Long-term, Single-Site, Charismatic Bird Species Monitoring with Stable Staffing in an Environmentally Liberal Region – ***Volunteers & the GGRO***

Allen M Fish & Buzz C Hull
& 2200 citizen scientists

PPSR – UC Davis 2013

GOLDEN GATE RAPTOR OBSERVATORY

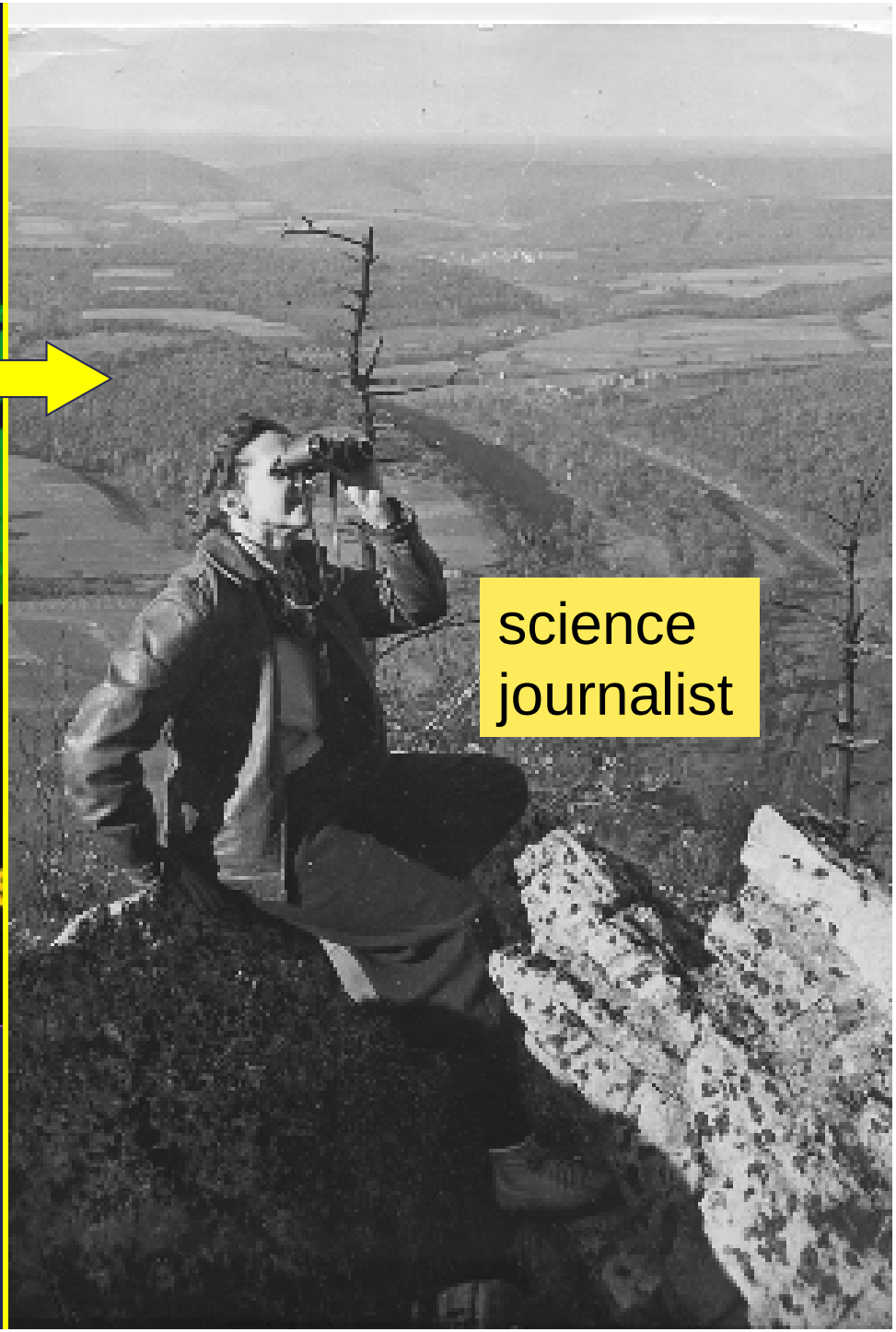
GGRO is a program of the Golden Gate National Parks Conservancy

in cooperation with the National Park Service.

