Multi-species Baseline Initiative

see what's out there...

N184CH

Multi-species Baseline Initiative Partner Organizations

Washington Department of Fish and Wildlife

Forest Service U.S. Department of Agriculture

Rocky Mountain Research Station

U.S. Fish & Wildlife Service

Vandals University of Idaho

sole

Potlatch

Scotchman Peaks Wilderness

Idaho Department of Lands

Idaho Conservation Office of Species Conservation

Kalispel Tribe of Indians

Hancock Forest Management®

A Division of Hancock Timber Resource Group, A Manulife Asset Management Company

Coeur d'Alene Tribe

Idaho Conservation League

Climate Impacts Group

British Columbia The Best Place on Earth | Ministry of Environment

U.S. Department of the Interior Bureau of Land Management

19 Target Species Listed in Idaho and Washington State Wildlife Action Plans

Study Area

919 5x5km cells

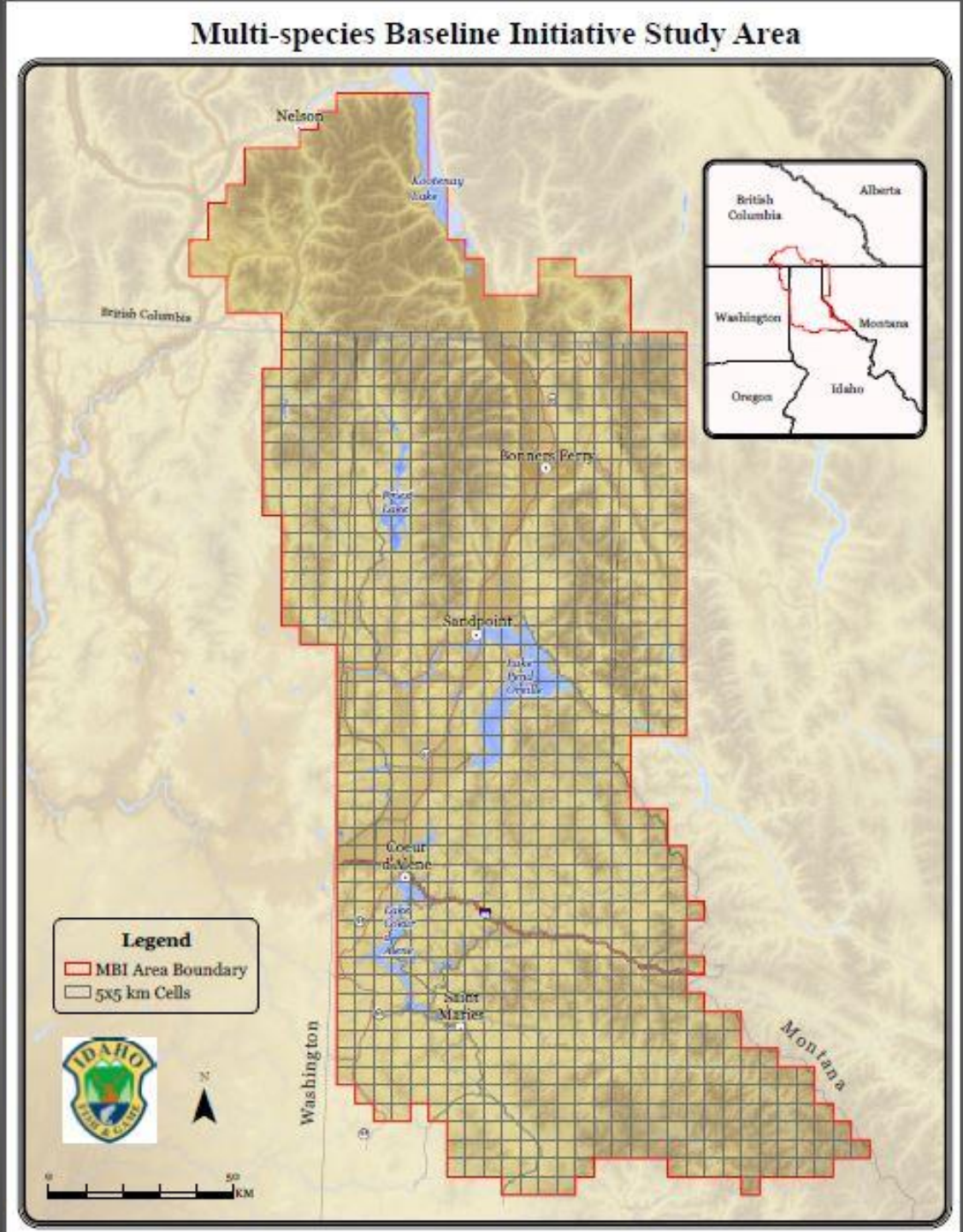
22,975km^2

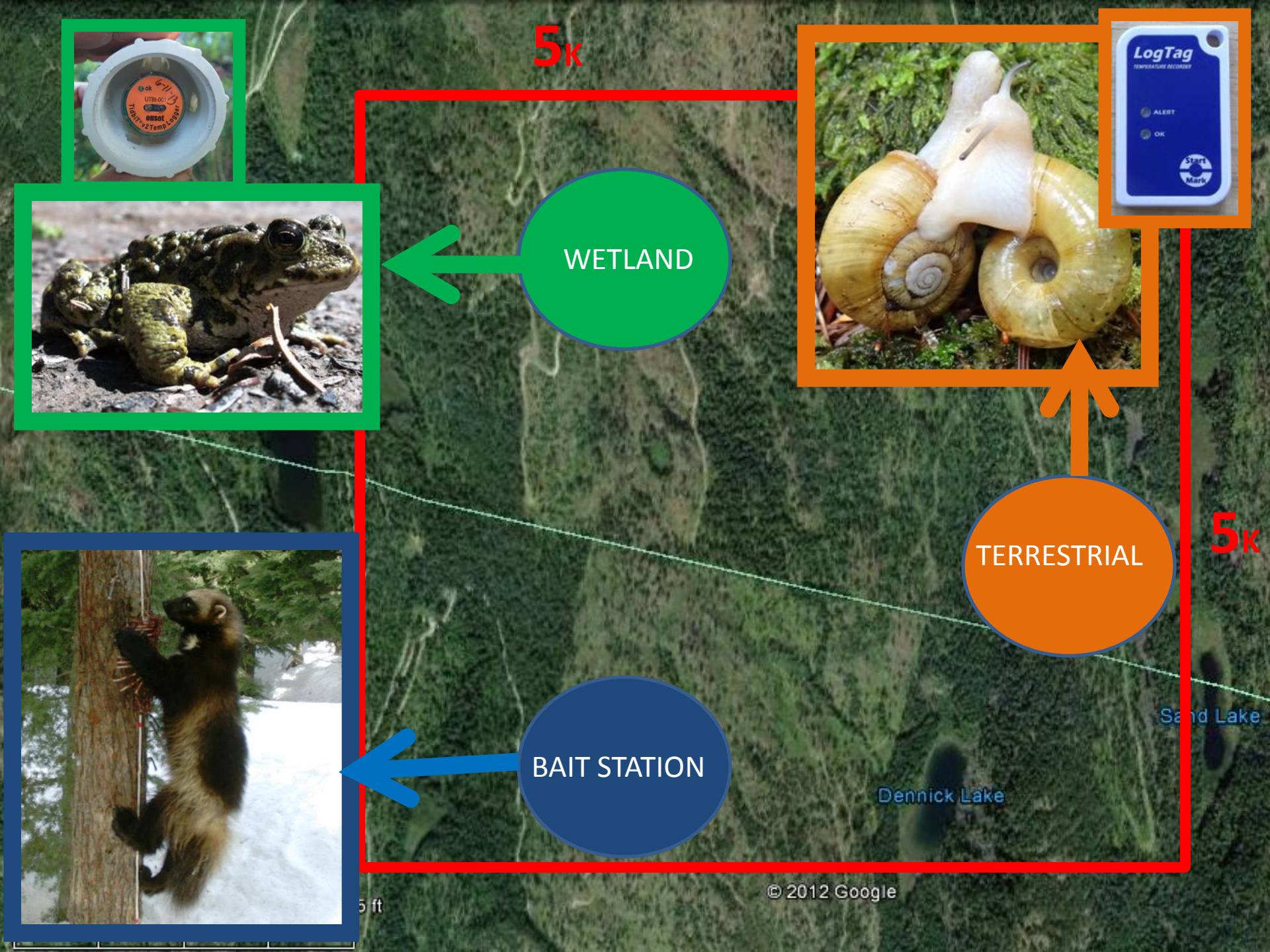
Phase I:

Baseline Survey 2010-2014

Phase II:

Long Term Multi-taxa Monitoring




5K
WETLAND
TERRESTRIAL
5K
BAIT STATION
Dennick Lake
© 2012 Google

Standardized surveys at 2,215 sites detected 182 species.

Micro-climate data loggers co-located at 1,169 wildlife survey sites.

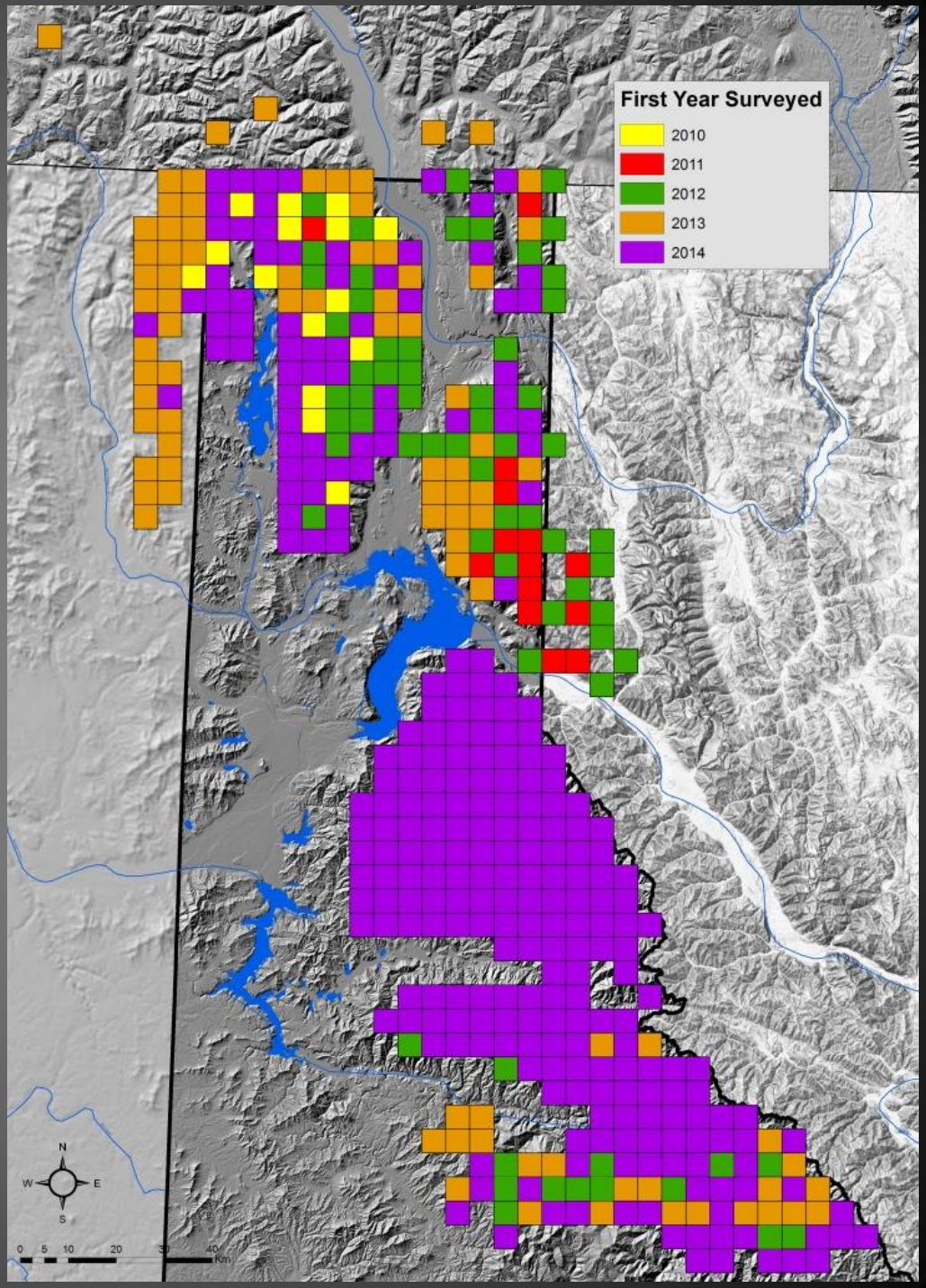
Taxa Detected

- **Gastropods**
- **Amphibians**
- Reptiles
- **Mammals**
- Birds
- Native Plants
- Exotic Plants
- Beetles

