



Black-Tailed Deer of the Central Coast

9.13.18

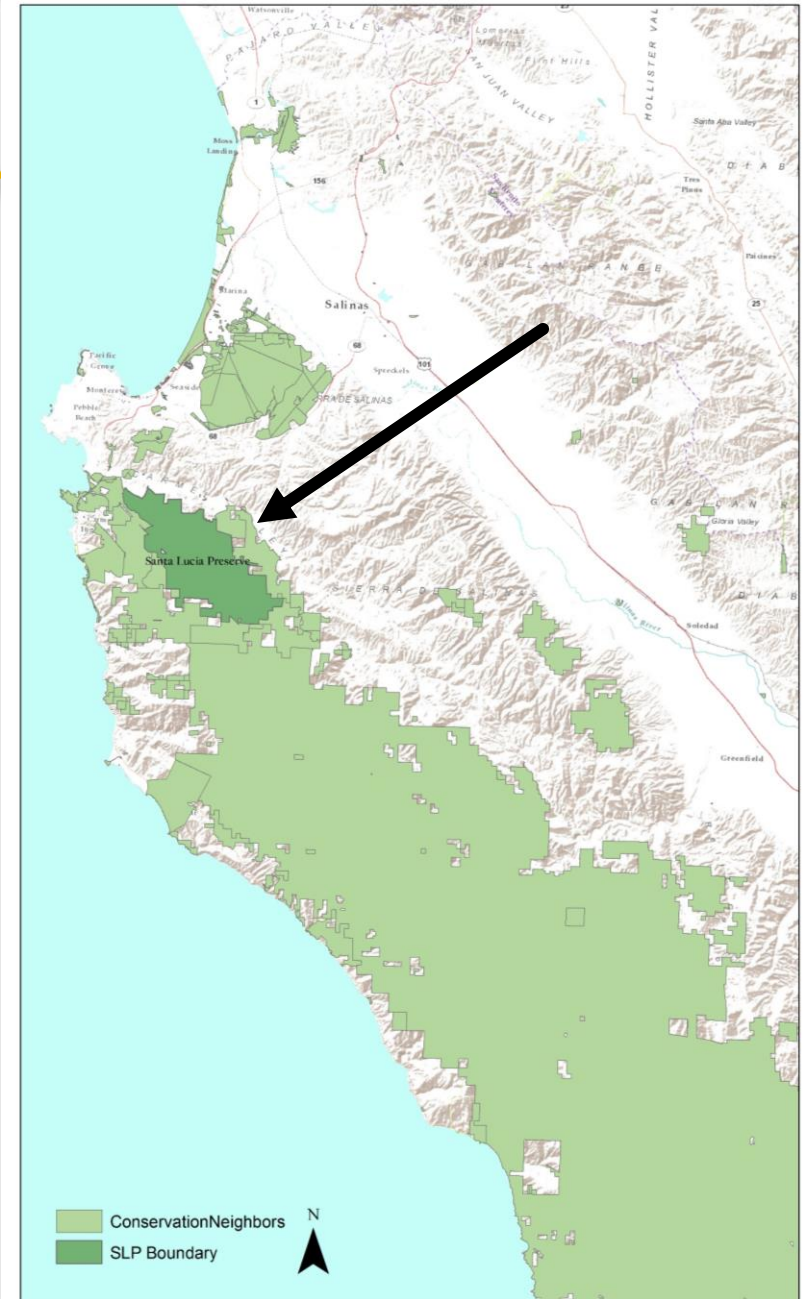
Christy Wyckoff
Senior Wildlife Ecologist



Living With Wildlife

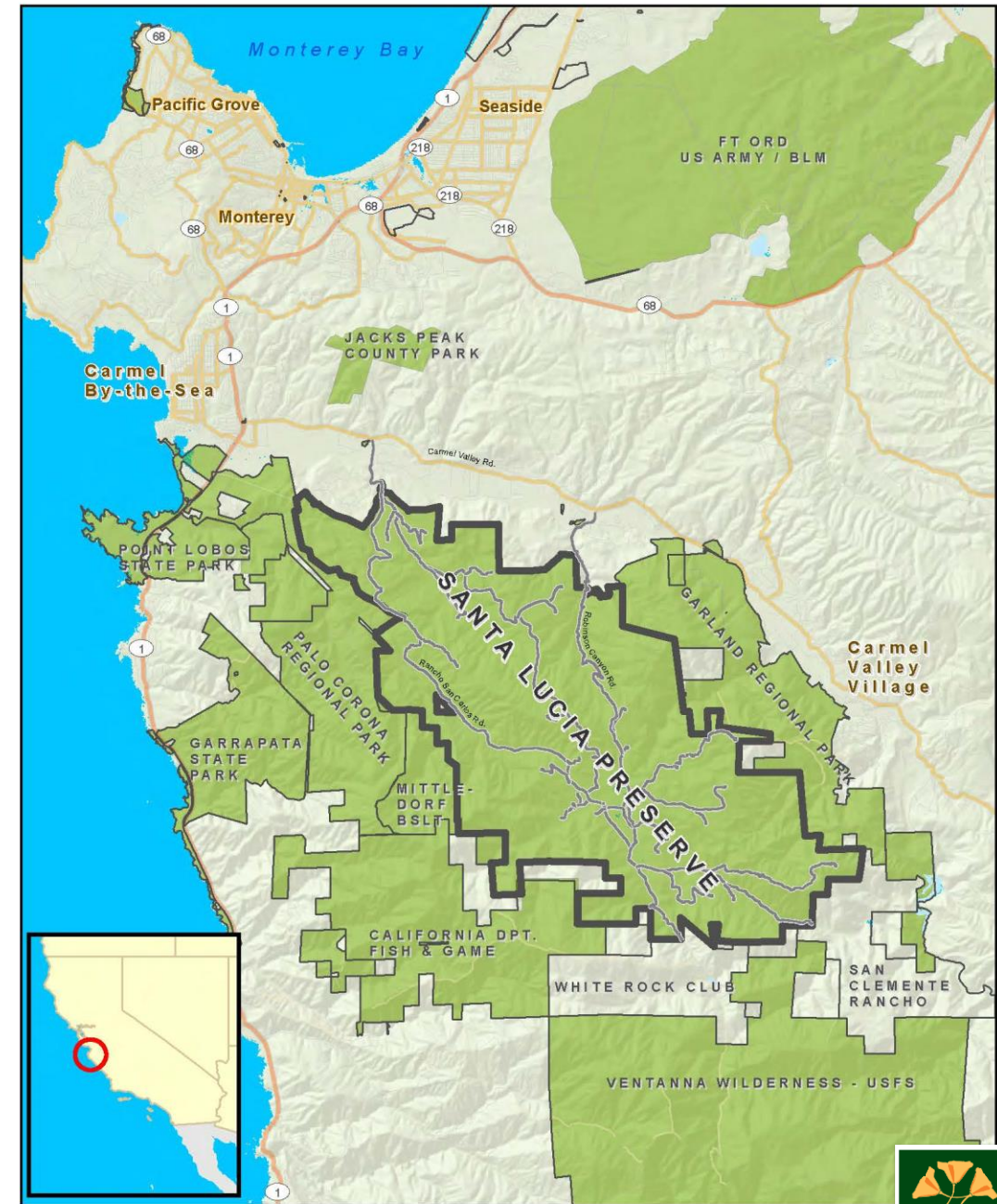


Santa Lucía Preserve



Santa Lucía Preserve

- Conservation Development
- 90% permanently protected
- Natural Setting
 - 18,000 acres
 - Historic cattle ranch
 - High biodiversity
- Human Setting
 - 2,000 acres
 - 296 home sites
 - Social club and golf course



