

# **Raptors, Rats, and Rodenticides**

**Is this DDT All Over Again?**



**Allen Fish**

**Golden Gate Raptor  
Observatory**

**[RaptorsAreTheSolution.org](http://RaptorsAreTheSolution.org)**

GGRO is part of the Golden Gate National Parks Conservancy  
in cooperation with the National Park Service.



Male  
Northern  
Harrier

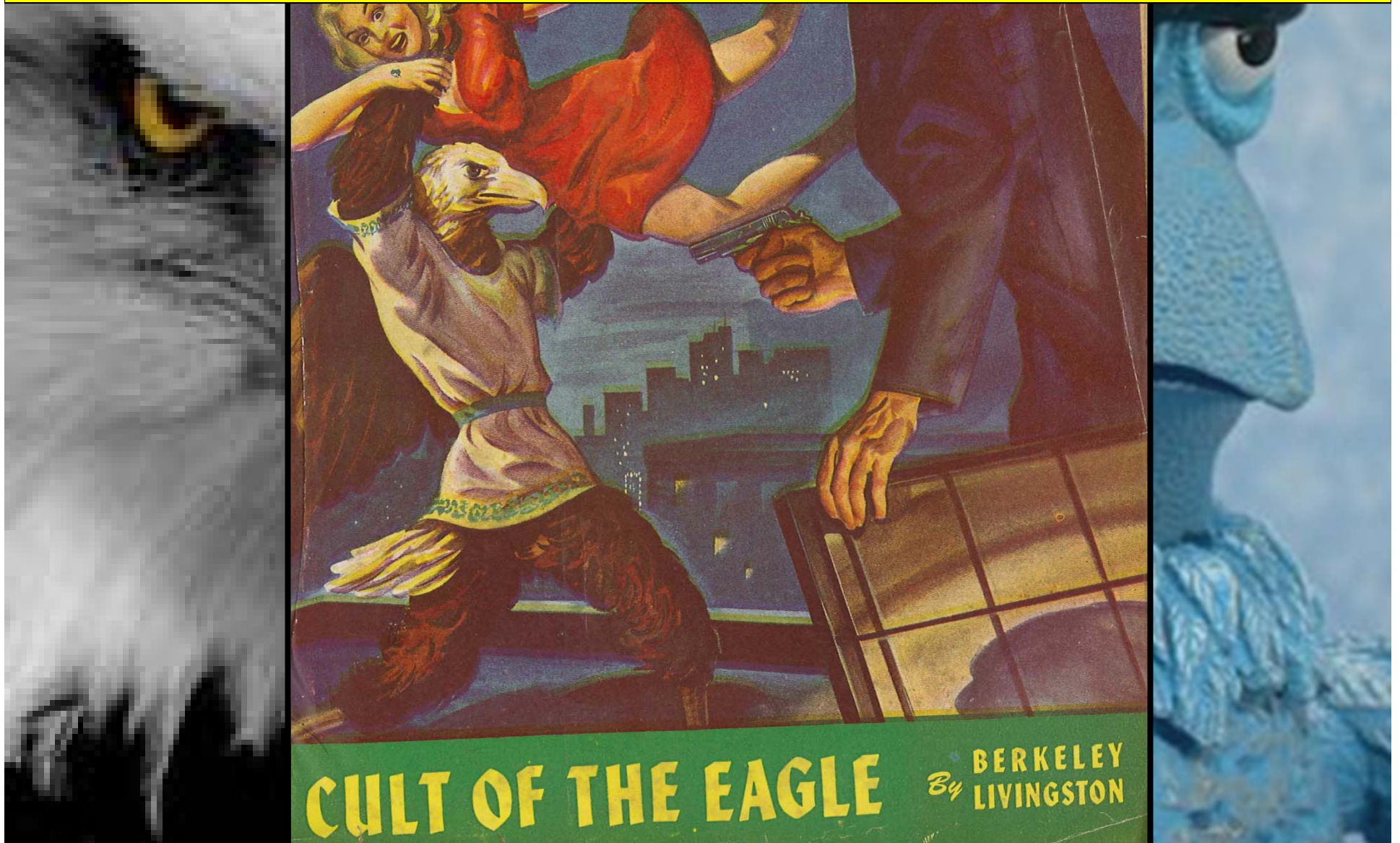
300 volunteers  
& 3 staff  
dedicated to  
long-term  
monitoring of  
California's  
raptors.





Raptors  
are  
**STRONG!**

Could popular RAPTOR images cloud our ability to see how vulnerable they are?



The FACTS are:

Two of  
three  
young  
Redtails  
won't see  
their first  
birthday.