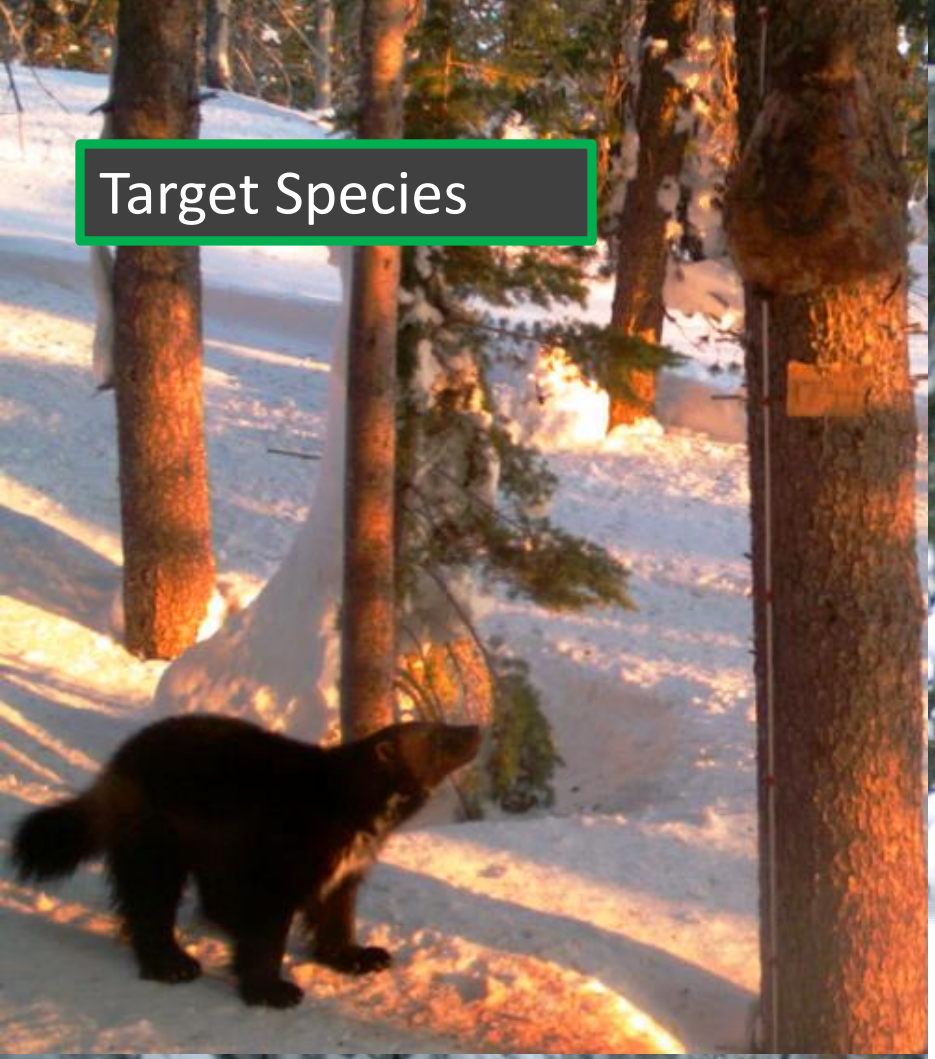
Methods:

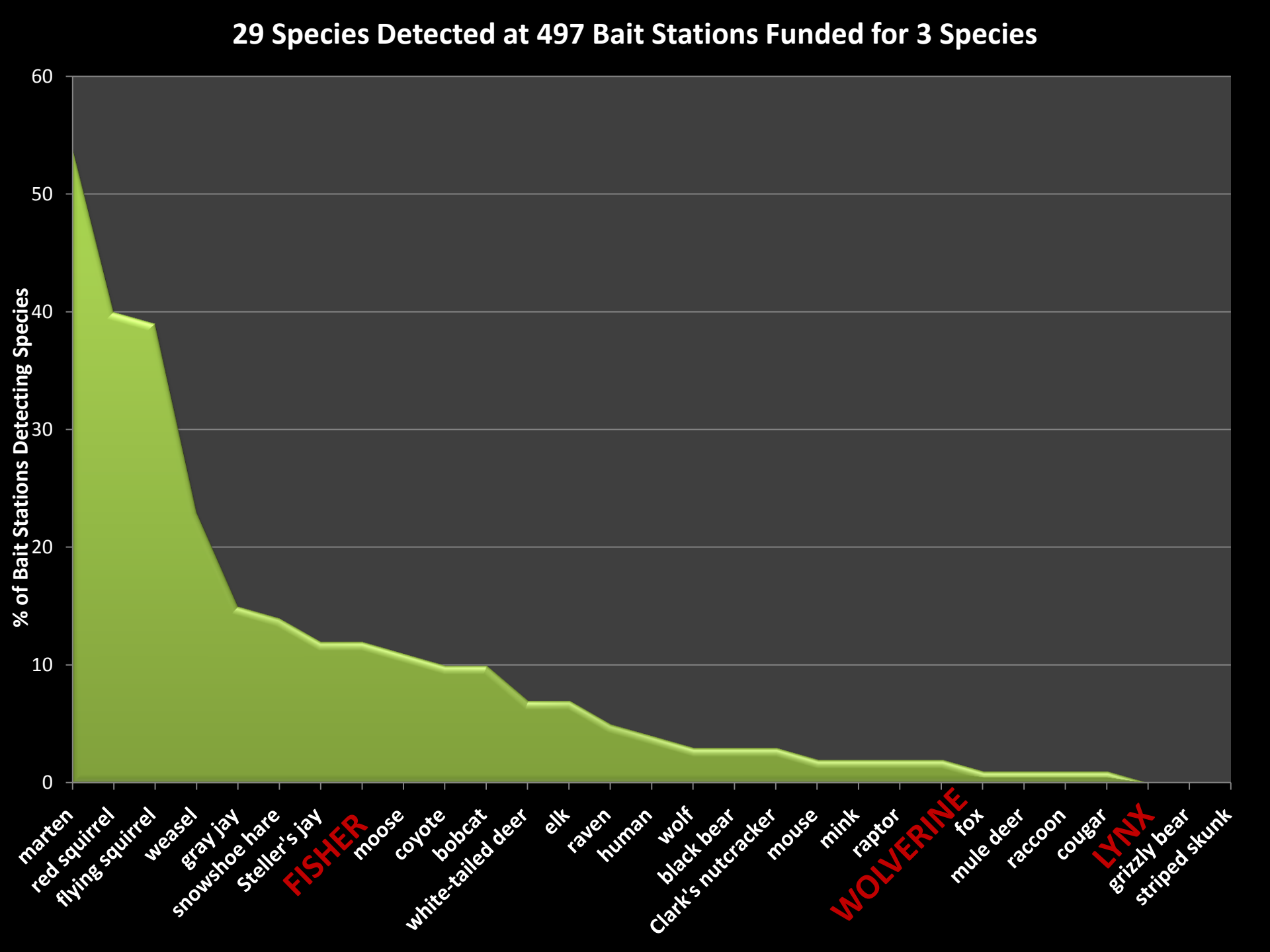
Bait Stations

2010-2014:
497 Stations in
453 cells



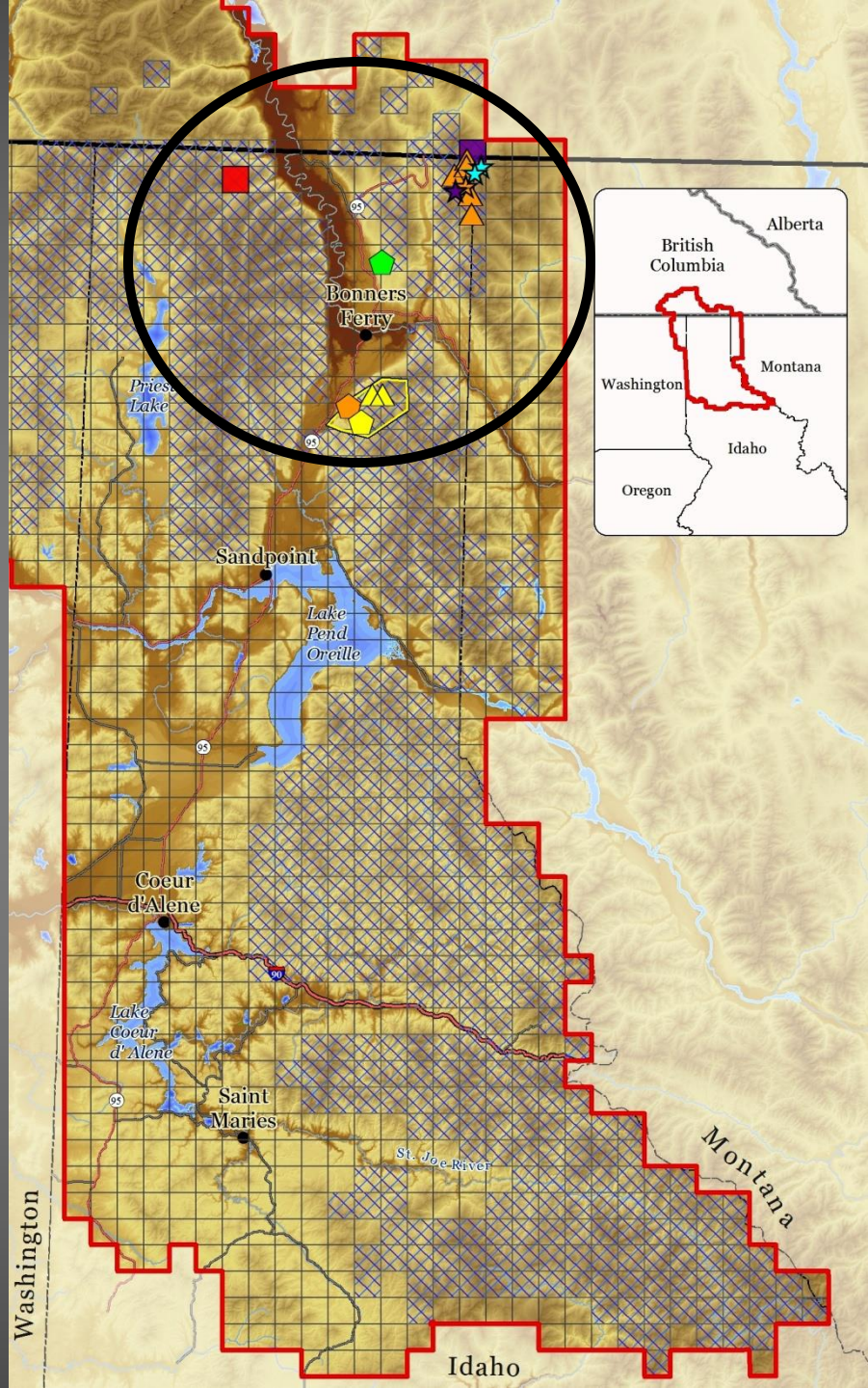
Target Species




29 Species Detected at 497 Bait Stations Funded for 3 Species
% of Bait Stations Detecting Species
60
50
40
30
20
10
0
marten
red squirrel
flying squirrel
weasel
gray jay
snowshoe hare
Steller's jay
FISHER
moose
coyote
bobcat
white-tailed deer
elk
raven
human
wolf
black bear
Clark's nutcracker
mouse
mink
raptor
WOLVERINE
fox
mule deer
raccoon
cougar
LYNX
grizzly bear
striped skunk

