

What does ecosystem recovery look like after 130 years of invasive species? The Story of Santa Cruz Island

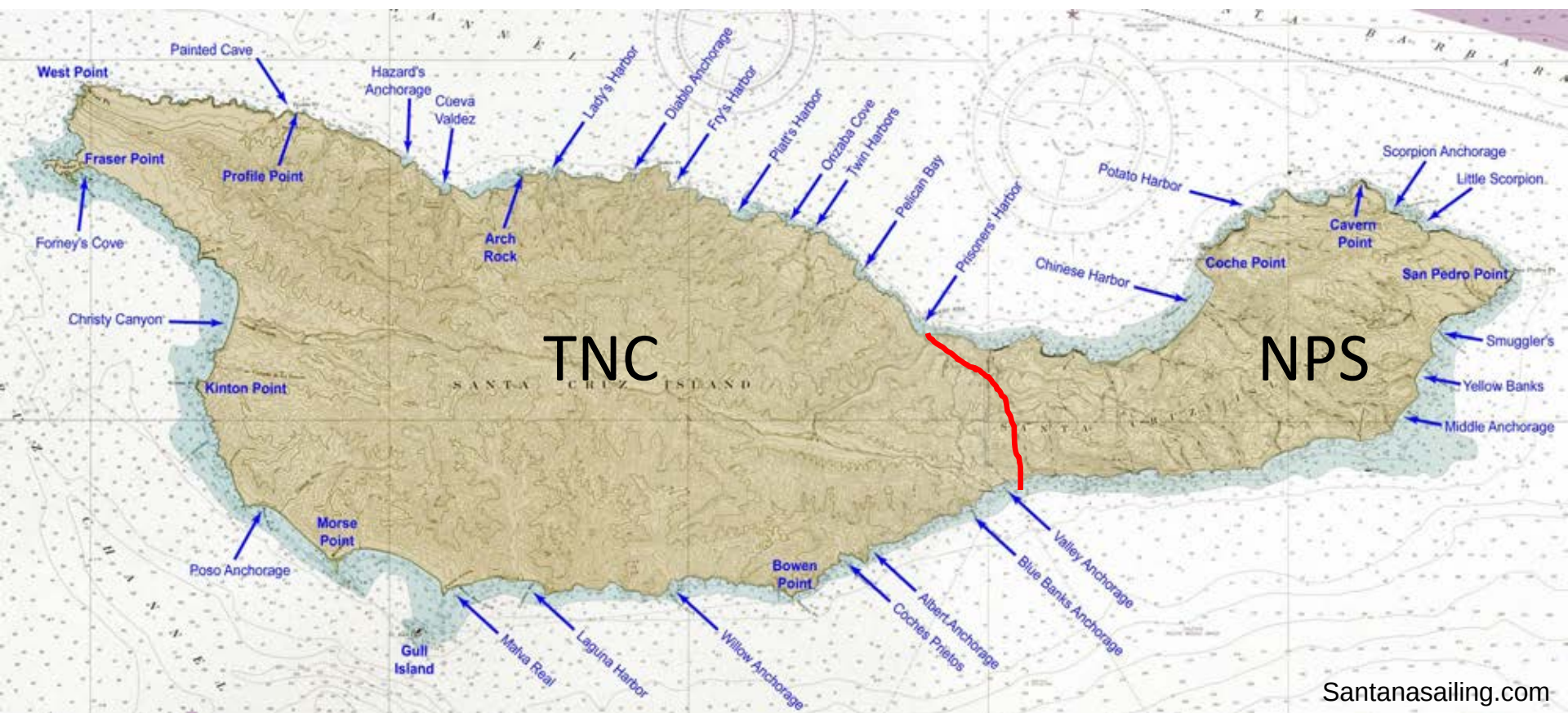


CATALINA ISLAND
CONSERVANCY

John Knapp

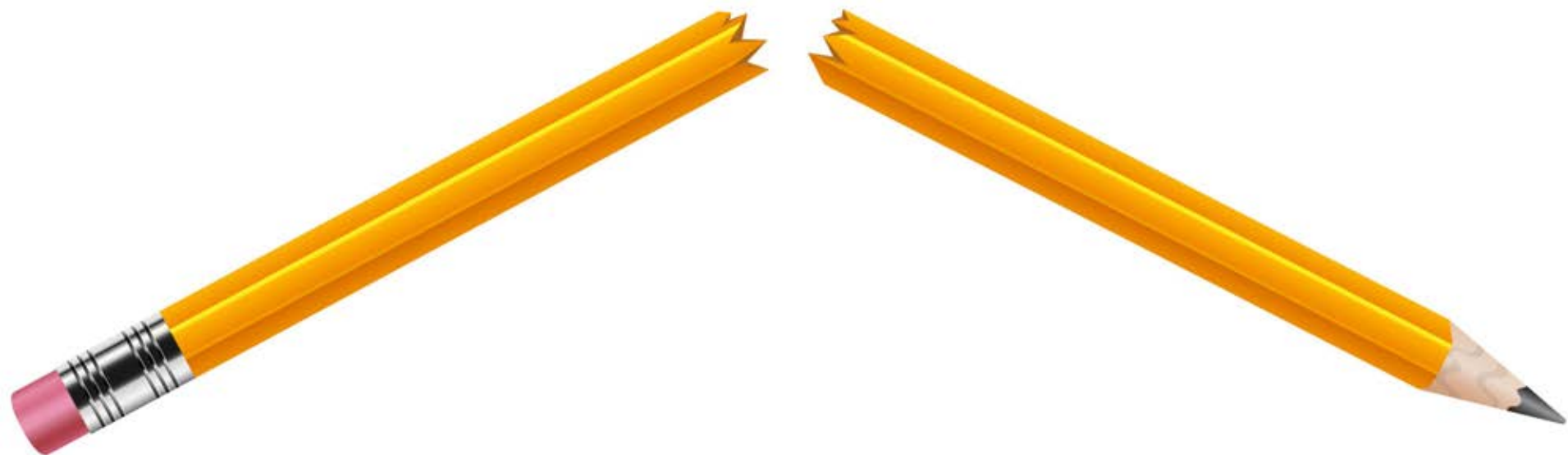
Senior Conservation Scientist





1978





Recovery?