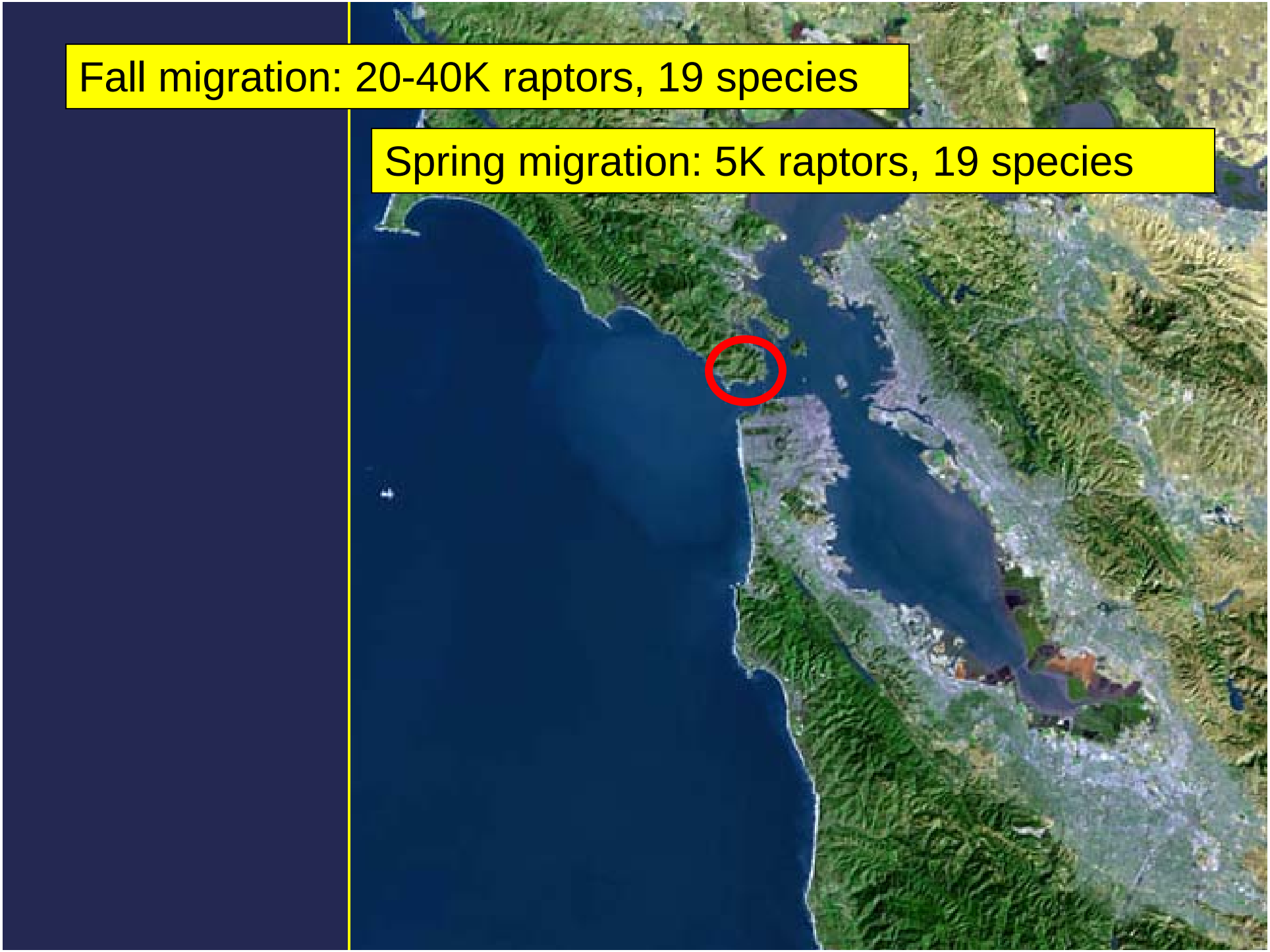
Male Northern Harrier

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

Raptor



1972 -- Laurence Binford (CAS) locates the Marin Headlands hawk migration.