2010-14 Lynx Summary

5 individual animals



2010-14 Lynx Summary

5 individual animals

<u>2 Males</u>

Male 2010

Male 2011, 2012

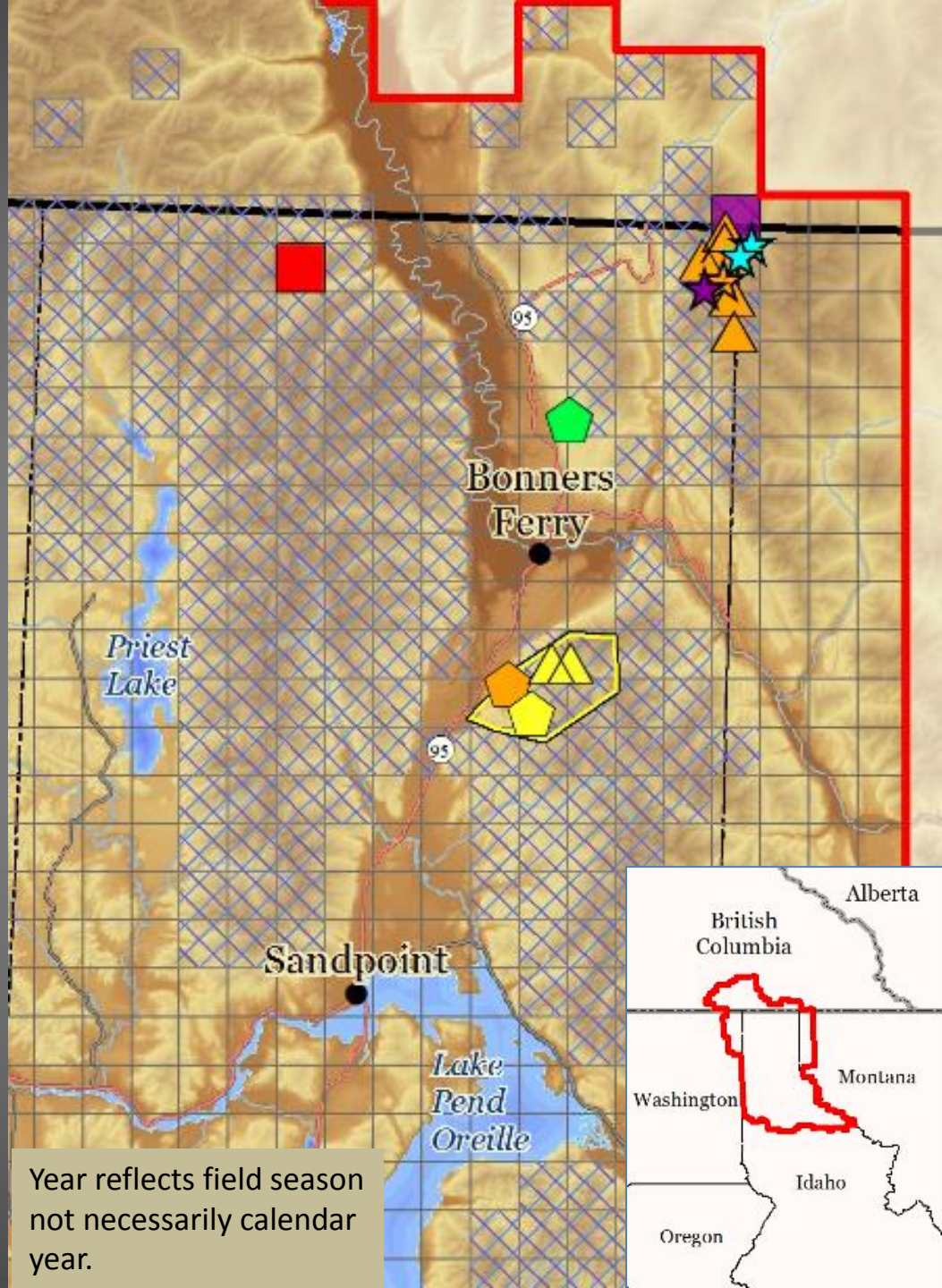
<u>3 Females</u>

Female 2013, 2014

Female 2013 (juvenile)

Female 2014, 2015 (adult)

Unknown Individuals



Year reflects field season not necessarily calendar year.

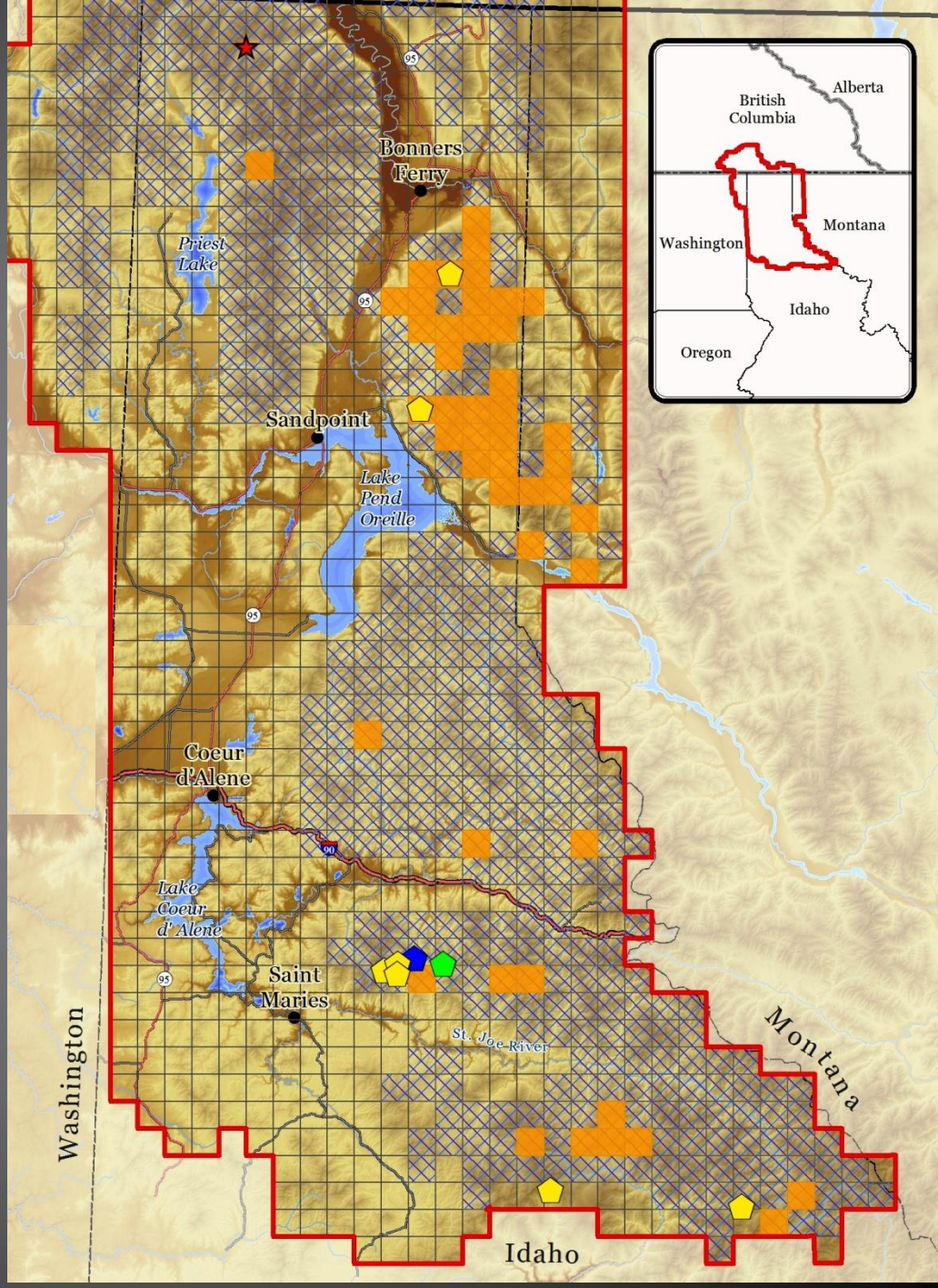
2010-14 Fisher Summary

46 Individuals Detected

Bait Station Detections
58 (12%) of 497 stations
47 (10%) of 457 cells

Opportunistic Detections
1 research live capture

9 incidental trapping mortalities
2013, 2014, 2015



2010-14 Wolverine Summary

3 Males Detected

Male1

Male2

Male3

Bait Station Detections

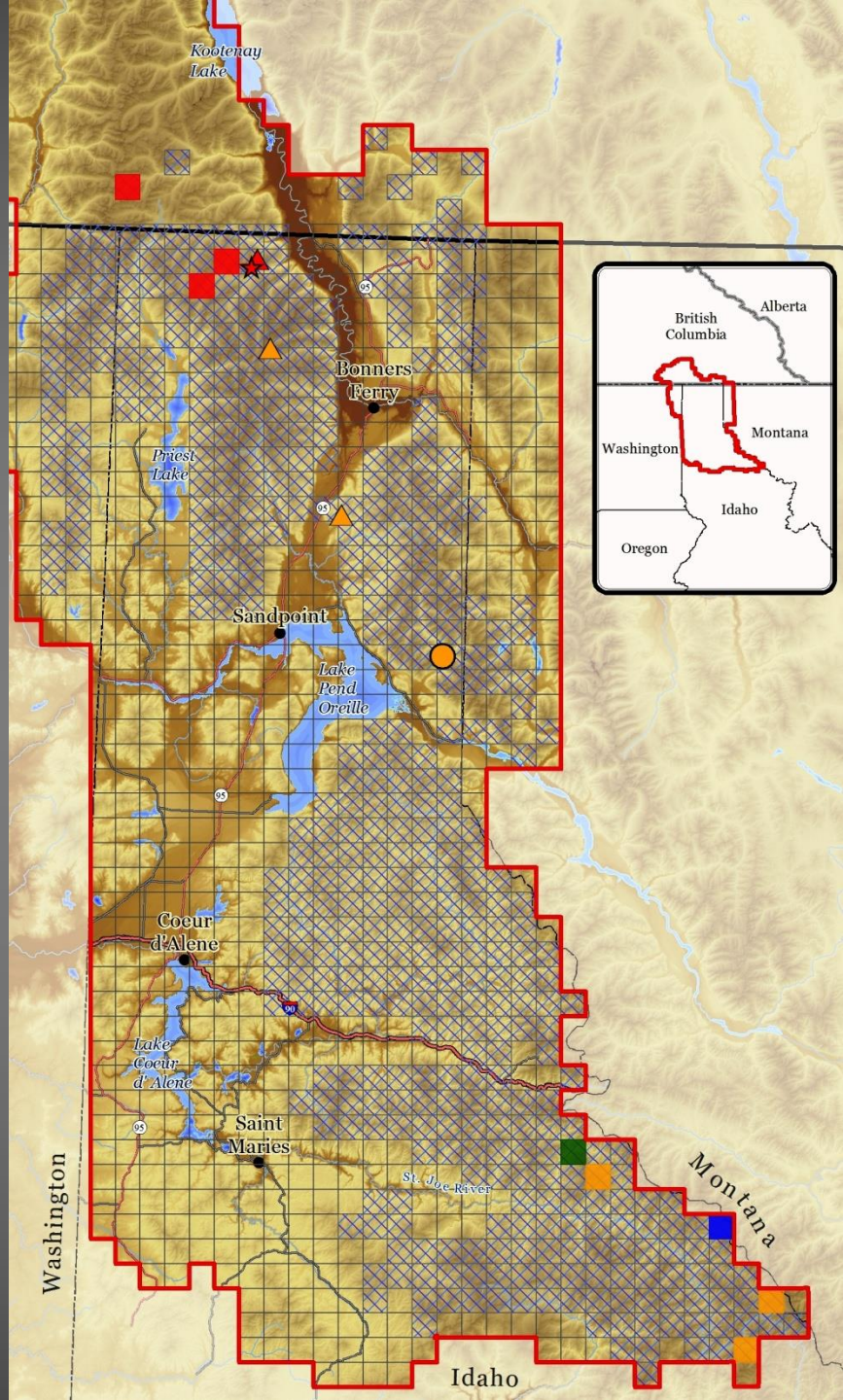
8 (2%) of 497 stations

8 (2%) of 457 cells

Opportunistic Detections

Verified tracks

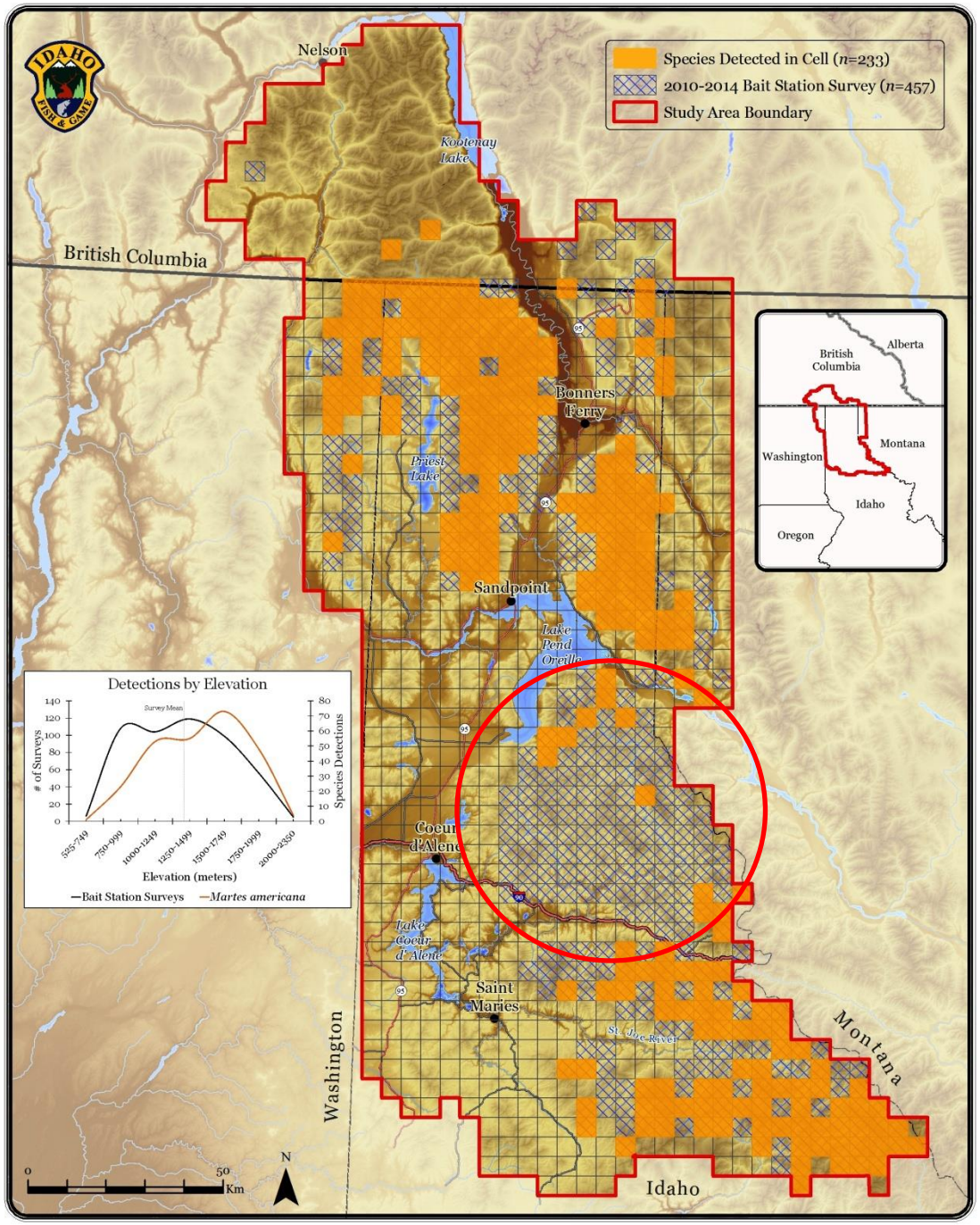
Remote camera images



Marten

Overall Detection Rate = 54%
Detection rate in CDA's = 12%
Detection rate outside CDA's = 63%

