



- LCR MSCP -



**Southwestern Willow Flycatcher  
Demography and Ecology Studies  
along the Lower Colorado River and Tributaries  
2009**



**SWCA<sup>®</sup>**  
ENVIRONMENTAL CONSULTANTS

# Study components

- Broadcast surveys



- Territory/nest monitoring



- Banding/resighting



- Microclimate/vegetation



- Cowbird trapping



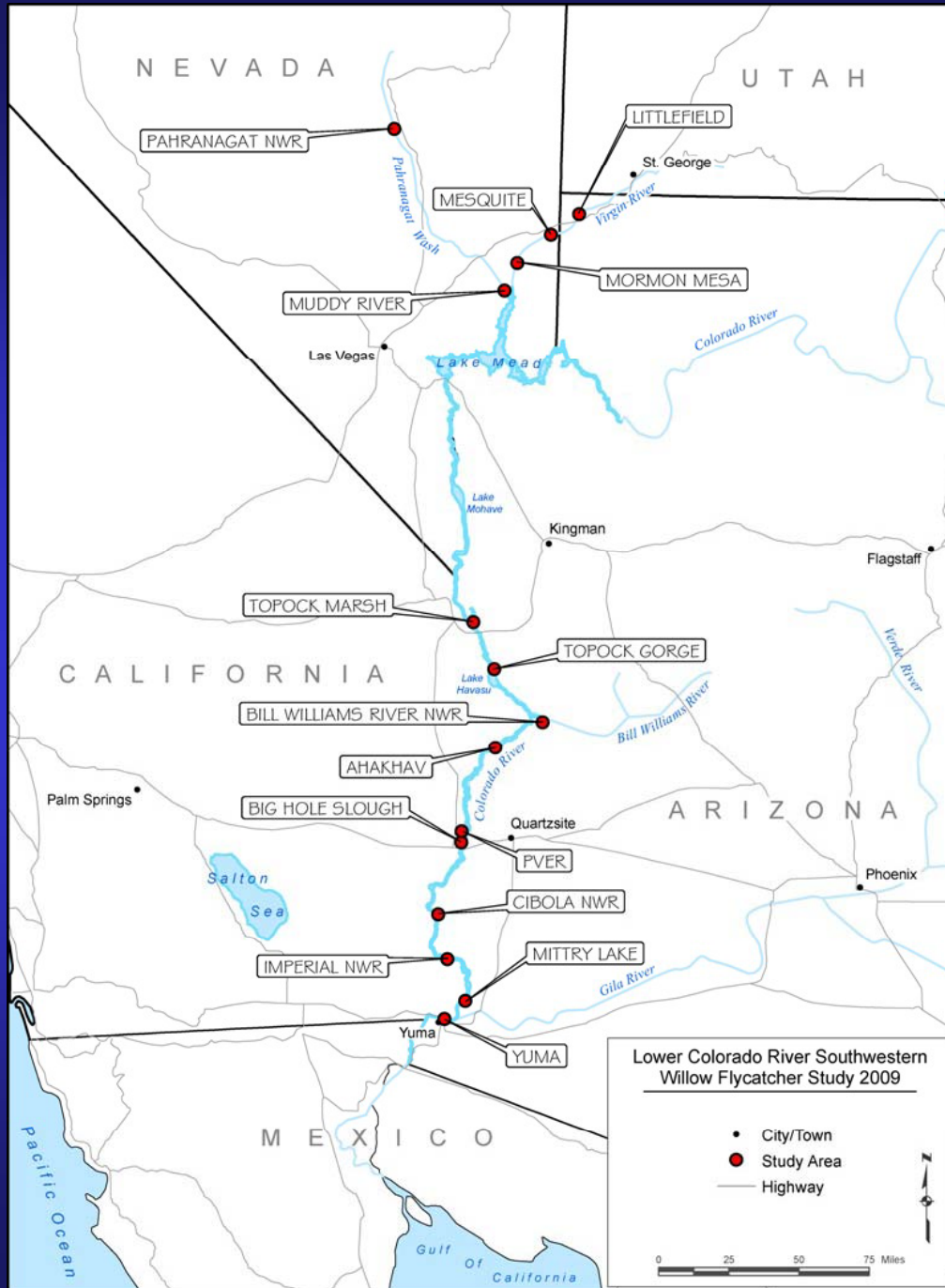
# Study Area



Approx. 100 survey sites

Sites chosen by field recon  
via helicopter and on foot

Goal to survey all potential  