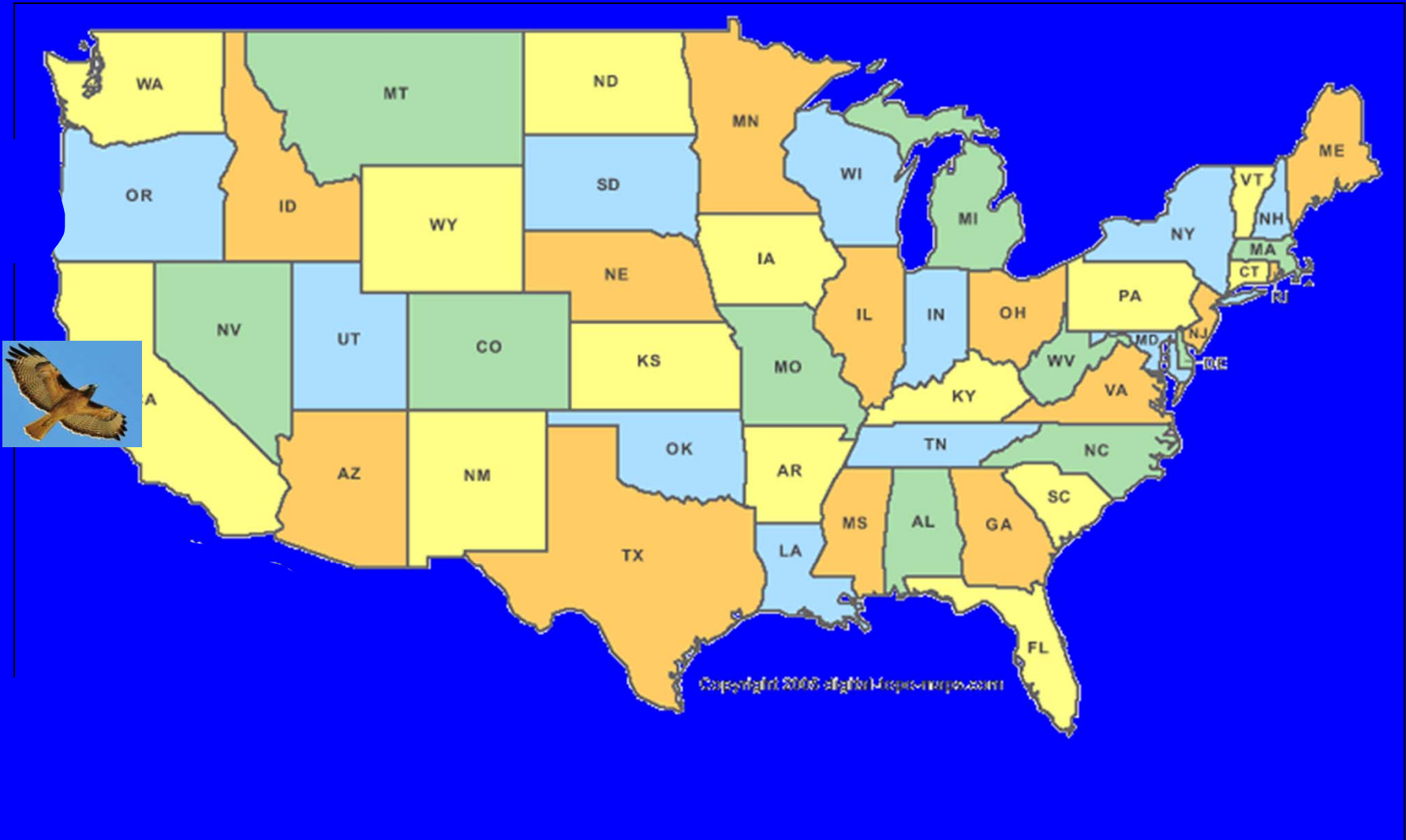


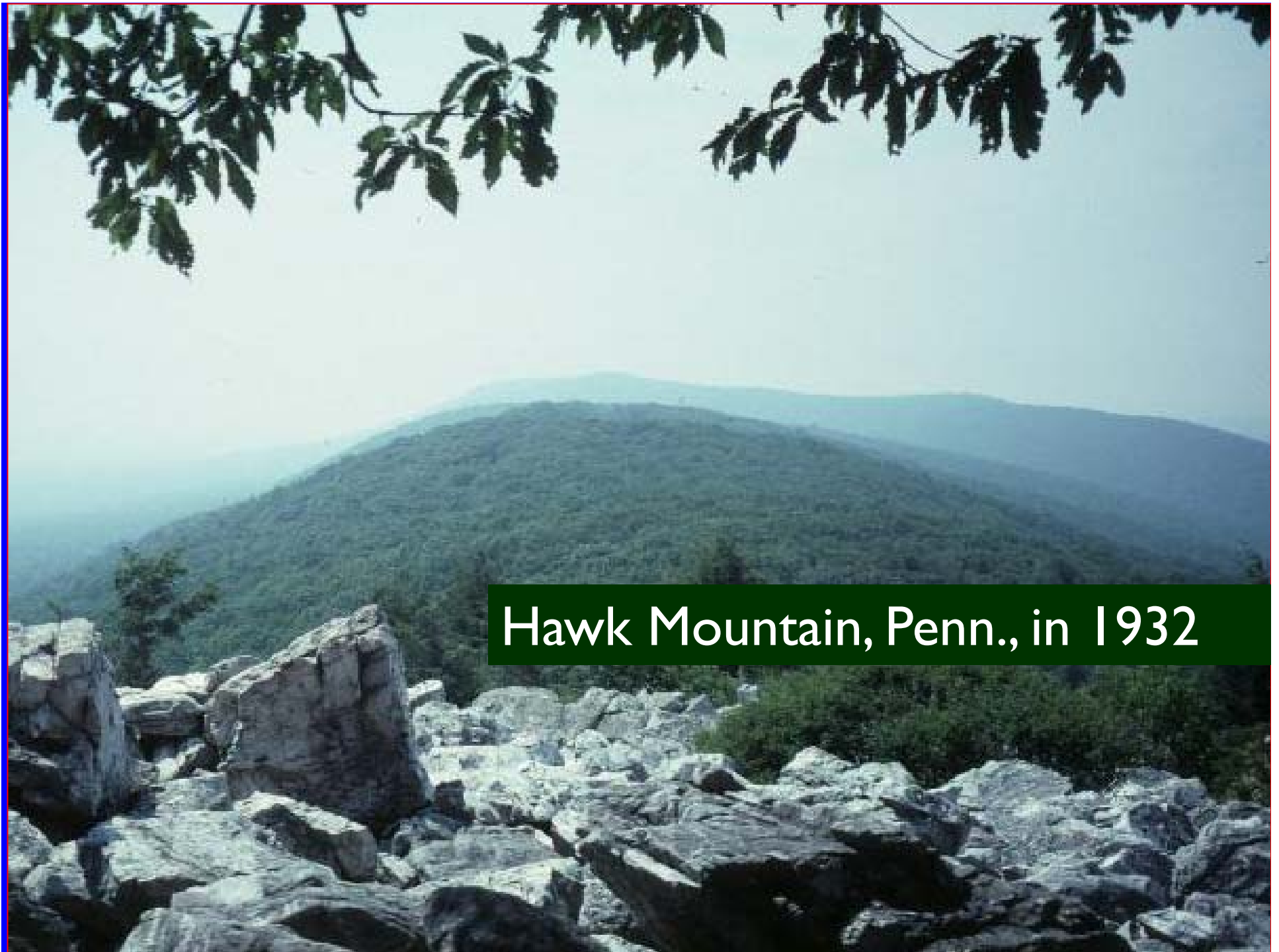
For many raptors, first-year mortality is 50 to 70%.

**WHAT kills raptors in California:** diseases, collisions, electrocutions, poisons, window-kills, road-kills, wind turbines, guns, habitat loss, climate?



# Modern raptor conservation biology starts in Pennsylvania in 1933...





Hawk Mountain, Penn., in 1932

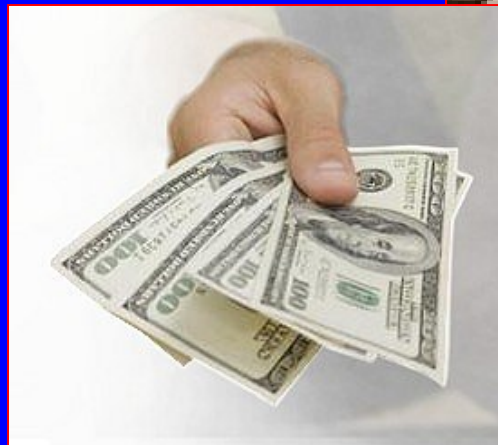


1933 – Richard Pough & Henry Collins  
photograph the Hawk Mountain slaughter – show  
photos at NYC Audubon



1934 -- A FURIOUS  
Rosalie Edge buys  
Hawk Mountain.

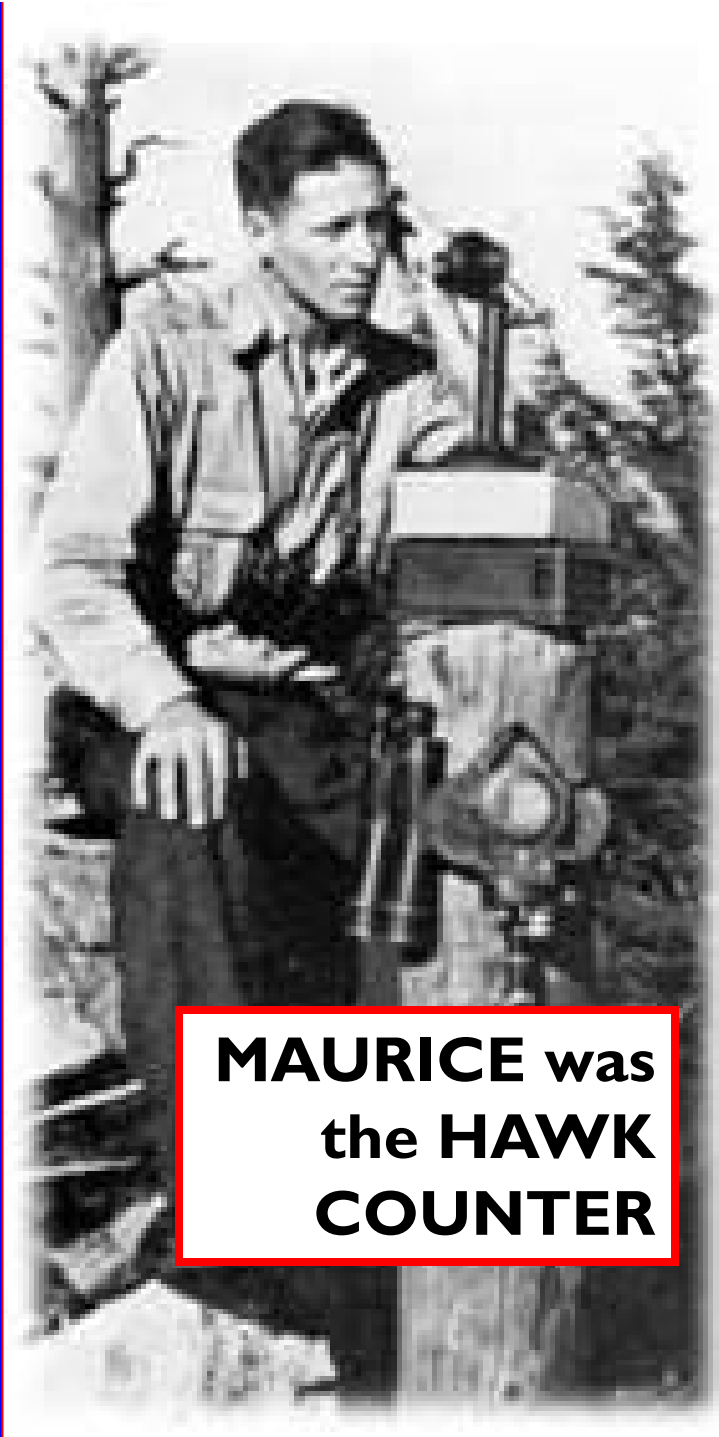
Just \$2.50 per acre...