Fall migration: 20-40K raptors, 19 species
Spring migration: 5K raptors, 19 species


By 1984, the GGRO was formed . . .
to inspire preservation of California's raptors through scientific monitoring, tracking, and public education;
GOLDEN GATE
RAPTOR
OBSERVATORY

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

Odwalloculars!

GGRO RESEARCH

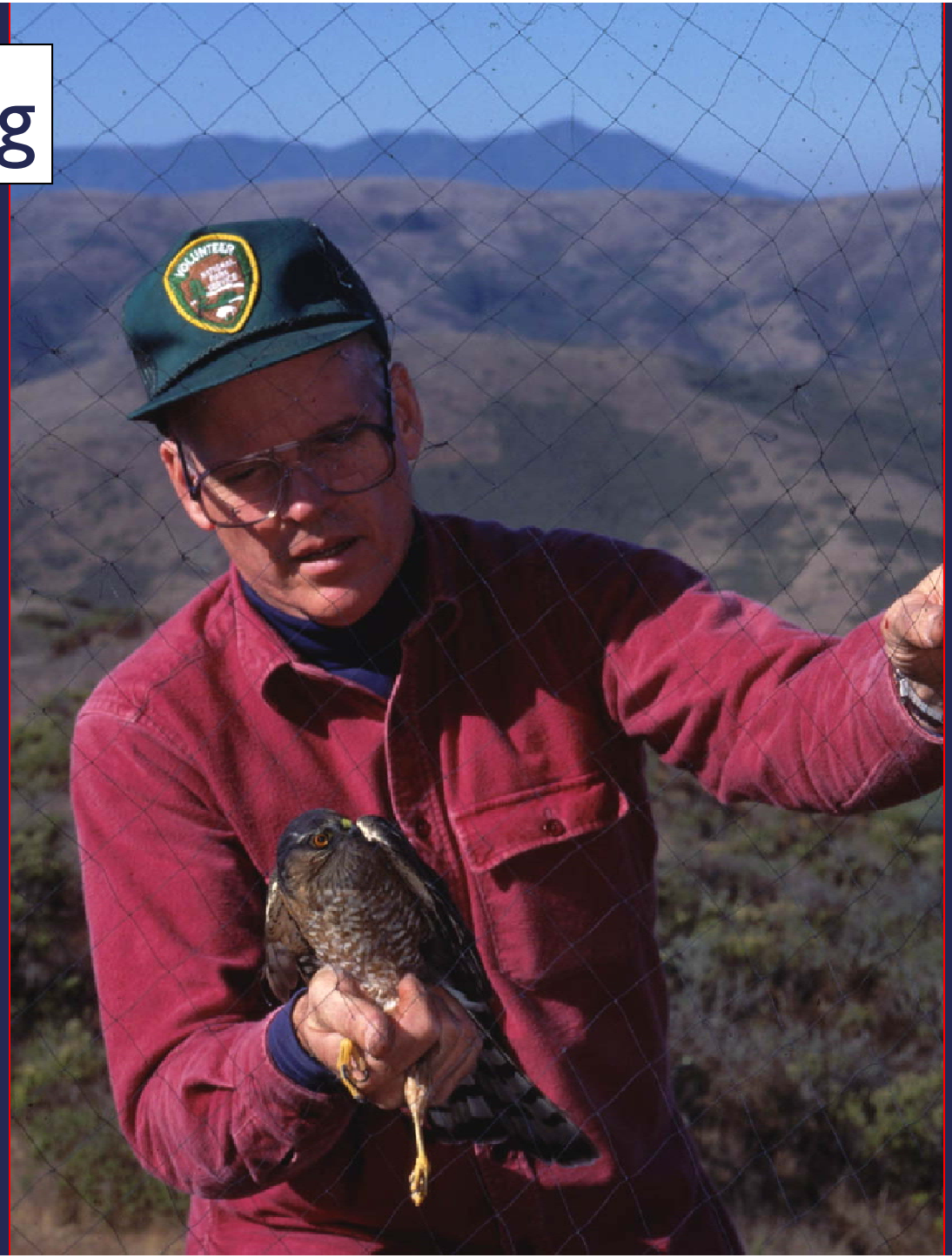
- Hawk counting
- Banding
- Radio-tracking
- Nest monitoring
- Cell-phone/GPS tracking
- Specialized research


