

MOG Meeting

*Captive Desert Tortoise Survey,
Greater Las Vegas Area 2018*

Kobbe Shaw, Tortoise Group



Las Vegas, NV February 2019

Thank You!!

Steve Miller, UNLV CBER

Sarah Mortimer, Tortoise Group

Amanda Tolson, Tortoise Group

Roy Averill-Murray, USFWS DTRC

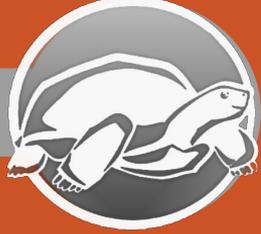
Todd Esque, USGS

Scott Cambrin, Clark County MSHCF



Las Vegas, NV February 2019

Michelson and Morley, Mistake of the Century



Two physicists attempting to prove speed of light was affected by “aether”.

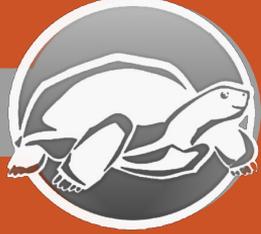
All subsequent tests revealed that speed of light was unaffected by “aether” or anything else, Michelson and Morley concluded their test was a failure.

“If this experiment had not brought us into serious embarrassment, no one would have regarded the Relativity Theory as a redemption. – A. Einstein

Part of the scientific process includes the question: “What did we learn from this mistake?”

“There are no mistakes, just happy accidents.” – Bob Ross

Issues With Too Many Pet Tortoises



People tend to dump unwanted tortoises into “uninhabited” desert areas.

Without proper information and without proper resources, tortoise custodians will do what they think is best for an unwanted tortoise.

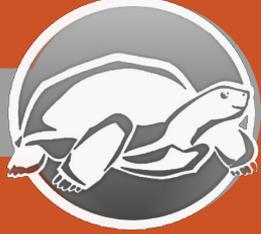
URTD has been associated with many of the populations that have been observed to decline (Jacobson, et al, 1991).

Pet tortoises are being released into the wild on a regular basis

In Clark County, Tortoise Group only “handles” 15% of custodian requests

Keep Wild Tortoises Wild, Keep Captives Captive

What is a Threat?



Total Number of Pets in Captivity

If we don't want pet tortoises in the wild, the number of pet tortoises in captivity should be considered when assessing threat level.

How Are Wild Tortoises Faring in Areas Surrounding Human Population Centers?

Is there a negative correlation to wild populations?

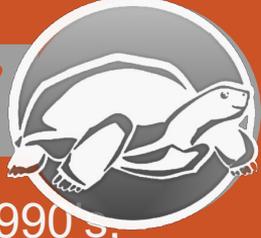
How Prevalent is Disease in Pet Population?

A high disease rate in pet tortoises indicates a definitive threat to wild populations.

Are Pet Tortoises Actually *Gopherus Agassizzi*?

Does it make sense to release species other than desert tortoises into Mojave?