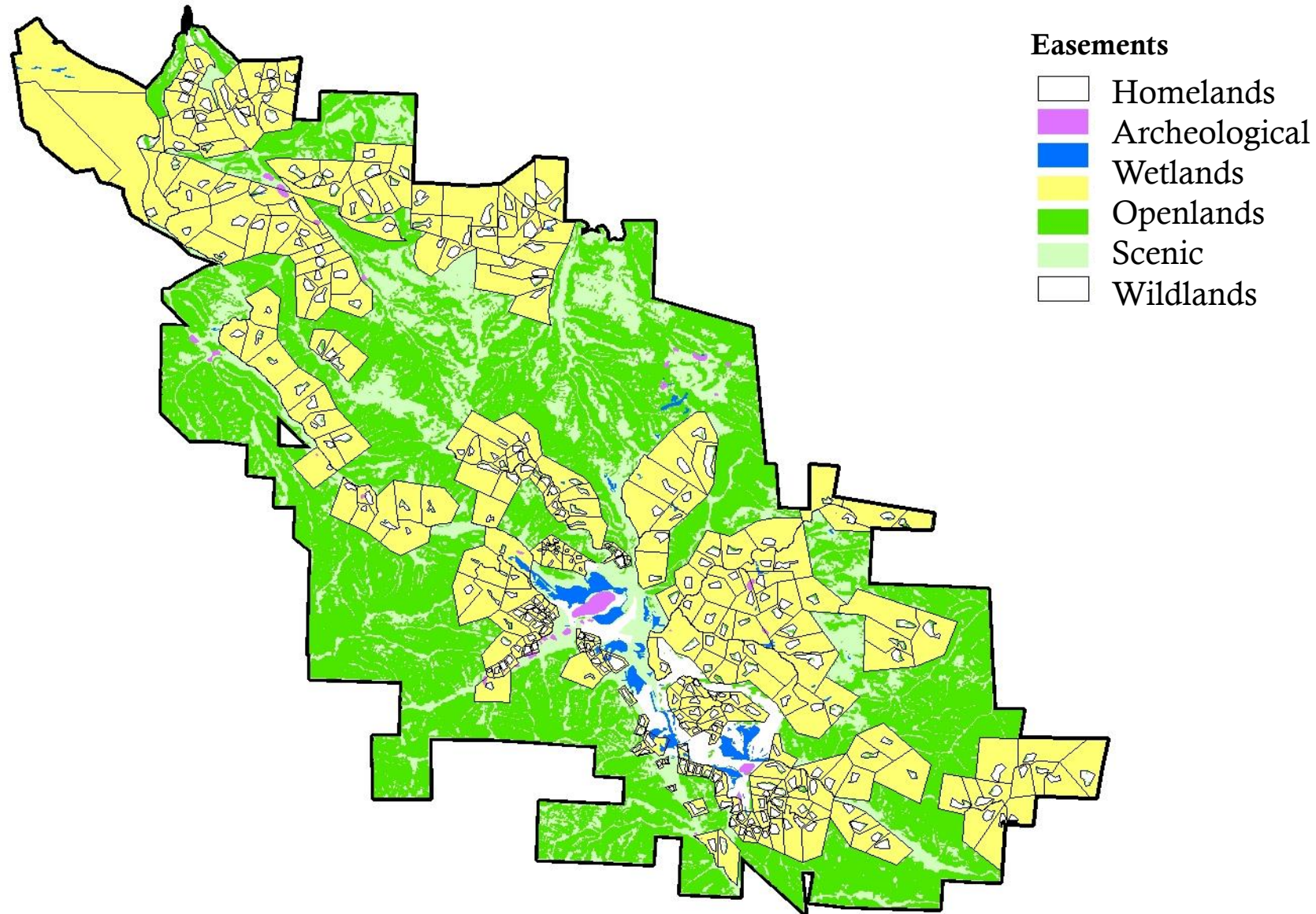
Location & Conservation Context
Santa Lucía Preserve
Carmel, Monterey Co., CA

0 1.5 3 Miles



Chris Wilson, 9/26/2

Protected Landscape



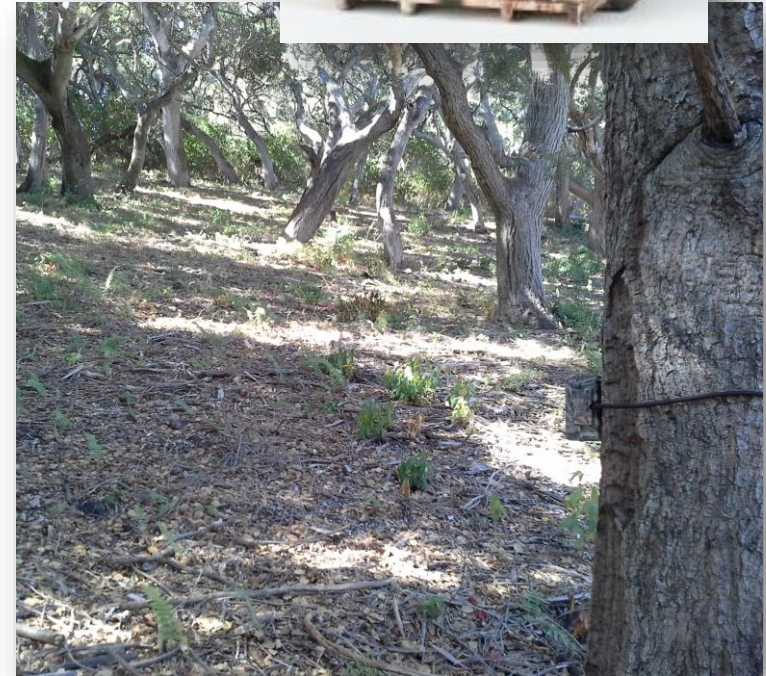
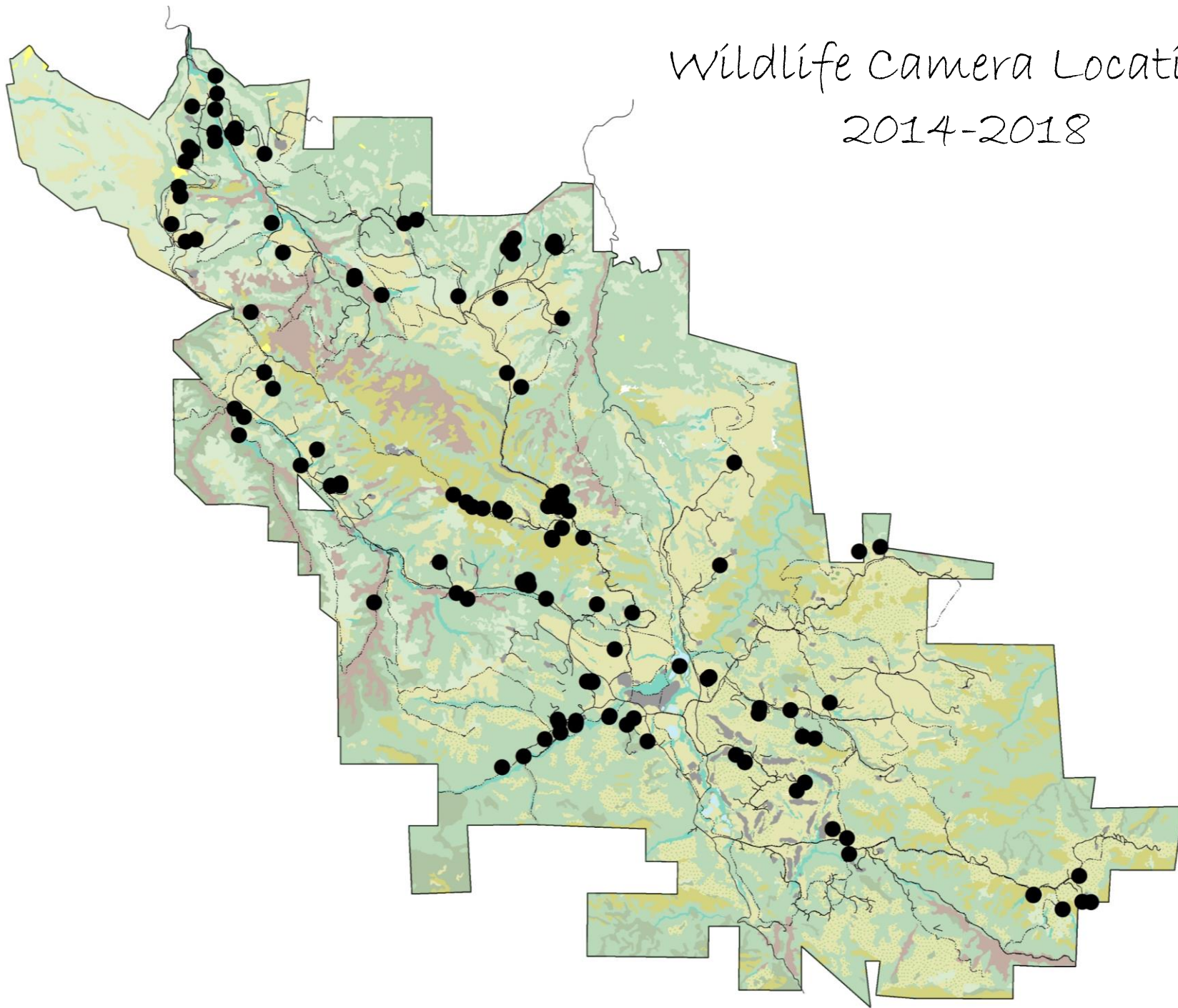
Santa Lucía Conservancy

