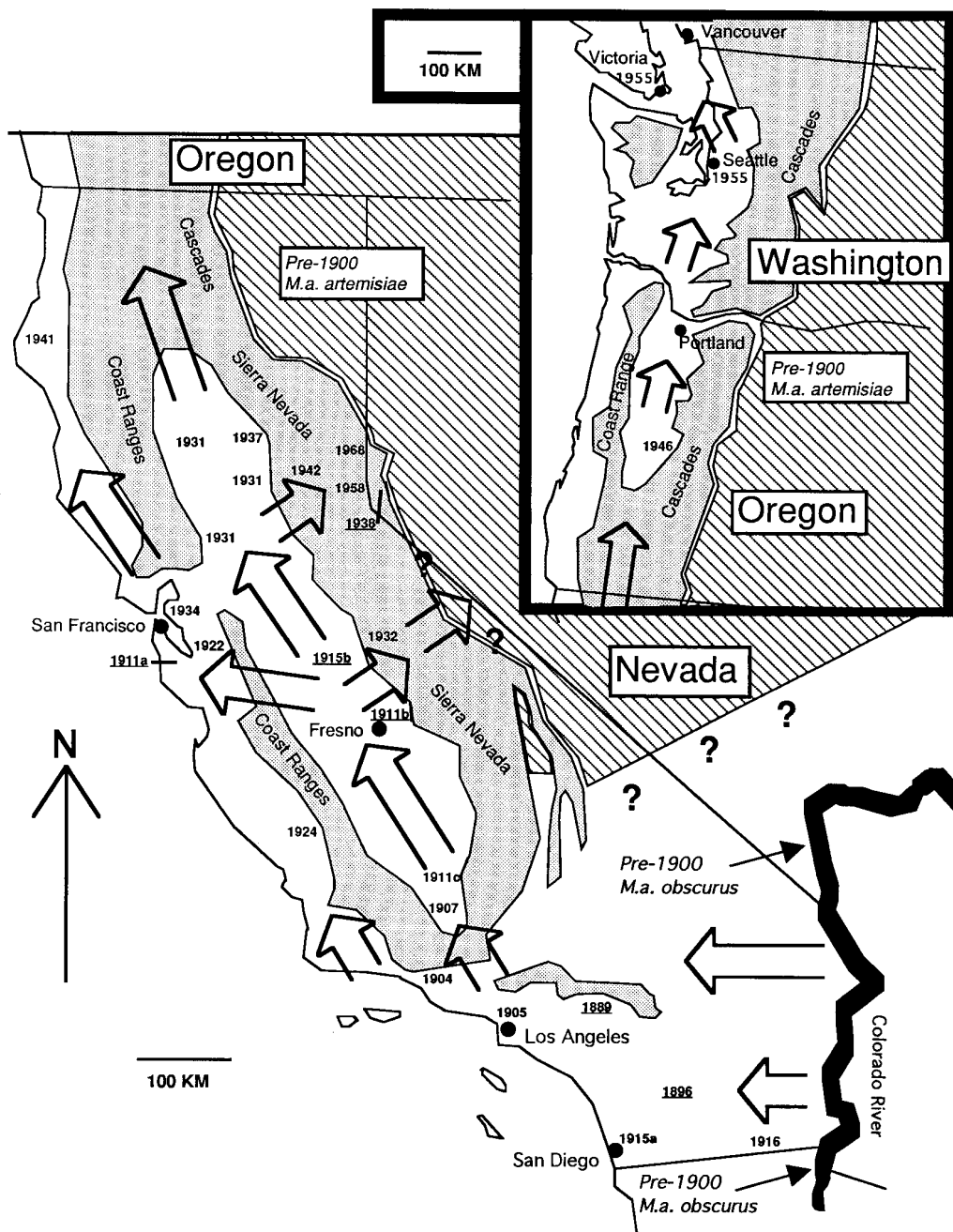
(Molothrus ater)