Hawkwatching

Peregrine Falcon

Season Total
Seasonal rph
Quadrant System Instituted
Yearly Sightings
Yearly Sightings Per Hour
250
200
150
100
50
0
0.6
0.5
0.4
0.3
0.2
0.1
0
1986
1989
1992
1995
1998
2001
2004
2007
Year

Banding



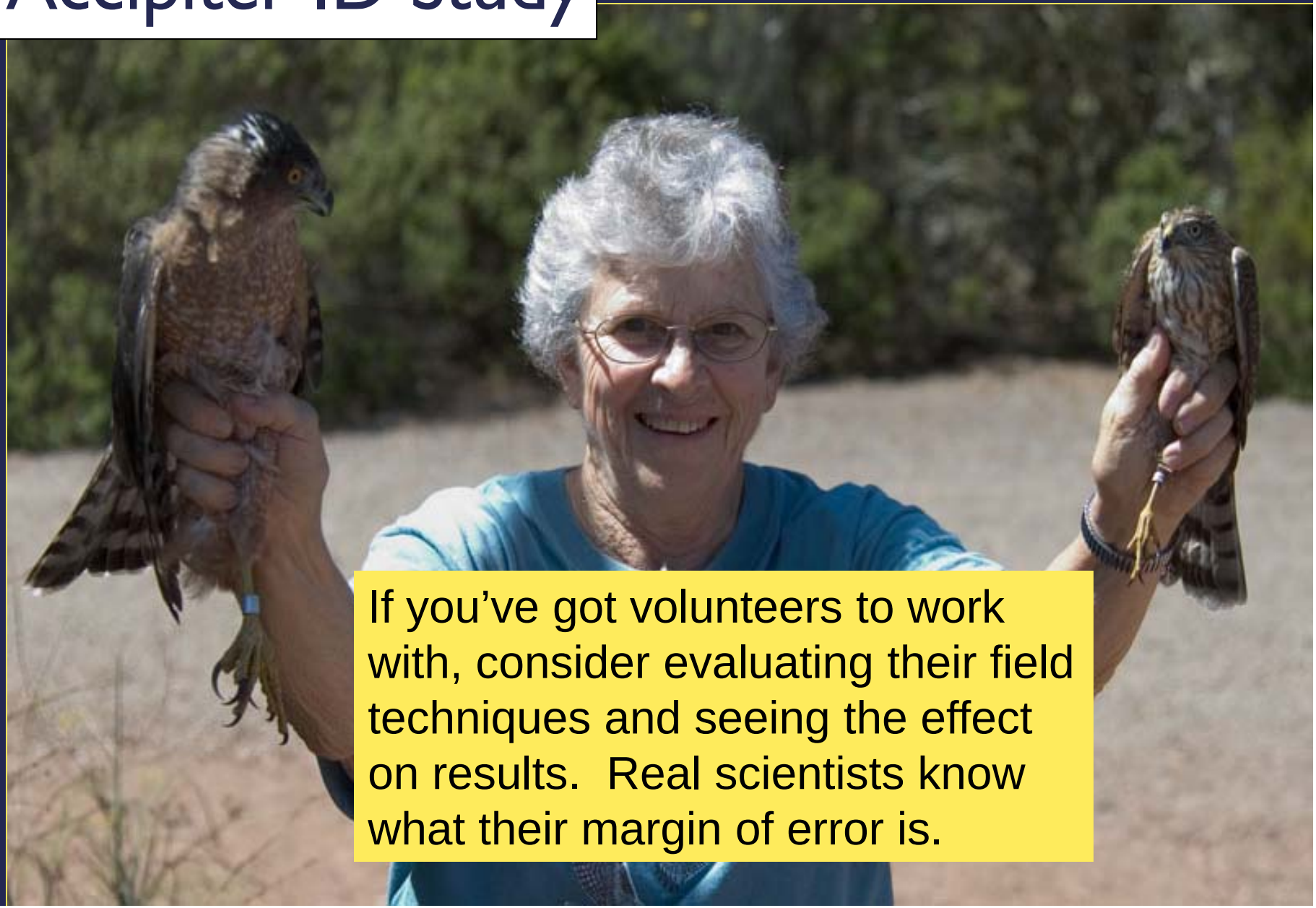
36,000+ hawks banded

1200 band recoveries

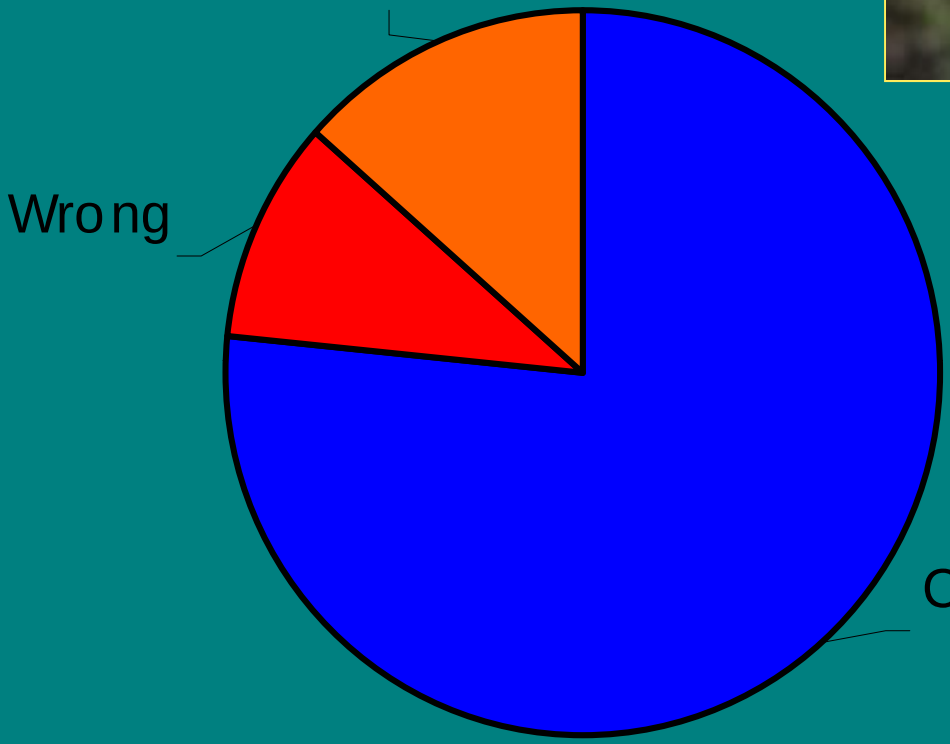
3% rate

BANDING is partly waiting for recoveries to show you migratory patterns but ALSO a HUGE opportunity to study the bird in hand: health, diseases, genetics. MUCH of our HARD SCIENCE are COLLABORATIONS.

Accipiter ID Study



If you've got volunteers to work with, consider evaluating their field techniques and seeing the effect on results. Real scientists know what their margin of error is.



Accipiter Identification 1994-2003

N = 1018

VOLUNTEER STRUCTURE

- Daily data collection, Aug-Dec
- 1 LONG day every other week
- 1 class of vols each year
- April-May: Recruitment
- June: Interview & notify
- July-Aug: Trainings
- 2-year apprentice; no guarantee about being invited back
- Heavily dependent on volunteer MIDDLE MGMT – Dayleader system.

STATS & HIGH POINTS

- More than 2200 vols in 30 years
- 44,000 vol hours annually
- Annual retention 75-80%
- 30% are 10-years+
- 56% women, more in banding
- 85+ scientific presentations & publications
- 10K visitors/yr; 90 classes/yr
- Other scientific & conservation impacts: collaborations; agency consultations, conservation campaigns, college classes
- WE ARE a nexus of raptor obsession

LESSONS LEARNED

- Not all programs get equal staff time; we get stretched – but be clear what your baseline operations are
- Volunteer contract that includes job description & at-will closure
- Constantly data-check
- Keep data collection simple
- Deadwood (1 in 20); Vols from Hell (1 in 500)
- No-shows (2 times & you're out)
- Don't chase volunteers
- Engage college interns

MORE LESSONS

• Twice annual newsletters to donors, colleagues, professionals in the field, etc. Make it professional & GIVE it AWAY.