- ◆ 501(c)(3) Non-Profit
- ◆ Incorporated in 1995
- ◆ Land trust to hold and steward easements
- ◆ Science-based land management
- ◆ Ecological research
- ◆ Environmental education

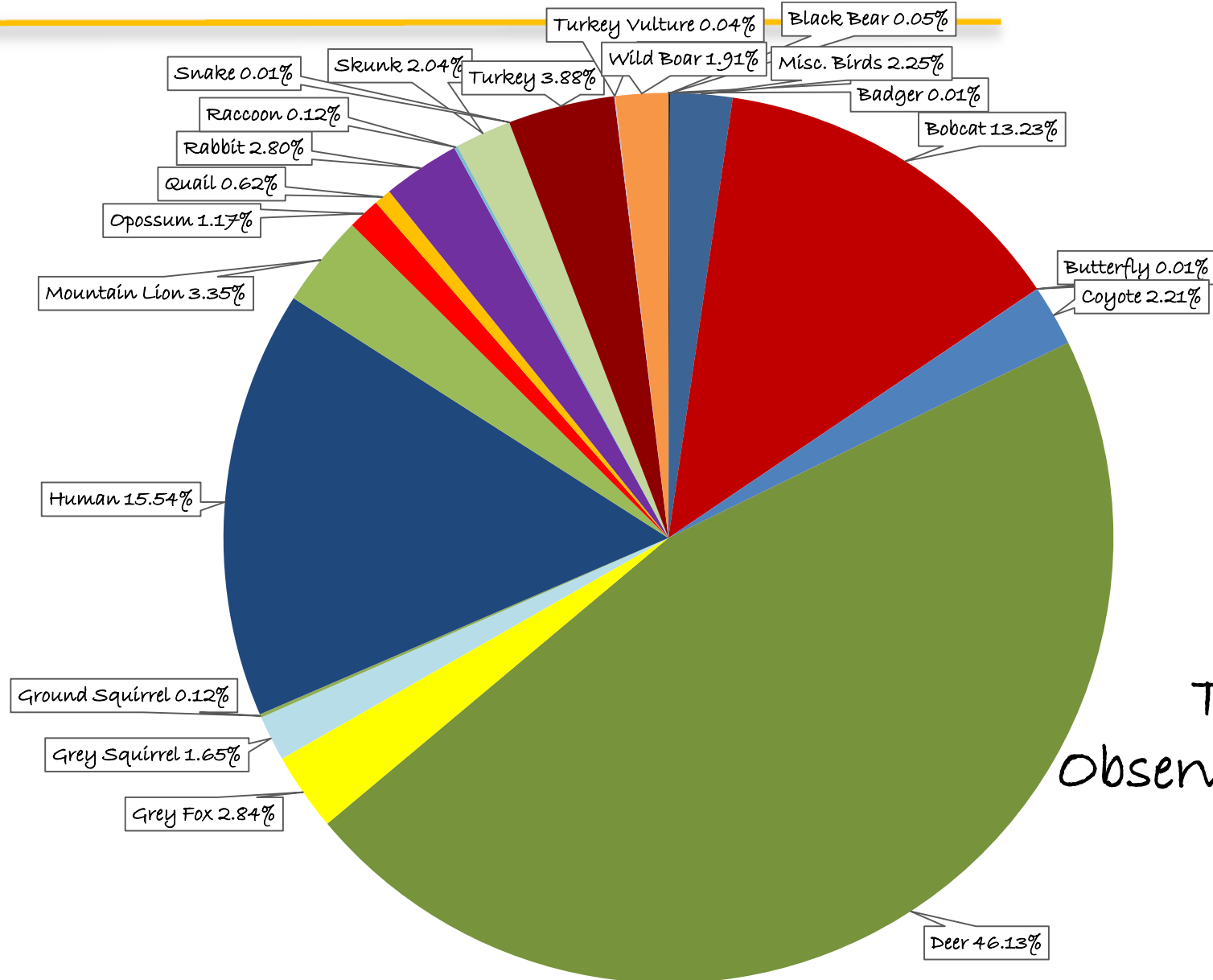




Wildlife Camera Locations 2014-2018



Wildlife Observations



Total Wildlife
Observations Reported =
18,151

Deer



- Most visible and wide spread large mammal species in California

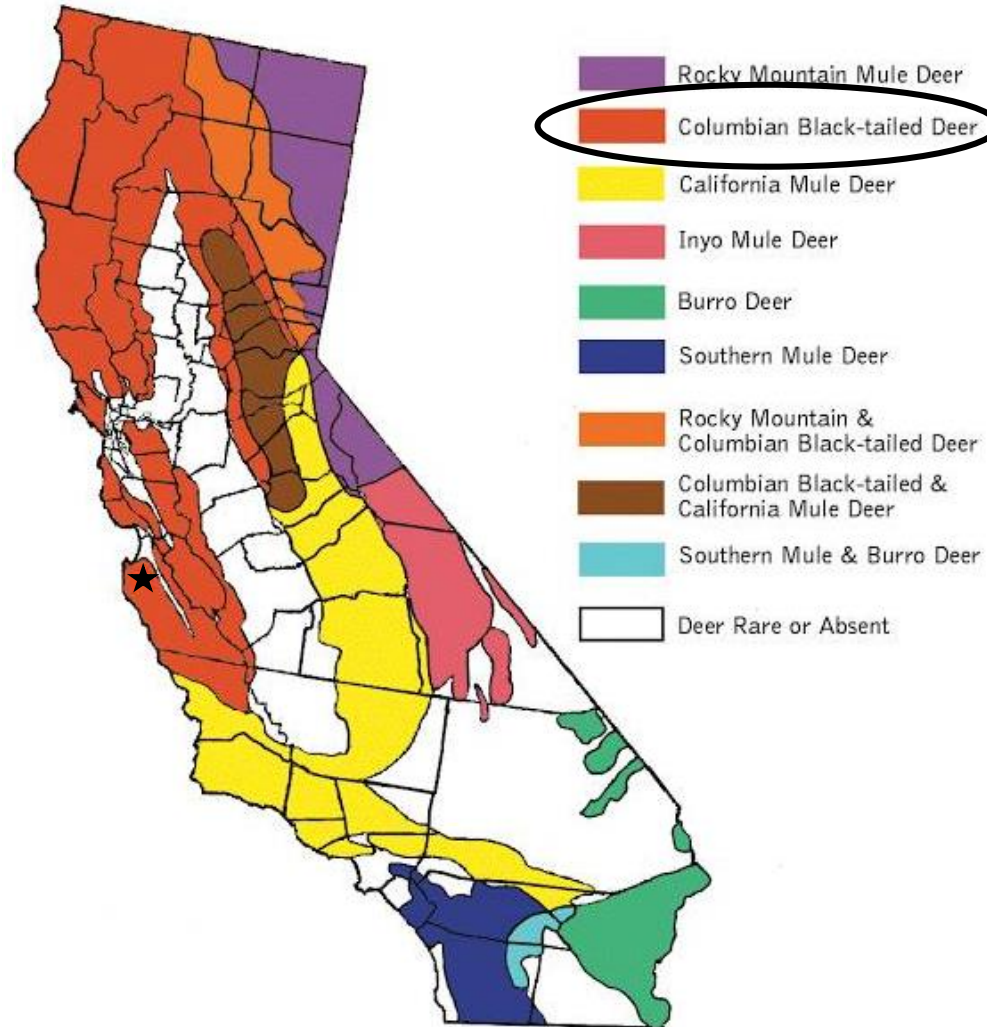
9 Species of Deer in California

Deer Distribution in California

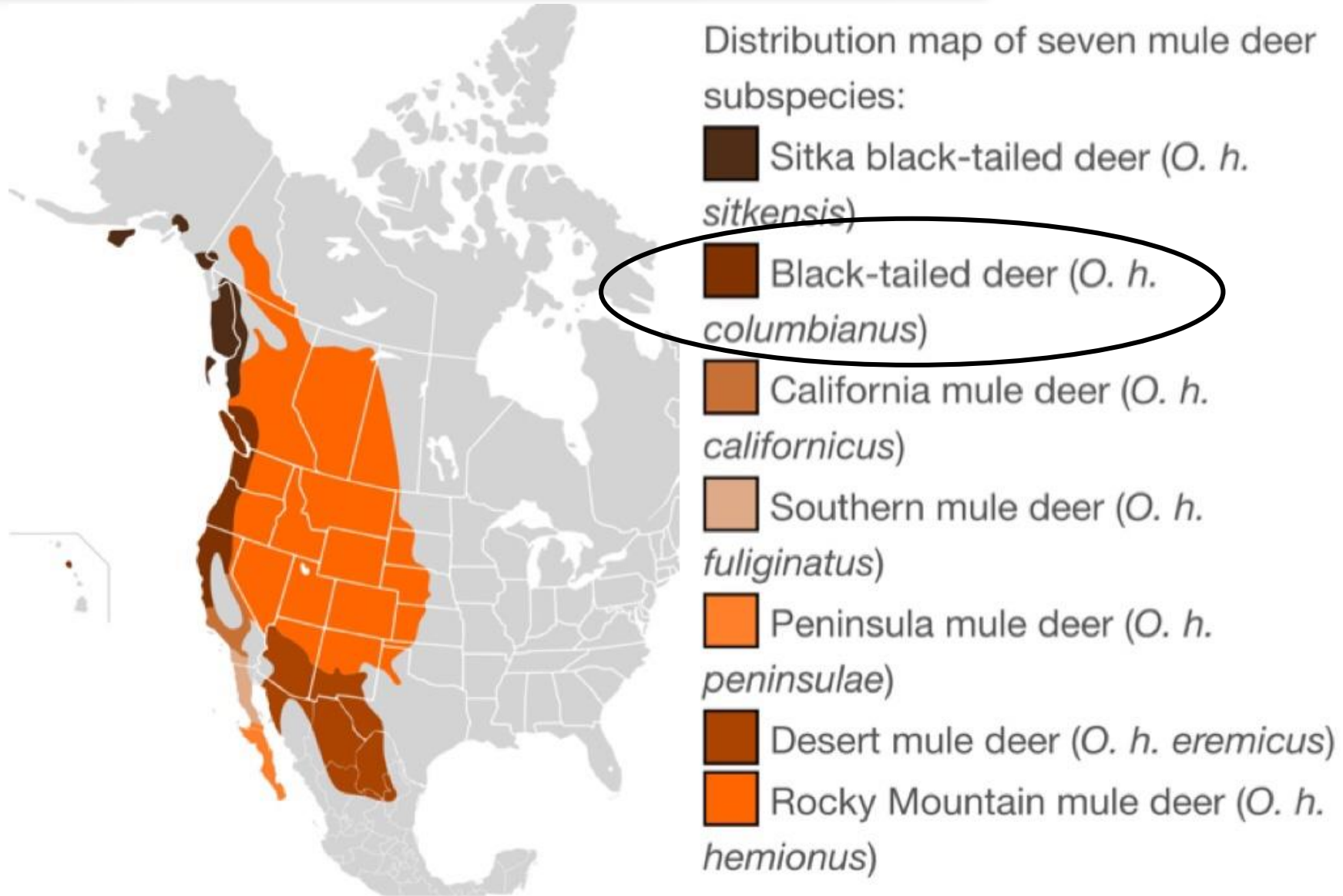


9 Species of Deer in California

Deer Distribution in California



Columbia black-tailed deer



Columbia black-tailed deer

- *Odocoileus hemionus columbianus*
- Sub species of mule deer



White-tailed deer



Black-tailed deer



Mule deer



Stotting



Antlers



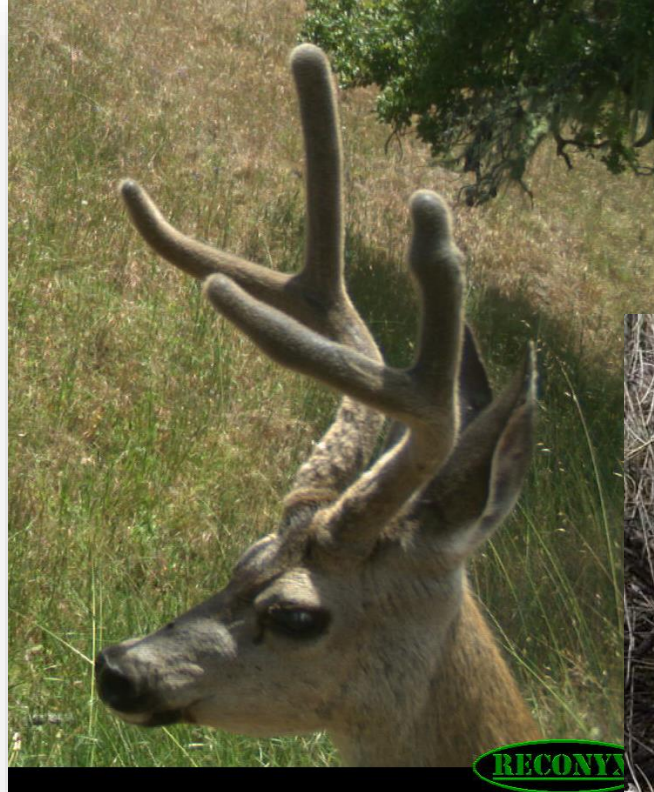
white-tailed deer



black-tailed deer



mule deer



Body Indicators

1½

1½-YEAR-OLD BUCKS

- Looks like a doe with antlers.
- Thin neck, slim body.
- Distinct line of separation between neck and shoulder.
- Legs appear too long in proportion to the rest of the body.
- No muscle definition (sleek looking).
- Wide potential for number of antler points, but antlers are thin.
- Little or no tarsal staining.

2½

2½-YEAR-OLD BUCKS

