

Update on the Cactus Wren Translocation by the Nature Reserve of Orange County

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Background

- Translocation treated as an experimental management action
- Purpose:
 - Recolonize historically occupied sites
 - Bolster small, isolated populations
 - Allow for genetic mixing
- Context: Regional land-use change
 - Reduction in size and number of populations
 - Disruption of metapopulation dynamics
 - Increasingly permanent loss of populations due to fire and other disturbance

Orange County Coastal NCCP-Reserve

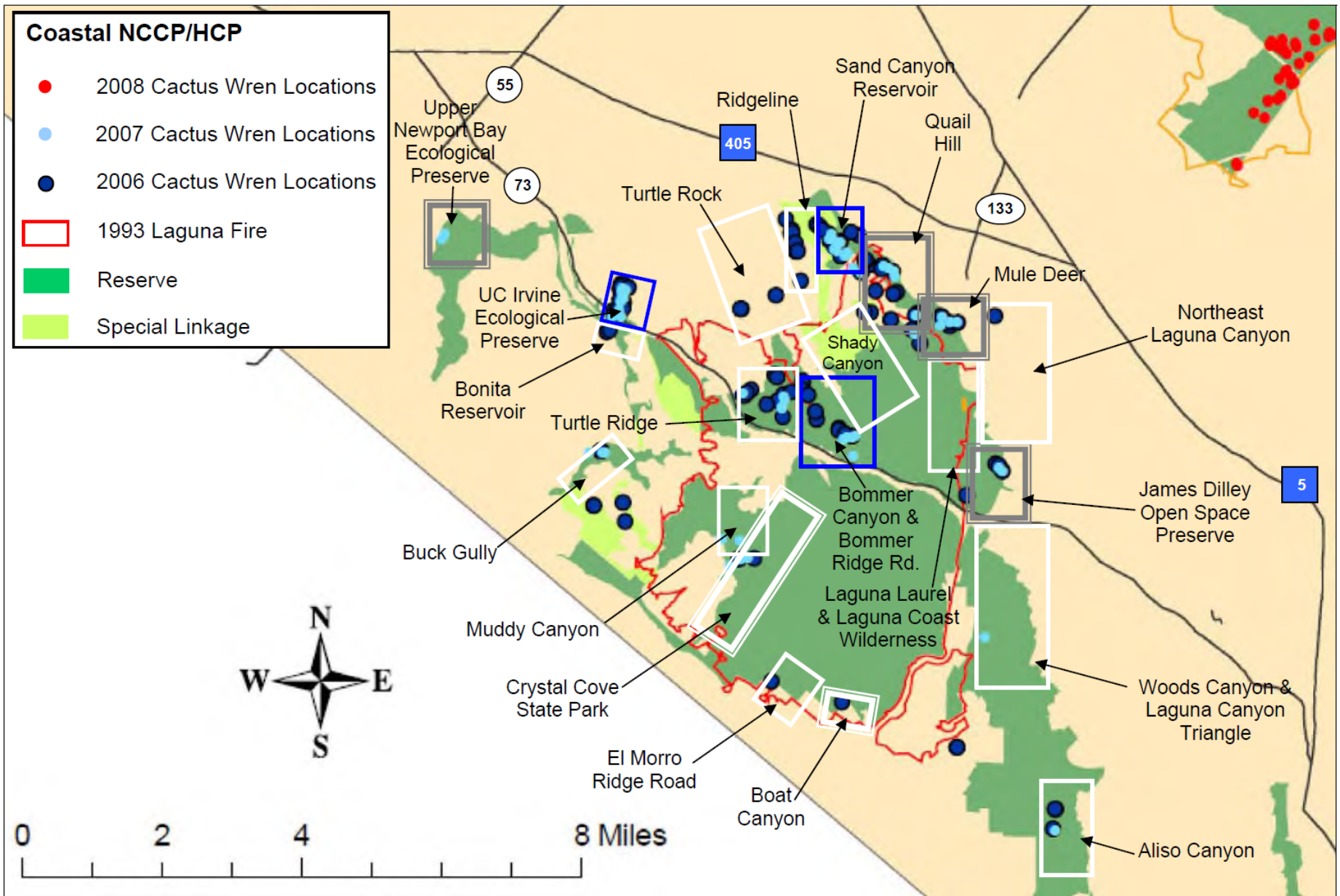
- South Coast Wilderness
- Approximately 17,000 acres
- Cactus Wren: isolated due to surrounding development
- 75% burned in Laguna Fire (estimate >80% loss of habitat, much has still to recover)
- Remaining suitable habitat is disjunct
- Greater than 80% estimated decline in Cactus Wren population

