

THE NATURE CONSERVANCY'S PROGRAM TO ERADICATE 24 NON-NATIVE INVASIVE PLANT SPECIES FROM SANTA CRUZ ISLAND



John Knapp and Coleen Cory
The Nature Conservancy

California Invasive Plant Council Symposium, Lake Arrowhead California, October 2013

Southern California Bight and Channel Islands



Pt. Conception

Santa Barbara

Ventura

Pt. Mugu

Pt. Dume

Santa Monica Bay

LAX

Los Angeles

Palos Verdes Peninsula

Long Beach

Newport Beach

Dana Point

San Diego

Channel Islands

San Miguel

Santa Rosa

Santa Cruz

Anacapa

Santa Barbara

San Nicolas

Santa Catalina

San Clemente

White Pt.

San Pedro Bay

50 miles



SCiCo.



SCiCo.



SCiCo.



unknown



J. Knapp



USGS

Eradicating plants is considered to be more difficult than eradicating animals



24 Species Targeted for Eradication

PRESENT- TNC ONLY

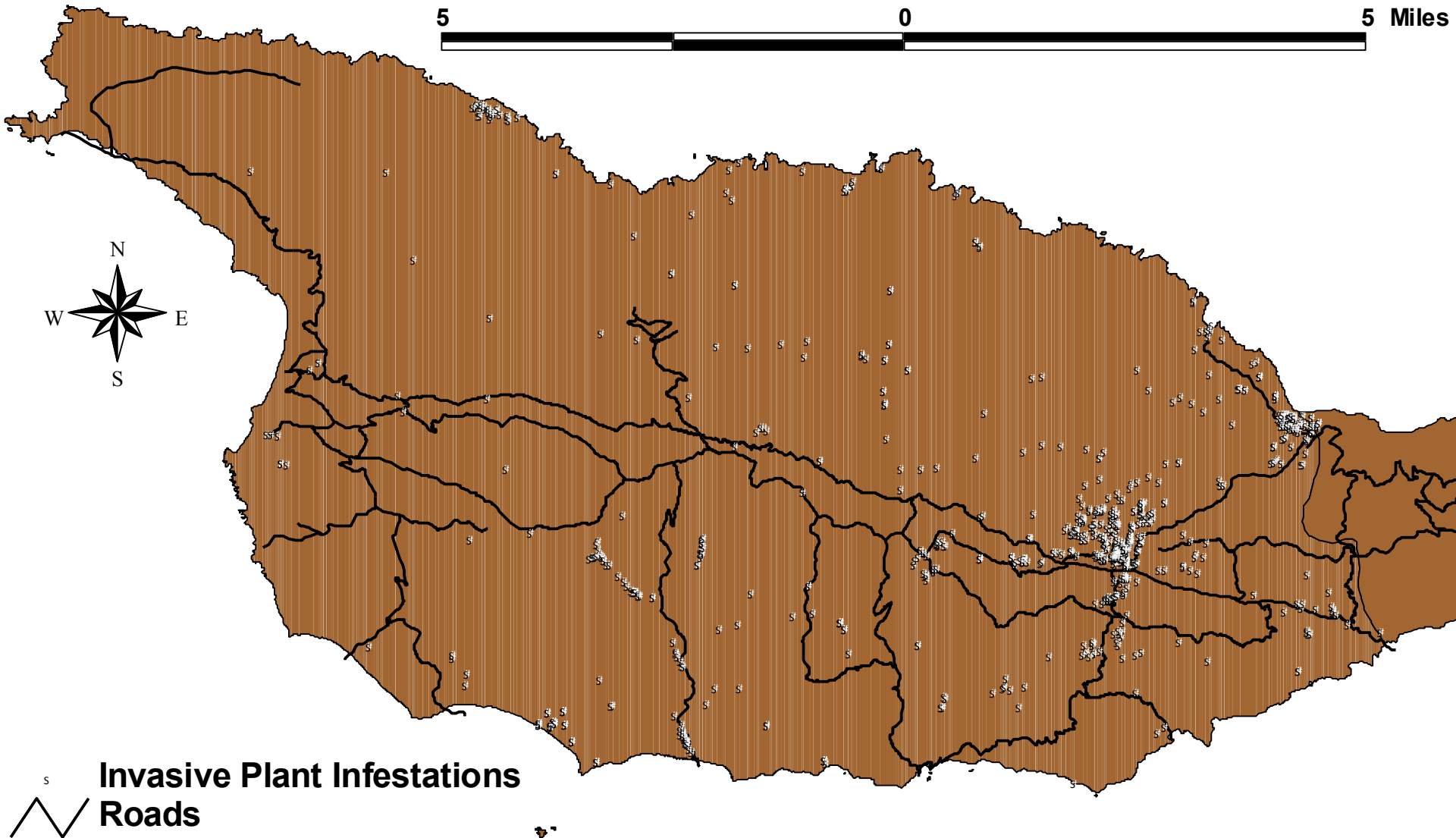
Acacia dealbata
Carduus pycnocephalus
Centranthus ruber
Ehrharta erecta
Eriogonum giganteum
Genista melanoxylon
Helichrysum petiolare
*Lavatera assurgentifolia**
Oenothera xenogaura
Opuntia ficus-indica
Rubus armeniacus
Solanum elaeagnifolium

