Desert Tortoise Recovery Office Update

27 August 2009

DMG meeting

Outline

- Revised recovery plan
- SDSS development
- Research projects
- Range-wide monitoring program
- SAC disease workgroup

Revised Recovery Plan

- 44 unique letters + >6000 form letters
- 4 peer reviews

- ~250 individual comments (combined)

Recovery Plan – Major Changes

- Population Trends and Distribution rewritten
- Recovery Unit section rewritten
- Table added: side-by-side comparison of recovery actions between 1994 plan and revised plan
- Decision support system appendix rewritten to simplify and generalize
- Comment appendix

Recovery Plan Next Steps

- ✓ Revised plan submitted to regional office.
- Publish final plan
- MOG meeting – establish RITs
- Organize RITs/schedule initial meetings
- Develop 5-year Recovery Action Plans
  - West Mojave – focus on SDSS

SDSS Development

- Redlands Institute and InfoHarvest
- Data layers
- Spatially-explicit threat models
- Conceptual models

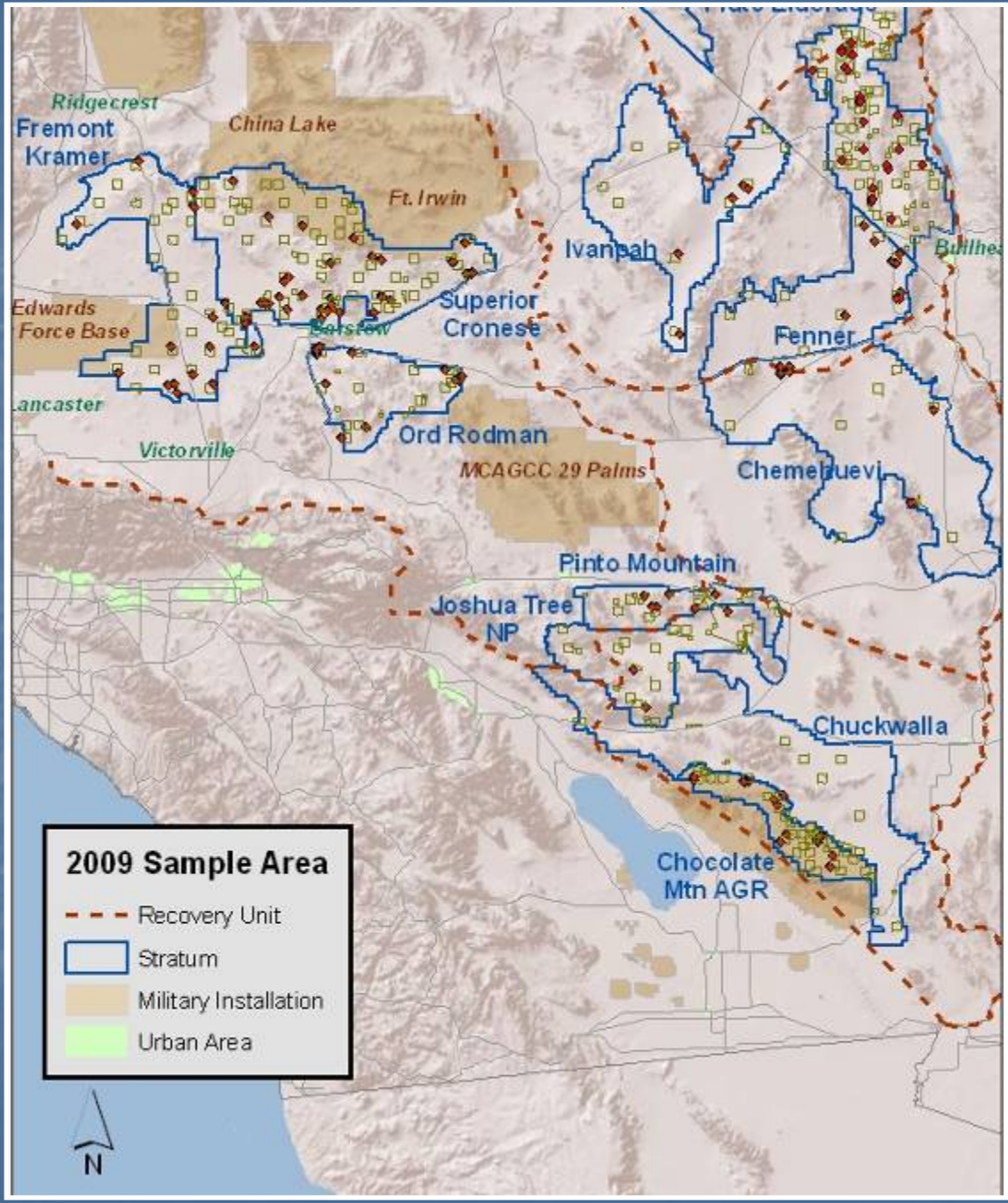
- 18 August: managers technical team meeting