habitat



## ★ Breeding sites

Pahrnanagat – native

Mesquite – mixed-native

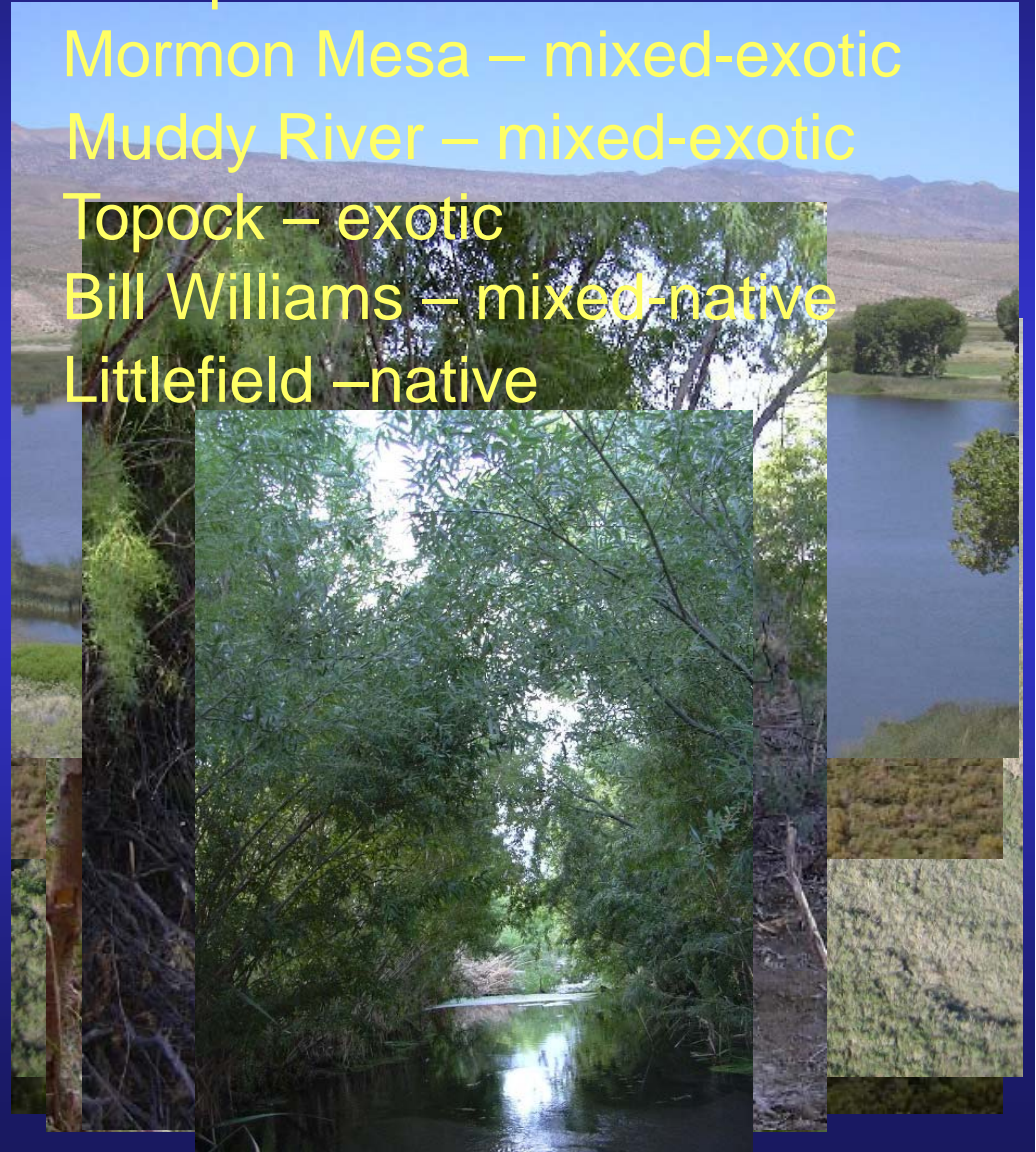
Mormon Mesa – mixed-exotic

Muddy River – mixed-exotic

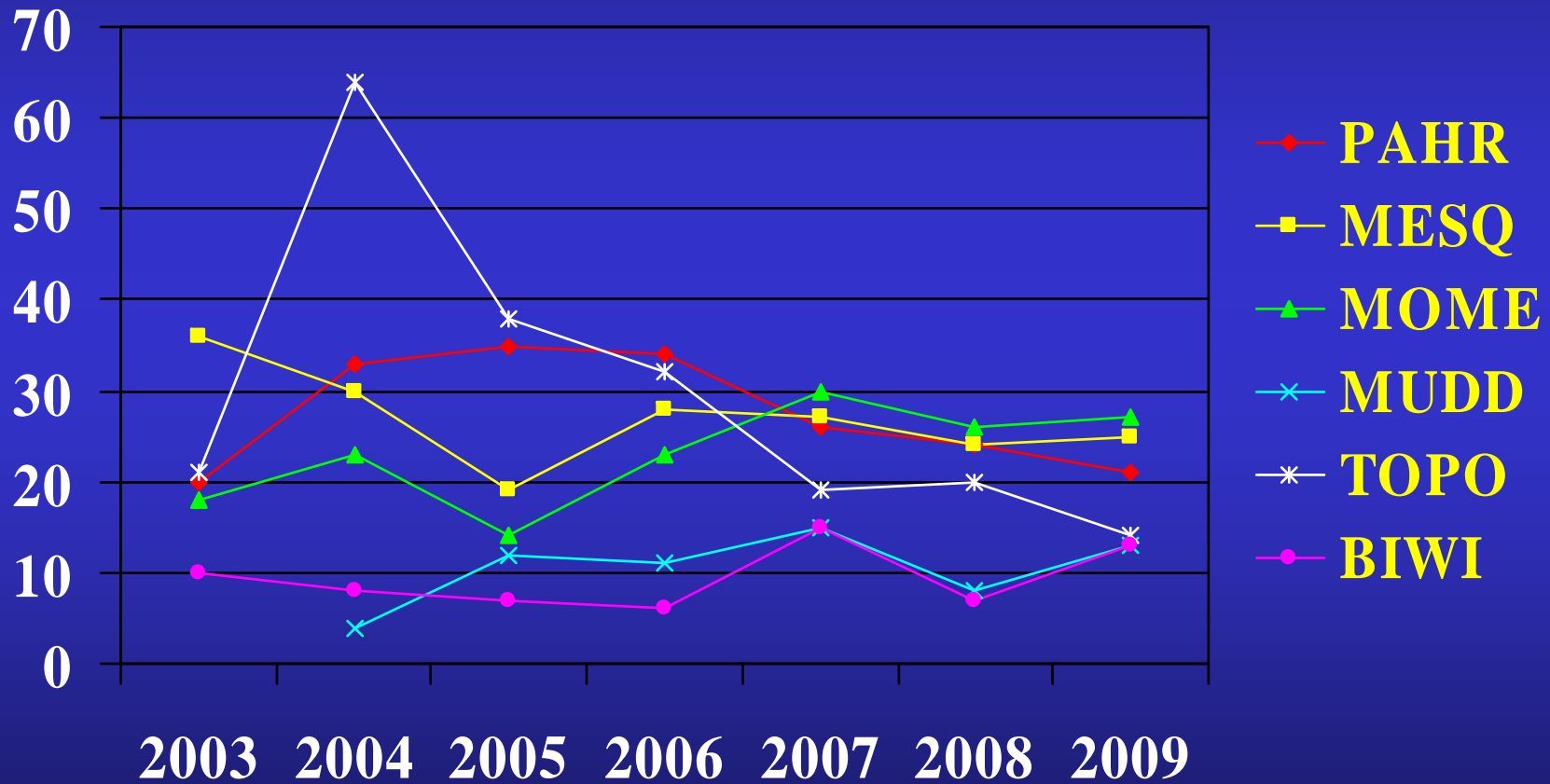
Topock – exotic

Bill Williams – mixed-native