**IRMA was the GATE KEEPER**

1934 –  
Edge  
hires the  
Brouns

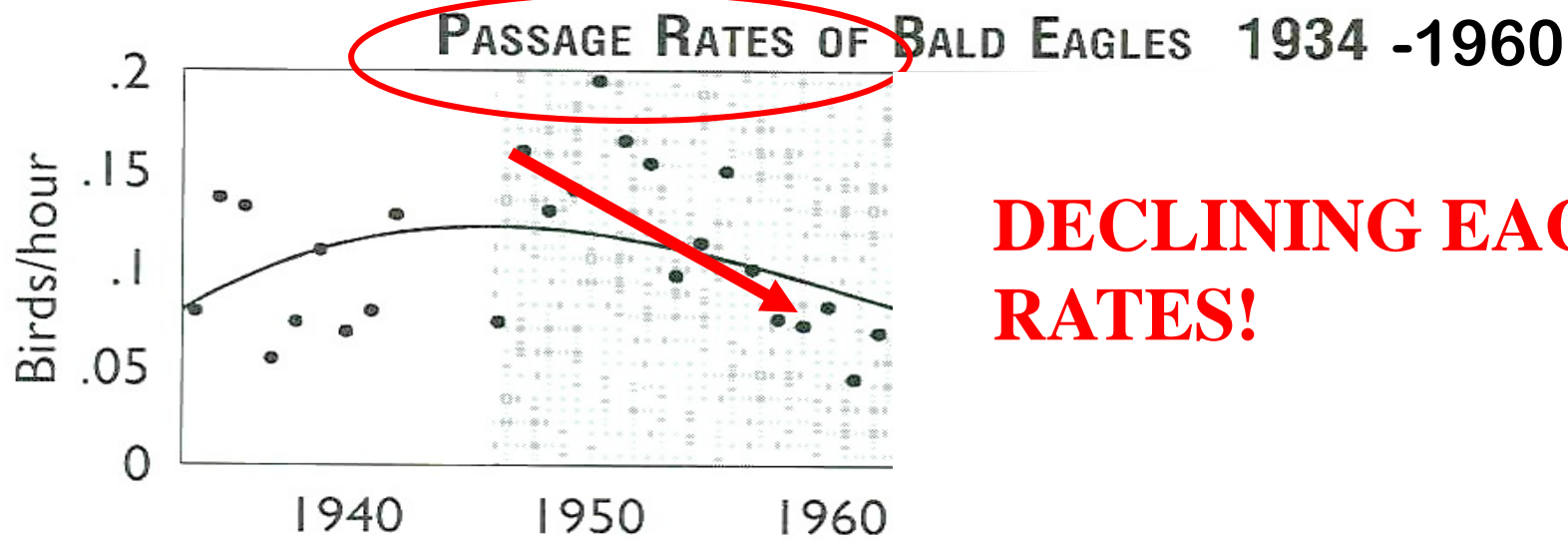


**MAURICE was the HAWK COUNTER**



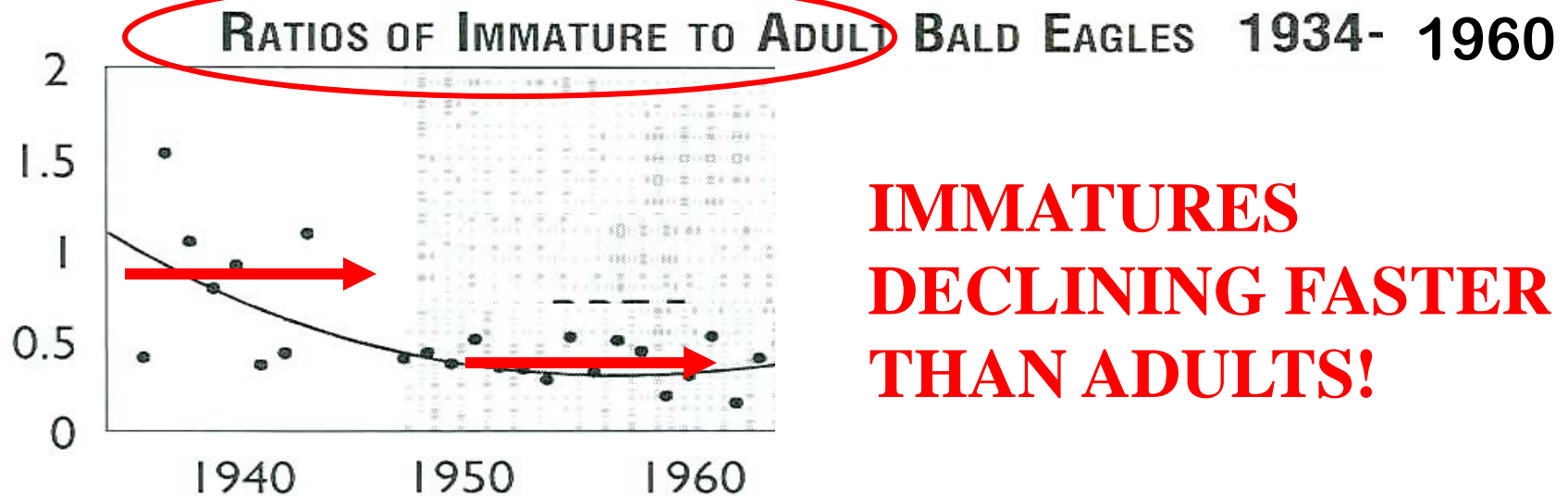
Among them,  
marine-biologist,  
science-journalist,  
nature-writer  
Rachel Carson.

Who asked Maurice  
Broun about his  
hawk count data...



**DECLINING EAGLE RATES!**

...and finds some interesting patterns...



**IMMATURES DECLINING FASTER THAN ADULTS!**

1962 -- CARSON  
makes case that  
DDT STOPS birds  
from breeding.



SILENT SPRING wins a  
Pulitzer & 5 years later:

1967-- British  
biochemists  
show that  
DDT binds up  
CALCIUM...

THE EDGE OF THE SEA  
*questions our attempt to control the  
natural world about us*

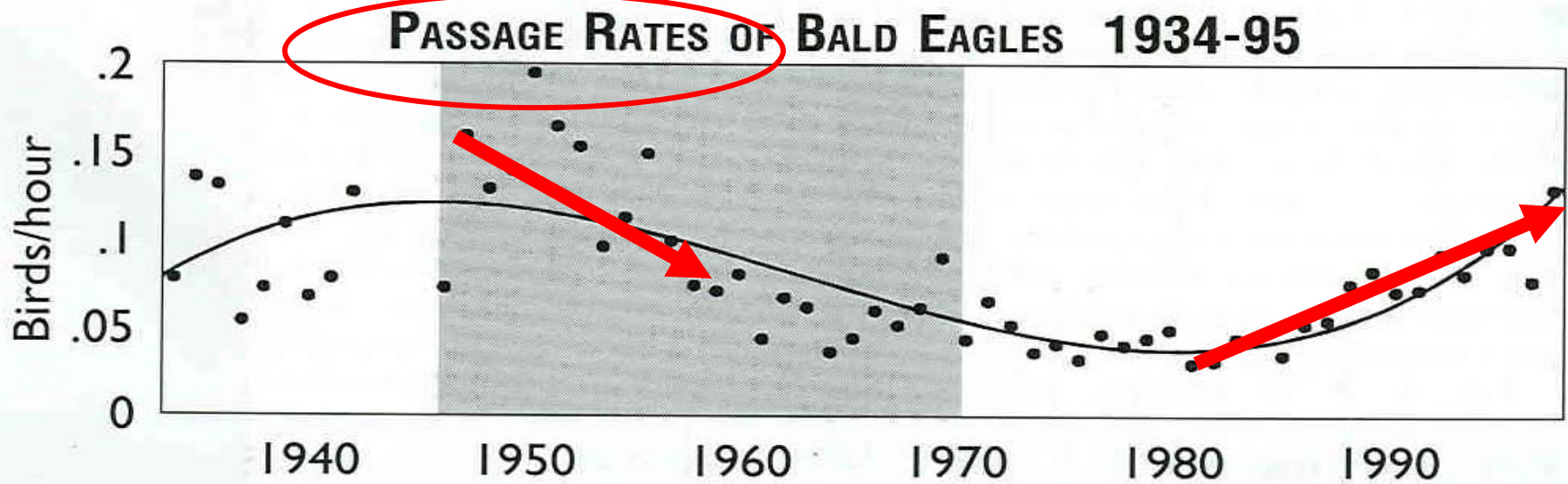
SILENT  
SPRING  
Rachel  
Carson

And Rachel Carson becomes a stamp!