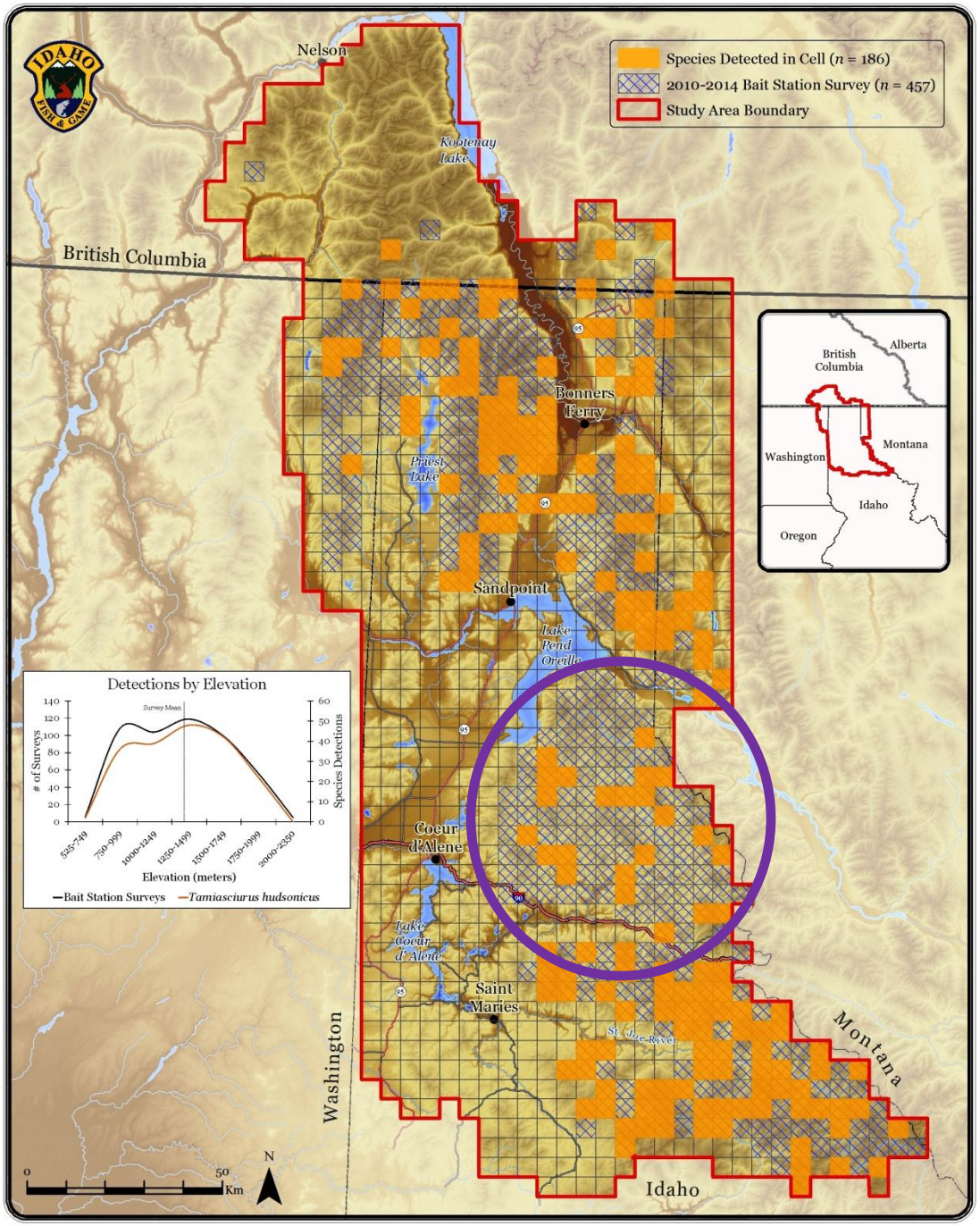
Multi-species Baseline Initiative: Marten (*Martes americana*) Detections



Red Squirrel

Overall Detection Rate = 40%
Detection rate in CDA's = 21%
Detection rate outside CDA's = 45%

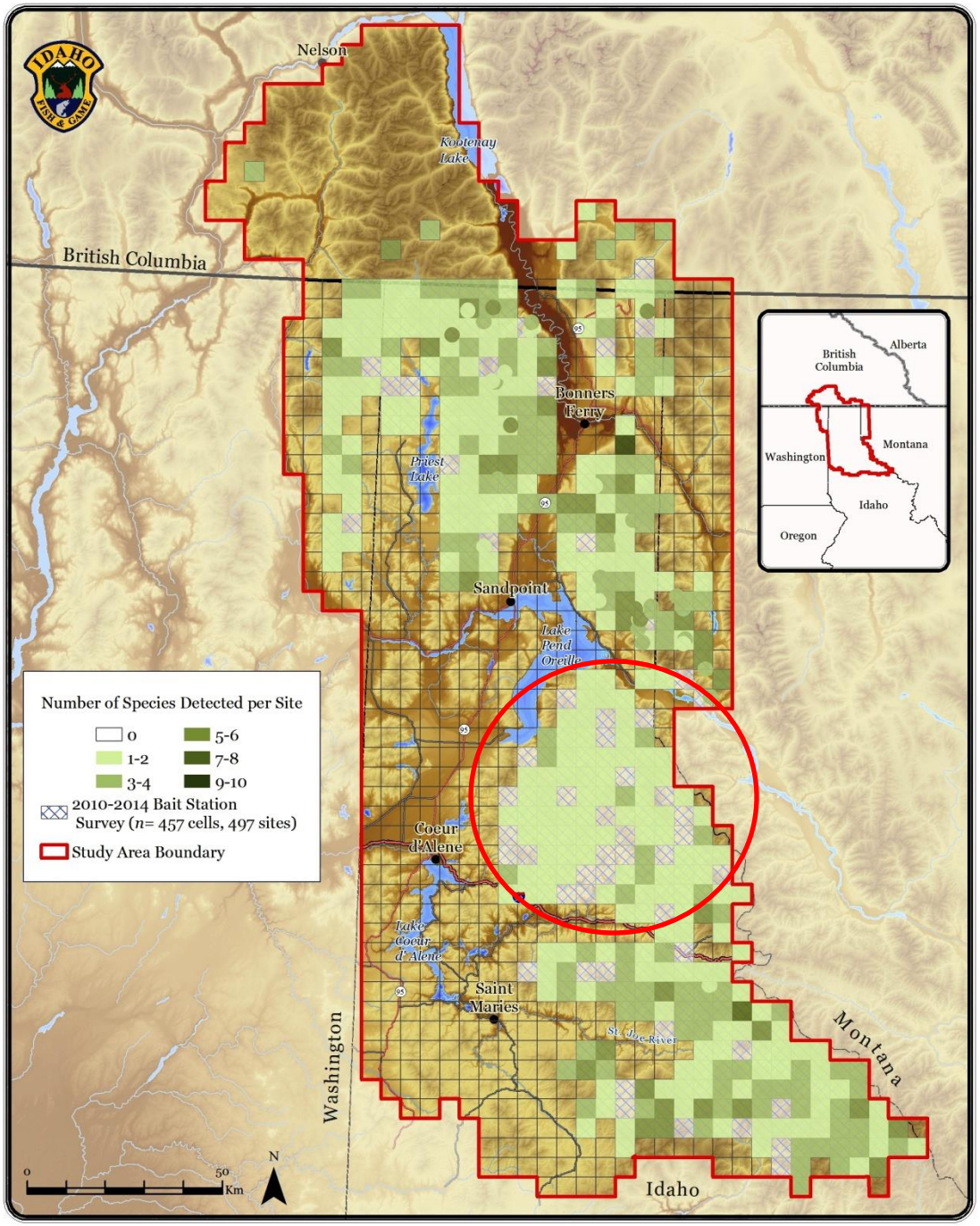
Multi-species Baseline Initiative: Red Squirrel (*Tamiasciurus hudsonicus*) Detections