- Relatively thin waist and shoulders.
- Hindquarters are proportional to chest/shoulder area.
- Minimal neck swelling during the rut.
- Lightly stained tarsal glands.
- Neck width is roughly equal to face width.
- Back and belly are flat or level.

3½

3½-YEAR-OLD BUCKS

- Thickly muscled neck during the rut, but there is still a separation between the neck and shoulders.
- Chest/shoulder area now begins to look heavier than hindquarters.
- Overall look of an athlete in prime condition (good muscle tone but still lanky and lean).
- Neck is now wider than the face, especially during the rut.
- Back and belly are still flat and tight.

4½

4½-YEAR-OLD BUCKS

- Fully muscled neck blends into the shoulders seamlessly.
- No longer lanky or lean – leg length is proportional to body size.
- Waistline has dropped and is now level with chestline.
- Tarsal glands are large and very dark during the rut.

5½

5½-YEAR-OLD BUCKS

- Shoulders and neck appear to be one large mass.
- Belly is rounder and may sag, except when post-rut weight loss is a factor, as in these photos.
- Legs begin to appear too short for the massive body.
- Neck is thick and heavy, but the skin still appears tight.
- Head appears very deep and heavy from a profile view.
- Forehead is darkened by gland secretions, and some graying may be visible around the muzzle.