PRESENT- ISLAND-WIDE

Acacia melanoxylon
Albizia lophantha
Cortaderia selloana
*Ficus carica**
Hedera canariensis
Olea europea
*Pelargonium xhortorum**
Phalaris aquatica
*Pinus pinea**
*Schinus molle**
Tamarix ramosissima
*Washingtonia robusta**

*Knapp et. al. 2008. Santa Cruz Island Weed Map.
Proceedings of the 7th California Island Symposium.*

884 Infestations of 24 Invasive Plant Species



Scientific Name	Total Pops	Dead Pops	Active Pops	'Original'Pops	Emergent Pops	New Pops
<i>Acacia decurrens</i>	1	1	0	0	0	0
<i>Acacia melanoxylon</i>	86	51	35	0	25	10
<i>Albizia lophantha</i>	22	7	15	0	3	12
<i>Carduus pycnocephalus</i>	2	0	2	0	2	0
<i>Cortaderia selloana</i>	121	84	37	0	33	4
<i>Ehrharta erecta</i>	2	0	2	0	2	0
<i>Eriogonum giganteum</i>	36	28	8	2	5	1
<i>Genista melanoxylon</i>	67	15	52	4	48	0
<i>Lavatera assurgentifolia</i>	4	3	1	0	1	0
<i>Olea europea</i>	10	9	1	0	0	1
<i>Opunita ficus-indica</i>	4	4	0	0	0	0
<i>Pinus pinea</i>	143	75	68	1	12	55
<i>Rubus discolor</i>	19	12	7	3	4	0
<i>Schinus molle</i>	243	217	26	3	14	9
<i>Washingtonia robusta</i>	1	1	0	0	0	0
Sub-total (n = 15)	761	507	254	13	149	92
<i>Centranthus ruber</i>	5	4	1	1	0	0
<i>Ficus carica</i>	7	6	1	0	1	0
<i>Hedera canariensis</i>	16	8	7	3	3	1
<i>Helichrysum petiolare</i>	13	0	13	13	0	0
<i>Oenothera xenogaura</i>	2	0	2	2	0	0
<i>Pelargonium hortorum</i>	5	2	3	2	1	0
<i>Phalaris aquatica</i>	26	0	26	24	0	2
<i>Solanum elaeagnifolium</i>	3	1	2	0	2	0
<i>Tamarix ramosissima</i>	45	42	3	0	0	3
Sub-total (n = 9)	123	63	59	46	7	6
Total (n = 24)	884	570	314	59	157	98