Littlefield – native



# # Resident Adult Flycatchers



# Habitat conditions 2009

Pahranagat

Mesquite West



# Flycatchers on Southern LCR

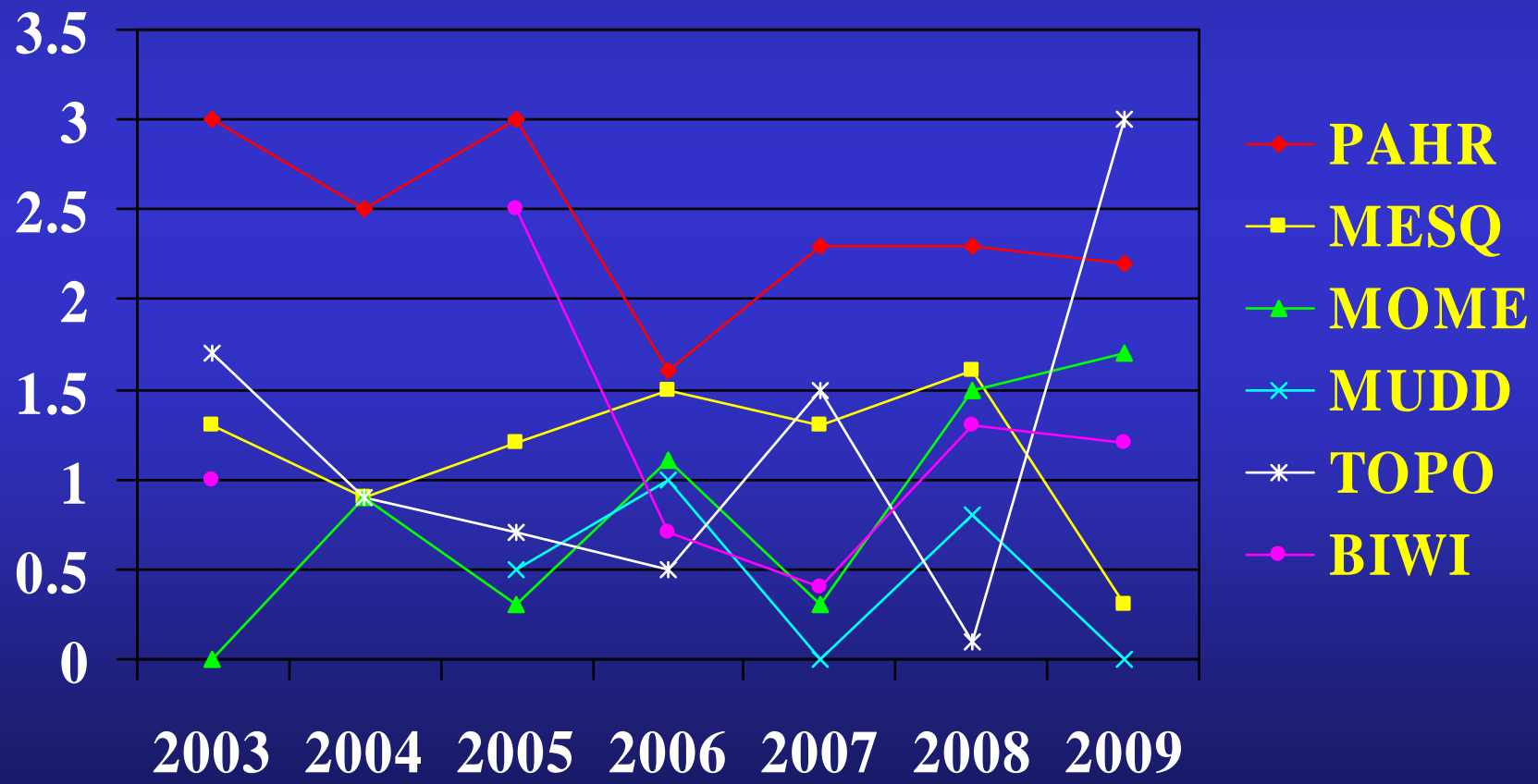
No resident willow flycatchers recorded south of Bill Williams