Why are islands special?



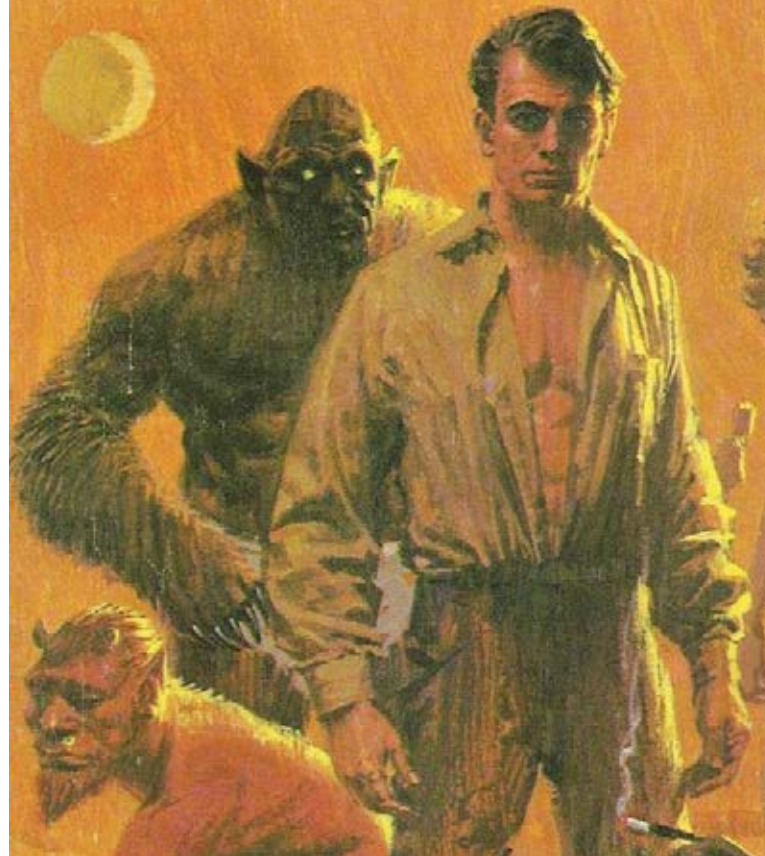
California Islands

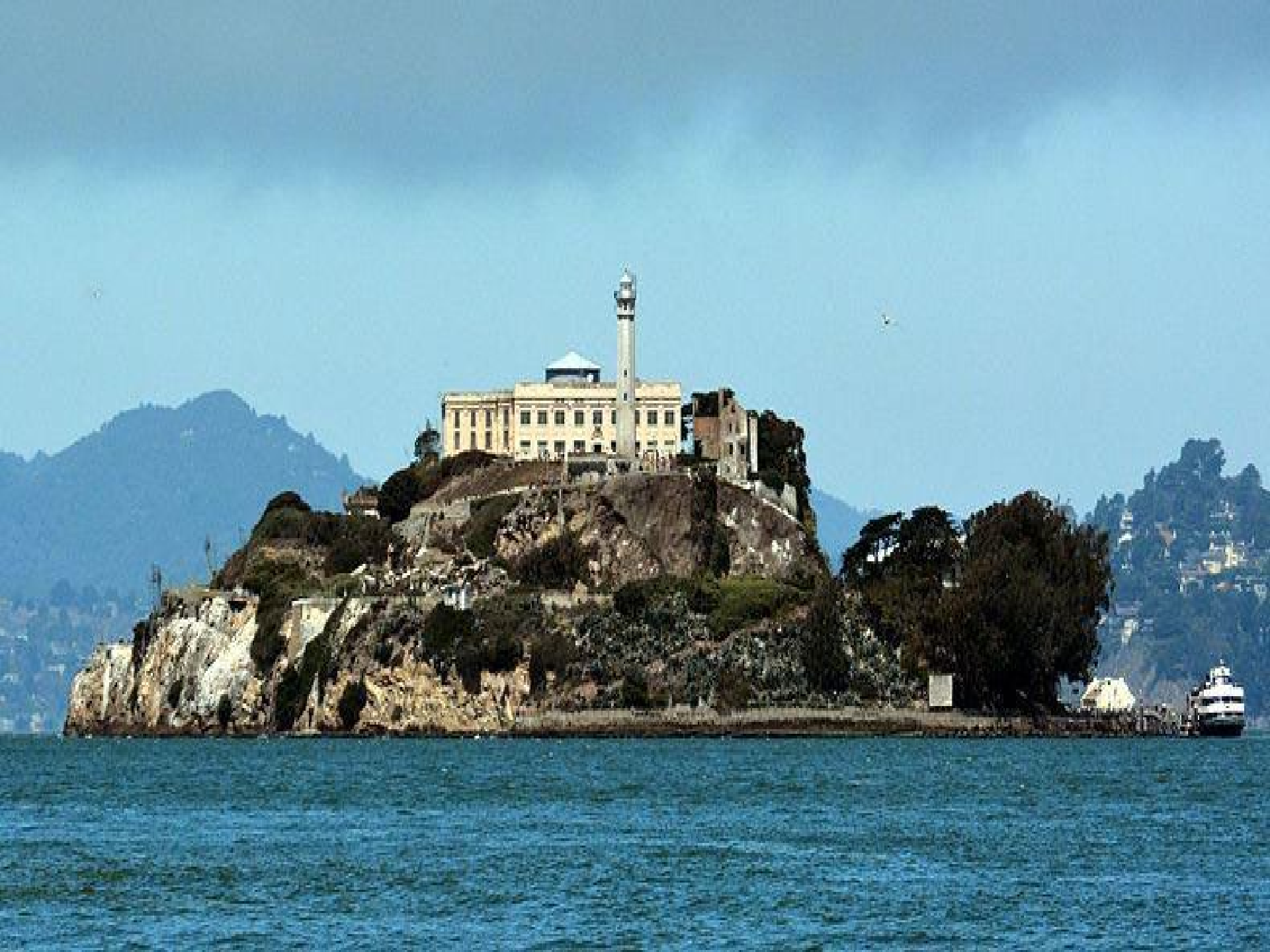
Lost city of Atlantis



THE ISLAND OF DR. MOREAU

H. G. WELLS





FANTASY ISLAND

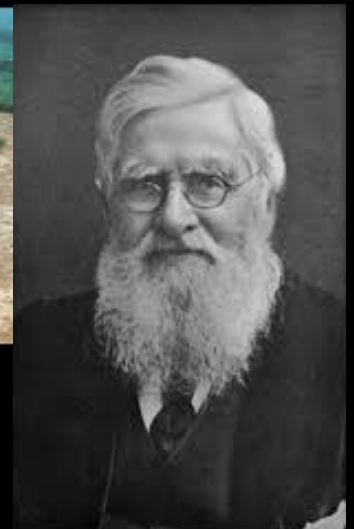