Natural History of Cowbirds

- Brood-parasite
- Expansion of Distribution

Cowbird colonization of the Far West, Rothstein 1994



Natural History of Cowbirds

- Migratory and Resident
- Breeding Season

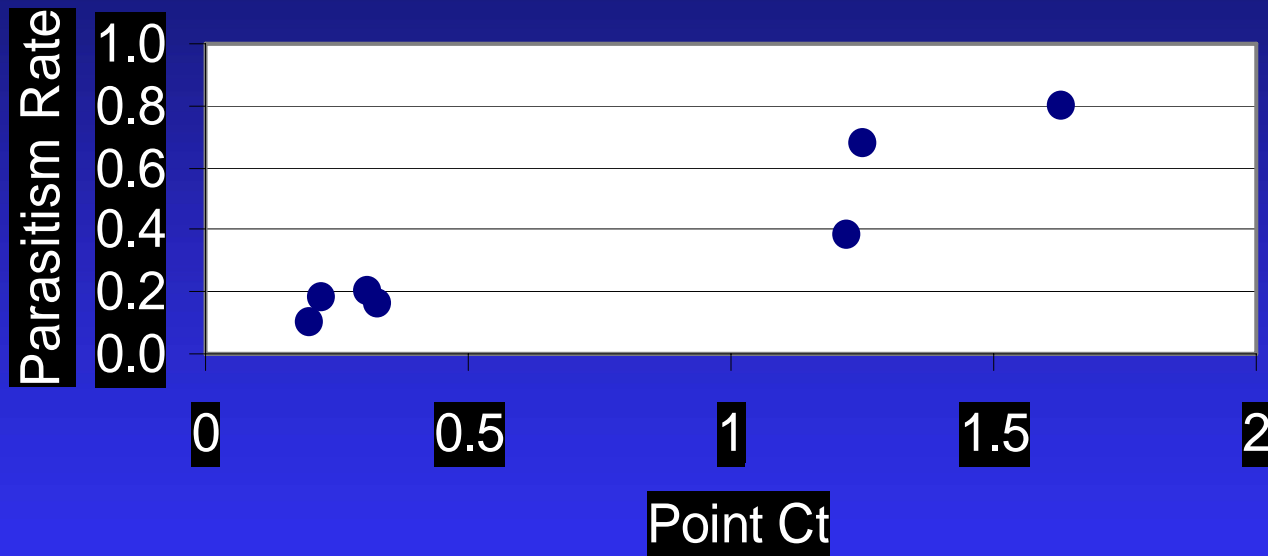
Natural History of Cowbirds

Breeding Season

- Early AM activity
- Nest parasitism
- Prolific egg-layers
- Parasitize open-cup nesters
- Separate feeding and breeding areas

Cowbird Abundance & Parasitism Rates

Kern River Population



Do cowbirds affect Southwestern Willow Flycatchers?

Potential Effects of Parasitism on Willow Flycatchers

- Nest abandonment
- Egg Loss
- Nestling Loss
- Population effects?

Parasitism and Desertion rates of parasitized Willow Flycatchers is highly VARIABLE in different regions.

Region	Parasitism rate (N)	Desertion rate (N)	Reference
California	68% (19)	57% (14)	Harris 1991
California	63% (60)	45% (38)	Whitfield 1990
New Mexico	22% (129)	35% (26)	Stoleson & Finch 1999
Arizona	7% (203 ⁴)	36% (14)	Paradzick et al. 1999