Species Richness

Overall Mean # Species = 2.8
Mean in CDA's = 1.9
Mean outside CDA's = 3.0

Multi-species Baseline Initiative: Bait Station Species Richness



5K
WETLAND
LogTag
TERRESTRIAL
5K
BAIT STATION
Dennick Lake
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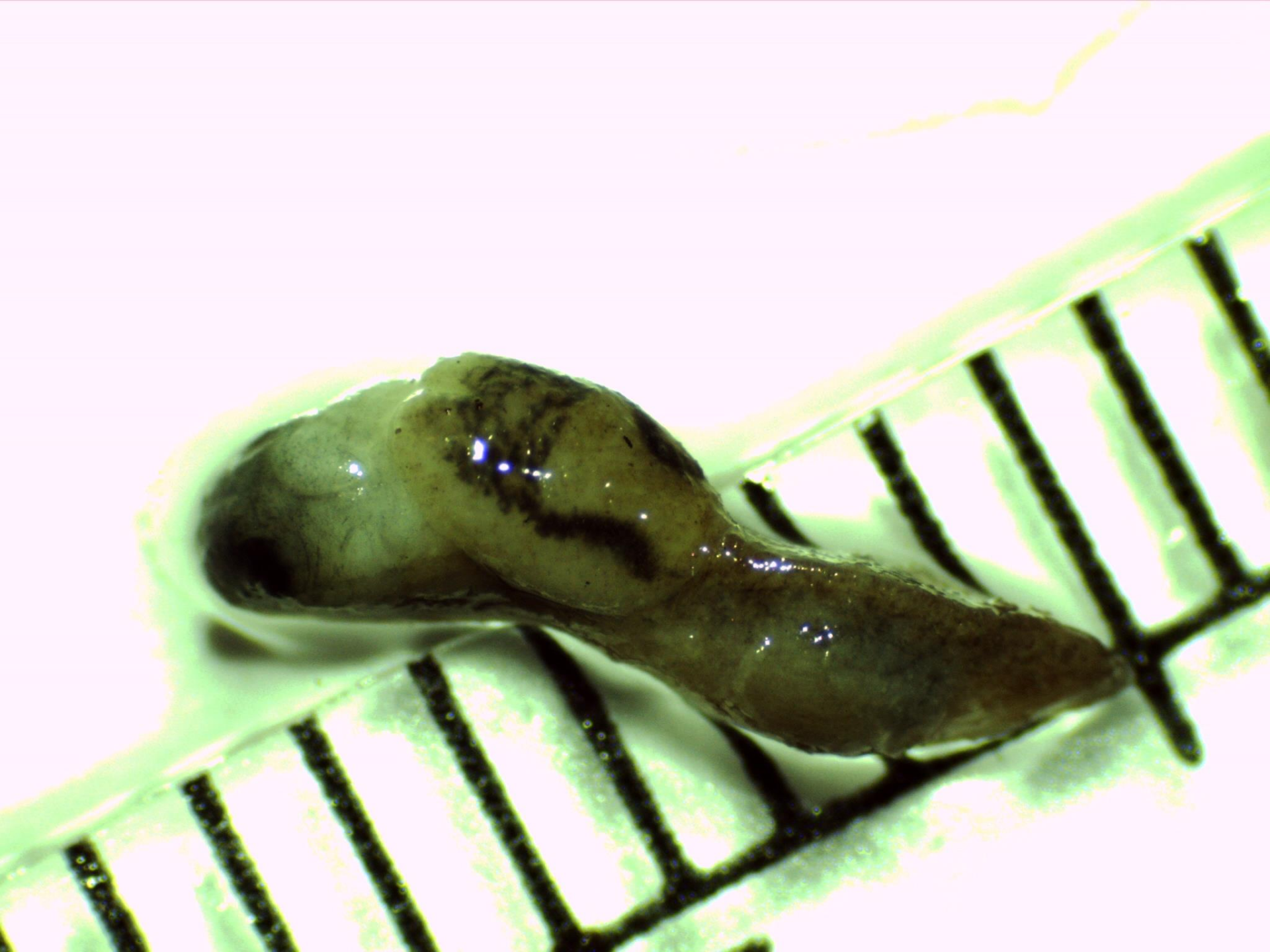
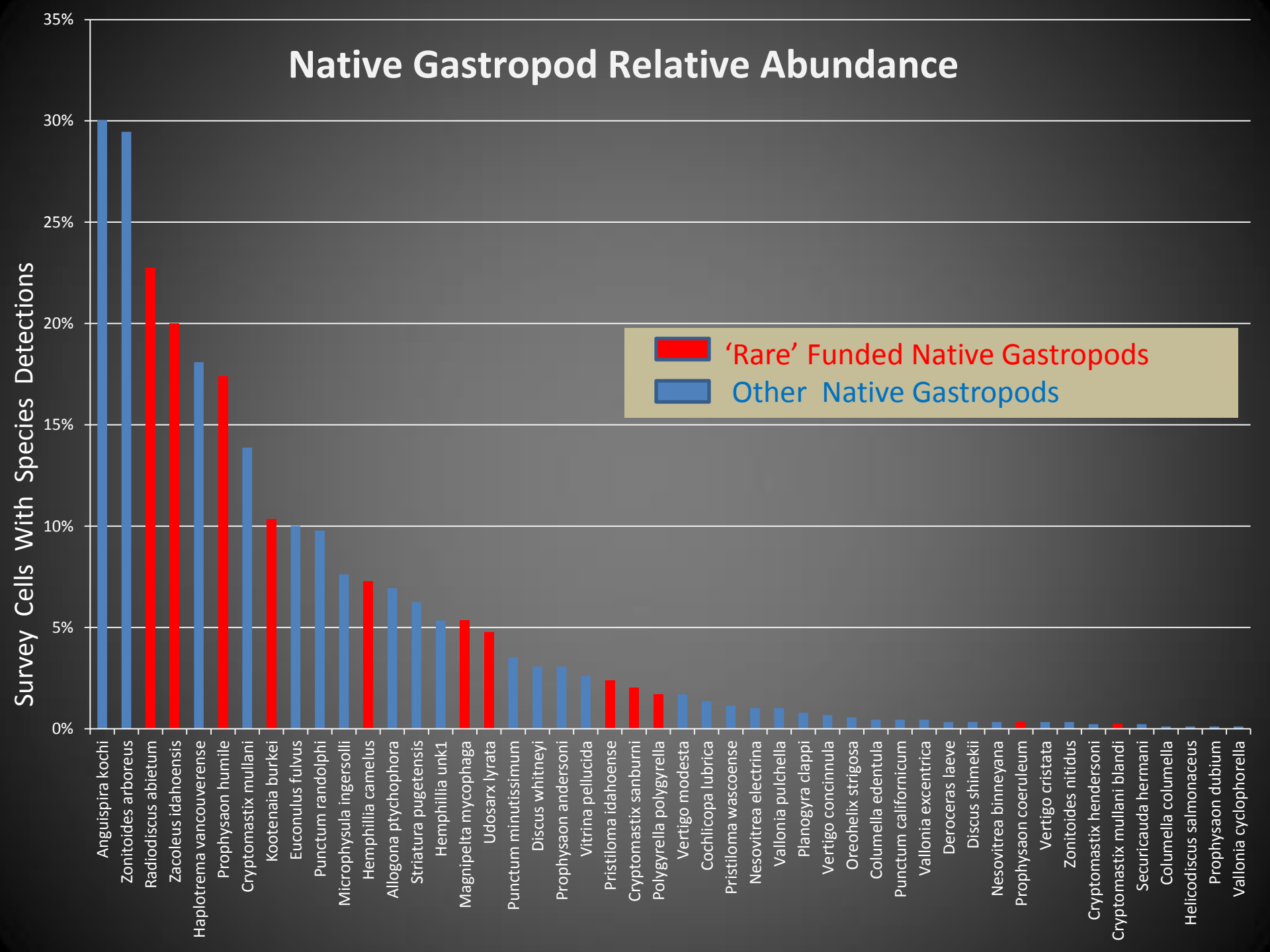
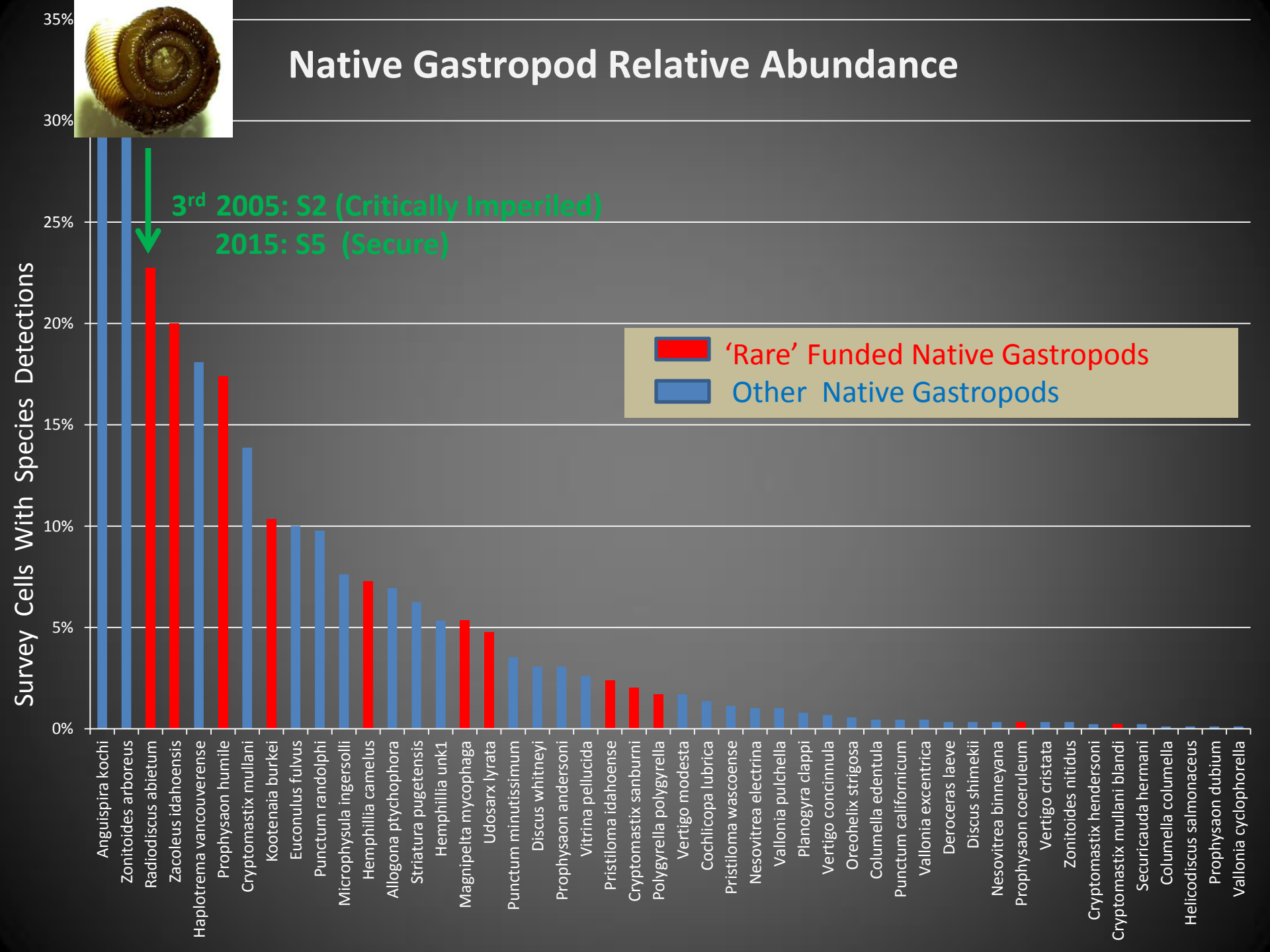
NUDE
BEACH
CARTOONSTOCK
.com
Search ID jcen819



9 mm


Native Gastropod Relative Abundance
Survey Cells With Species Detections
35%
30%
25%
20%
15%
10%
5%
0%
'Rare' Funded Native Gastropods
Other Native Gastropods
Anguispira kochi
Zonitoides arboreus
Radiodiscus abietum
Zacoleus idahoensis
Haplotrema vancouverense
Prophysaon humile
Cryptomastix mullani
Kootenaia burkei
Euconulus fulvus
Punctum randolphi
Microphysula ingersolli
Hemphillia camelus
Allogona ptychophora
Striatura pugetensis
Hemphillia unk1
Magnipelta mycophaga
Udosarx lyrata
Punctum minutissimum
Discus whitneyi
Prophysaon andersoni
Vitrina pellucida
Pristiloma idahoense
Cryptomastix sanburni
Polygyrella polygyrella
Vertigo modesta
Cochlicopa lubrica
Pristiloma wascoense
Nesovitrea electrina
Vallonia pulchella
Planogyra clappi
Vertigo concinnula
Oreohelix strigosa
Columella edentula
Punctum californicum
Vallonia excentrica
Deroceras laeve
Discus shimekii
Nesovitrea binneyana
Prophysaon coeruleum
Vertigo cristata
Zonitoides nitidus
Cryptomastix hendersoni
Cryptomastix mullani blandi
Securicauda hermani
Columella columella
Helicodiscus salmonaceus
Prophysaon dubium
Vallonia cyclophorella


Native Gastropod Relative Abundance
Survey Cells With Species Detections
35%
30%
25%
20%
15%
10%
5%
0%
3rd 2005: S2 (Critically Imperiled)
2015: S5 (Secure)
'Rare' Funded Native Gastropods
Other Native Gastropods
Anguispira kochi
Zonitoides arboreus
Radiodiscus abietum
Zacoleus idahoensis
Haplotrema vancouverense
Prophysaon humile
Cryptomastix mullani
Kootenaia burkei
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Securicauda hermani
Columella columella
Helicodiscus salmonaceus
Prophysaon dubium
Vallonia cyclophorella

LogTag
TEMPERATURE RECORDER
ALERT
OK

LogTag
TEMPERATURE RECORDER
ALERT
OK

Multi-species Baseline Initiative: Mean Annual Air Temperature Sept. 1 2013 - Aug. 31, 2014