6½

6½-YEAR-OLD BUCKS

- Contrast between darker forehead and graying muzzle increasing.
- Prominent guttally.
- Heavy body appears too big for the legs.
- Skin around the face and neck is rippled and appears loose. A flap of loose skin is visible at the throat/jawline.
- In the rut, tarsal stain extends down the inside of the legs.
- Neck and chest appear to be one continuous muscle.

- 130-200 lbs
- Smaller than mule deer

2014-11-08 6:14:05 AM M 1/10

47°F



PC800 PROFESSIONAL

RECONYX





2015-05-16 3:09:43 PM M 7/10

59°F



PC800 PROFESSIONAL

RECONYX





Black-tailed buck

Wildlands-Long Ridge





Blacktailed deer

Andrasick – Long Ridge

2014-11-11 4:48:24 AM M 9/10

51°F



PC800 PROFESSIONAL

RECONYX

2015-08-04 5:12:38 PM M 8/10

71°F



PC800 PROFESSIONAL

RECONYX



2014-10-09 8:28:23 AM M 3/10

63°F



PC800 PROFESSIONAL

RECONYX



2014-10-25 8:55:03 AM M 1/10

59°F



PC800 PROFESSIONAL

RECONYX

Longevity

- 9-10 years
 - Depends on weather, habitat quality, predation and hunting pressure
- Average
 - 2.5 years for males
 - 3.2 years for females
- Oldest on record 22 years



2014-11-17 11:20:56 AM M 10/10

0 75°F



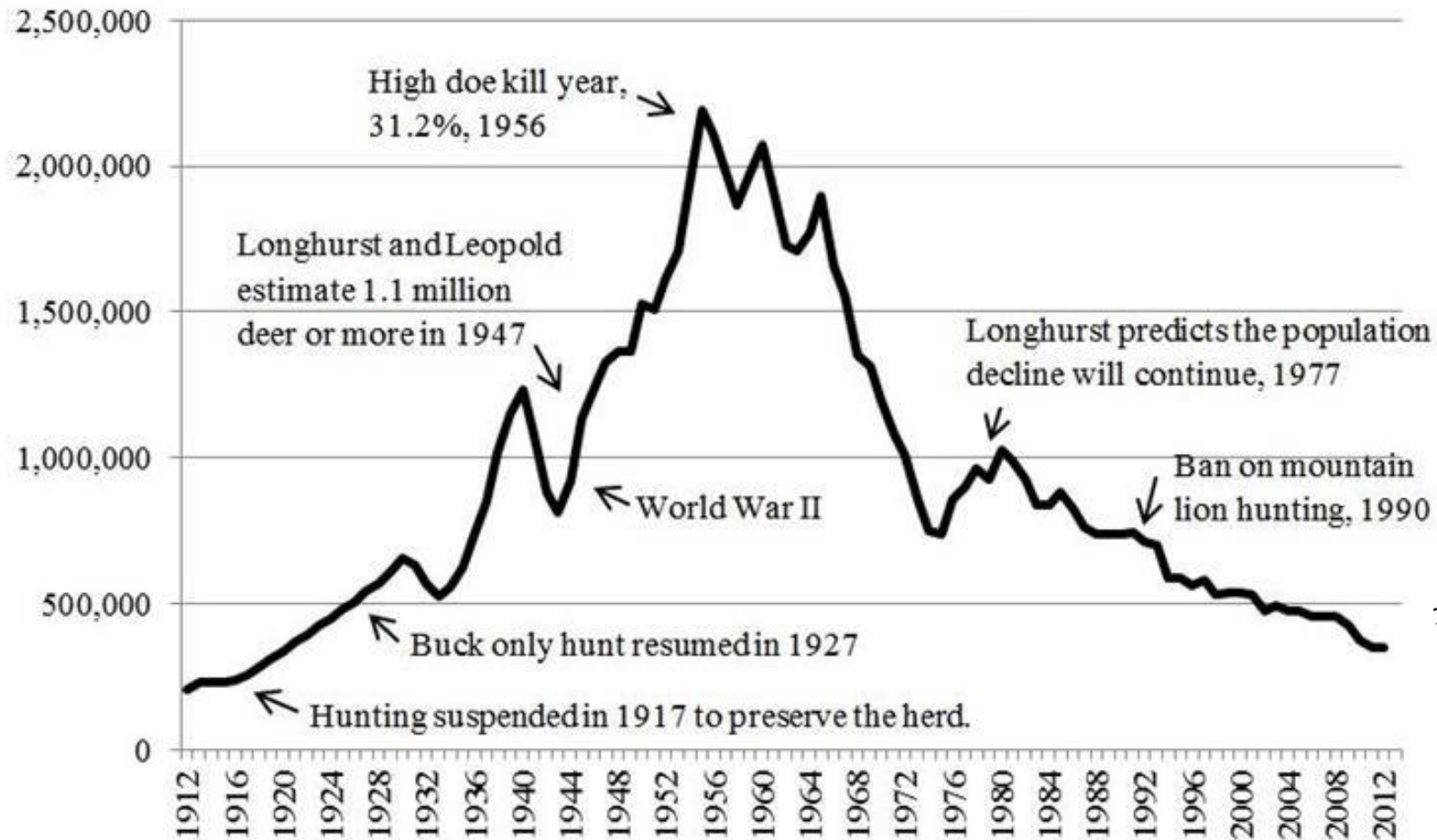
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Population Trends