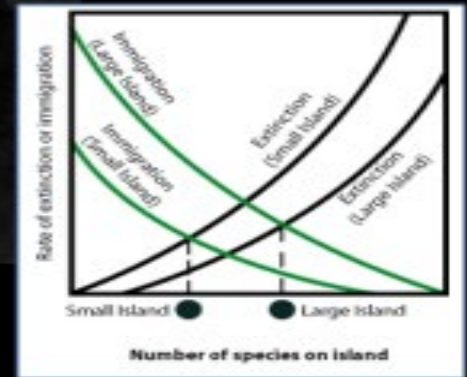
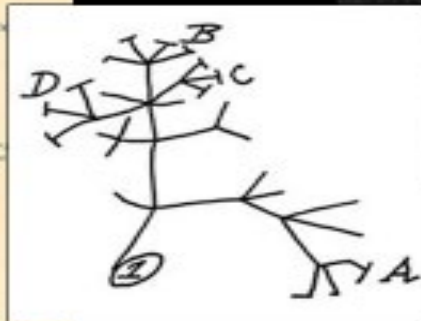
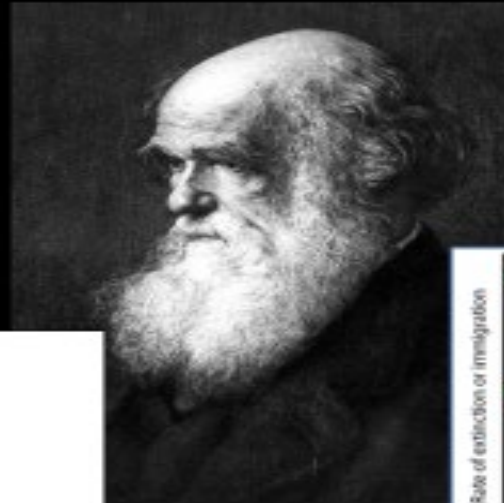
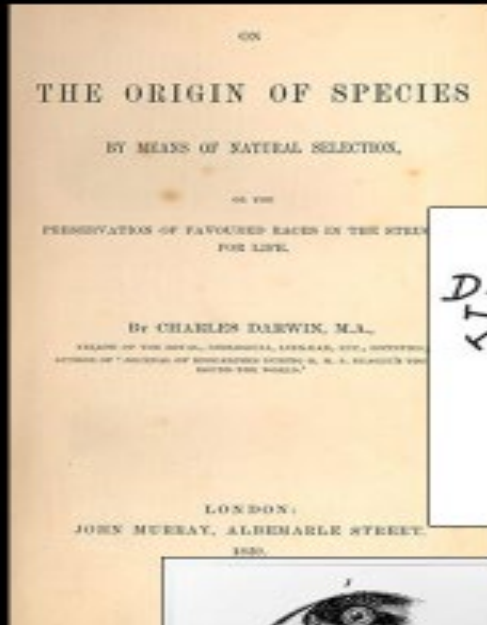




TEMPTATION *Island*

NEW PARADISE, SAME DESIRES.