Migrant willow flycatchers detected through mid-June





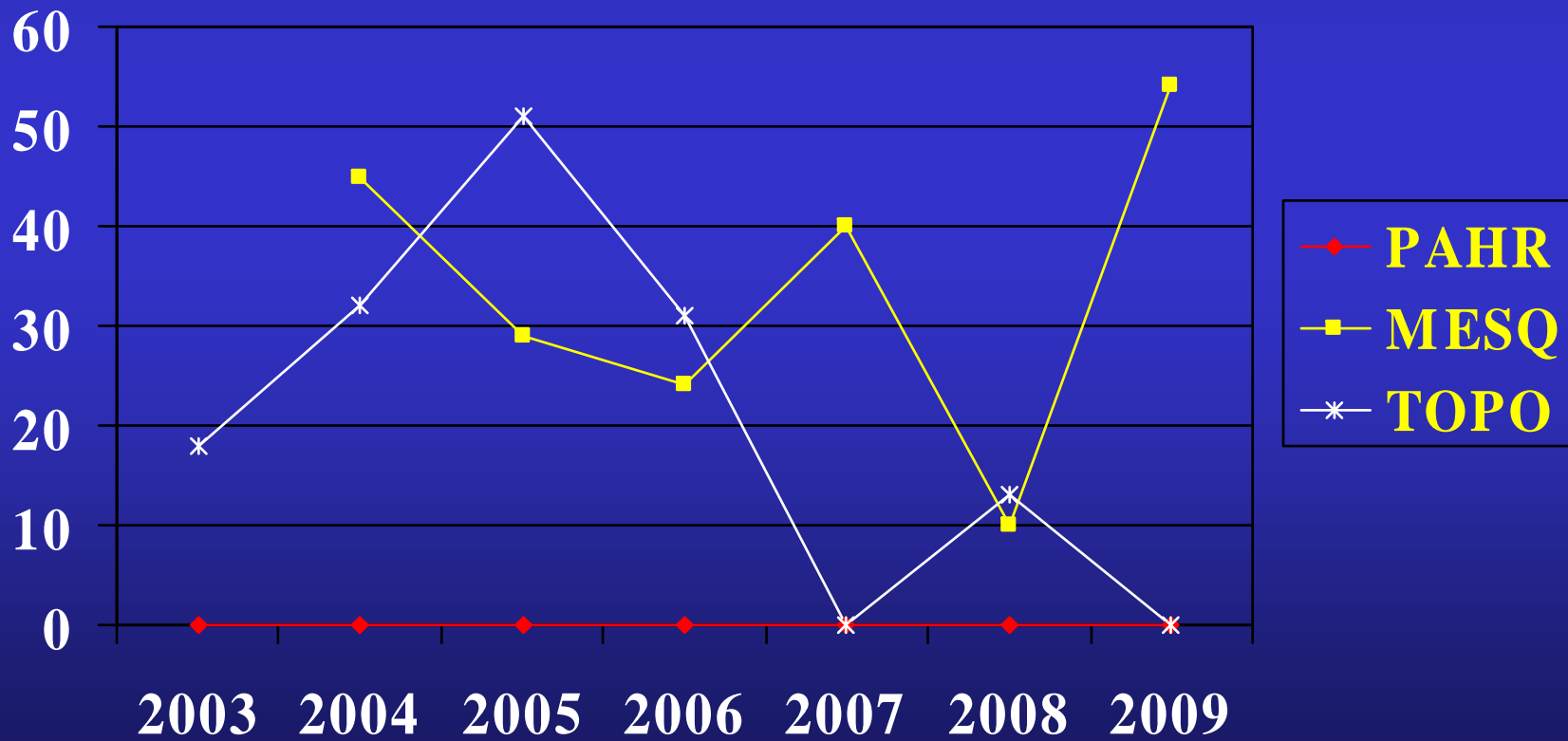
## Fecundity





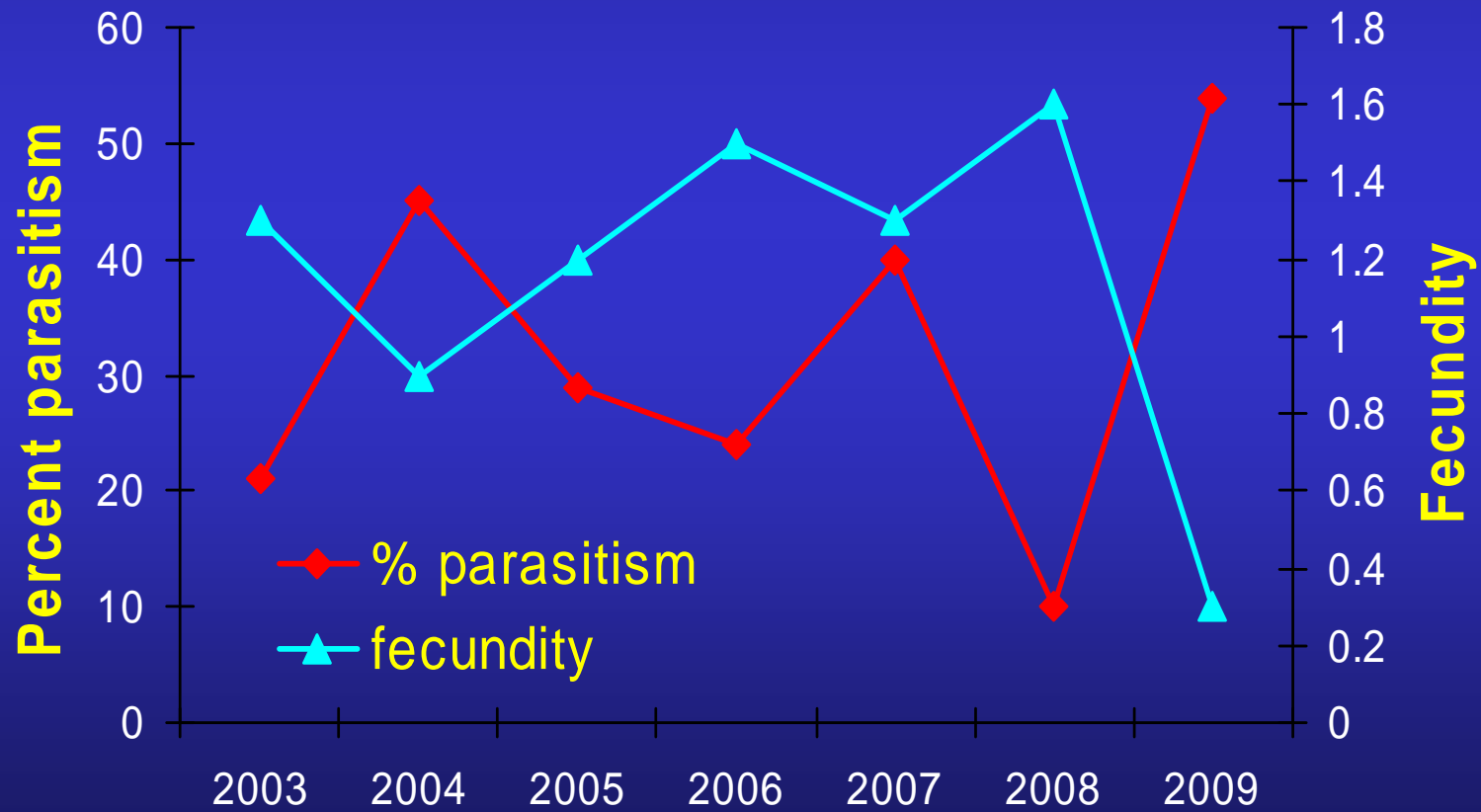


## Percent Brood Parasitism



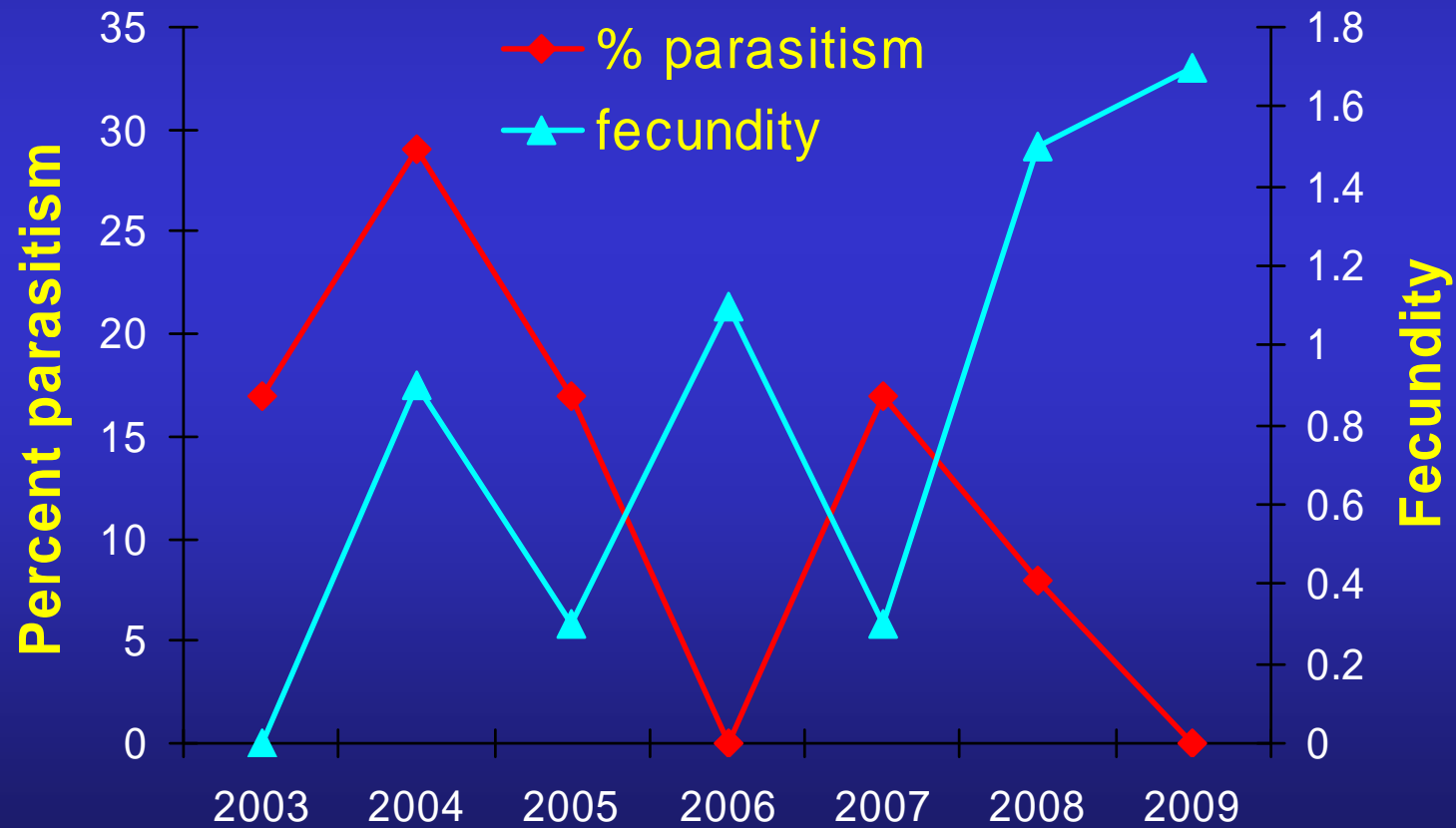


## Mesquite



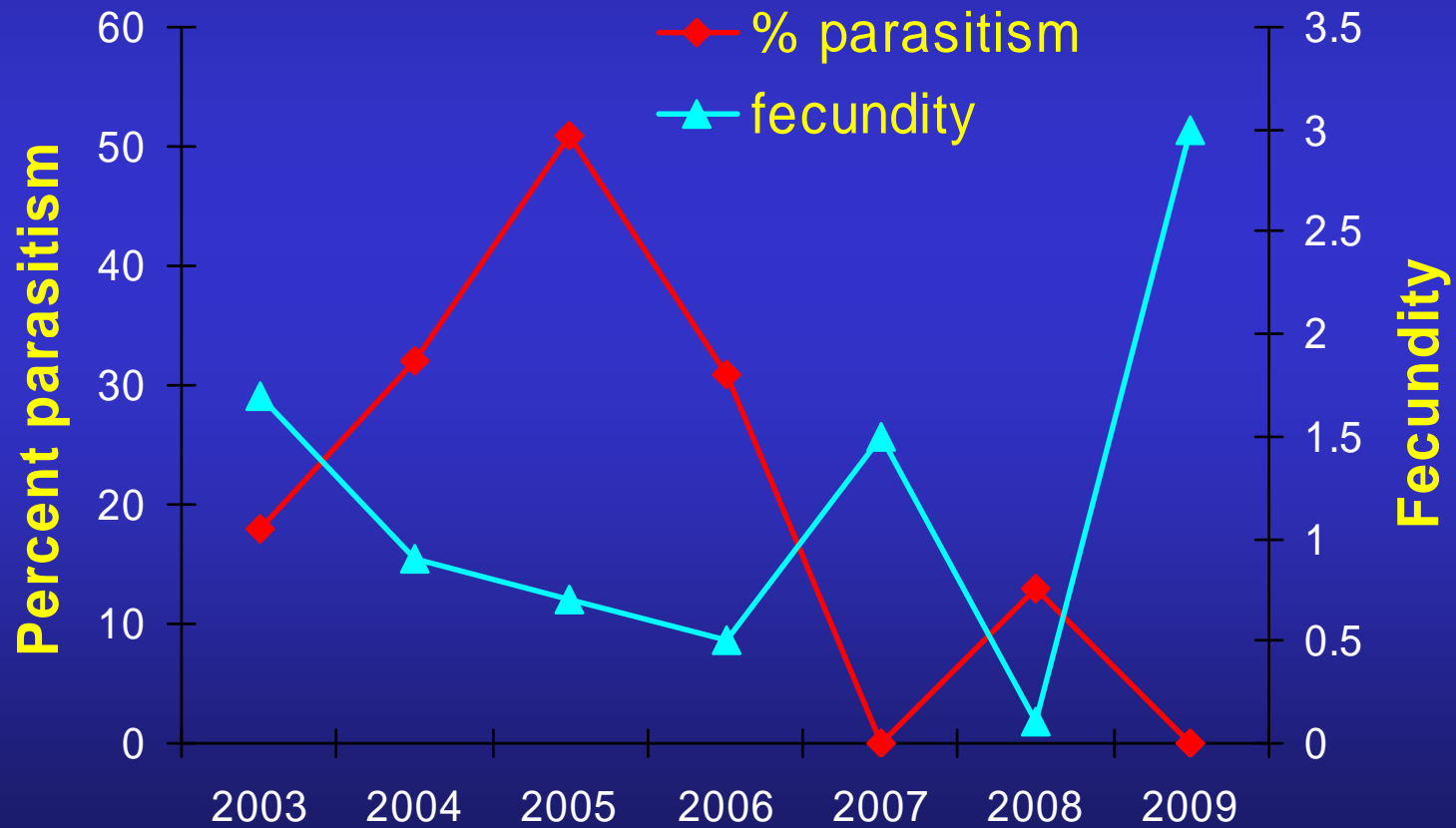


## Mormon Mesa





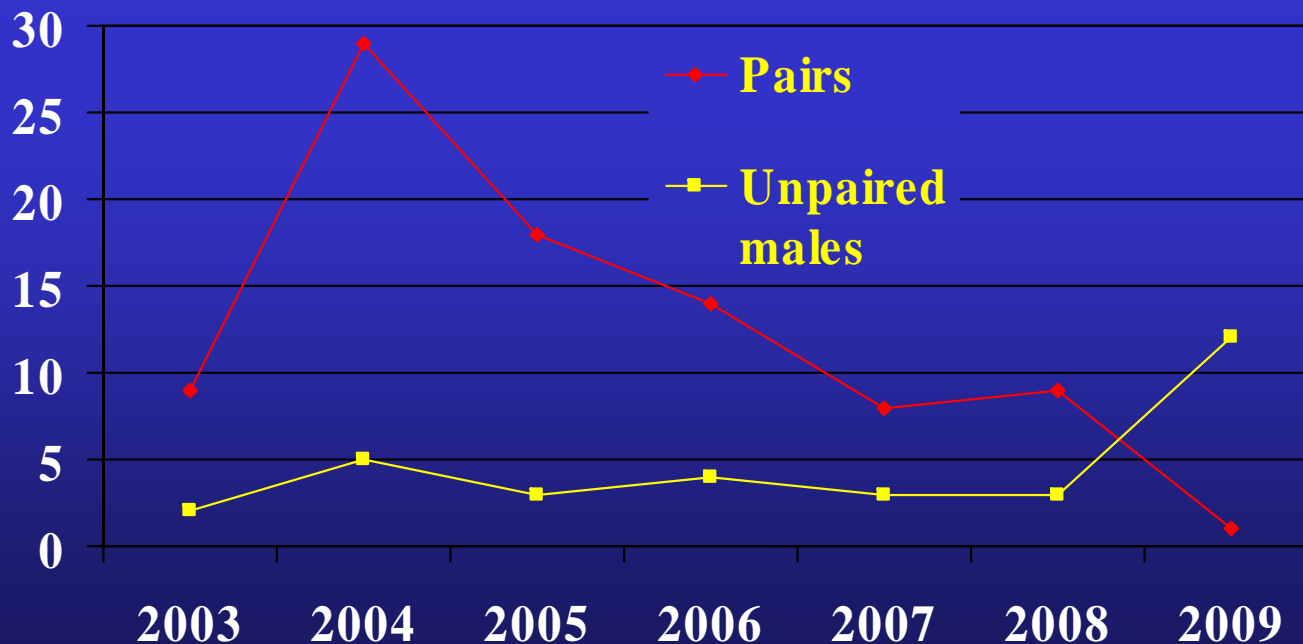
## Topock Marsh



# Topock Marsh

Simultaneous drop in nesting and rise in unpaired males

- 3 territories in which potential females were detected for less than a week in June