Estimated California Deer Population, 1912 to 2012



Population: ~530,000 deer
(all species) across state

Breeding



- Seasonal Breeders
- Rut: August-October
- Triggered by photoperiod -
> increase in testosterone
- very energy intensive
and often results in
injury
 - Can lose 20%
- After rut bucks hide, rest
and regain weight
- Antlers are shed after rut
(Dec-Feb)

Bucks sparring





ONAL

RECONYX

Reproduction



- Breed at 1.5 years
- Maximizing Mate Strategies
 - Sit and wait
 - Excursion
- Conception rate is 90-95%
- Gestation 6-7 months
- Typical fawning locally in March
- Average is 2 fawns at a time
 - Can have 1-3
 - Will adopt orphans
 - Multiple sires

2014-08-18 2:03:09 PM M 4/10

87°F



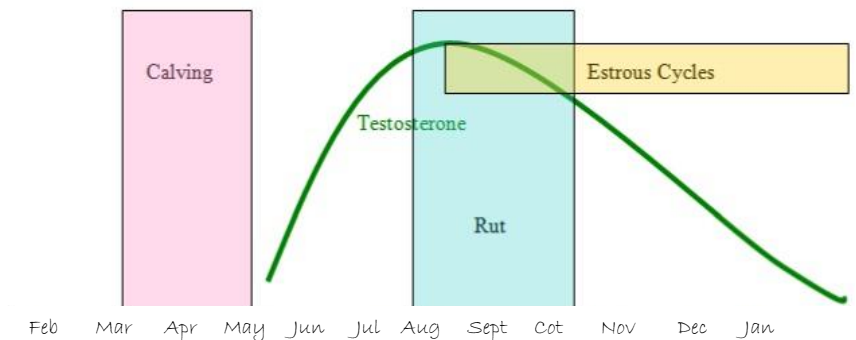
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Reproduction



- Fawns are 6-8lbs at birth and no scent for first week
- Stay still for hours in grasslands waiting for mother to return
- Does are very protective
- Fawn mortality is 45-70%



Adapted from Gordon, 1997.



Communication



- Communication:
 - Fawns bleat; males grunt; both sexes snort in alarm
 - Pheromone communication:
 - metatarsal - outside lower leg, alarm scent
 - Tarsal - inside leg, mutual recognition
 - Lachrymal - eye gland, territorial marking by males
 - Interdigital - between toes, trail scent

Communication



2017-05-31 7:19:12 AM

M 3/10

52°F



PC800 PROFESSIONAL

RECONYX



Activity



- Not a herding species – associate in small groups of 3-6
- Females travel in small family groups with oldest female typically the alpha
- Fawns stay with mother for first year
- Males spend time in bachelor groups with dominance structure until the rut, then solo
- No harem structure during breeding season

2014-11-06 1:31:41 AM M 7/10

48°F

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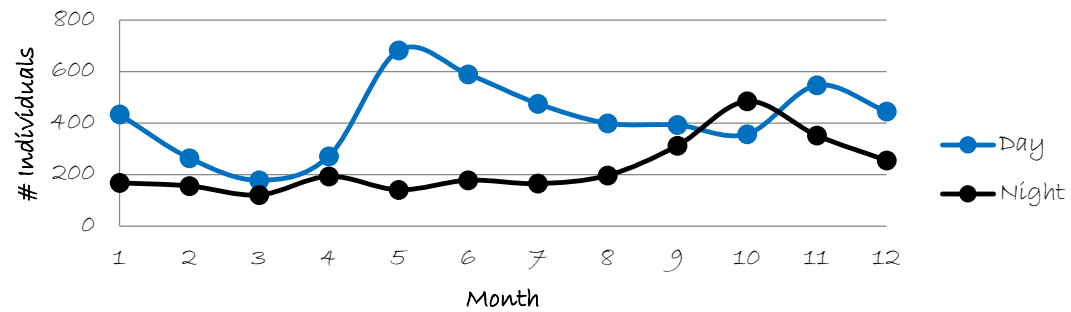
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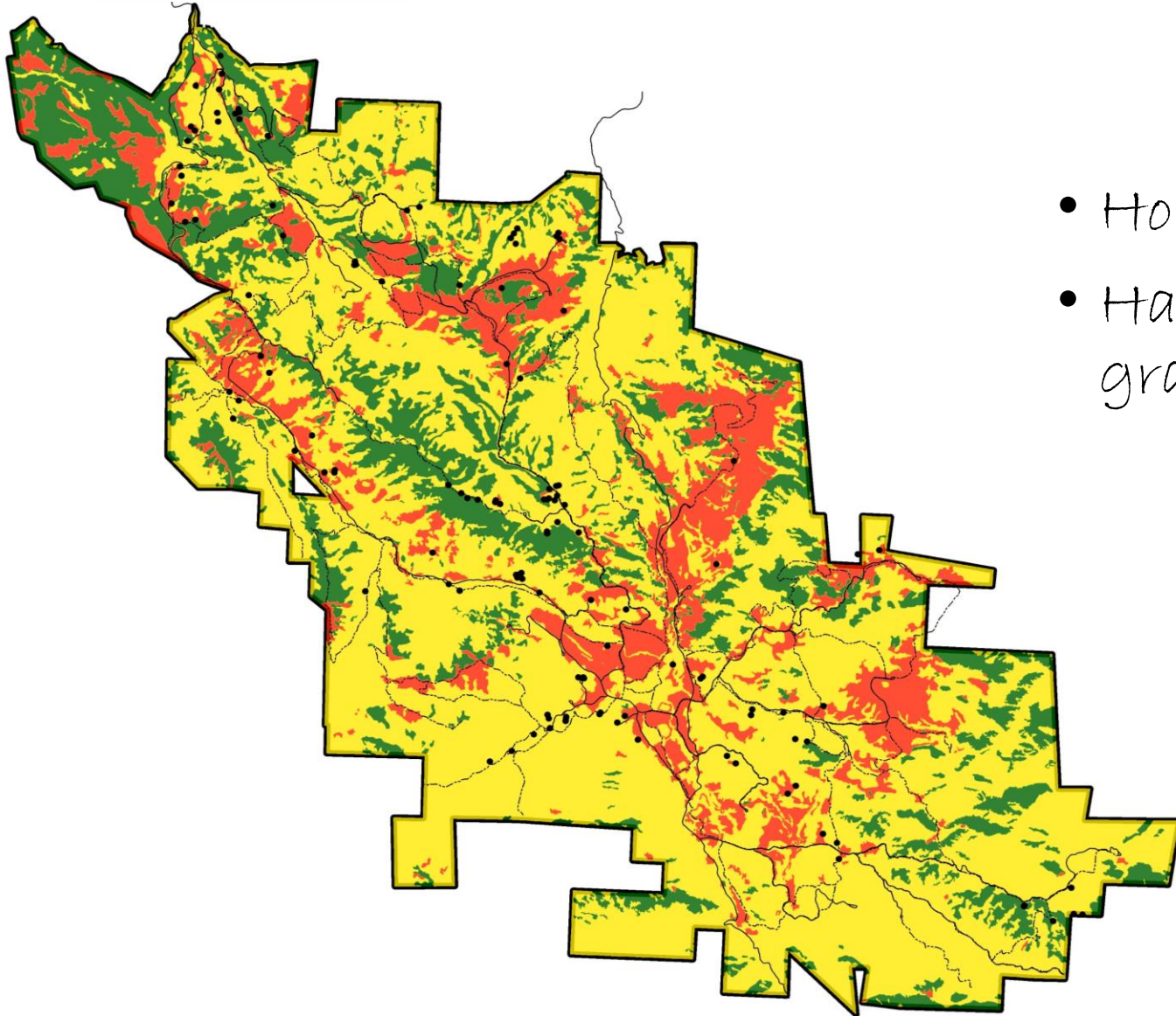
Activity