NETFLIX | MARCH 12

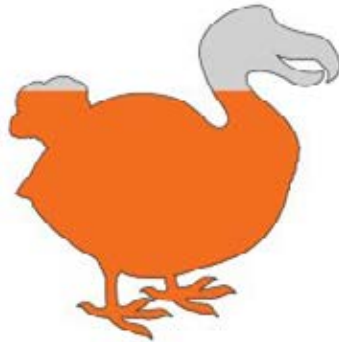


ISLANDS REPRESENT



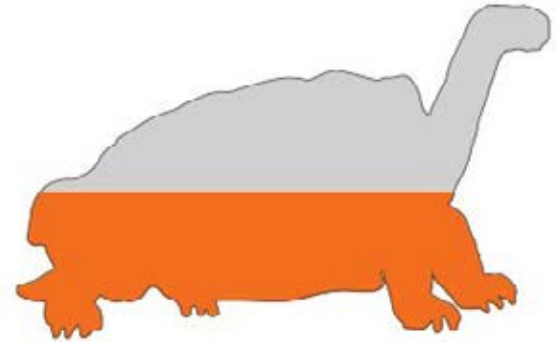
5%

Land Area



80%

**Recorded
Extinctions**



40%

**Endangered
Species**

ISLANDS REPRESENT

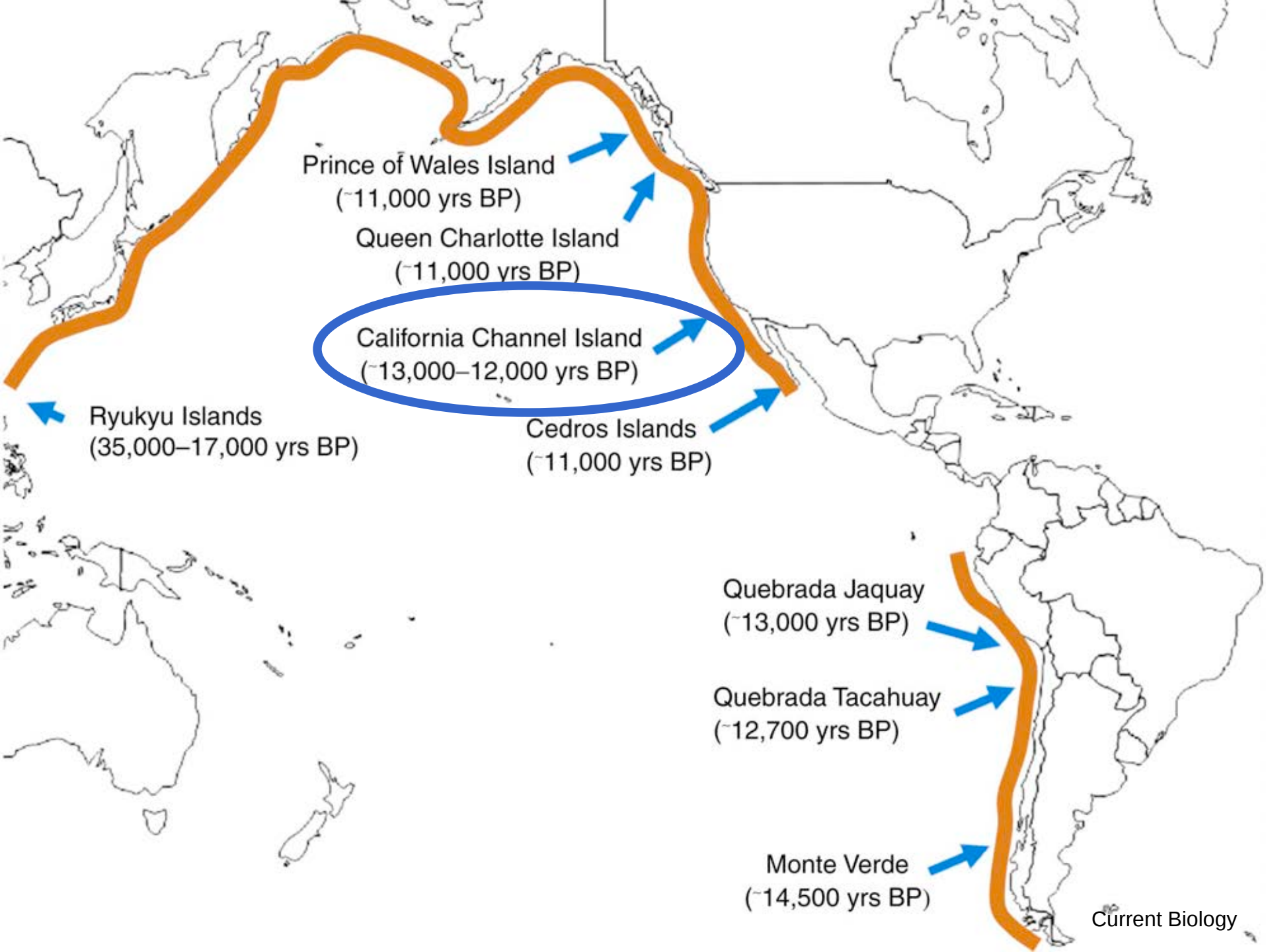


20%

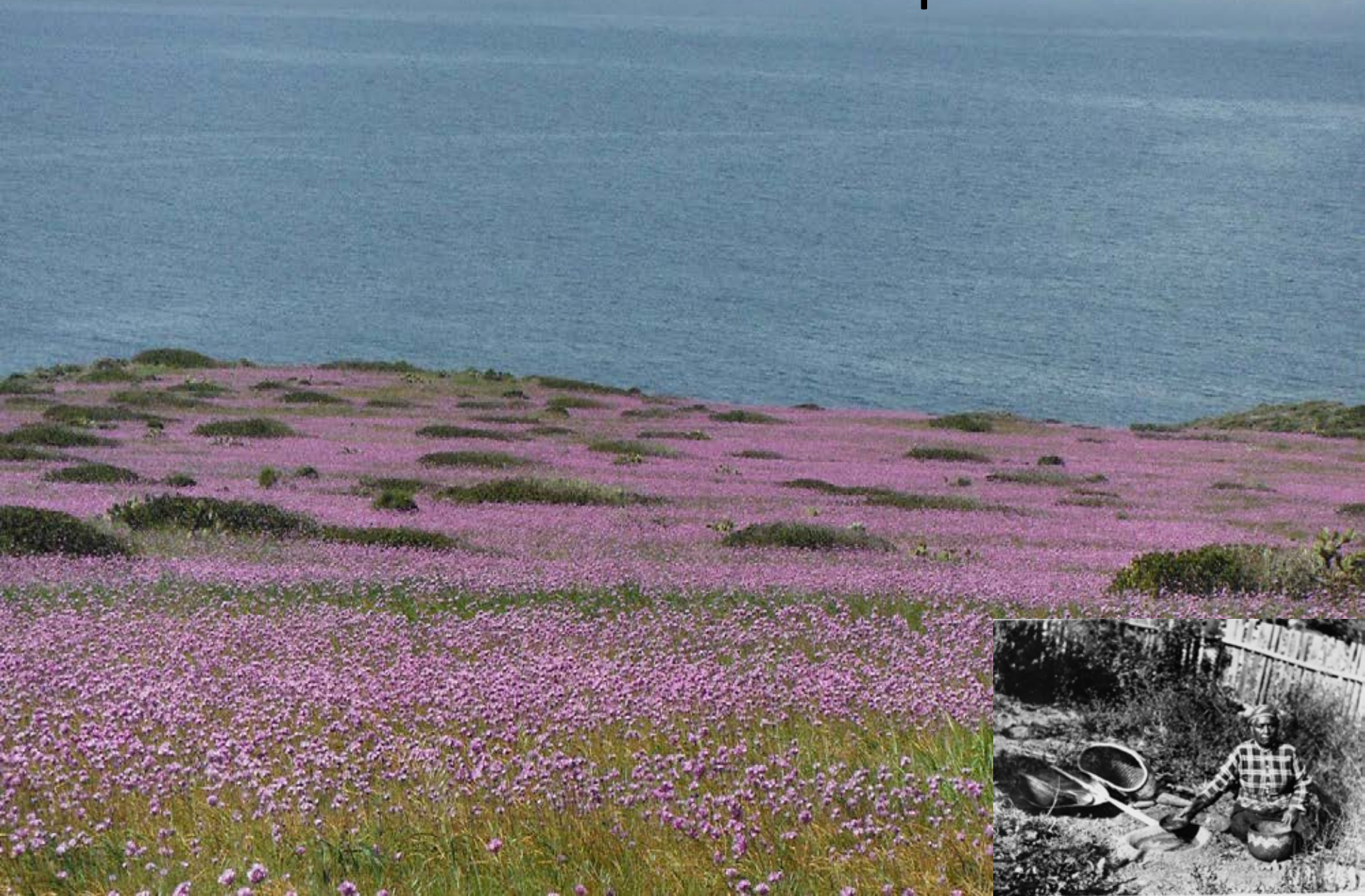
Plant, Bird, & Reptile Diversity

Why is Santa Cruz Island special?