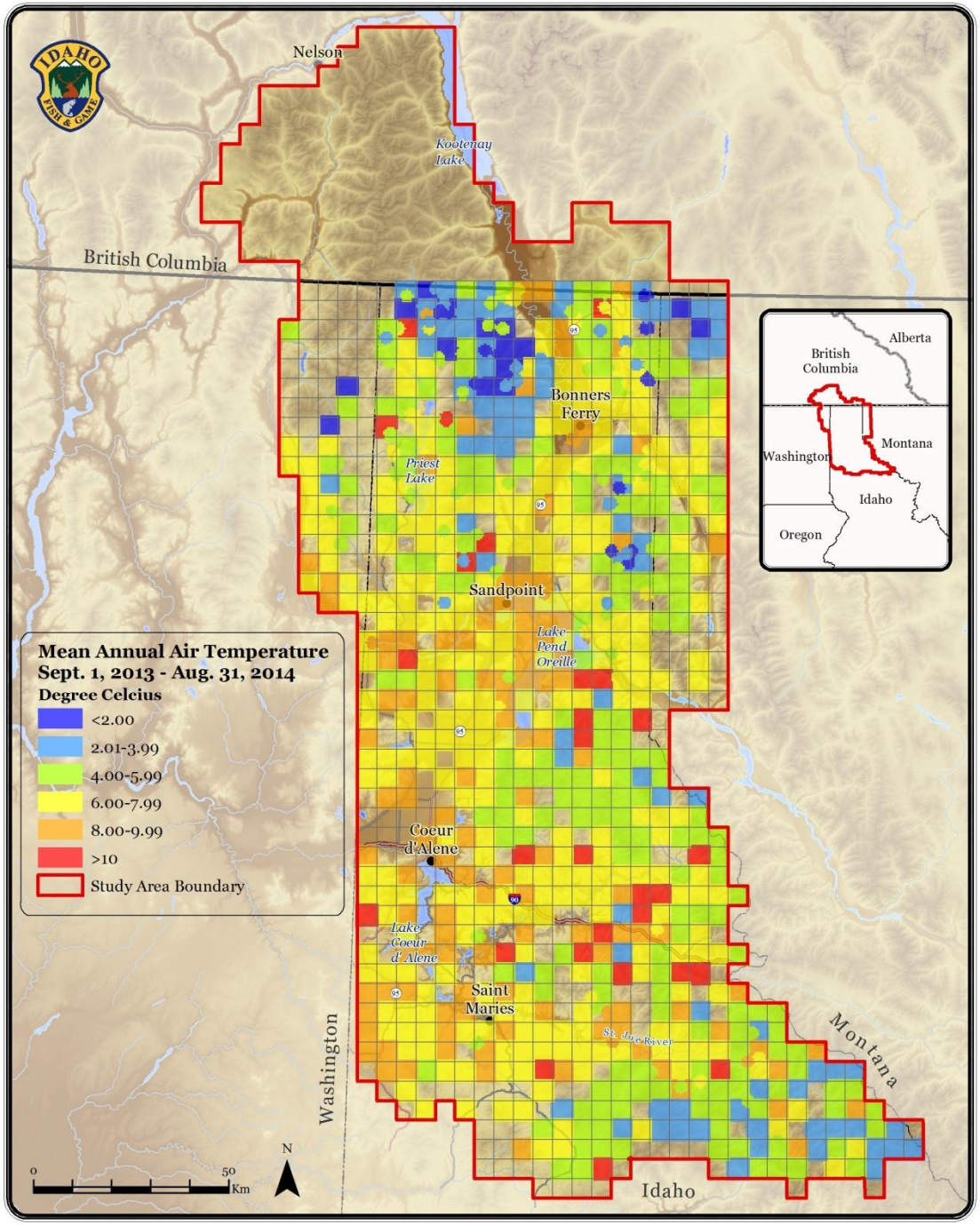
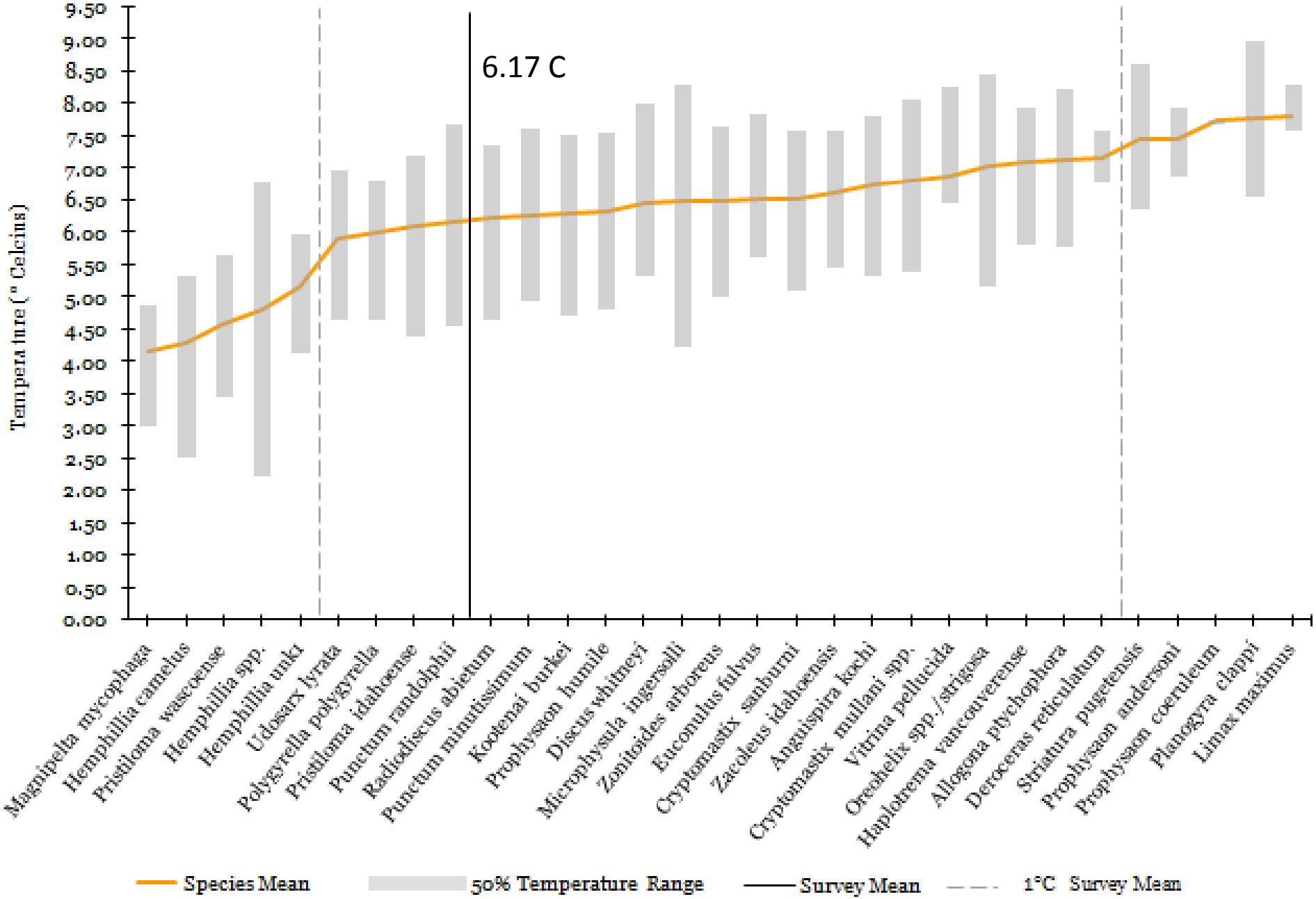
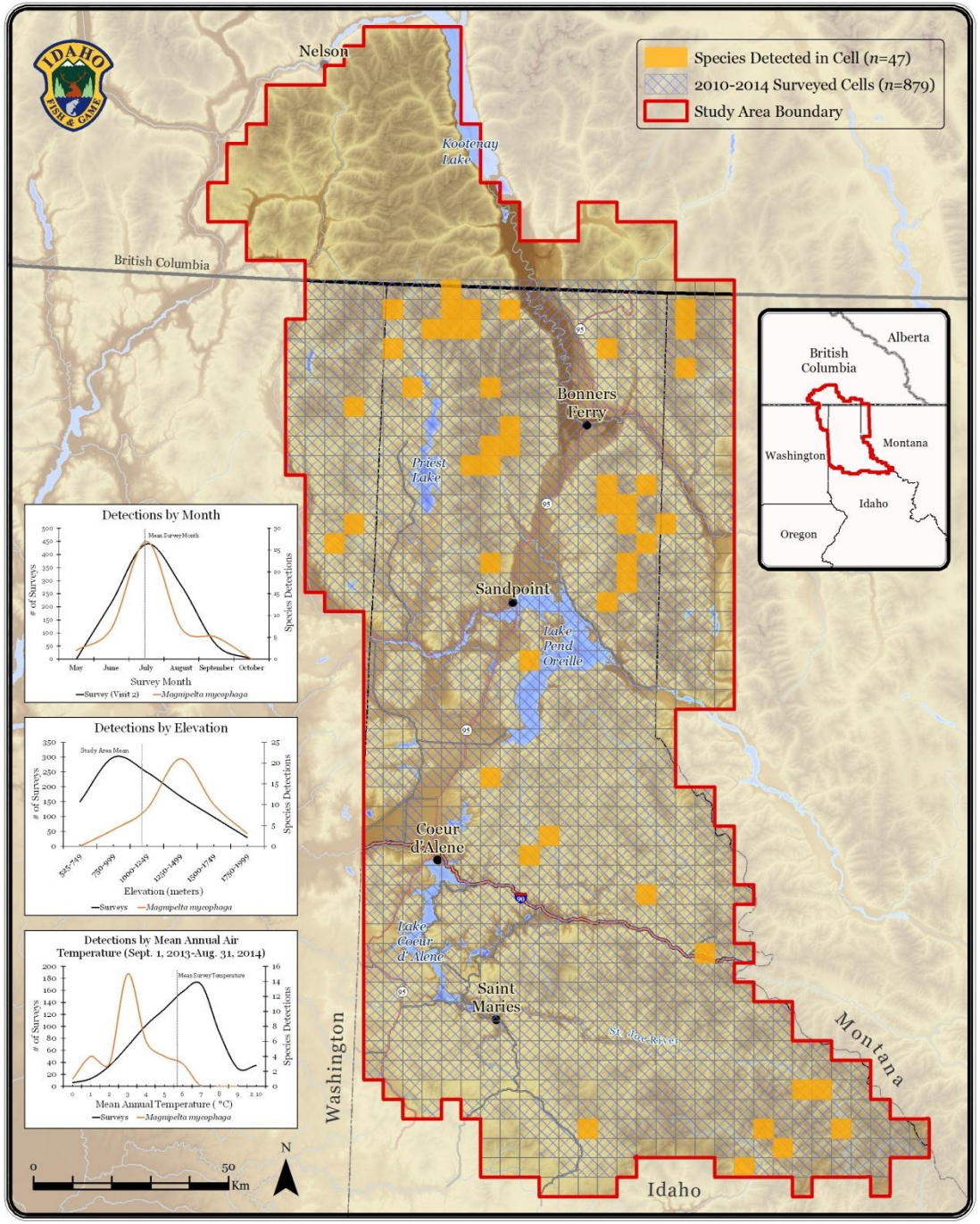
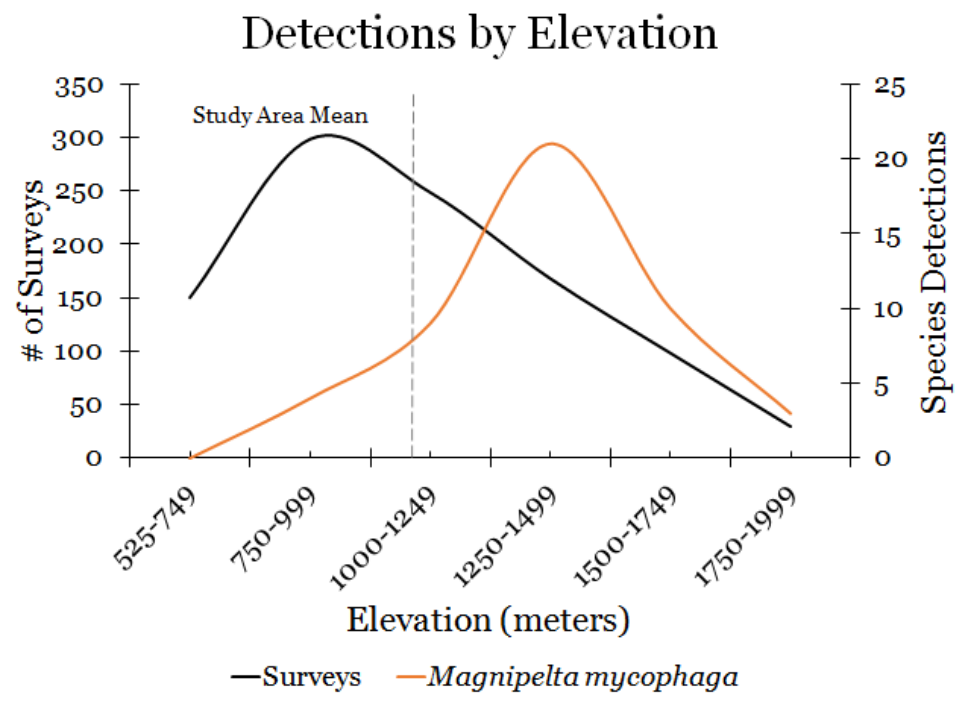


Figure 2. Mean and 50% temperature range of select gastropod species

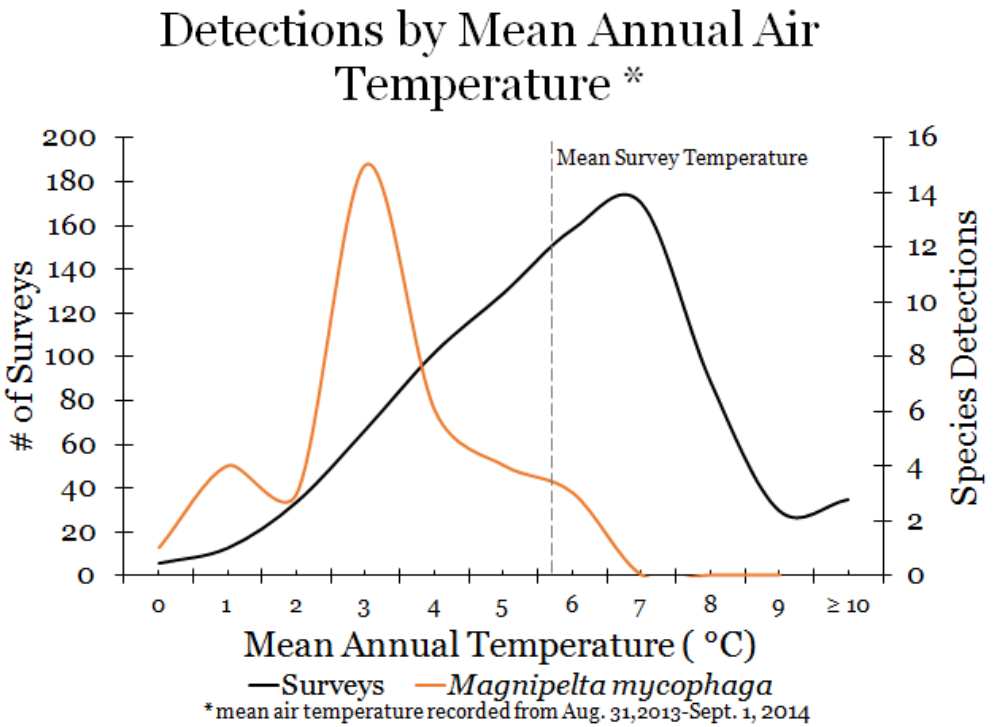


Multi-species Baseline Initiative: Magnum Mantleslug (*Magnipelta mycophaga*) Detections