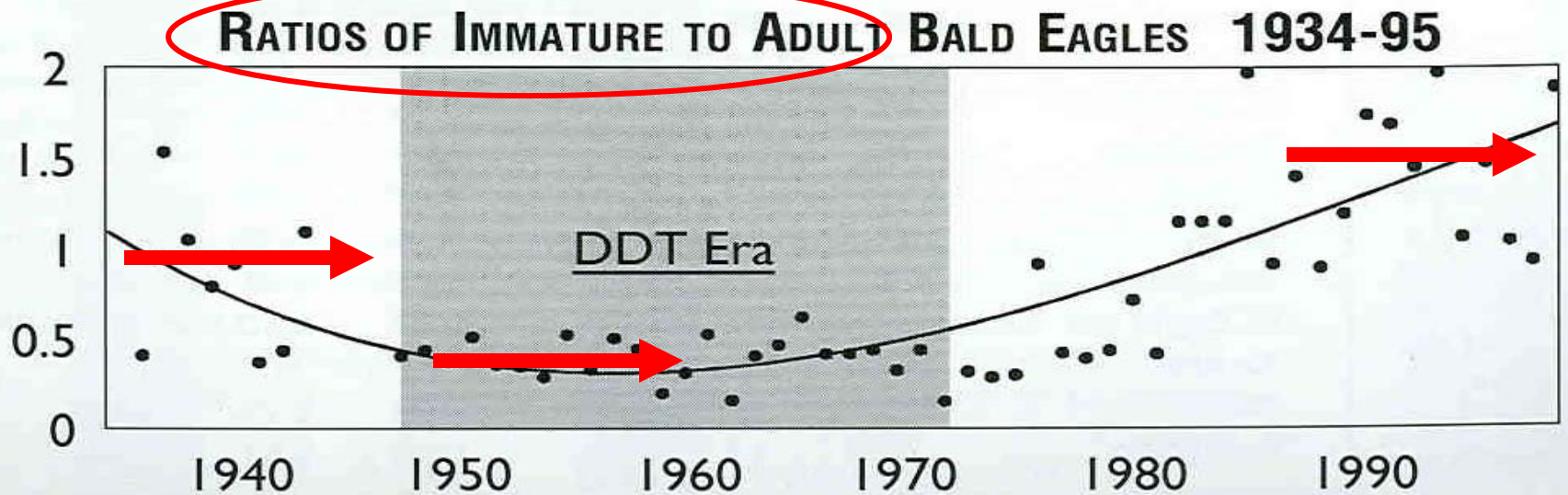
Was this start of the modern environmental movement? Possibly.

At minimum, a critical tipping point.





**And Bald Eagles bounced back at Hawk Mountain post-DDT.**





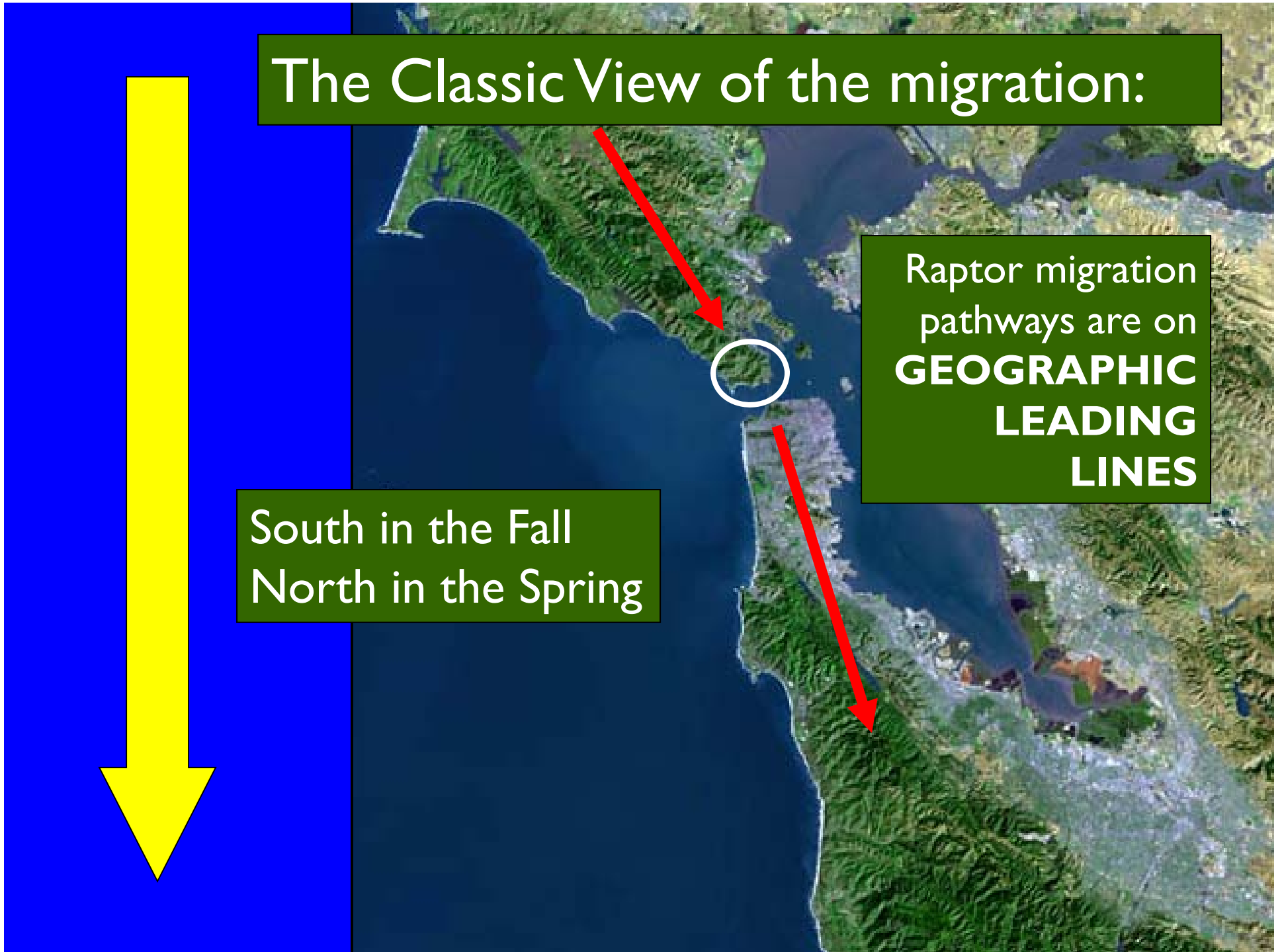
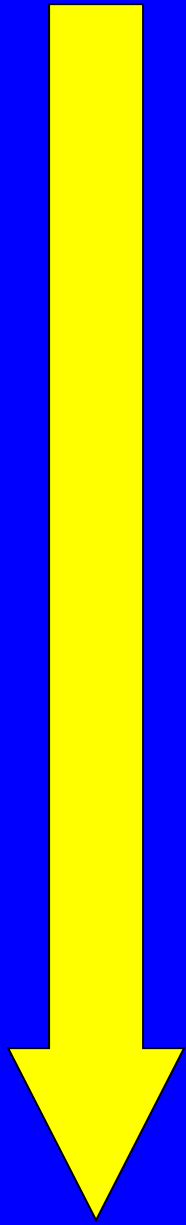


Raptor migrations can be **critical population monitoring** sites, with potentially far-reaching **INFORMATION** about broader environments.

# The Classic View of the migration:

Raptor migration pathways are on **GEOGRAPHIC LEADING LINES**

South in the Fall  
North in the Spring



GGRO  
was  
formed in  
1984 ...



to inspire  
preservation of  
California's  
raptors through  
monitoring,  
tracking, and  
public education;



**GOLDEN GATE  
RAPTOR  
OBSERVATORY**

To make Hawk Hill an open-air school for migration-watchers.