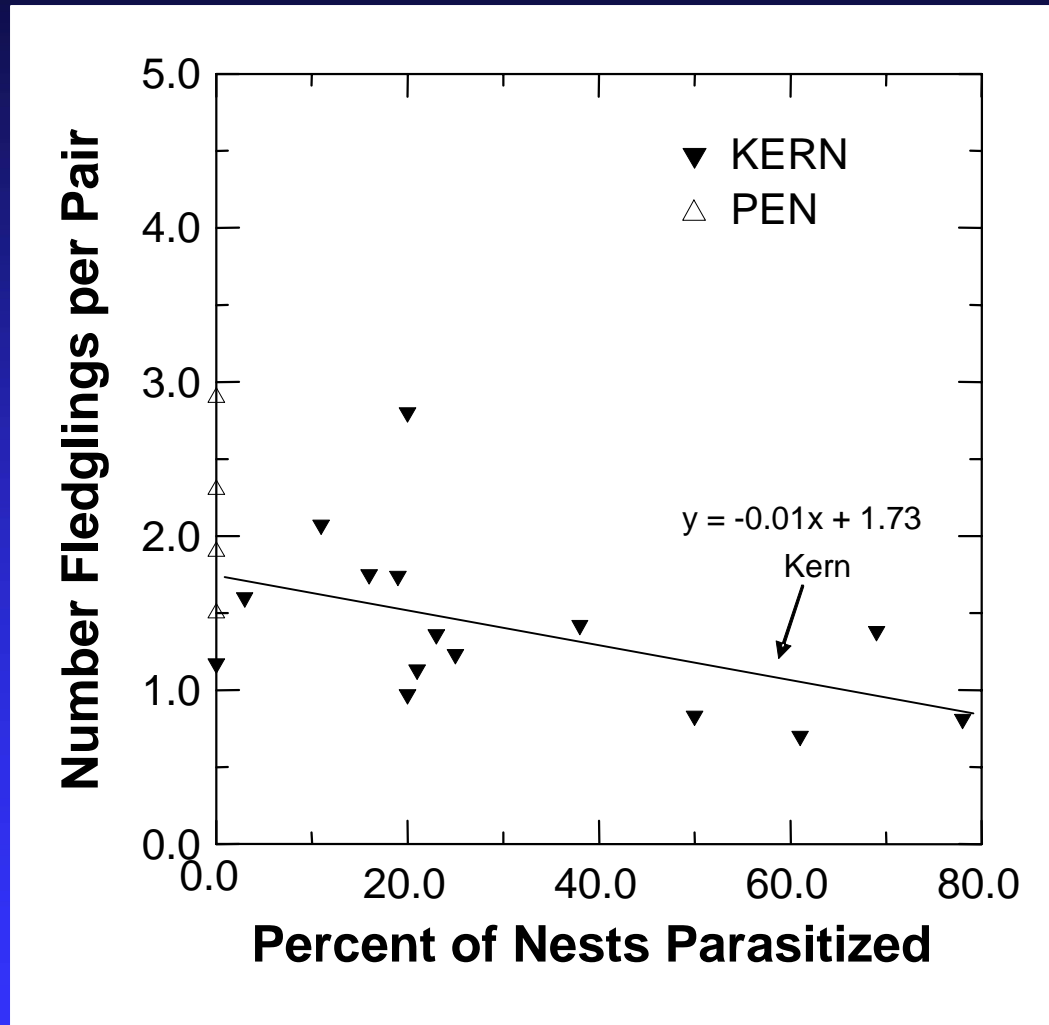
Potential Effects of Parasitism on Willow Flycatchers

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How often flycatcher young are produced in parasitized nests

- Arizona: 4 out of 31 nests (13%)
- California: 18 out of 133 nests (14%)

Parasitism and SWFL Productivity



Kus et al. 2006

Potential Effects of Parasitism on Willow Flycatchers

- Nest abandonment
- Egg Loss
- Nestling Loss
- Population effects?

Management practices typically prescribed to help populations of endangered host species