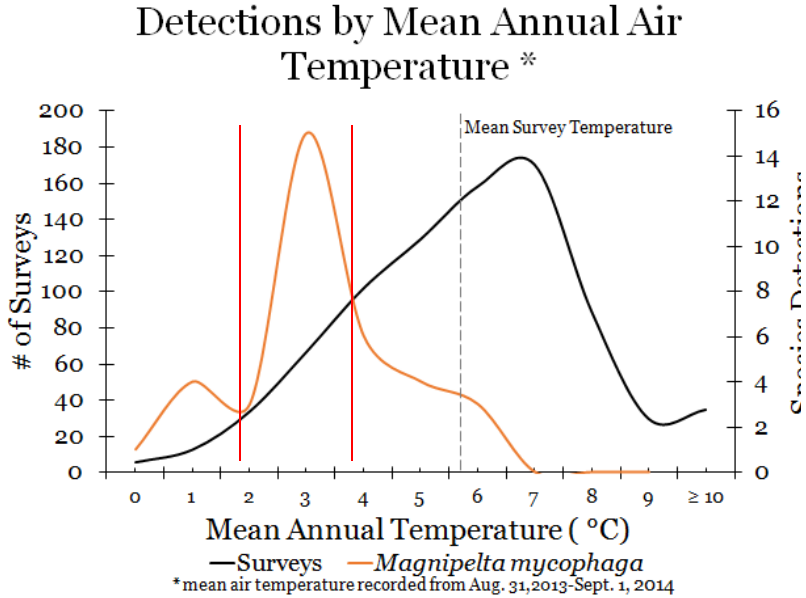


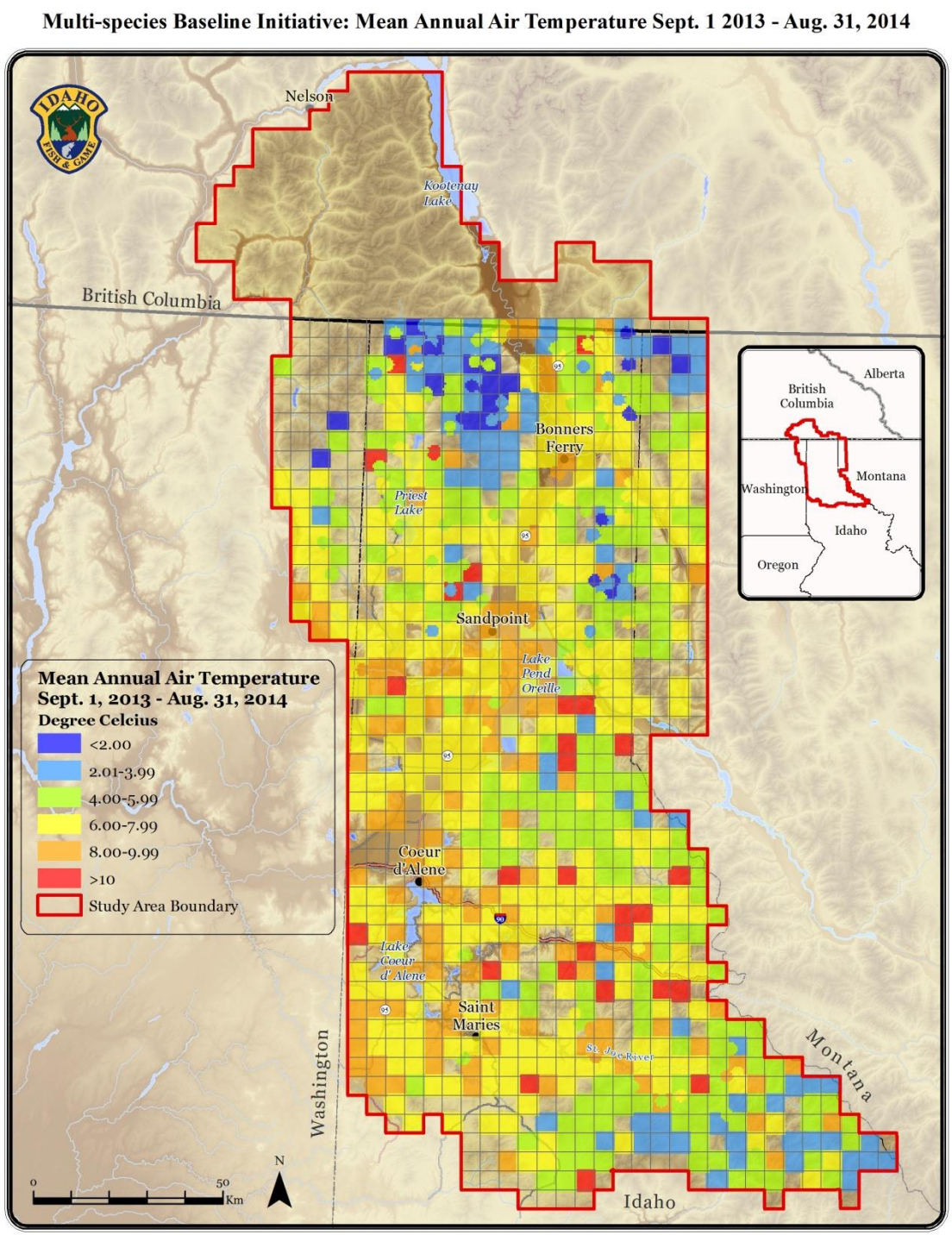

Detections by Elevation
Study Area Mean
# of Surveys
Species Detections
350
300
250
200
150
100
50
0
25
20
15
10
5
0
525-749
750-999
1000-1249
1250-1499
1500-1749
1750-1999
Elevation (meters)
Surveys
Magnipelta mycophaga

n = 47 sites

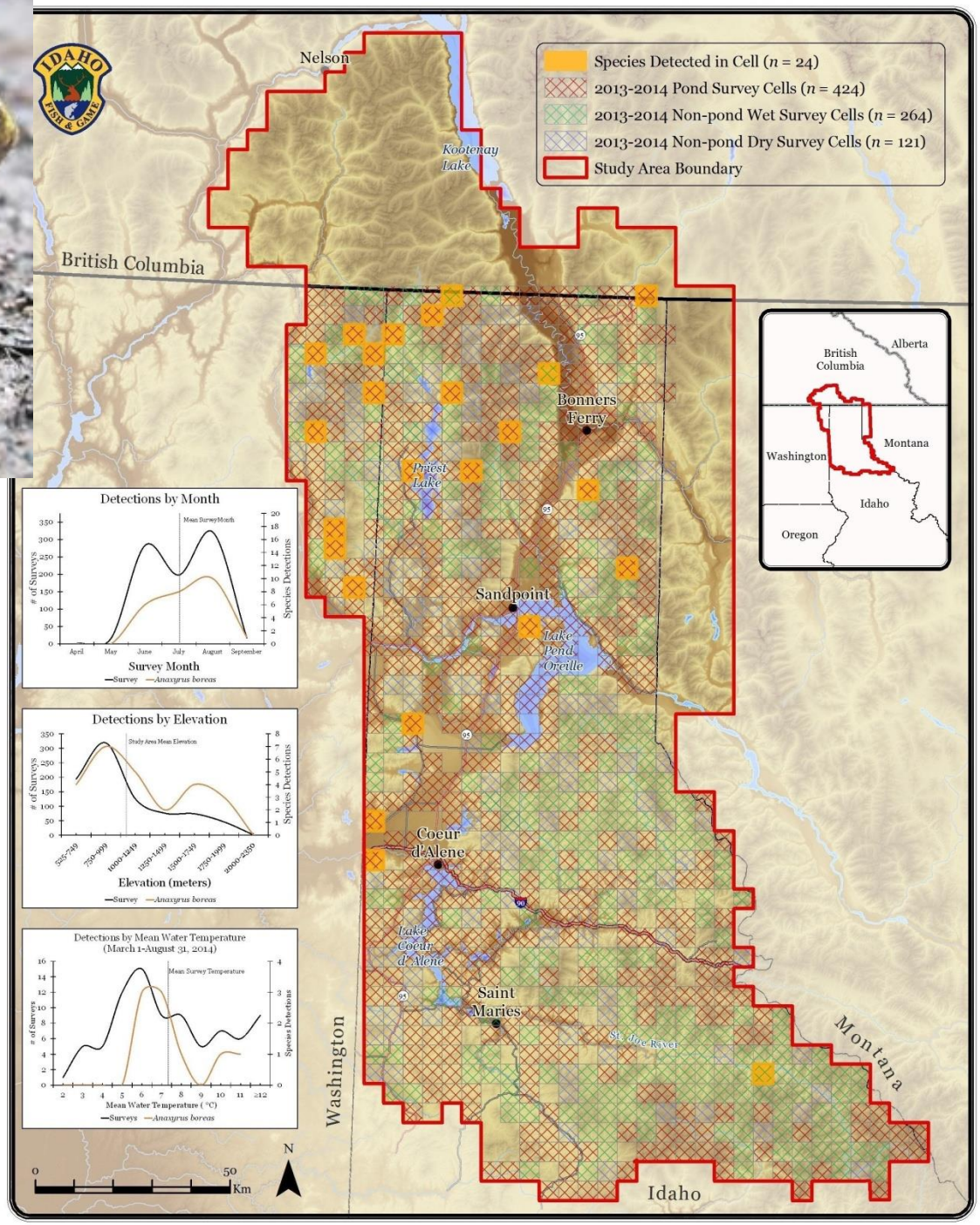

Detections by Mean Annual Air Temperature *
Mean Survey Temperature
# of Surveys
Species Detections
200
180
160
140
120
100
80
60
40
20
0
16
14
12
10
8
6
4
2
0
0
1
2
3
4
5
6
7
8
9
≥ 10
Mean Annual Temperature (°C)
Surveys
Magnipelta mycophaga
*mean air temperature recorded from Aug. 31,2013-Sept. 1, 2014