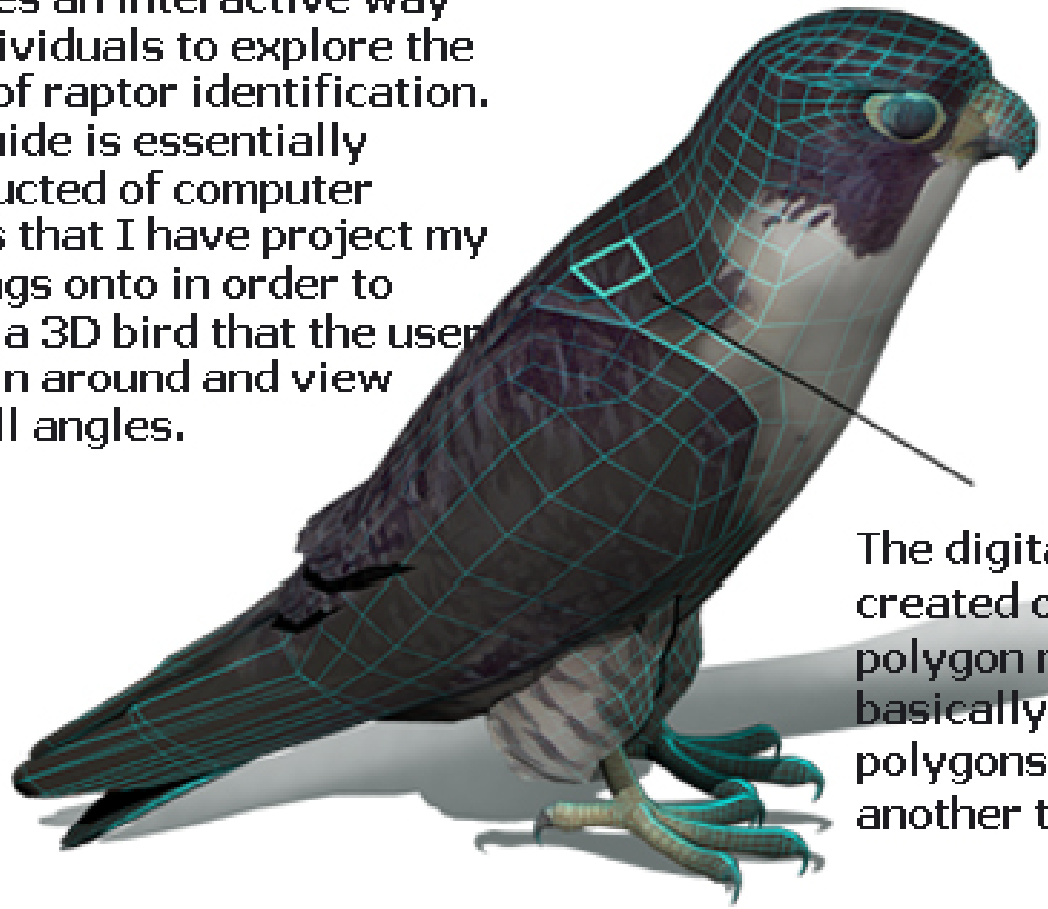
• Monthly newsletters or communications to volunteers.

• Whose interest is being served? Both. A good match means that this COLLISION of INTERESTS is compatible. If not, fire the vol.

•Vols are NOT cheap labor; they are an expensive investment in community. So why do that?

VOLUNTEERS bring something unpredictable…

This sample page of my online 3D hawk field guide provides an interactive way for individuals to explore the world of raptor identification. This guide is essentially constructed of computer models that I have project my paintings onto in order to create a 3D bird that the user can spin around and view from all angles.