- Cowbird Trapping
- Remove cattle

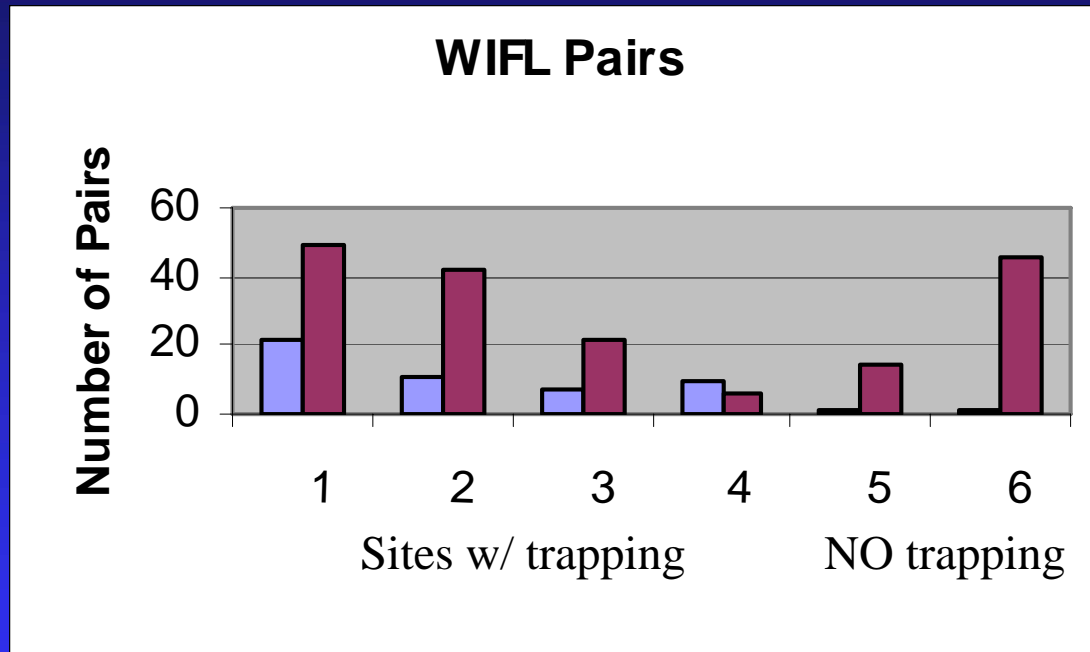
Management practices typically prescribed to help populations of endangered host species

- Cowbird Trapping
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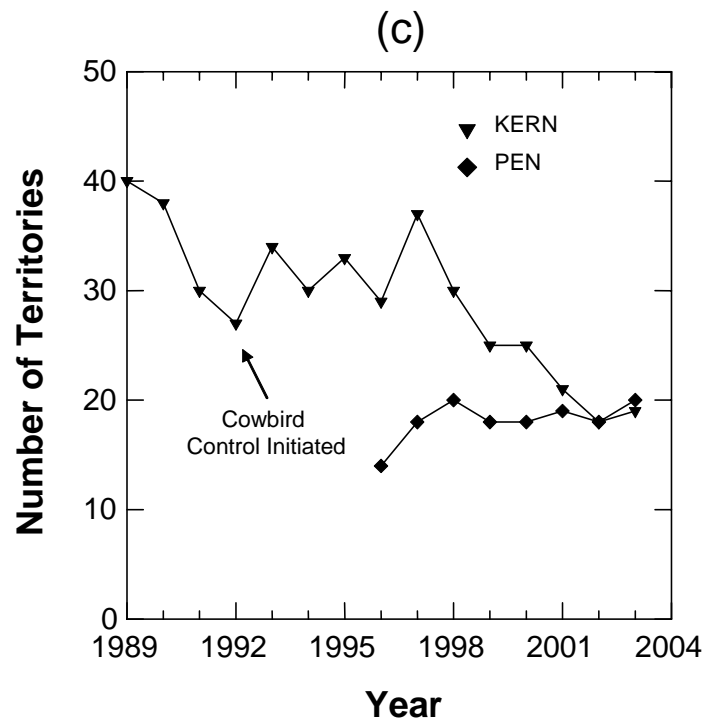
Experiments in Cowbird Removal Programs



WIFL populations and Cowbird Trapping-NO PATTERN



SWFL Population Size



Southern CA Cowbird Trapping

2004 (Famolaro summary, Sweetwater)

- Counties: Riverside, Orange, San Bernardino and San Diego
- 180 traps
- About 5900 cowbirds trapped
- About 730 EUST and HOSP trapped
- About 18,350* Nontarget species released
- About 200 Nontarget 'taken'

Possible impacts of cowbird control:

- Effective cowbird trapping removes the selective pressure of parasitism necessary to promote the selection of antiparasitic defense mechanisms
- Economic, political, ethical

Cowbird control

- is effective in reducing parasitism and increasing annual productivity
- produces population increases in *some* species
- is effective only as long as suitable habitat is available