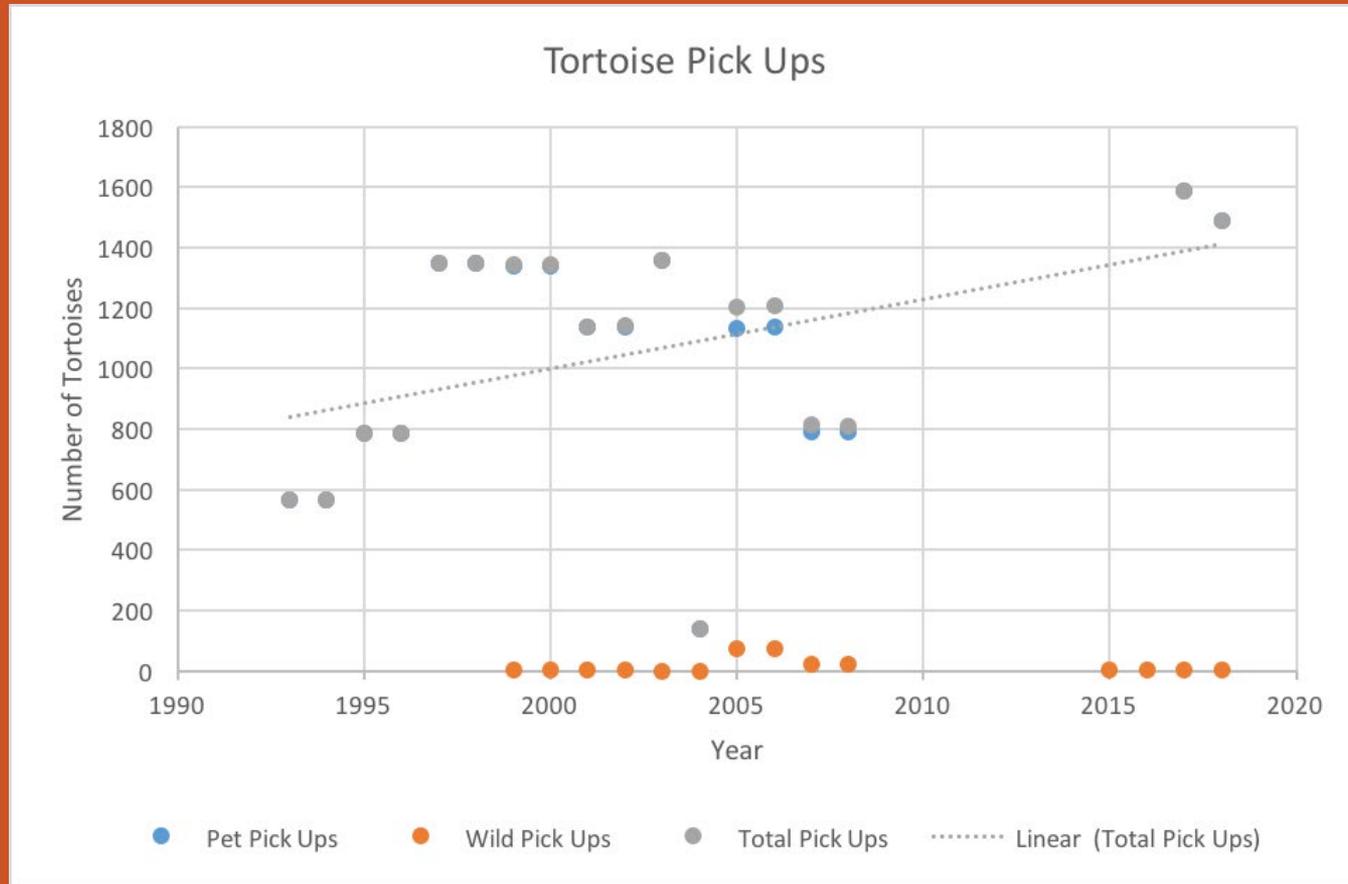
Pet Overpopulation in Clark County, NV



1. Desert Tortoise Conservation Center (DTCC) began taking pets in 1990's, pet population quickly dwarfed original intent of DTCC
2. Clark County, Smithsonian, San Diego Zoo managed the DTCC as a research facility
3. DTCC closes in 2014
4. Pet tortoise population continues to increase yearly

“Keep wild tortoises wild, keep captive tortoises captive.”

Tortoise Pickups, Clark County 1993-2018



Pet Tortoise Survey, Las Vegas



1. Tortoise Group, UNLV's Center For Business and Economic Research
2. March 2018-November 2018
3. 38,000 direct mail, anonymous survey questionnaire
4. 2,148 adjusted responses (5.6% response rate)
5. Statistical methodology, non-response bias and post-stratification
6. Dog/Cat population used as benchmark

“Keep wild tortoises wild, keep captive tortoises captive.”

Pet Tortoise Population Estimates



	<i>Survey Mean</i>		<i>Survey Total</i>	
	<i>Mean</i>	<i>St. Dev.</i>	<i>Total</i>	<i>St. Dev.</i>
Tortoise	0.22	0.04	137,173	23,486
Cats	0.40	0.02	250,897	12,444
Dogs	0.81	0.02	507,950	13,839

Table 1: Results of pet population using WS1

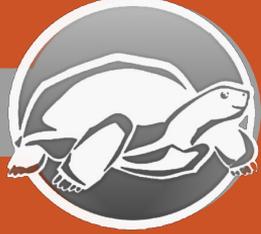
	<i>Survey Mean</i>		<i>Survey Total</i>	
	<i>Mean</i>	<i>St. Dev.</i>	<i>Total</i>	<i>St. Dev.</i>
Tortoise	0.21	0.03	137,332	22,424
Cats	0.42	0.02	270,474	15,907
Dogs	0.80	0.03	519,905	16,700

Table 2: Results for pet population using WS2

	<i>Survey Mean</i>		<i>Survey Total</i>	
	<i>Mean</i>	<i>St. Dev.</i>	<i>Total</i>	<i>St. Dev.</i>
Tortoise	0.24	0.07	153,784	44,756
Cats	0.41	0.02	264,385	14,194
Dogs	0.78	0.03	498,075	16,822

Table 3: Results for pet population using WS3

Why Not Release Pets into the Wild?



URTD and extant health issues (bladder stones) are highly prevalent in the captive population.

Backyard breeding of pets often result in cross-breeding of species (Sonoran & Mojave, etc).

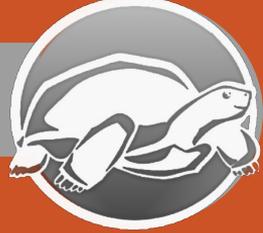
Inserting new tortoises into any area of the Mojave could potentially disrupt the ecosystem given the limited amount of available resources for wildlife.

Not a Good Idea!