Cultural Landscapes





M. Ball



TNC Photo Archives





Miocene Relict

D. Knapp



Pleistocene Relict

D. Knapp

Introduced Vertebrates



Feral pigs, horses, sheep, cattle, turkeys, and peafowl













SCIF

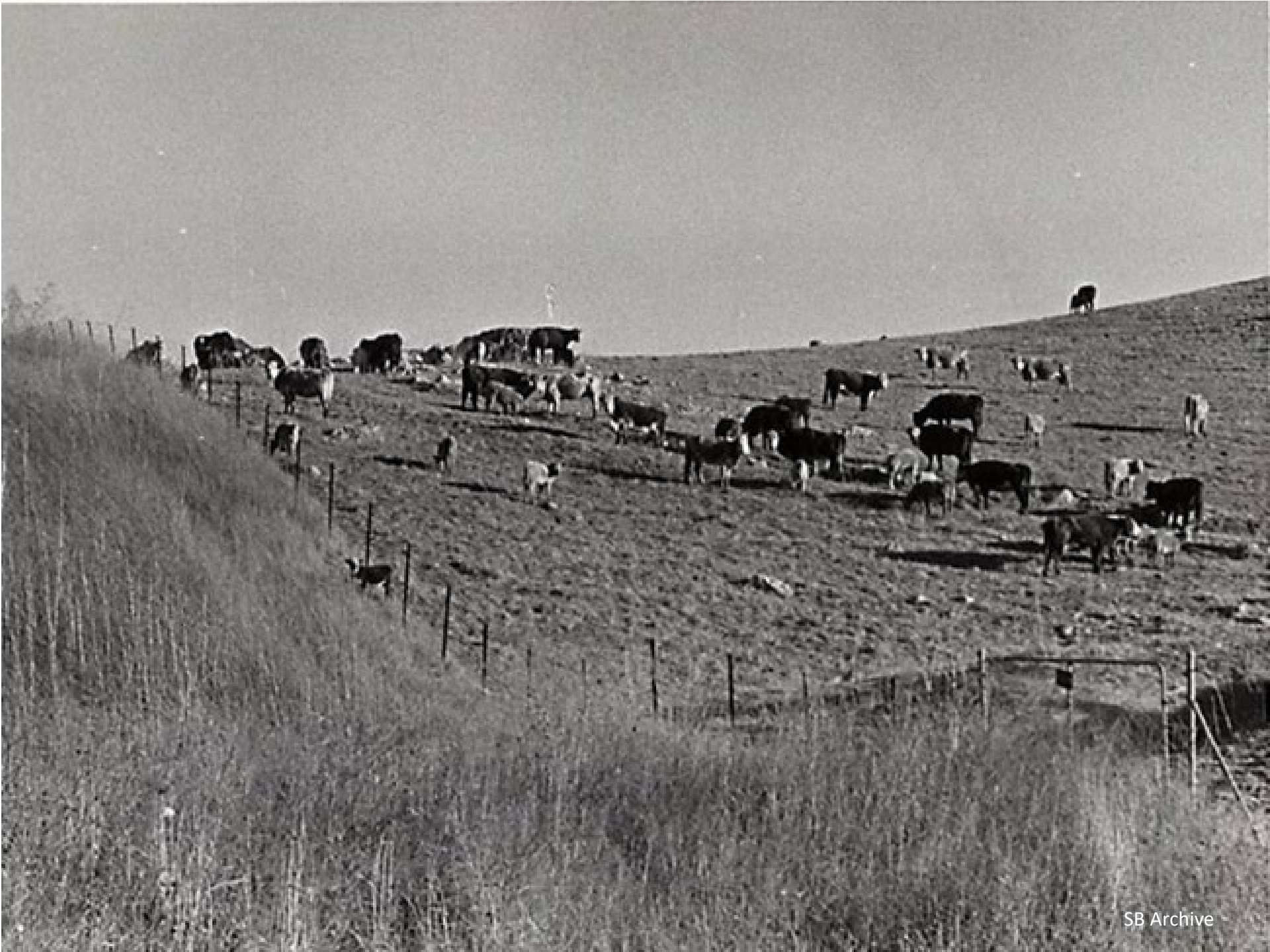


SCIF



SCIF

TNC Archives





Vegetation Recovery 1985-2005



1985

Grass	74%
Scrub	5%
Chaparral	14%
Forest	7%



2005

Grass	24%
Scrub	43%
Chaparral	25%
Forest	8%

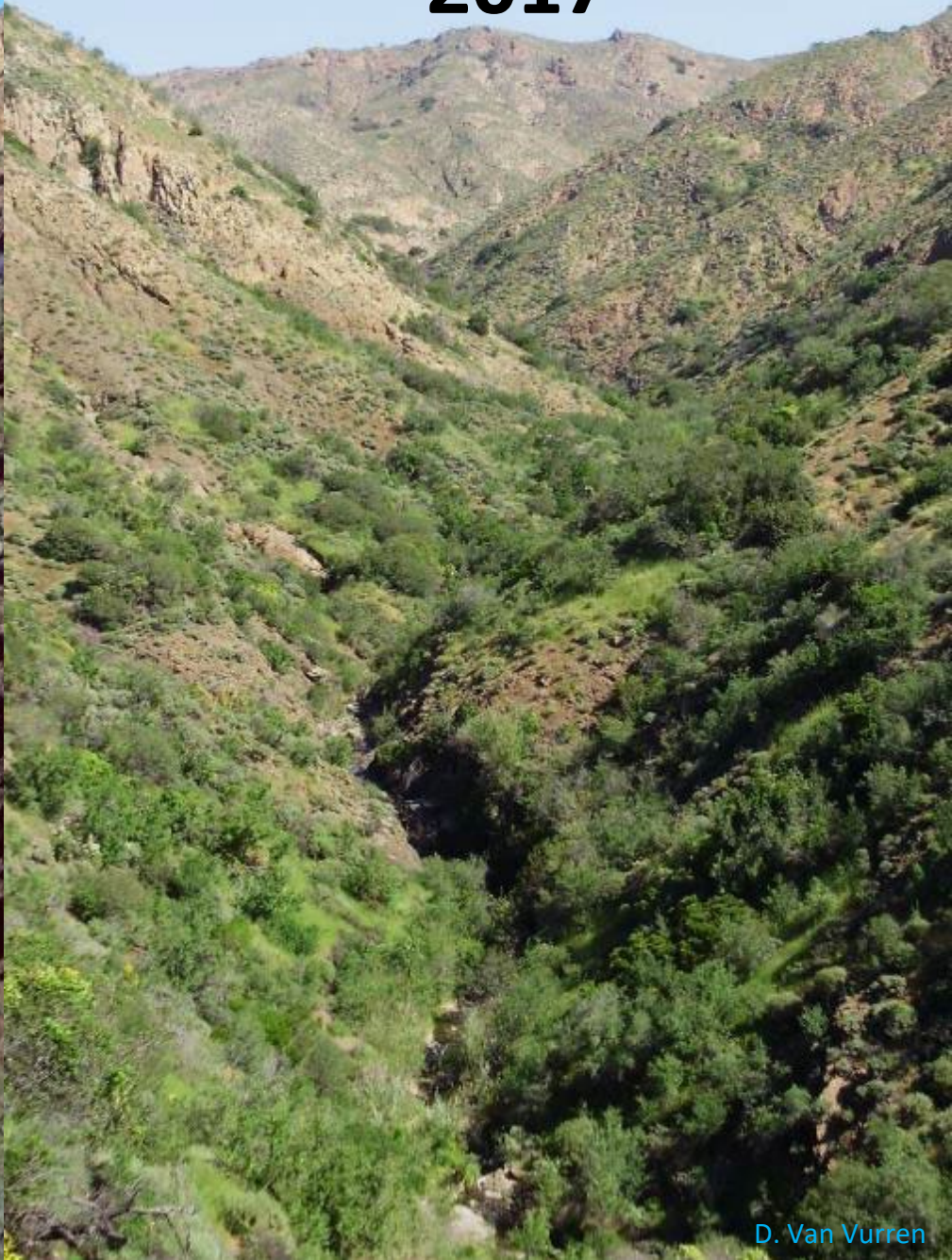


1980



D. Van Vurren

2017

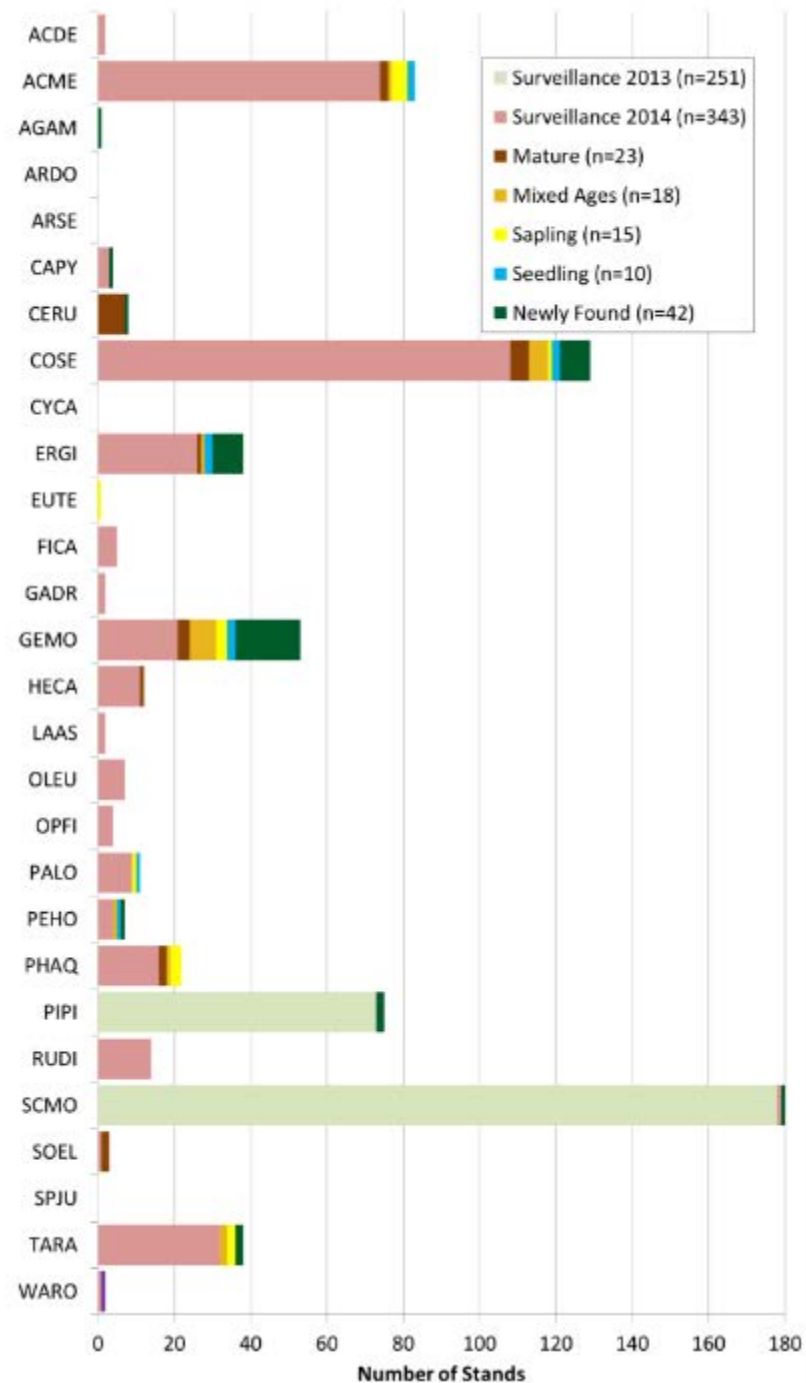


D. Van Vurren

Invasive Plant Eradication



A. TNC Remote Treatment Status 2014



Argentine Ant Eradication



Photo by David A. Holway



Cause Hanna, CSCIU







M. Ball

Santa Cruz Island fox (*Urocyon littoralis santacruzae*)
Federally delisted 2016

Island scrub jay protection





Santa Cruz Island live-forever (*Dudleya nesiotica*)
Federally delisted 2024



Sea Cliff Bedstraw (*Gallium buxifolium*)

Federally delisted 2024



Hoffmann's rockcress (*Boechea hoffmannii*)

Federally Endangered- met recovery criteria on Island



Santa Cruz Island lotus (*Acmispon argophyllus niveus*)

State Endangered- fully recovered



Santa Cruz island fringe-pod (*Thysanocarpus conchuliferus*)
Federally Endangered- met recovery criteria on Island