Science and Management Response

- Management:
 - Focus on connecting isolated populations (two linkage projects)
 - Adding suitable habitat (24+ acres)
- Science:
 - Monitoring survival, reproduction, and dispersal
 - Foraging behavior
 - Genetics
 - **Translocation**

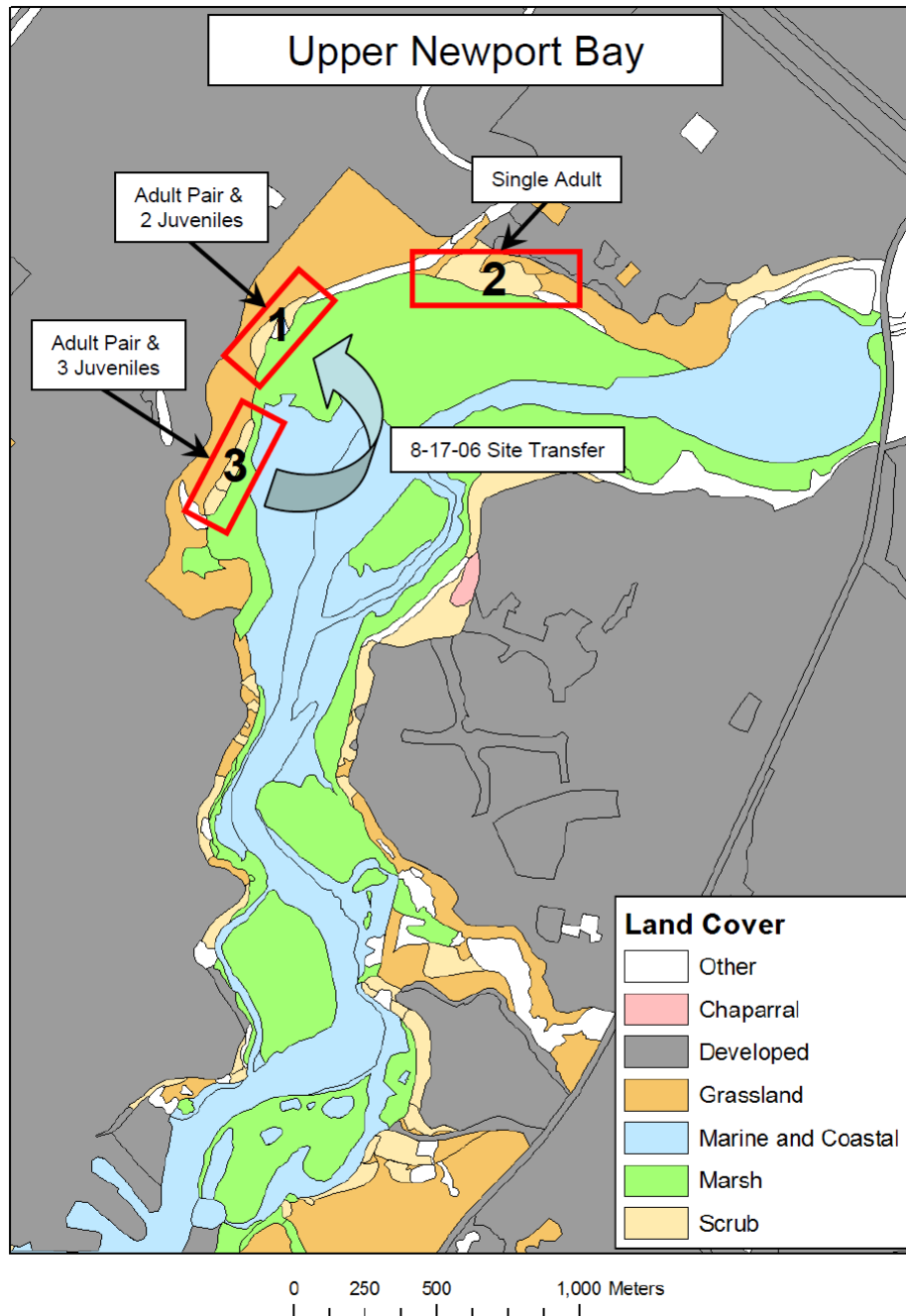
Coastal NCCP/HCP

- 2008 Cactus Wren Locations
- 2007 Cactus Wren Locations
- 2006 Cactus Wren Locations
- ▭ 1993 Laguna Fire
- Reserve
- Special Linkage



2006 Translocation

- Involved multiple family groups
- Narrow band of habitat at Upper Newport Bay
- Safely capture, process, and transport Cactus Wrens