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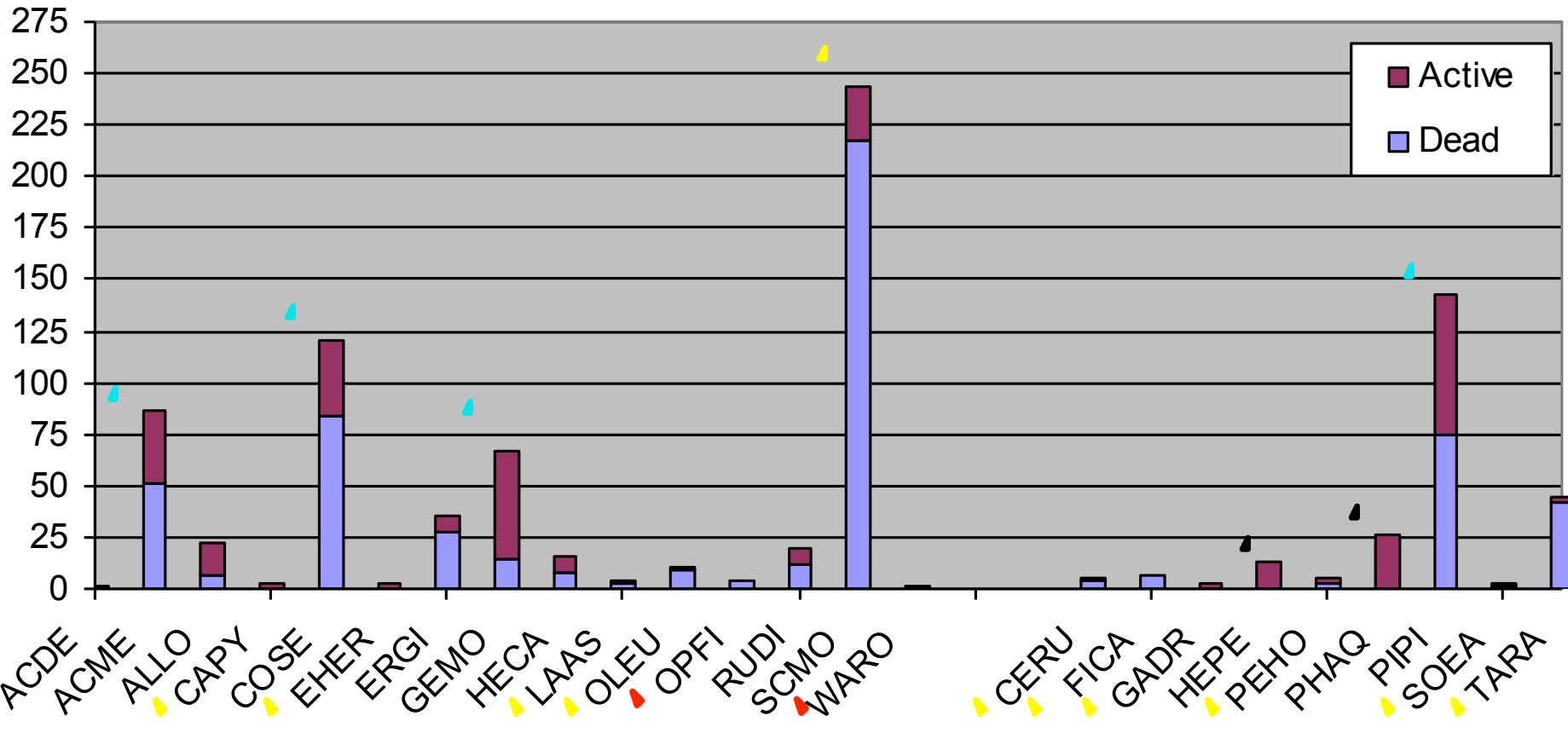
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Infestation status by species



What's working?