- Similar pattern seen at Roosevelt Lake in 2002
- Possible indication of poor habitat quality



# Microclimate and Vegetation Study Design

Within active territories

- 20 m from territory center
- T/RH logger as soon as territory identified
- Vegetation at end of season

Provide description of occupied habitat in various vegetation types

- Combine with data collected within territories in previous years

# Microclimate and Vegetation Study Design

## Temporal changes in habitat

- Identified portions of study areas that were occupied in previous years but not 2009
- Relocated old nests
- Hung T/RH data logger at the old nest
- Completed veg plot at end of season
- Compared results to data collected when nest was active

## Old Nest Results

Mormon Mesa (n = 13) and Topock Marsh (n = 13)

- No obvious changes in habitat
- Lower humidity
- Increase in canopy height
- Decrease in proportion of live stems 2.5-8 cm dbh  
Same result as at Topock in 2008





# Acknowledgements

- Bureau of Reclamation – Chris Dodge and Theresa Olson
- USFWS Regions 1 and 2
- Federal Bird Banding Laboratory
- Arizona Game and Fish Dept.
- Nevada Division of Wildlife
- California Dept. of Fish and Game
- Utah Division of Wildlife Resources
- Refuges:
  - Pahranagat NWR
  - Havasu NWR
  - Bill Williams River NWR
  - Cibola NWR
  - Imperial NWR
- Grand Canyon National Park
- Hualapai Tribe
- Colorado River Indian Tribes
- Lake Mead NRA
- Bureau of Land Management
- Key Pittman WMA
- Overton WMA
- Private landowners

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our field crews.**