2017-06-04 3:13:07 AM M 8/10 61°F

Deer Activity

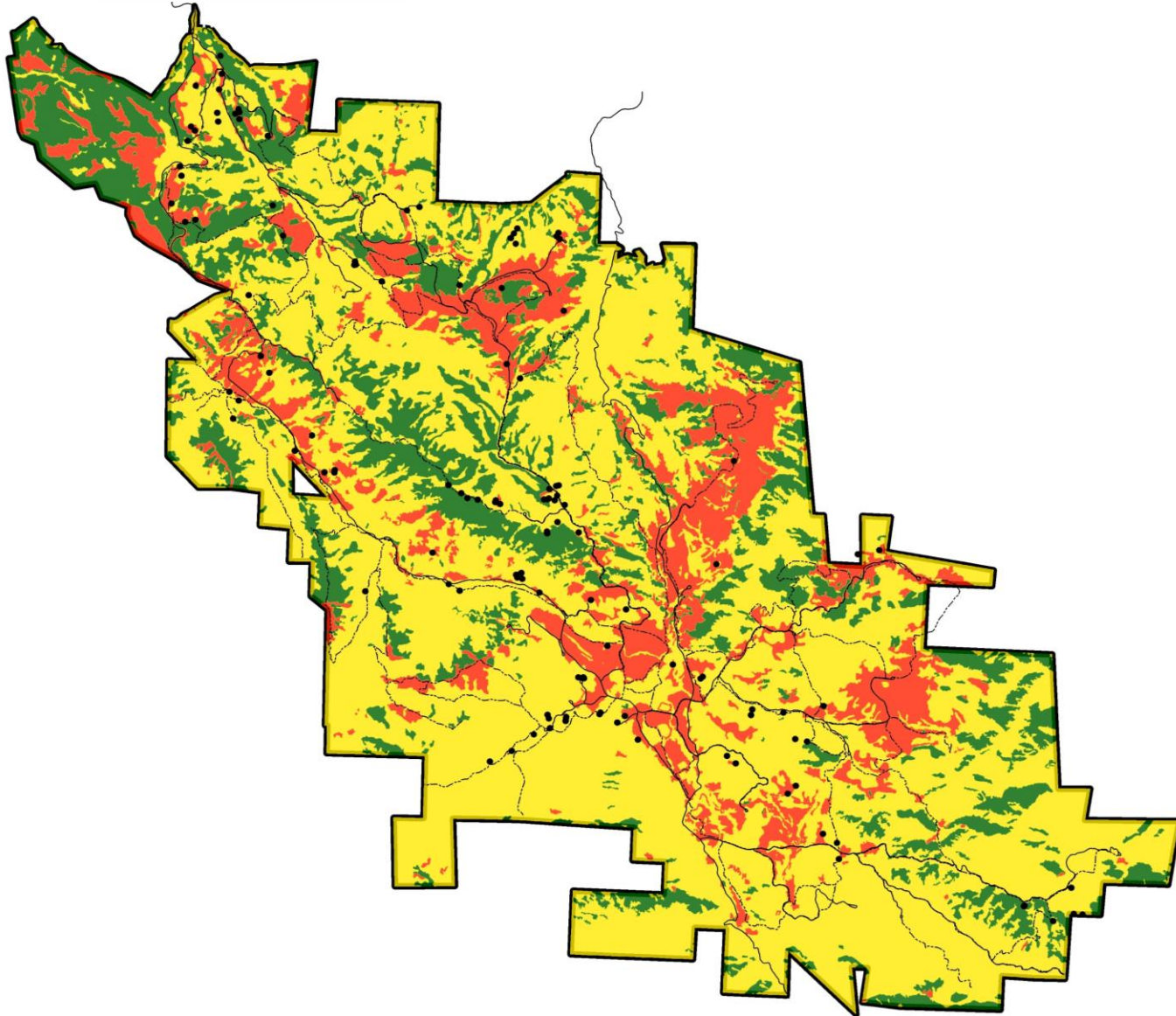


Territory & Movements



- Home range: 90-600 acres
- Habitat: open forests and grasslands

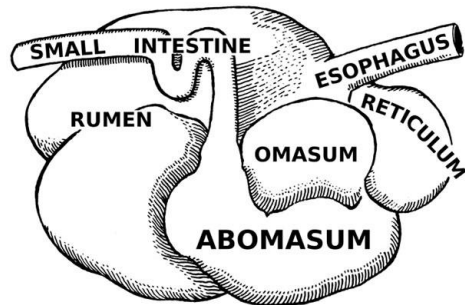
Diet



- Browsers – glean
 - As opposed to grazers that clip at ground level
- Growing tips of shrubs and trees
- Grass, clover herbaceous plants
- Acorns, lichen, fungi, berries...
- Poison oak
- Cultivated plants
- Most of their water comes from food

Ruminant

- Four chambered stomach
 - Rumen -> reticulum -> omasum -> abomasum
- Microbes and fermentation = sugars and protein
- Bed down and chew cud
- Regurgitate more than once in digesting food
- Diverse diet helps digestion