Cool Air Refugia



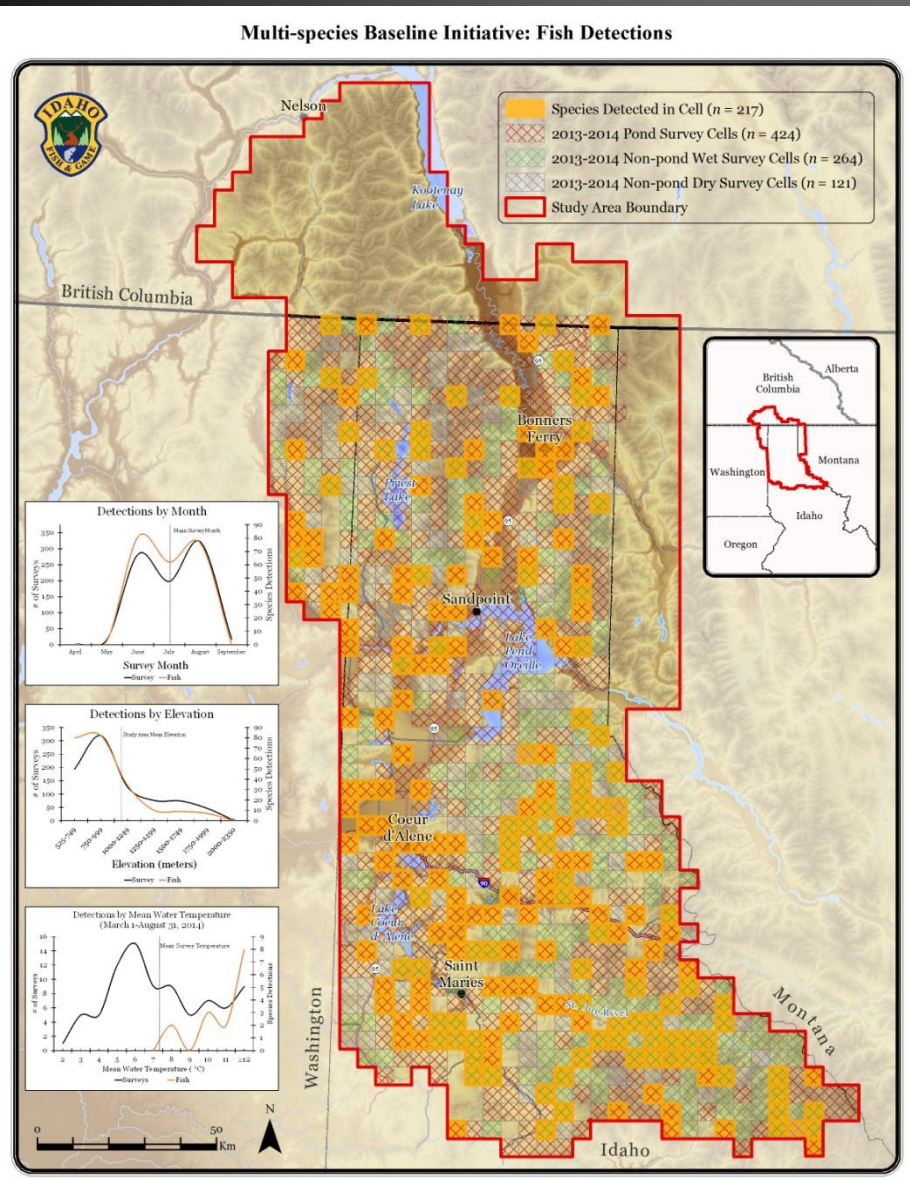


Multi-species Baseline Initiative: Western Toad (*Anaxyrus boreas*) Detections

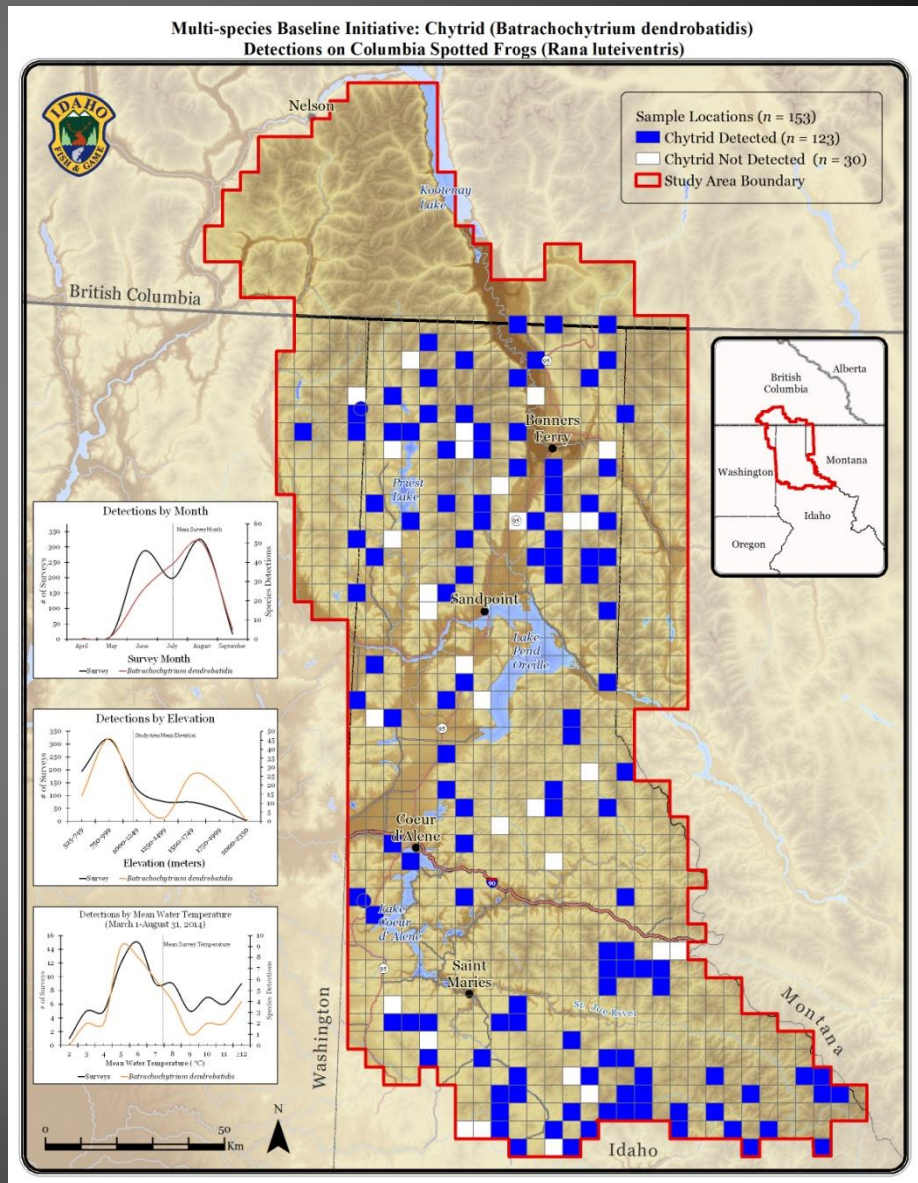


Potential Threats to Native Amphibians

Non-native Fish

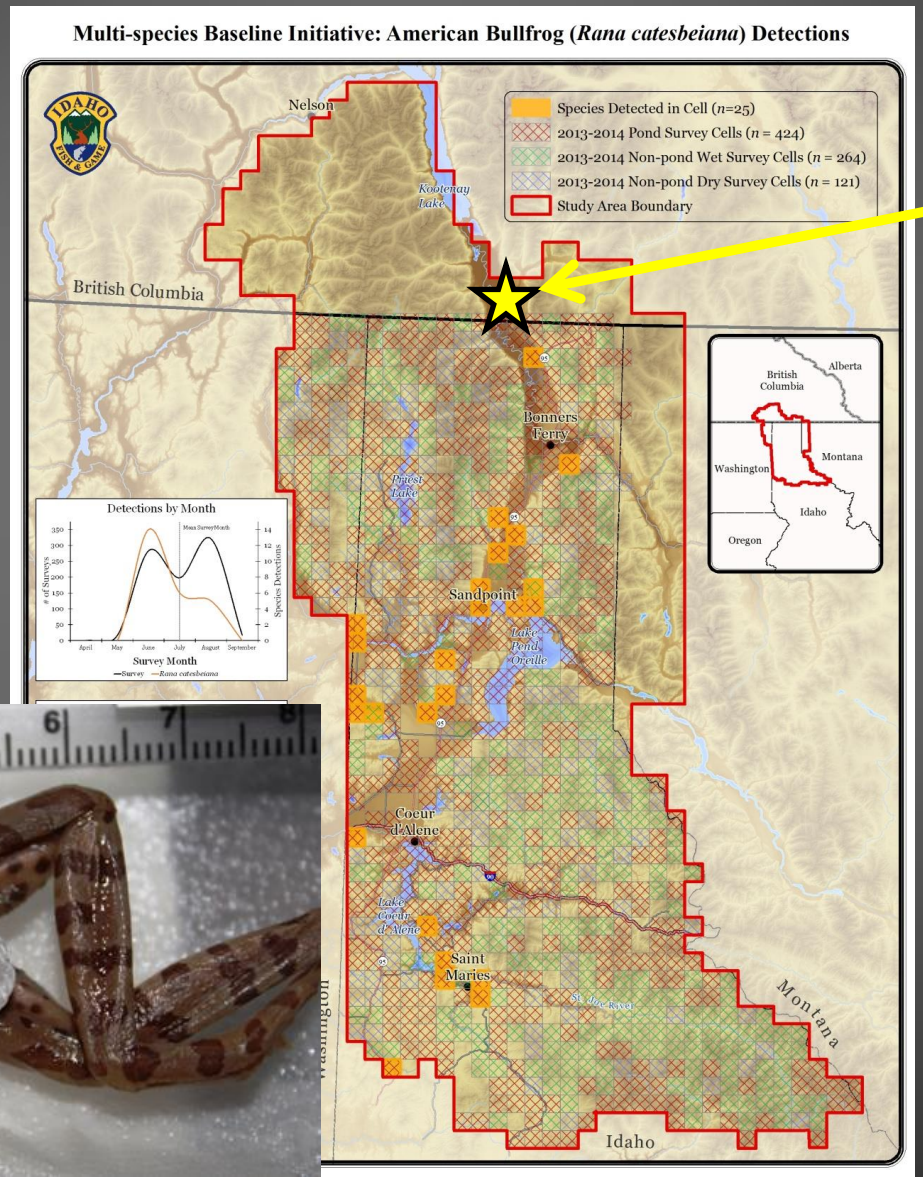


Chytrid Fungus



Potential Threats to Native Amphibians

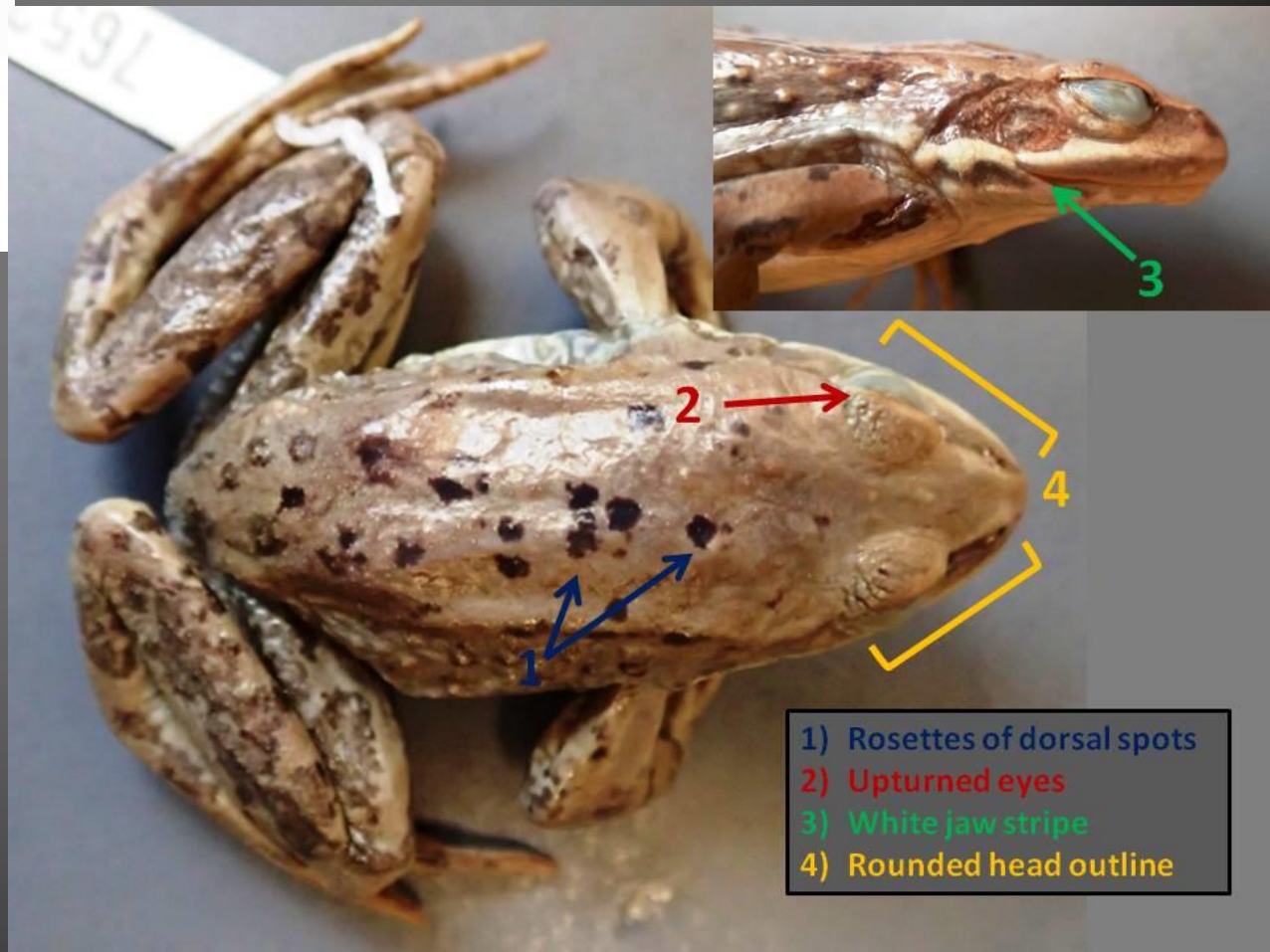
Non-native Amphibians



Native N. Leopard Frog Colony at Creston Wildlife Management Area in B.C.

Wood Frogs

Wood Frogs


3
2
4
1
1) Rosettes of dorsal spots
2) Upturned eyes
3) White jaw stripe
4) Rounded head outline

https://idfg.idaho.gov/baseline

michael.lucid@idfg.idaho.gov