Red-tailed



Ferruginous



Buteos =  
SOARING  
HAWKS

Red-shouldered



Broad-winged

Rough-legged



Swainson's



Sharp-  
shinned



Accipiters  
= FOREST  
HAWKS



Cooper's



Northern  
Goshawk

Peregrine



Merlin

Falcons =  
falcons

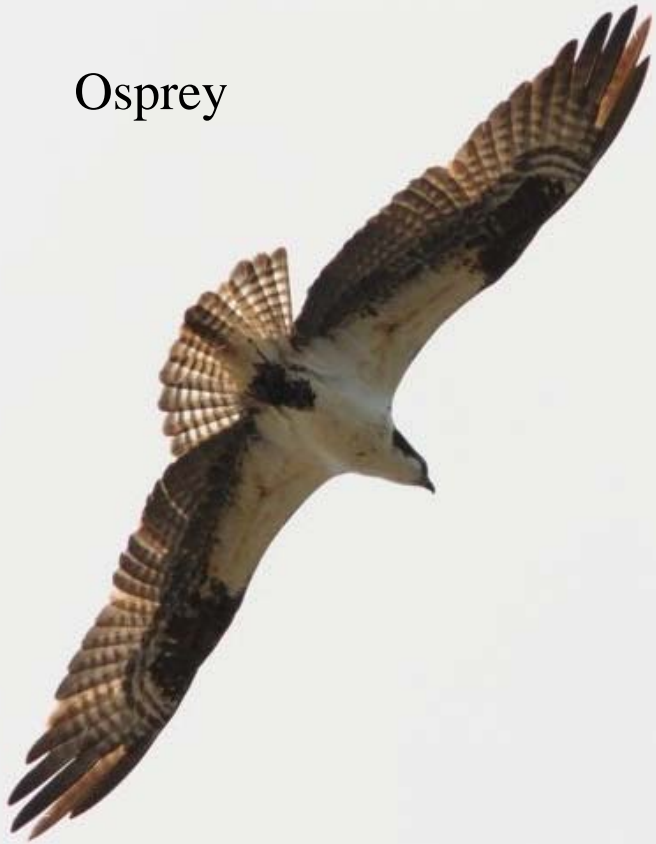
Prairie



American  
Kestrel



Osprey



Misc.  
white-  
bellied or  
rumped  
raptors

Northern  
Harrier



White-tailed Kite



Turkey Vulture



Large  
dark  
raptors

Bald Eagle



Golden Eagle

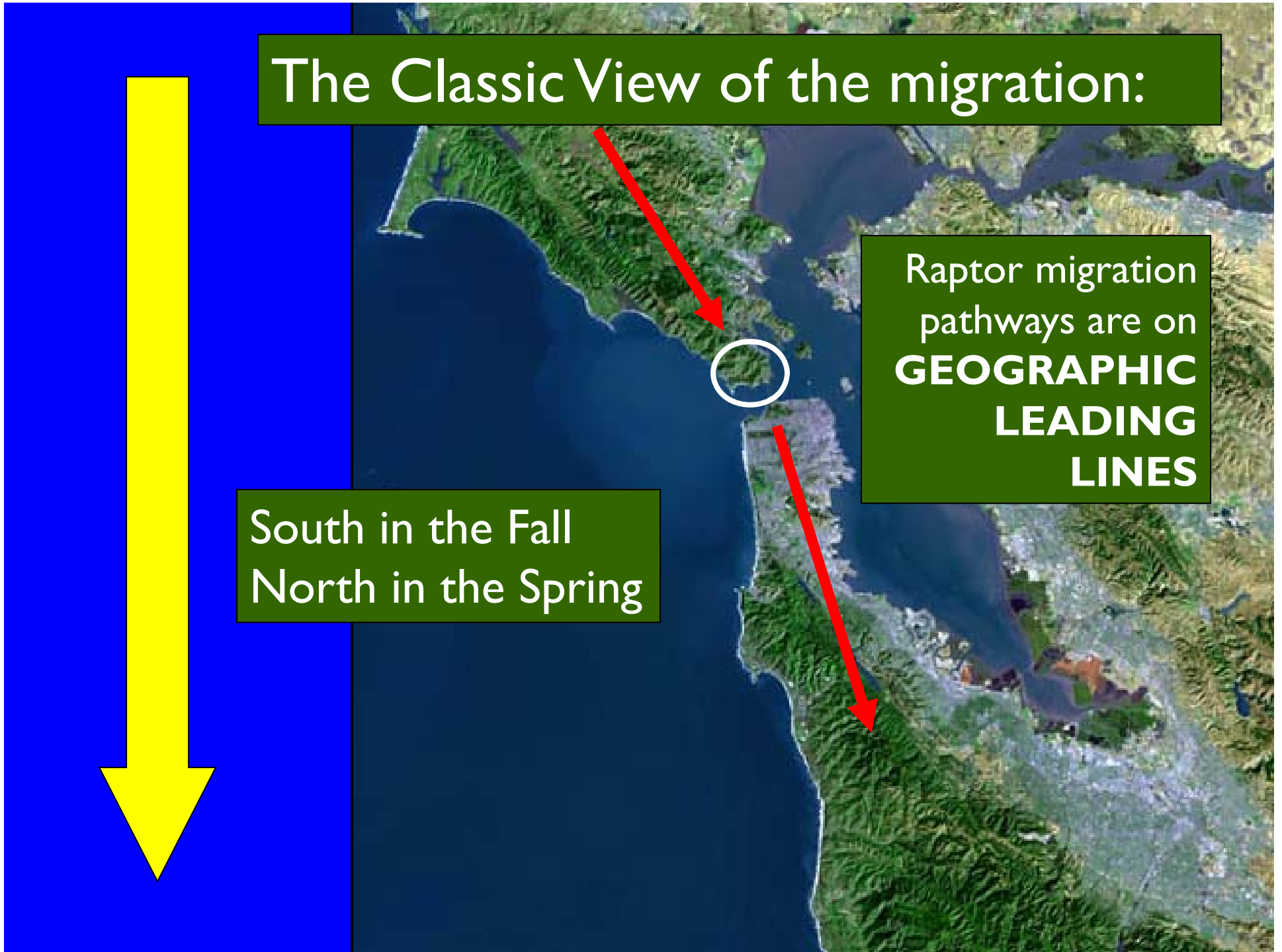
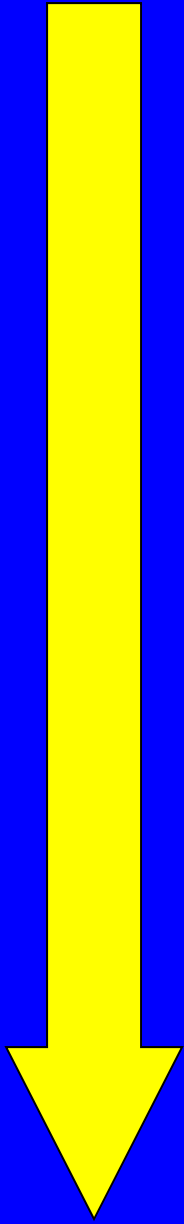
# GGRO Research