Should be thought of as a short-term tool
for managing T&E species

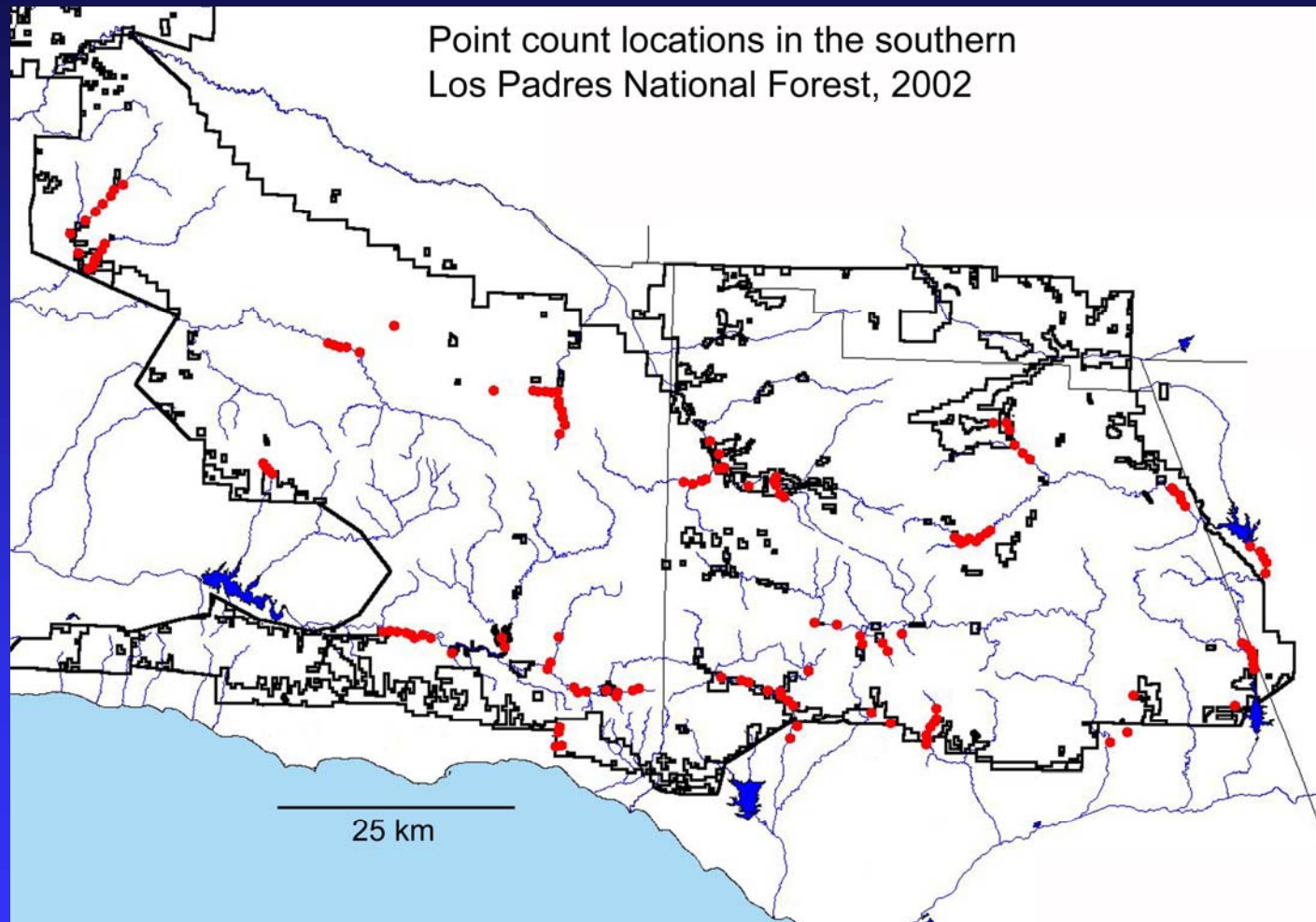
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Cowbirds and Livestock