2014-11-05 7:07:45 AM M 8/10

62°F



PC800 PROFESSIONAL

RECONYX



2014-10-17 4:02:01 AM M 4/10

58°F



PC800 PROFESSIONAL

RECONYX









2016-03-24 3:04:51 AM M 3/10

41°F



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Predator : Prey

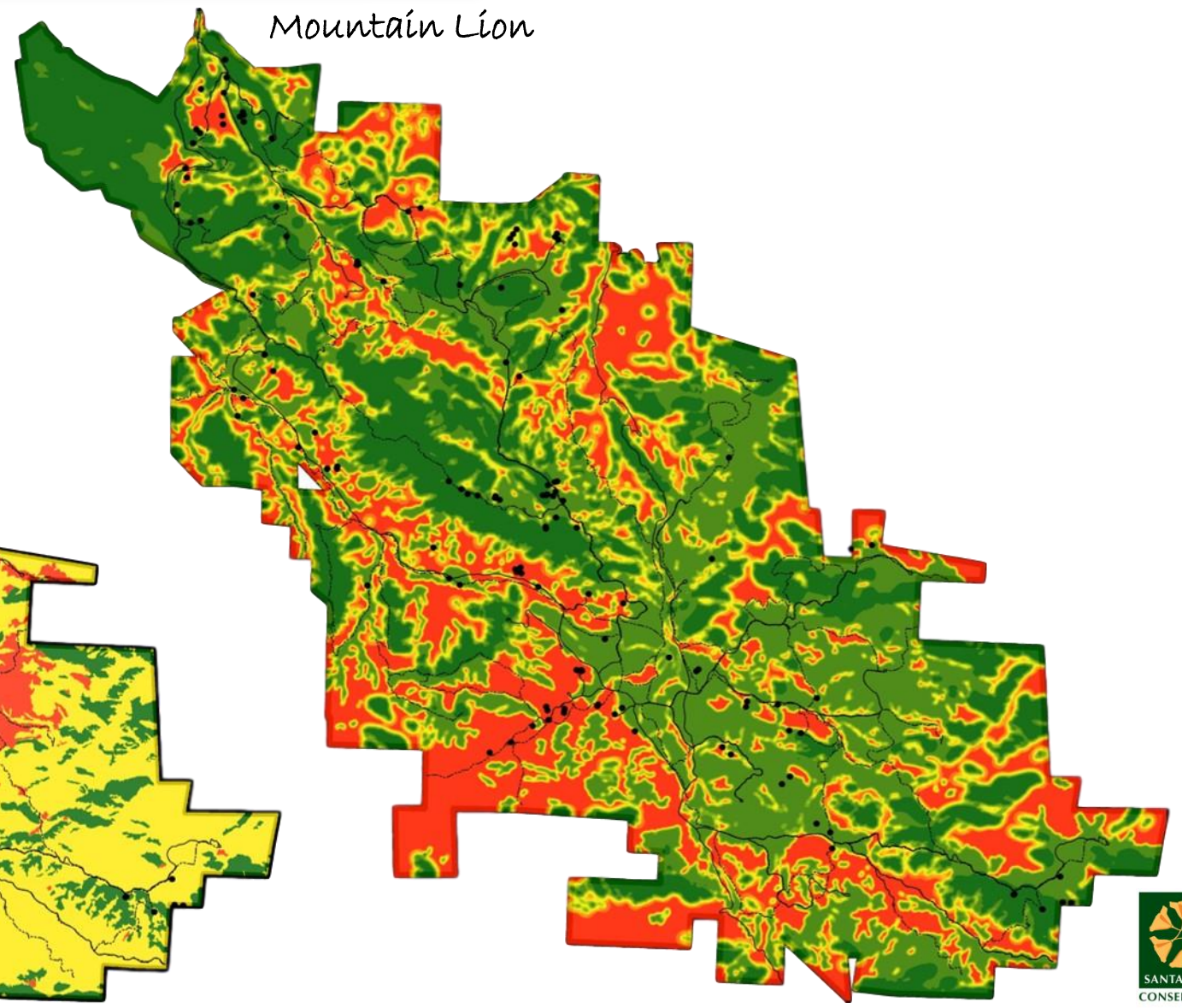
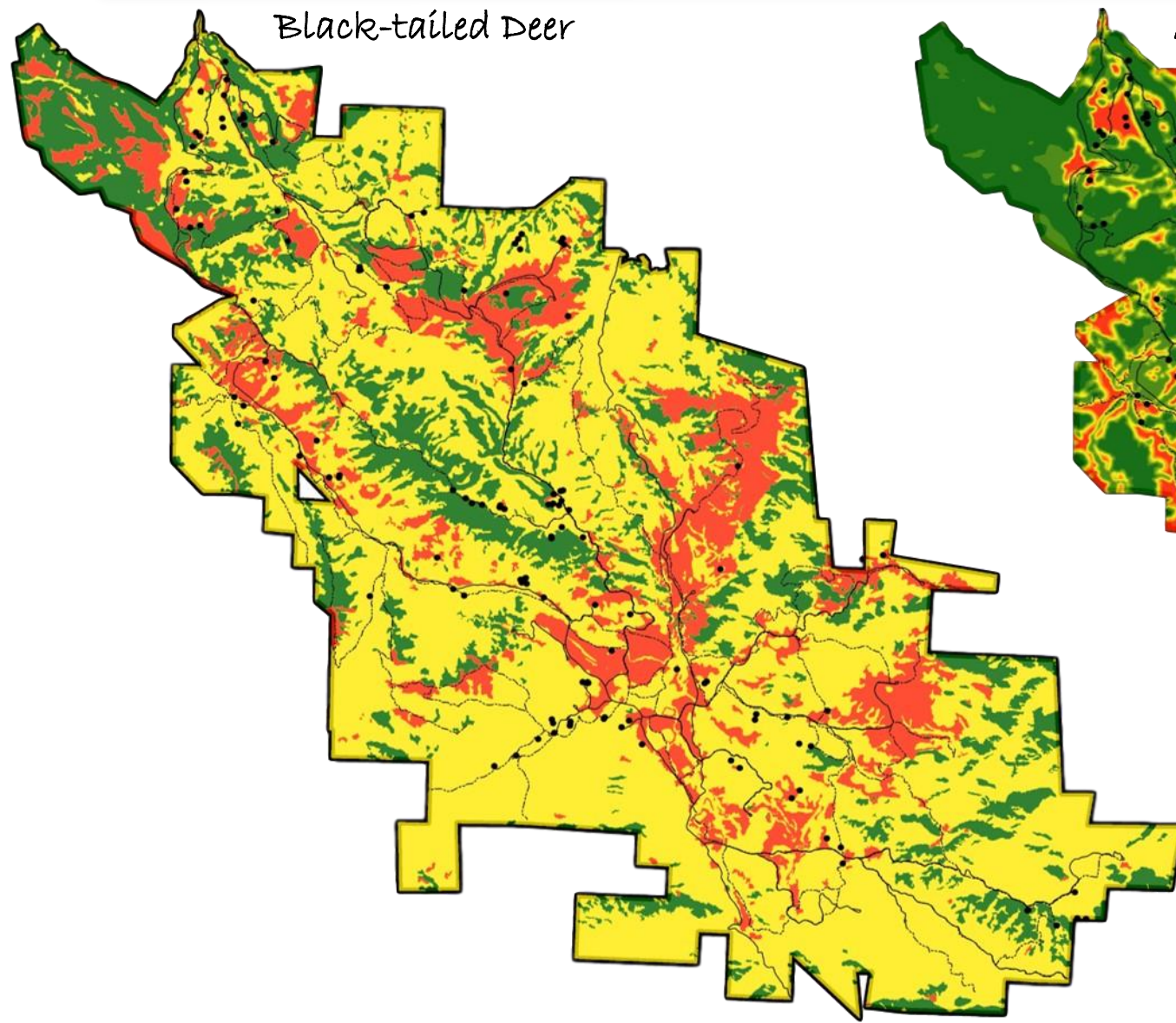


Predator : Prey

- Male
 - 1 deer 9-12 days
- Female with cubs
 - 1 deer every 4 days



Predator : Prey



Carcass Forensics



Miscellaneous

- Eyeshine: white
- Vehicle collisions increase during the rut
 - Travel in groups - look for additional deer



Living with Deer

- Fencing
 - 6-8' tall
 - 5.5' if landing area is uncertain
 - Full exclusion
 - Think about travel corridors
- Repellents
 - Chemical
 - Odor or taste
 - Clove, cinnamon, eucalyptus, cayenne
- Scare tactics
 - Neophobic
 - Motion activated sprinkler
 - Motion activated lights – need to move them around





Coexistence



Coexistence



Coexistence



Thank You!