- Cactus Wren are likely stay in place
- Small, isolated population can be productive for multiple generations



- Site occupied since 2006 (7+ Years)
- Highly productive
- No new birds have entered the population
- First successful dispersal out of the site detected in 2013



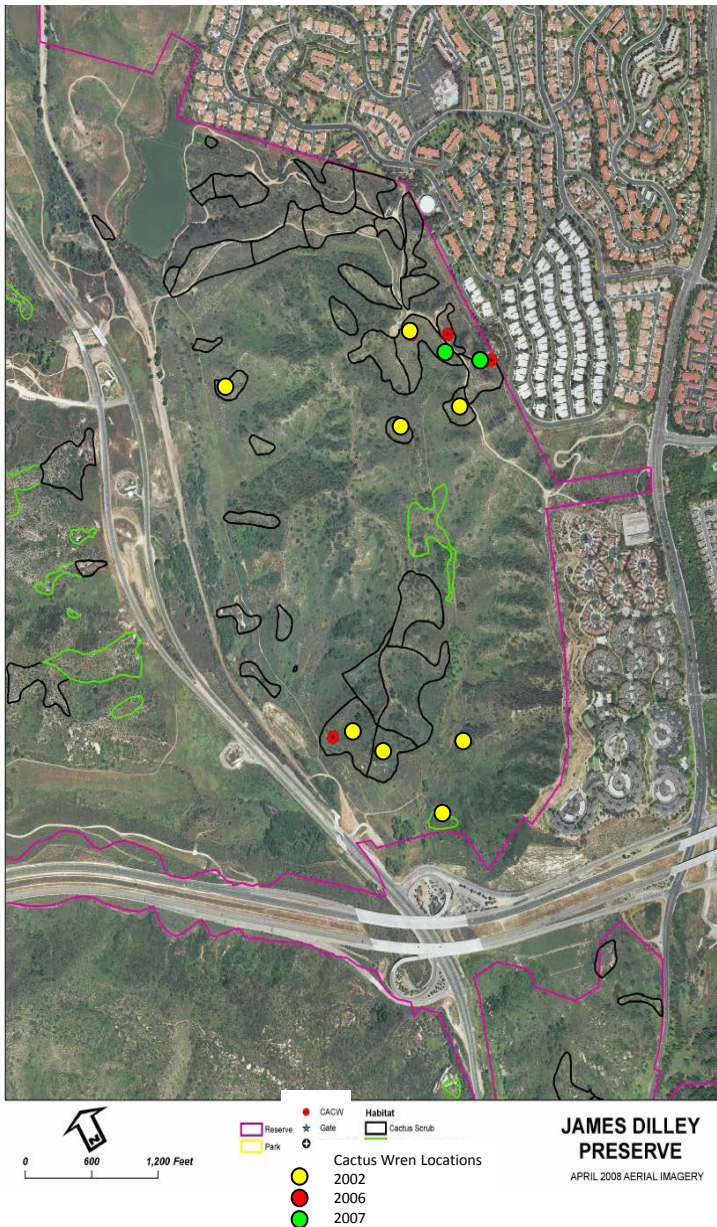
City of Lake Forest Sports Park



2011 Translocation

- Needed to occur in the fall (not involve the translocation of family groups)
- Need for supplemental food
- Lack of information on pairings or demography
- Concern about the transmission of disease