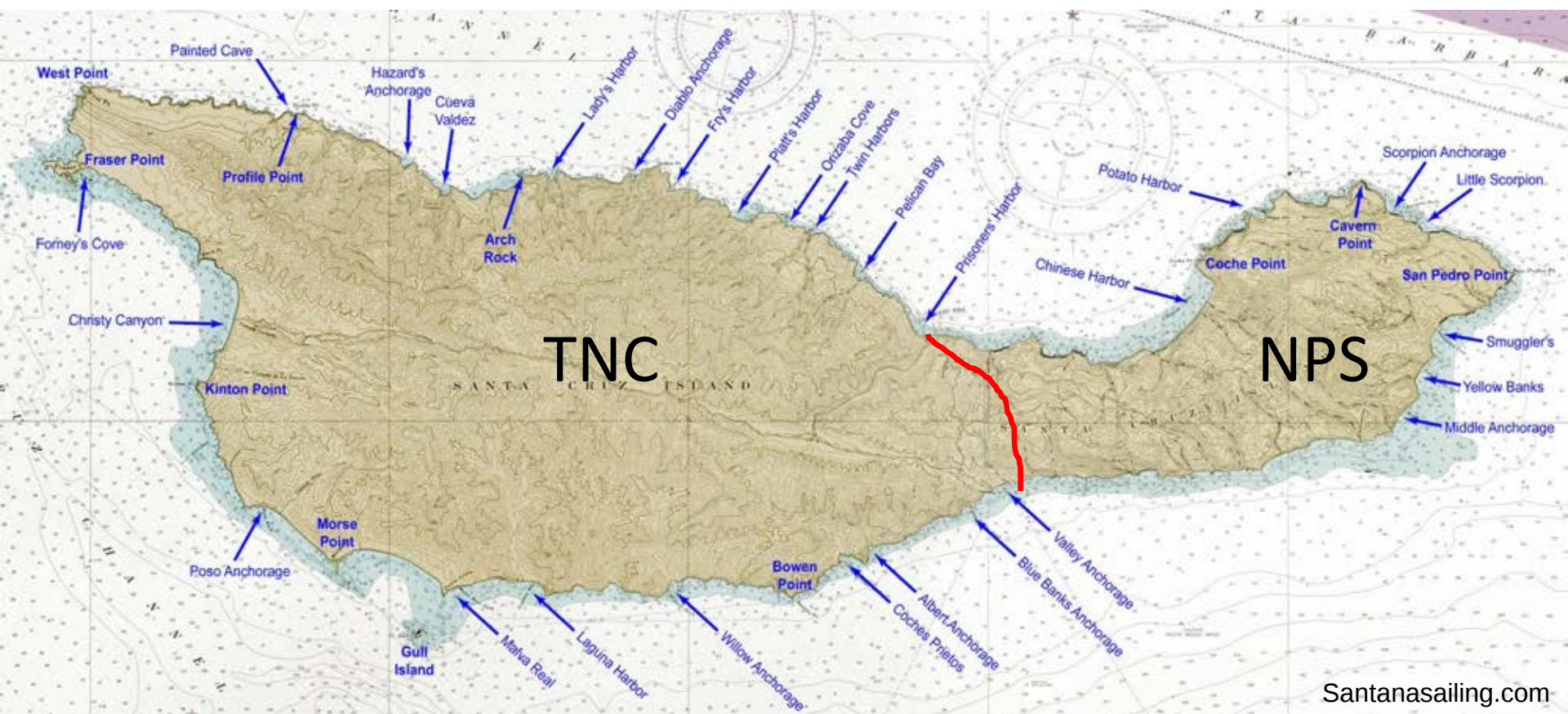
Rediscoveries





Black abalone (*Haliotis cracherodii*)

Federally endangered- On the rise



Islands of the Californias

Botanical Collaborative

Islas de las Californias

Colaboración Botánica



Natural Reserve System
university of california



SDSU

San Diego State
University



Smithsonian



Channel Islands
CALIFORNIA STATE UNIVERSITY



UCDAVIS



CALIFORNIA
NATIVE PLANT SOCIETY

CALIFORNIA INSTITUTE
OF ENVIRONMENTAL STUDIES



THE HUNTINGTON
Library, Art Collections, and Botanical Gardens



COMISION NACIONAL DE
ÁREAS NATURALES
PROTEGIDAS



San
Diego
Zoo



Santa Barbara
Botanic Garden



The Nature
Conservancy

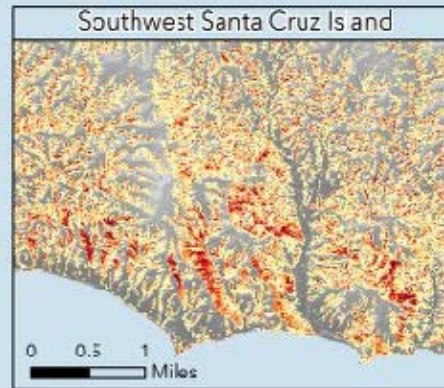
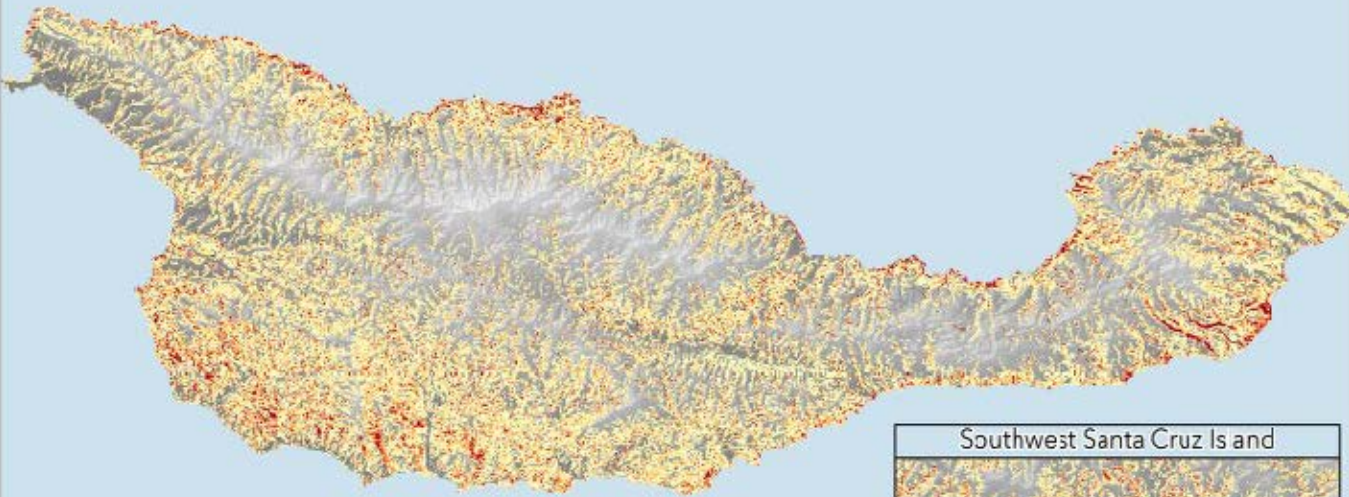




Invasive
Cobweb bush (*Plecostachys serpyllifolia*)

Habitat Suitability Model

Cortaderia selloana -- Pampas grass



Predicted Suitability (0-1)



M. Ball

Invasive

Pampas grass (*Cortaderia selloana*)



Island dunedelion (*Malacothris squalida*)
Federally endangered- extinction eminent



Island barberry (*Berberis pinnata* subsp. *insularis*)
Federally endangered- 11 individuals/ 4 populations



Loss of native *Opuntia* scrub due to introduction of the biocontrol agent- Cochineal

Recovery?



Questions?