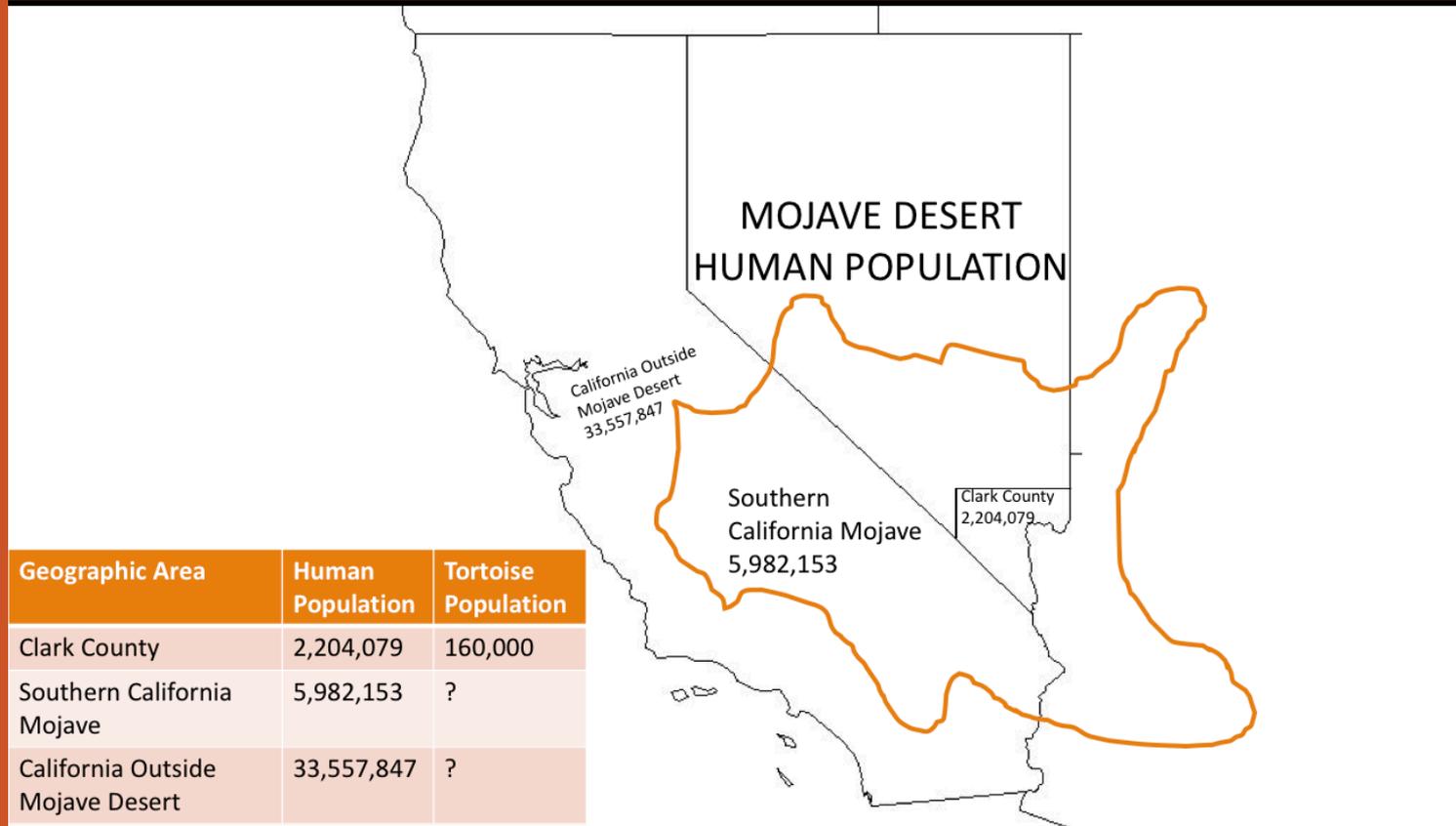
Foreign pathogens from other species can be introduced

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Health of Tortoises, Ticks, URTD



Mojave Desert Human Populations



Captive Tortoise Management



There are MANY pet tortoises in backyards in Las Vegas.

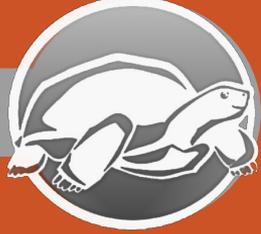
We can learn from the mistakes of the DTCC.

There are even more in California.

Without education and resources, citizens tend to dump unwanted tortoises into the wild.

Keep Wild Tortoises Wild, Keep Captives Captive

Captive Tortoise Management



At what point does the pet tortoise population in the Mojave pose a direct threat to wild tortoises?

RIT Priorities list symptoms of pet overpopulation but does not address pet tortoise overpopulation directly

Captive Tortoise Management needs further research, scholarly discussion, and some type of range-wide strategy.

Keep Wild Tortoises Wild, Keep Captives Captive

True Story!