# The Classic View of the migration:

Raptor migration pathways are on **GEOGRAPHIC LEADING LINES**

South in the Fall  
North in the Spring



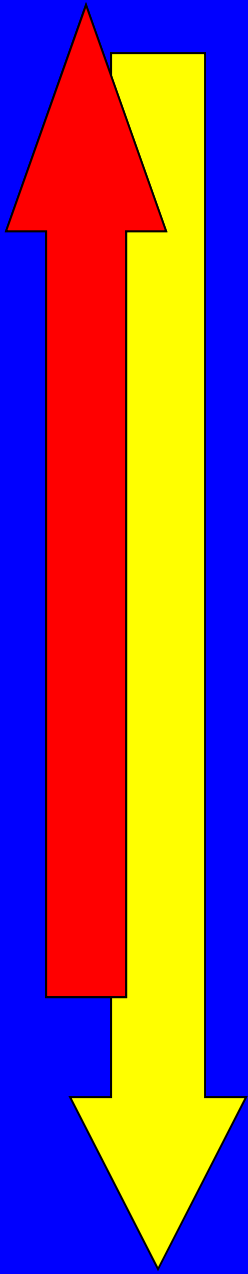
~~The Classic View of the migration:~~

REAL

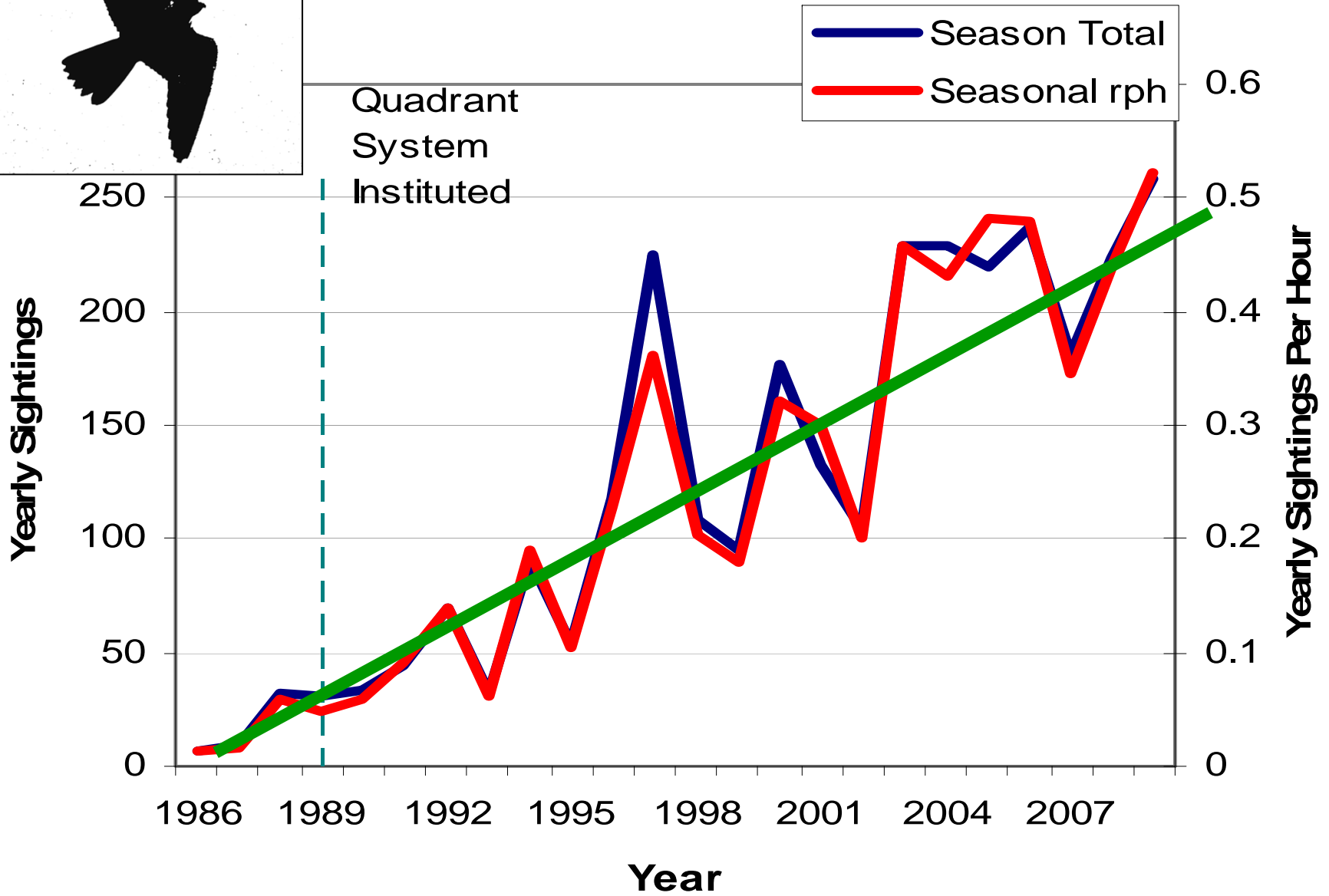
SOMETIMES

South in the Fall  
North in the Spring

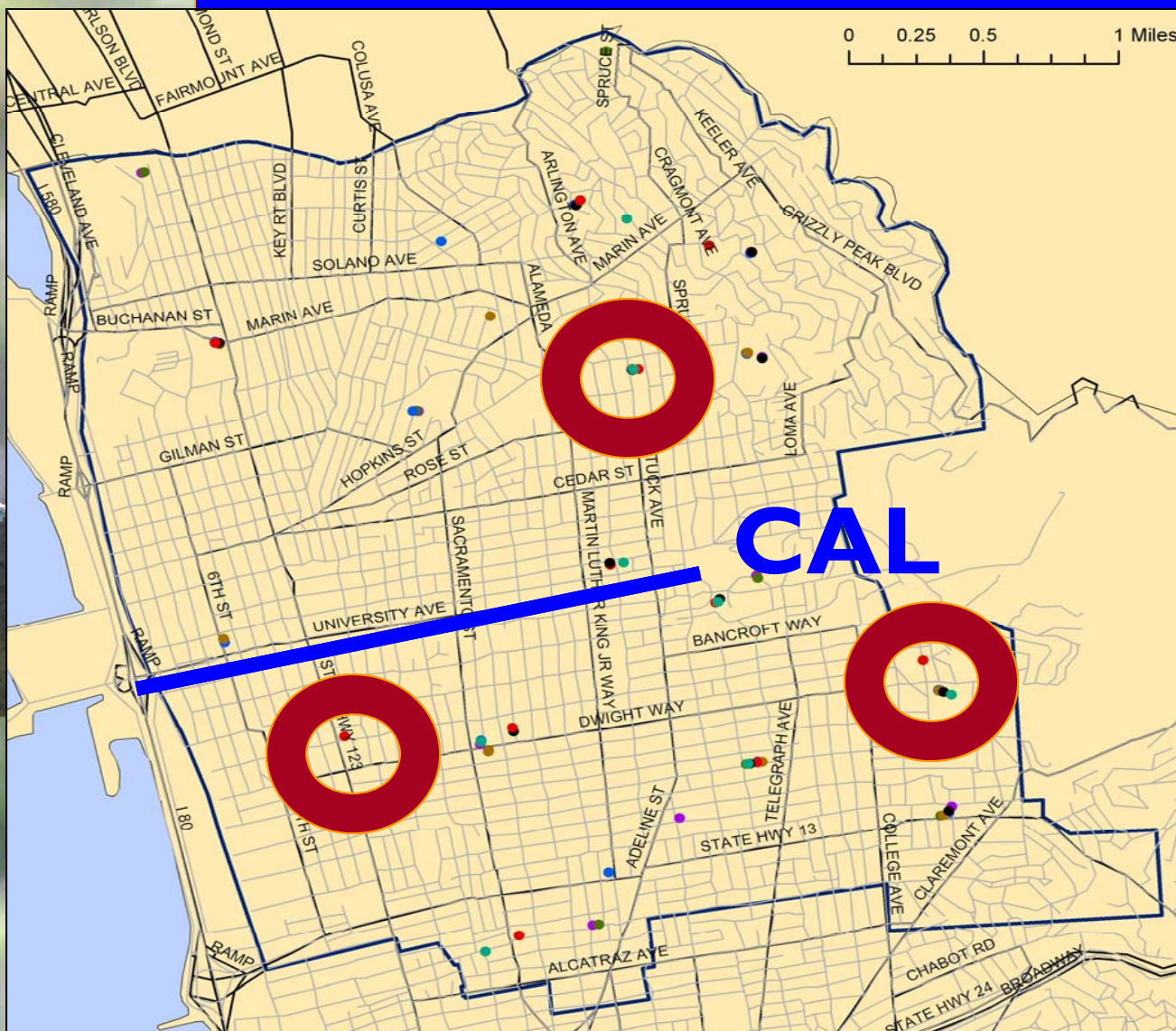
Golden Gate raptors travel in many directions, using a complex of migration strategies.



# Peregrine Falcon



# 2002 to 2011 – Cooper's Hawk nesting in Berkeley



What

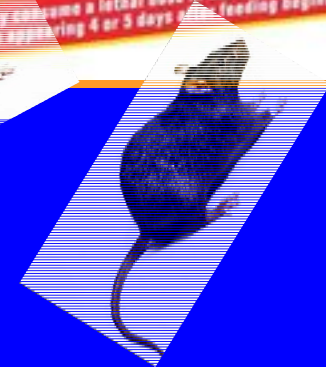
**SGAR**

companies

tell you:

Second Generation  
Anticoagulant  
Rodenticides:

Brodifacoum, Bromadiolone,  
Difenacoum, Difethialone



# What really happens:

1. Rat eats bait
2. Anticoagulant makes rat thirsty; starts to hemorrhage
3. Weak rat seeks water
4. Easy target for predator





# Poison companies say:

1. Indoor poison stays indoors. **NO!**
2. Poison in bait stays in box. **NO!**
3. Little chance for poison contact with pets & predators if used properly. **Um, NO!**



# Basic SGAR numbers:

1. 8 million lbs sold annually in CA (2/3 to homeowners)
2. 500 dead wildlife tested since '95, **75% SGARs in CA**
3. Min. est. 10K predators killed in CA
4. For US: annual pet poisonings in 10K's; children 17K/year





Red-shouldered Hawks

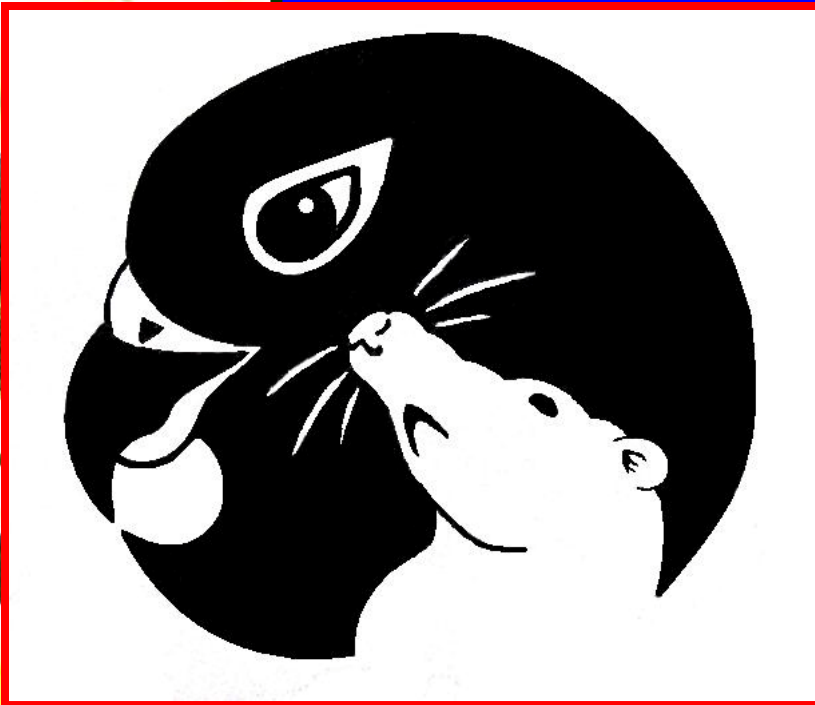
## Turkey Vulture



Cooper's Hawk



2011 – Lisa Owens Viani  
founds **Raptors are the  
Solution** to educate the  
public, and to build  
coalitions to accelerate  
the eradication of rat  
poisons.