Research Projects

- Juvenile tortoise survivorship (FISS)
  - SWCA
- Coyote foraging dynamics
  - California State-Stanislaus
- Spatially explicit PVA
  - University of Arizona/SAC

Monitoring: 2009 Transect Allocation

Recovery Unit	Stratum	Planned	Completed
Western Mojave	Fremont-Kramer	30	30
	Joshua Tree	25	26
	Ord-Rodman	20	21
	Pinto Mtns	17	18
	Superior-Cronese	70	70
Northern Colorado	Chemehuevi	10	11
Eastern Mojave	Fenner	10	10
	Ivanpah	10	10
Eastern Colorado	Chuckwalla (BLM)	12	12
	Chocolate Mtn AGR	33	33
Total		**237**	**241**



2009 transects and tortoises

Monitoring Reports

- 2007 report posted early next week
- 2008 will be posted in draft form this fall
- 2009 report will be posted in draft form late this calendar year

SAC Disease Workgroup

- High-priority disease research projects to refine management recommendations for natural populations and translocation applications

Disease Workgroup Members

- Peter Hudson (chair/SAC), Penn State
  - Center for Infectious Disease Dynamics
- Bruce Rideout, SDZ Institute for Conservation Research
  - Director, Wildlife Disease Laboratories
- Nadine Zamberski, SDZ Institute for Conservation Research
  - DVM - DTCC
- Ron Swaisgood, SDZ Institute for Conservation Research
  - Director, Applied Animal Ecology Program
- Jerry Simecka, Univ. North Texas Health Science Center
  - Chair, Department of Molecular Biology and Immunology
- Richard Tracy, University of Nevada-Reno
  - Professor, ecology, evol./organismal biology, conservation biology

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Western blot can distinguish natural and acquired antibodies to *Mycoplasma agassizii* in the desert tortoise (*Gopherus agassizii*)

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1. Introduction

The mollicute *Mycoplasma agassizii* has be
upper respiratory tract disease (URTD) in d
agassizii)(Jacobson et al., 1991; Brown et al., 19
certain areas of its Mojave desert habitat the d
significant population declines for at least tw
demiological studies have implicated *M. agassi*
al., 1991; Brown et al., 1994; Jacobson et al.,
1997; Lederle et al., 1997; Brown et al., 1999;
Christopher et al., 2003; Dickinson et al., 2005
microbiological diagnostic methods are diffi
desert tortoises (Wendland et al., 2007c), so a
infection has relied almost solely on an ELISA t

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Review

Upper respiratory tract disease (URTD) as a threat to desert tortoise populations: A reevaluation

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ABSTRACT

The relationships between *Mycoplasma agassizii*, a causative agent of upper respiratory disease (URTD), and desert tortoise (*Gopherus agassizii*), generally illustrate the complexities of disease dynamics in wild vertebrate populations. In this review, we summarize current understanding of URTD in Mojave desert tortoise populations, we illustrate how inadequate knowledge of tortoise immune systems may obfuscate assessment of disease, and we suggest approaches to future management of URTD in desert tortoise populations. We challenge the view that *M. agassizii* causes consistent levels of morbidity and/or mortality