



## Petition Evaluation Flat-tailed Horned Lizard



Photo credit: Eric Hollenbeck

**Fish and Game Commission Meeting**  
Laura Patterson, Senior Environmental Scientist  
February 12, 2015

## Presentation Overview

- Listing History
- Petition Evaluation
- Department Recommendation
  - Advance to candidacy



Photo credit: E

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## Listing History

- CDFG (1988-1989)
  - Department recommended Threatened status
  - Commission voted not to list under CESA
- USFWS (1993-2011)
  - Multiple proposed listing rules, lawsuits, and withdrawals
  - Interagency Conservation Agreement
    - Rangewide Management Strategy (RMS)
- CDFW (2014)
  - June 10, 2014 – Center for Biological Diversity

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## Petition Evaluation

### Acknowledgments

Eric Hollenbeck (R5) and Jack Crayon (R6)

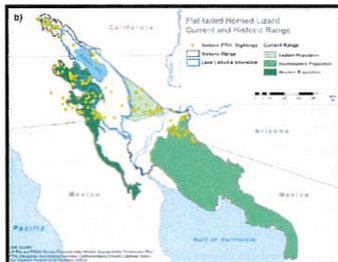


Photo credit: Gary Nafis

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## Range

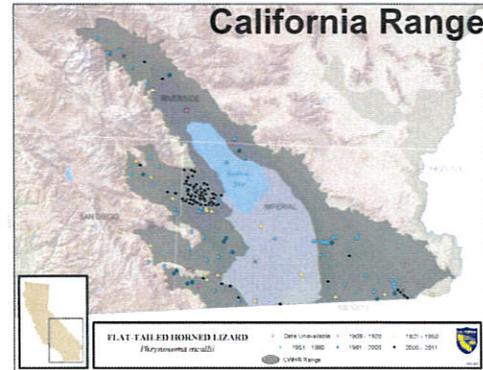
- Smallest U.S. horned lizard range
- MX (70.4%), CA (25.3%), AZ (4.3%)



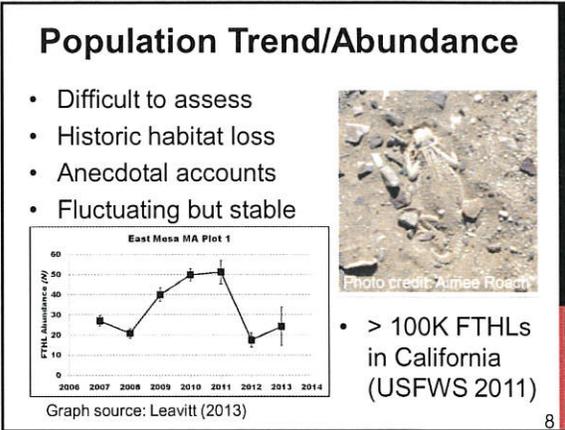
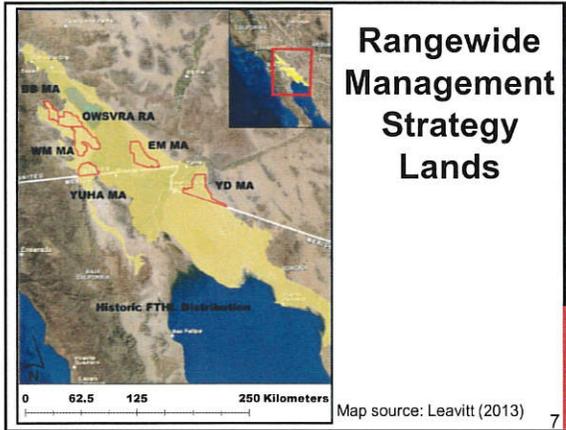
Map source: Center for Biological Diversity

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## California Range



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- ### Distribution
- Imperial Valley habitat loss (~50%)
    - Salton Sea flooding
    - Agriculture and urban development
  - Coachella Valley habitat loss (83-92%)
    - Two populations left
  - Occupancy of Management Areas (MA) and Research Area is relatively high

- ### Life History
- Dietary specialist
  - Long activity period
  - Low productivity
  - Predator avoidance strategy
  - Boom and bust population dynamics
    - Rely on wet years to rebound
  - Short-lived
- 
- Photo credit: Jonathan Hakim

- ### Necessary Habitat
- High quality habitat
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- Photo credit: Gary Nafis
- Low relief
  - Sandy soils
  - Windblown sand
  - Creosote-bursage

- ### Necessary Habitat
- High quality habitat
- 
- Photo credit: Gary Nafis
- Other habitat associations
- 
- Photo credit: Bruce Edley
- Mudhills
  - Gravel flats
  - Barren clay
  - Stabilized dunes
  - Vegetated edges of active dunes

## Threat Factors

- Development
- On- and off-road vehicles
- Fragmentation, barriers, edge effects
- Military training and border activities
- Non-native plants
- Climate change



Photo credit: Katy McClelland

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## Threat Degree and Immediacy

- Increase in renewable energy development
- Off-road vehicle (ORV) habitat degradation
- Predation along edges and infrastructure
- Barriers to movement
- Sahara mustard proliferation
- Climate change uncertain



Photo credit: USFWS

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## Existing Management

- Rangewide Management Strategy
- CA Desert Conservation Act
- HCP/NCCP
  - Coachella Valley MSHCP
  - Desert Renewable Energy Conservation Plan
- Bureau of Land Management "Sensitive"
- California "Species of Special Concern"



Photo credit: Gary

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## Future Management

- ID and utilize better survey methods
- Further limit ORV use within the MAs
- Improve enforcement
- Expand/create MAs
- Restore habitat
- Site energy projects carefully
- Bury transmission lines
- Improve relocation success



Photo credit: Marissa Maki

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## Department Recommendation

- Based on its review of the Petition and relevant available information, the Department finds the petitioned action may be warranted and recommends that the Commission accept the Petition for further consideration.



Photo credit: Gary Norris

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## Thank You / Questions



Photo credit: Eric Hollenbeck

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