People

Morgachino

The Columbian

Mazurkiewicz

Fox



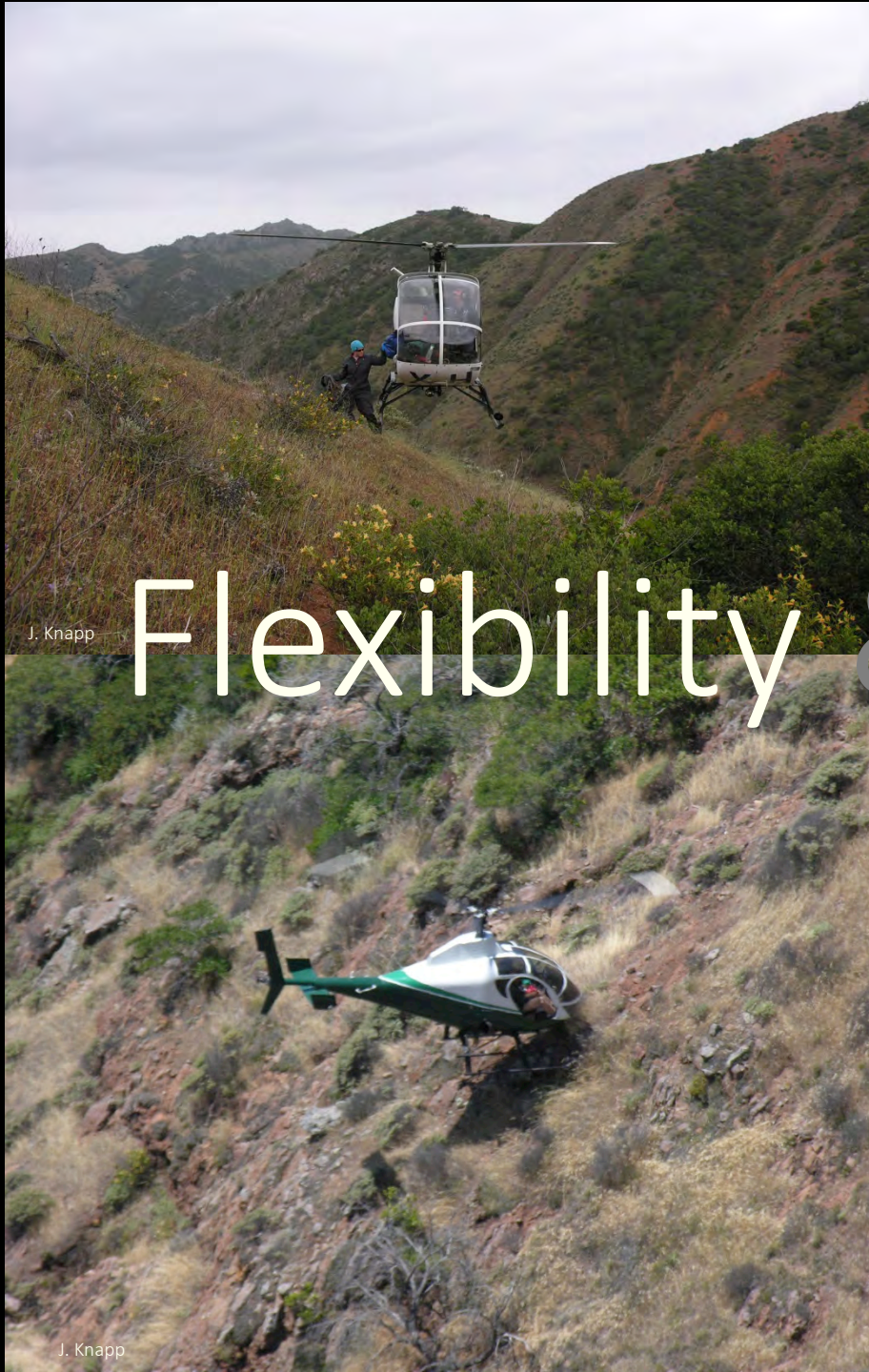
Flexibility & Speed

J. Knapp

M. Ball

J. Knapp

J. Knapp



Creativity

\$10,000 saved

What else?

- ✓ Consistent treatment and monitoring
- ✓ Tracking infestations, not biomass
- ✓ Neighbor with similar goals - NPS
- ✓ Joint biosecurity measures



J. Knapp



Native Range, Inc.



Eradication Challenges

- ✓ Soil seedbank
- ✓ Island recovery
- ✓ Detection
- ✓ *Potential fires*
- ✓ *Consistent and long-term funding*
- ✓ *Naysayers*

Question(s)?



Acknowledgements

- ✓ **Program Funders:**

Bernice Horst, California Dept. of Conservation, California Dept. of Food & Agriculture, California Wildlife Conservation Board, Jiji Foundation, Los Angeles Conservation Corps, & National Fish and Wildlife Foundation

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- ✓ **Native Range, Inc. staff (past and present):**

Morgan Ball, Diane Chakos, Lauren Danner, Jessica Dooley, Torrey Edel, Colin Fisher, Heather Fox, Dean Graham, Darcee Guttilla, Ken Hutchins, Dan Knapp, Brent Lithgow, Norm Macdonald, Claudia Mackeyev, David Mazurkicz, Sean McKnight, Williee Midgely, William Ordonez, David Pahlk, Eli Polzer, David Rivers, Jude Scott, Robin Shea, Cendrick Villasenor, Kelvin Walker, & Will Wright



Robyn Shea

: "The Secret Weapon"