**May 2008** -- After 10 years of study, EPA issues Risk Mitigation Decision for AR rodenticides as they pose “significant risks to wildlife & the environment.”



**2011-2013** – EPA announces intent to cancel regs of 20 rodenticides.

**2013** – Reckitt Benckiser (maker of d-CON) requests EPA hearing, expected to take 2+ years, refuses to take AR products off of store shelves.



**2013** – California DPR proposes designation of SGARs as Restricted Materials, not sellable to home-owners.



**SF Environment**

Our home. Our city. Our planet.

**Pesticide Action  
Network**  
NORTH AMERICA



windcare



AMERICAN BIRD  
CONSERVANCY



Many players  
working on  
SGARs.

# One of RATS' first projects

I like my meals poison free.



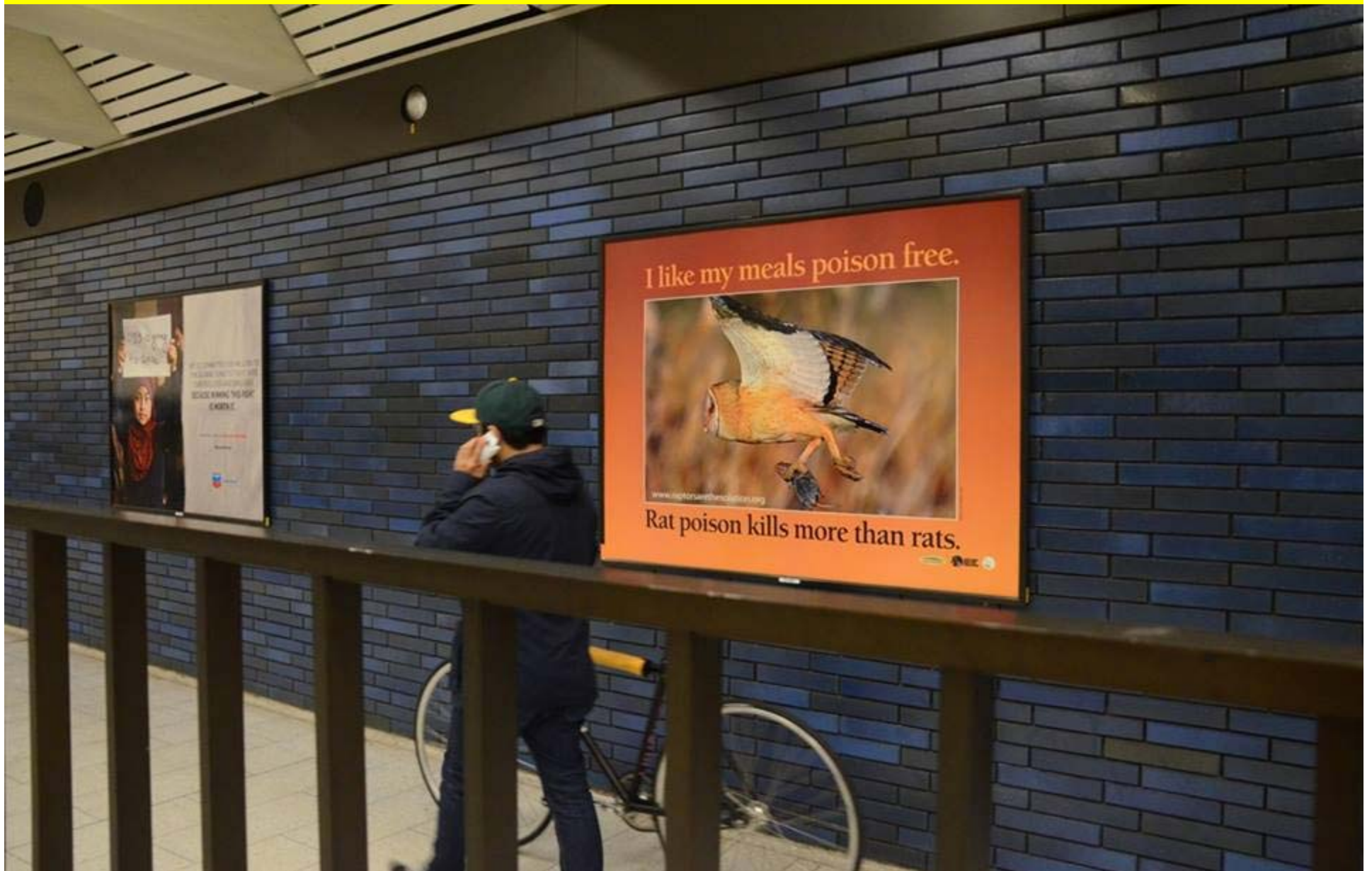
[www.raptorsarethesolution.org](http://www.raptorsarethesolution.org)

PHOTO BY JAMES TILLY

Rat poison kills more than rats.



# Oakland's MacArthur BART Station



# Inside Bay Area's AC Transit buses





Cooper's Hawk



Barn Owl

Urban raptors? Owls as partners in pest control in vineyards? **NOT UNLESS YOU CLEAR OUT THE POISONS.**

Produced  
poster series to  
discourage rat  
poison use in  
raptor nesting  
territories.

# COOPER'S HAWKS NESTING IN THIS AREA!

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Photo by Verne Nelson

**Please do not use rat poison.**

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Thank you for protecting  
our shared environment.

[www.raptorsarethesolution.org](http://www.raptorsarethesolution.org)

# Promoting City-County resolutions discouraging sale of SGARs

## RESOLUTION NO. 2011-60

1  
2  
3  
4  
5  
6  
7

**A RESOLUTION OF THE ALBANY CITY COUNCIL OPPOSING THE  
SALE AND PURCHASE OF RAT AND MOUSE POISONS DEEMED AN  
UNREASONABLE RISK TO CHILDREN, PETS AND WILDLIFE**

# Produced BOYCOTT card for Reckitt Benckiser products & petitioned Good Housekeeping



Lysol  
Woolite  
Clearasil  
Mucinex  
Easy-Off  
Finish  
French's  
Mop & Glo  
Dr. Scholls  
Cling-Free  
Glass Plus  
Sani Flush  
Brasso  
Wizard  
Calgon  
Air Wick  
Durex  
Tiger's Milk



Photo: Red-tailed Hawk by Michael Stubblefield



Produced claymation video with rising star teenager from Kentucky, Ian Timothy.



2007 – Seth Riley, NPS, studies  
39 bobcats & 4 pumas found  
near Santa Monica Mts

- 90% bobcats had ARs
- ALL pumas has ARs
- Living bobcats with ARs had mange





Kian Schulman, Malibu, buys all the rat poisons at her local gardening store if they go SGAR-free.



July 2012

## Anticoagulant Rodenticides on our Public and Community Lands: Spatial Distribution of Exposure and Poisoning of a Rare Forest Carnivore

Mourad W. Gabriel<sup>1,2\*</sup>, Leslie W. Woods<sup>3</sup>, Robert Sean M. Matthews<sup>6</sup>, J. Mark Higley<sup>7</sup>, Stefan M. K. Greta M. Wengert<sup>1</sup>, Benjamin N. Sacks<sup>2</sup>, Deana L.