- James Dilley Preserve – Laguna Coast Wilderness Park
- Unburned in Laguna Fire
- Historically occupied (last Cactus Wren seen in 2007)
- Strategic location relative to other populations











TOMMY HILFIGER

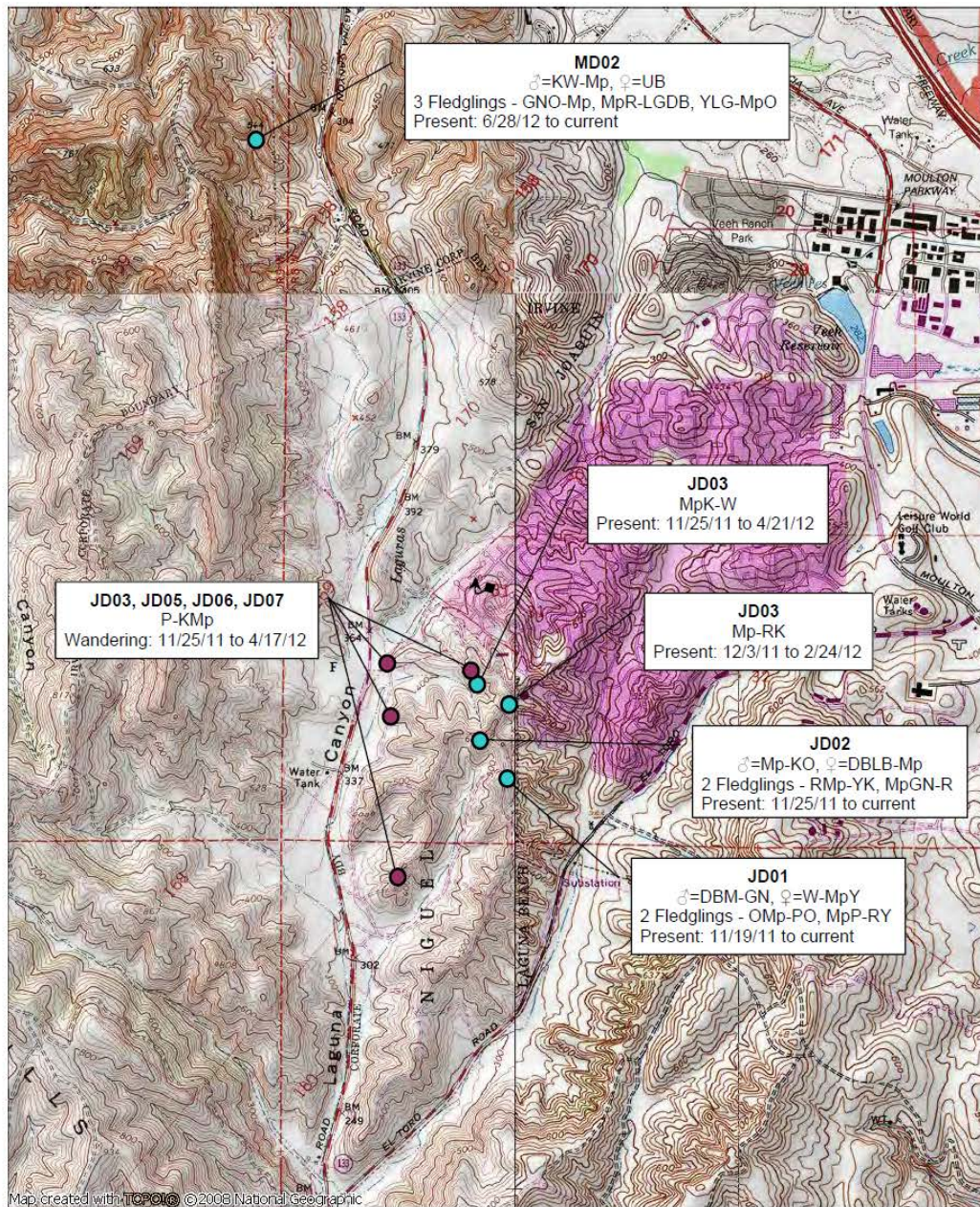


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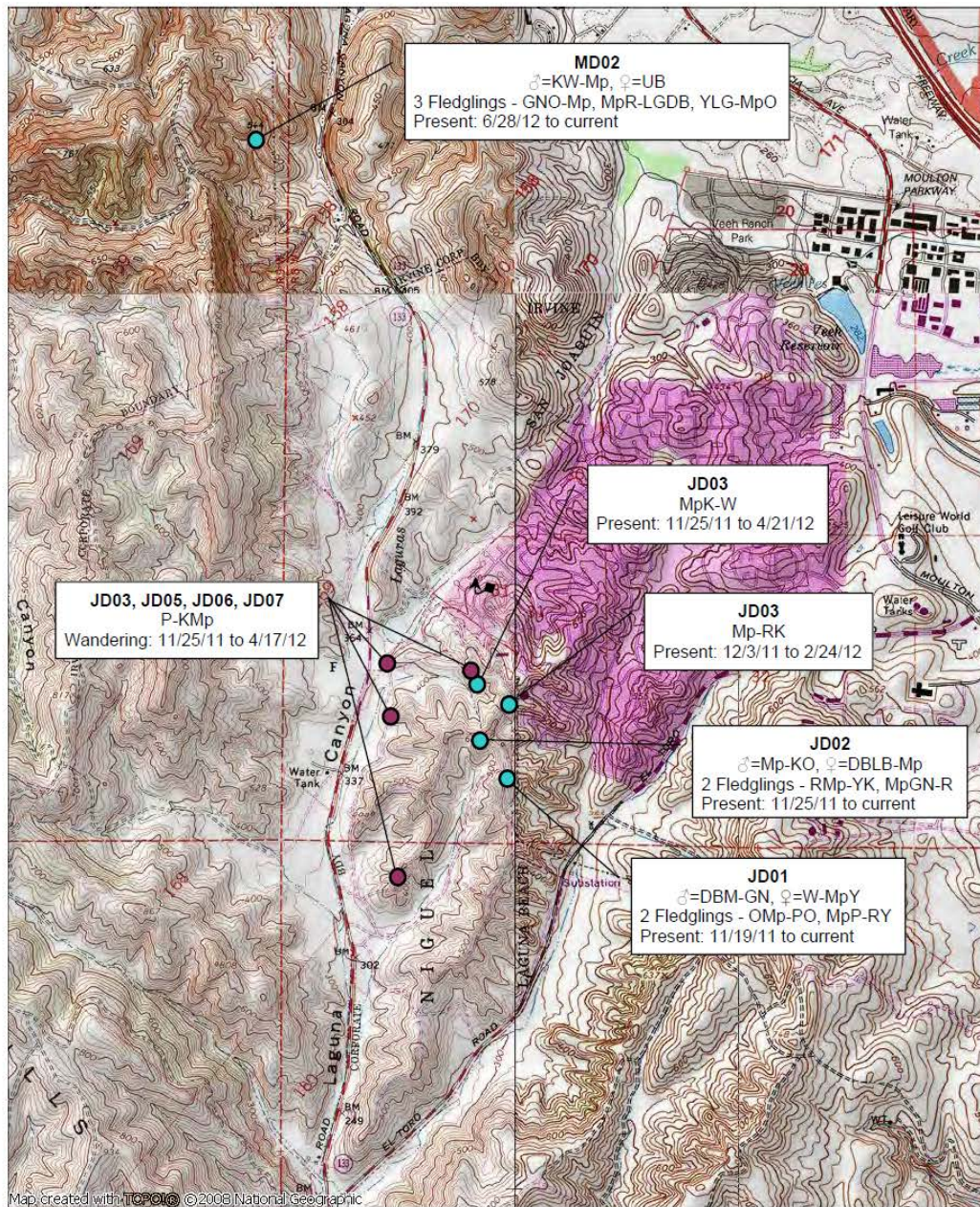