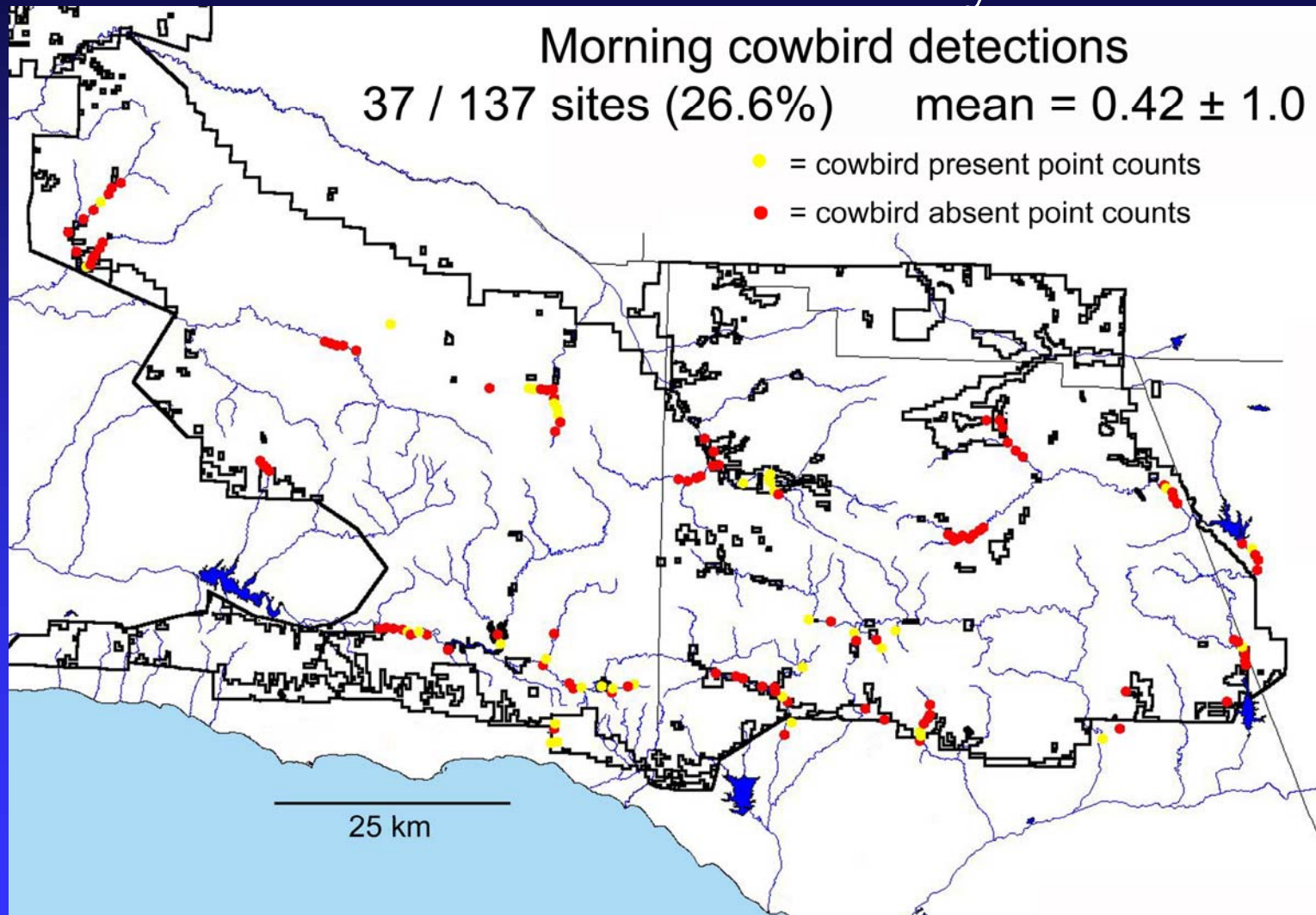


Cowbirds on Los Padres NF

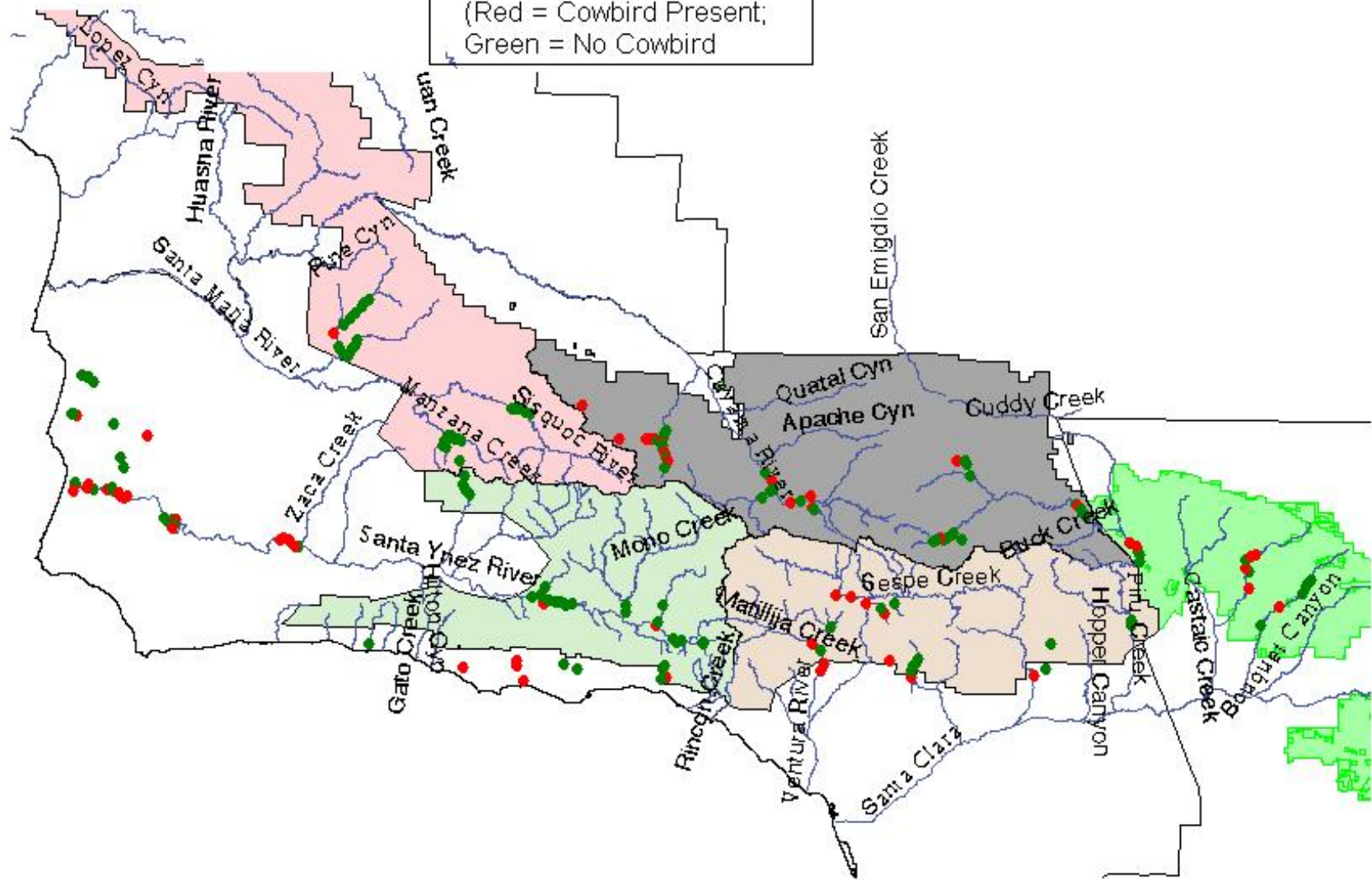


2002 Results

with Cowbird 'Chatter' Playback



2003 Cowbird Distribution
(Red = Cowbird Present;
Green = No Cowbird)



Not just livestock...

- In a central-southern California forest, cowbirds are not associated with livestock
- However, cowbirds ARE associated with passerine birds first, and second, urban land-use.
- The availability of host birds and cowbird feeding sites likely affect cowbird distribution.

SUMMARY

- Cowbird effects on willow flycatchers are site-specific and temporal.
- Cowbird management recommendations must also be site-specific and should be reviewed.
- Cowbird control can help in the short-term, but recovery of SWFL is **not** dependent on cowbird control.