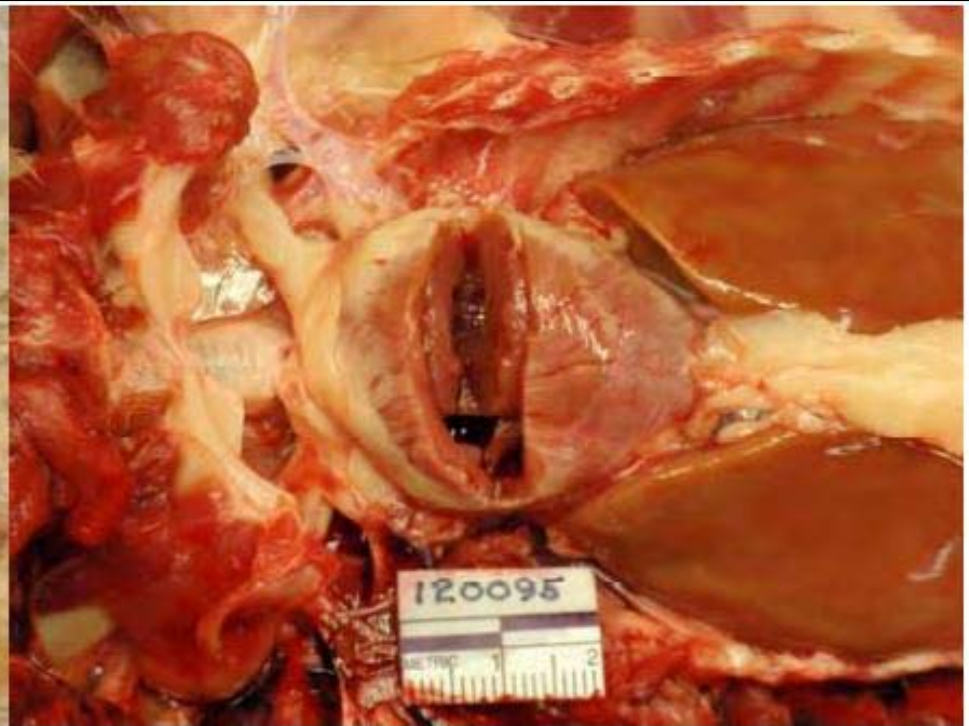
- Candidate T&E Spp. Calif.
- 46/58 positive SGARs
- ARs pass to kits via milk
- Source pot farms
- Collaboration of Integral Ecology Res Ctr, UCD, UCB, USFS, CAHFS, & Hoopa Tribal Council





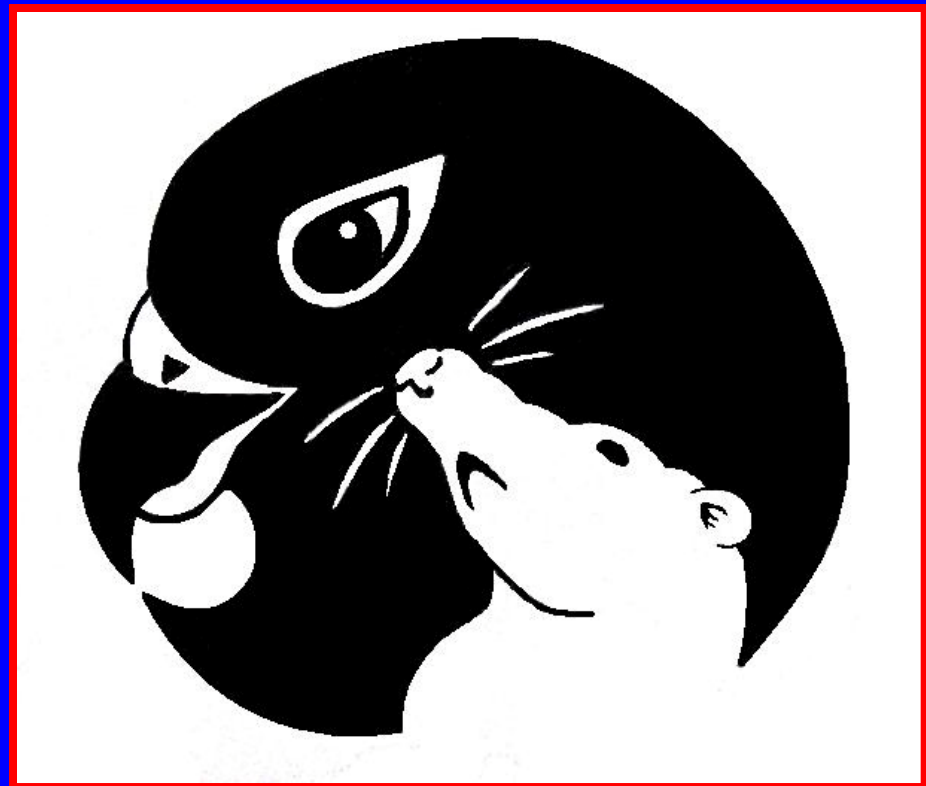
**HUMBOLDT COUNTY**  
passed anti-rodenticide  
resolution in 2013.

Summer 2012 – Pale  
Male's mate found  
dead in Central Park  
– necropsy showed 3  
ARs in her liver.  
About to lay 1<sup>st</sup> egg.



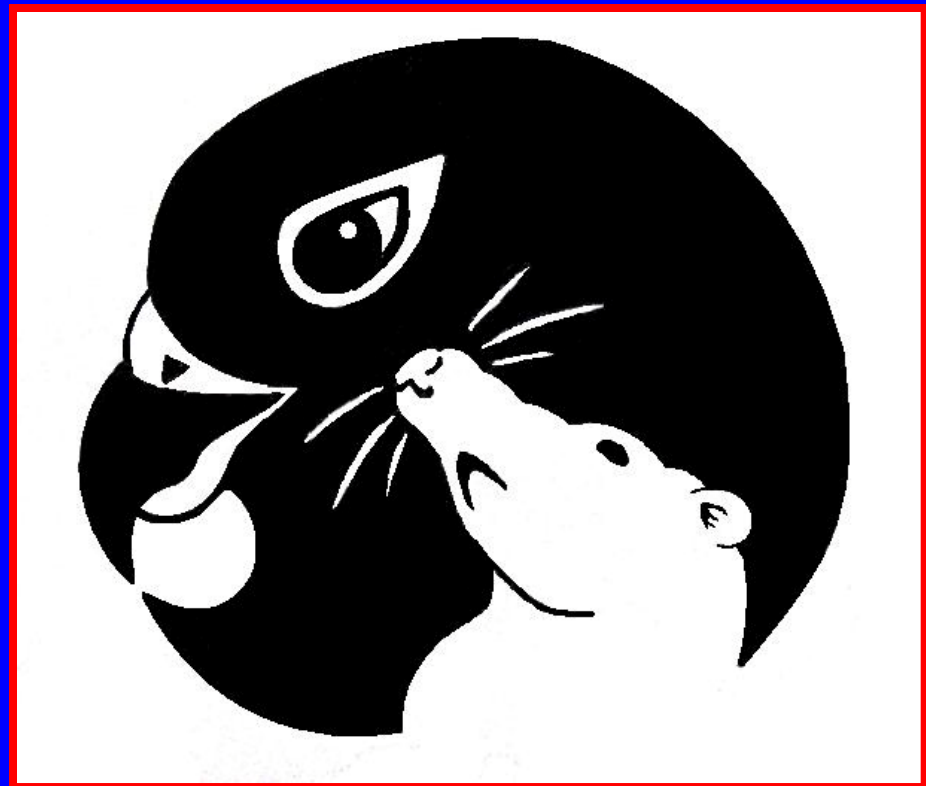
## In three years, **R.A.T.S.** has:

- Built a coalition of anti-rodenticide interests
- Helped passed 14 city and 2 county resolutions
- Produced 2 PSA videos
- Innovative media
- Gained 501c3 status from Earth Island Institute



# In the future, **R.A.T.S.** hopes to:

- Build a bank for cost of necropsies (\$120 per carcass)
- Help build a coalition of veterinarians
- More civic resolutions
- Press a chainstore to go NON-SGAR
- Work on alternatives
- Work on bait boxes
- Work on agriculture
- Support DPR/EPA





## **IS this DDT All Over Again?**

**Far better:** Wider interest, scientific evidence, environmental protection agencies & laws that didn't exist in 1962.

**Far worse:** EPA collecting evidence to halt homeowner access to SGARs for 10+ years, now expecting 2 years of legal wrangling with Reckitt Benckiser. Still need to get rid of bait-boxes, minimize agricultural and industrial SGAR use.

July 2012 -- Why is this man smiling?

Peets CEO  
Patrick  
O'Dea just  
sold Peets  
for a billion  
dollars.

Johan A  
**Benckiser**  
Investment

10.5%  
owner of  
Reckitt  
Benckiser  
(40 billion  
dollars)





Thank you for time & remember to get outside  
and watch raptors!



Thanks to Siobhan Ruck, Buzz Hull, Greg Gothard, Jeff Poklan, Walter Kitundu, David Jesus, George Eade, Bill Schmoker, Ned Harris, Barb Samuelson, Joe Naudzun, Tony Brake, Jenny Ross, & others for photographs.

I FOUND OUT D-CON  
RODENTICIDES HURT LOCAL  
RAPTORS SO I SWITCHED  
TO A MORE ENVIRONMENTALLY  
SAFE WAY OF GETTING RID  
OF RATS AND MICE.

WHAT'S  
THAT?



LOCAL  
RAPTORS.