- Seven adult and two juvenile birds translocated in mid-November 2011
- Three territories established within weeks
- Two lone adults disappear within days
- JD01 and JD02 pairs produce four fledglings in 2012
- JD03 birds disappear by the middle of 2012 breeding season
- One of the two lone adults (KW-Mp) is resighted in June 2012 with an unbanded female and three fledglings (3 km NNW of release site)



- Follow-up surveys in 2013 confirm only the JD01 pair at James Dilley (two nest attempts but no fledglings)
- KW-Mp paired with unbanded female same location as 2012 (produced two fledglings); then paired with a second nearby female (produced three more fledglings)
- Daughter of KW-Mp resighted in 2013; nested with non-translocated wren 0.75 km west of natal territory (produced three fledglings)
- MpK-W was resighted in 2013 4.4 km NW from release location – paired with unbanded female (no brood nests observed)



- In 2013, descendant from 2006 translocation is resighted; ~10 km from UNB
- Female wren is paired with unbanded male (produce three fledglings)
- Female wren was banded in 2009 as a fledgling of two translocated wrens; last seen at UNB in 2010
- First documented dispersal event for UNB population

Conclusions

- **We can:**
 - Safely capture, transport, and release Cactus Wrens
 - Be assured translocated wrens will likely remain in the immediate vicinity of release site
 - Provide Cactus Wrens with supplemental food (and nesting) resources
 - Re-establish populations in previously occupied areas
- We were unable to encourage new recruitment

Is translocation a tool for management?

- **Yes**
- May be cost-prohibitive
- Real costs
 - Upfront monitoring
 - Translocation effort
 - Supplemental feeding
 - Post-release monitoring
 - Monitoring reproductive output
 - Surveying for dispersal events

How may translocation be used?

- Rescue small, isolated populations
- Re-establish populations in historically occupied habitat to enhance local connectivity
- Foster genetic mixing to reduce risk of inbreeding depression and enhance genetic diversity

Can we do more with translocation?

- **Maybe**
- Help small populations reach a critical mass
- Commit to multiple years of effort
- Key: selecting the right donor and receptor sites; appropriate timing
- **Questions remain**

Acknowledgements

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Available Reports

1. **Kamada, D. and M.J. Mitrovich. 2006.** *Results of the 2006 Cactus Wren (Campylorhynchus brunneicapillus) Translocation Study in Orange County, California.* Report prepared for the California Department of Fish and Game. December 2006. 15 pp. + Appendices
2. **Kamada, D. 2008.** *Final Report: Cactus Wren (Campylorhynchus brunneicapillus) 2007 Telemetry Study and the 2007 Monitoring Results of the 2006 Cactus Wren Translocation Study in Orange County, California.* Report prepared for the California Department of Fish and Game and the Nature Reserve of Orange County. February 2008. 23 pp. + Appendices
3. **Preston, K.L. 2012.** *Nature Reserve of Orange County: Translocation of San Diego Cactus Wren, a State Species of Special Concern.* Annual Report Prepared for the California Department of Fish and Game. February 2012. 21 pp. + Appendices
4. **Mitrovich, M.J., K.L. Preston, and D. Kamada. 2013.** *Nature Reserve of Orange County: Translocation of San Diego Cactus Wren, a State Species of Special Concern.* Second Annual Report Prepared in Fulfillment of Reporting Requirements for the Memorandum of Understanding between the Nature Reserve of Orange County and California Department of Fish and Game. January 2013. 25 pp + Appendices.
5. **Kamada, D., M. Mitrovich, and K. Preston. 2014.** *Nature Reserve of Orange County: Coastal Cactus Wren Survey and Monitoring for Post-Translocation and Arthropod Foraging Studies in 2013.* Annual Report Prepared in Fulfillment of Reporting Requirements for the Memorandum of Understanding (MOU) between Dana Kamada and the California Department of Fish and Wildlife (CDFW) and 3rd Annual Report Prepared in Fulfillment of Reporting Requirement for the MOU between the Nature Reserve of Orange County (NROC) and CDFW. February 2014. 35 pp + Appendices.