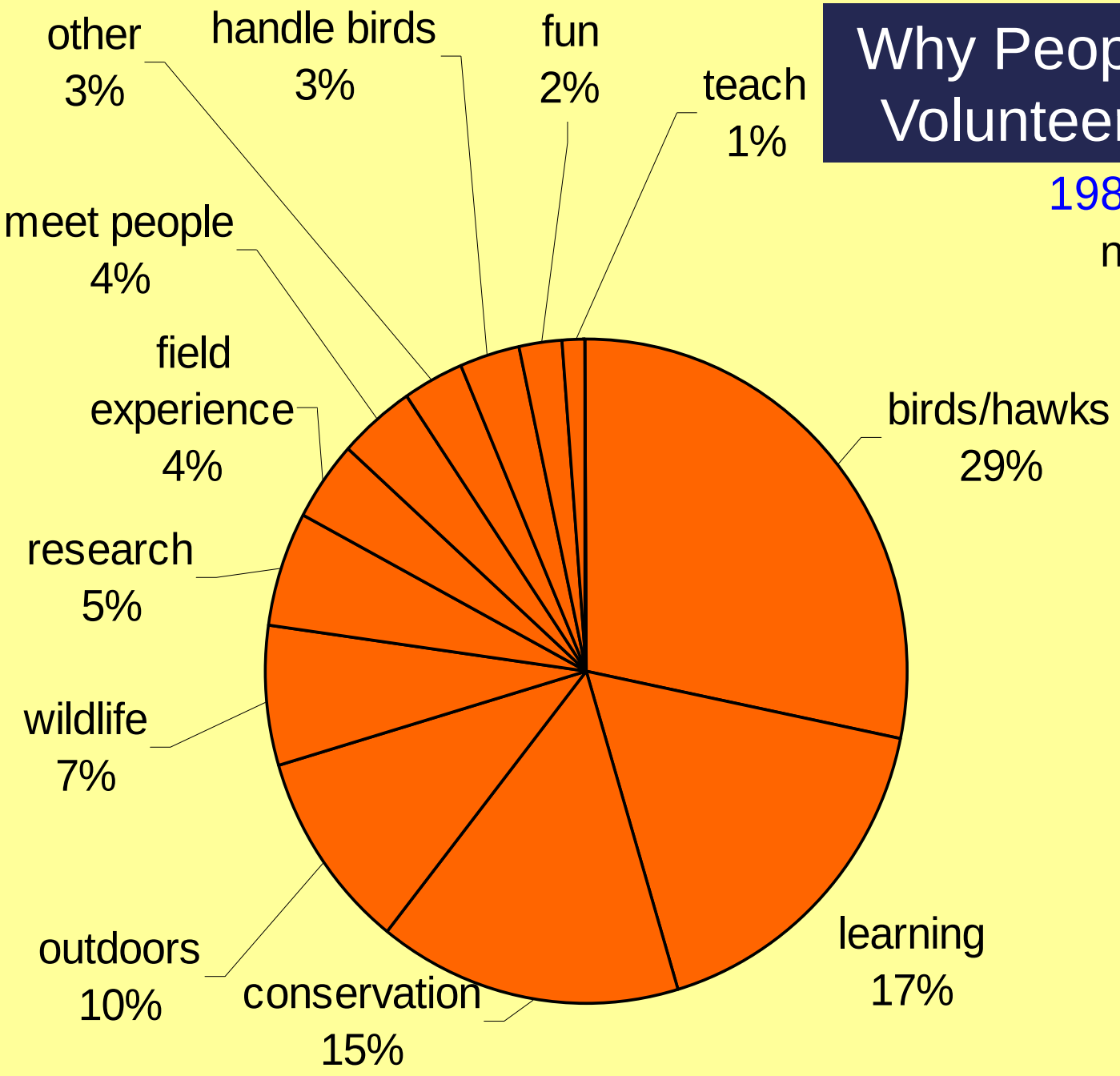


The digital hawk model is created out of a wireframe polygon mesh, which is basically a number of polygons attached to one another to create an object.

Why People SAY they Volunteer for GGRO

1983 - 2003

n = 806



VOLUNTEERS are looking to contribute to effective science & conservation. They want to feel valued; to feel connected, & to have an authentic experience.

Public

em**P**owered

in **S**ervice

of a **R**esult

Good science is tense even without the public in the room.

- Hypothesis testing
- Long tedious repetition
- Professional review
- The pretense of objectivity
- The sublimation of passion
- Windowless laboratories