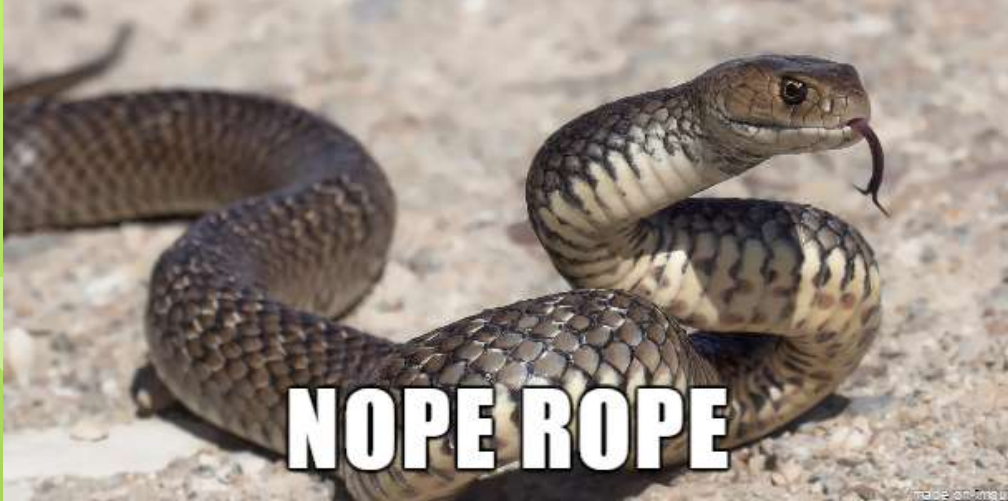


# The Trash Panda's Dilemma: Residential vs. Woodland Living and Zoonotic Disease Impacts



Dr. Scott C. Williams  
2017 Forest Health Workshop  
New Haven, CT



**NOPE ROPE**

made on imgur



**TYRANNOSAURUS DEER**

made on imgur



**PRISON PONY**



**TREE RAT**





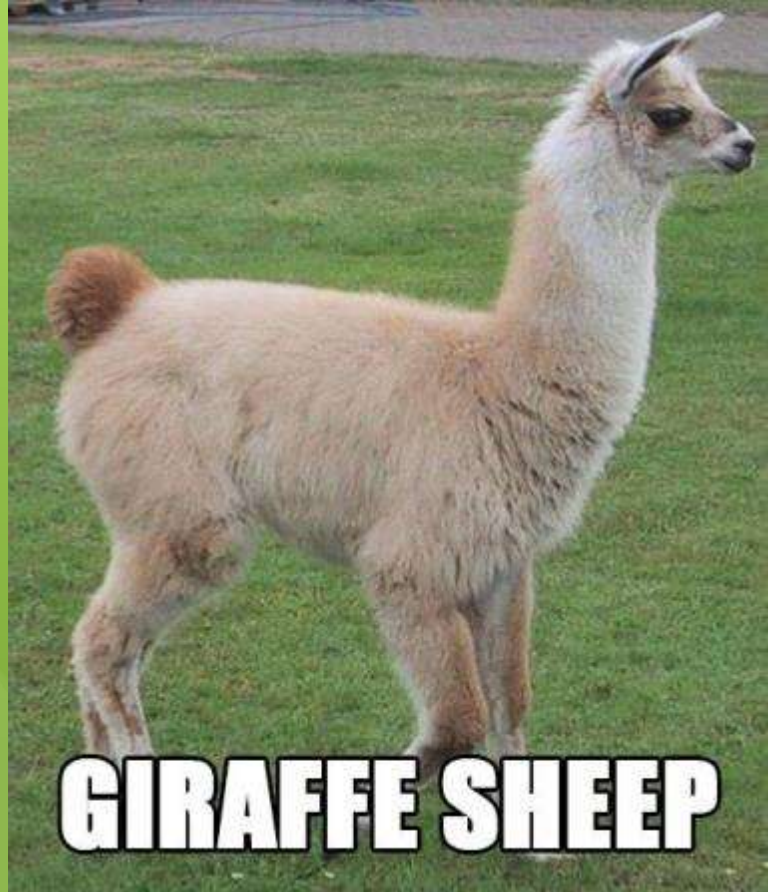
**DUCK PUPPY**



**CAT SNAKE**



**SEA CATSNAKE**



**GIRAFFE SHEEP**





**DANGER WATER COW**



**AMERICAN MURDER LOG**





**FART SQUIRREL**

PHOTO © JESSIE JOYCE / GETTY IMAGES



# Tick Host Dilution Effect Theory

- Suggests. . .
  - Lyme disease risk is lower when diverse host communities are present
  - Human-induced environmental changes, such as landscape fragmentation and predator suppression, can inadvertently increase disease risk by reducing biodiversity.



## Example of a Backyard Habitat





# Game Cameras

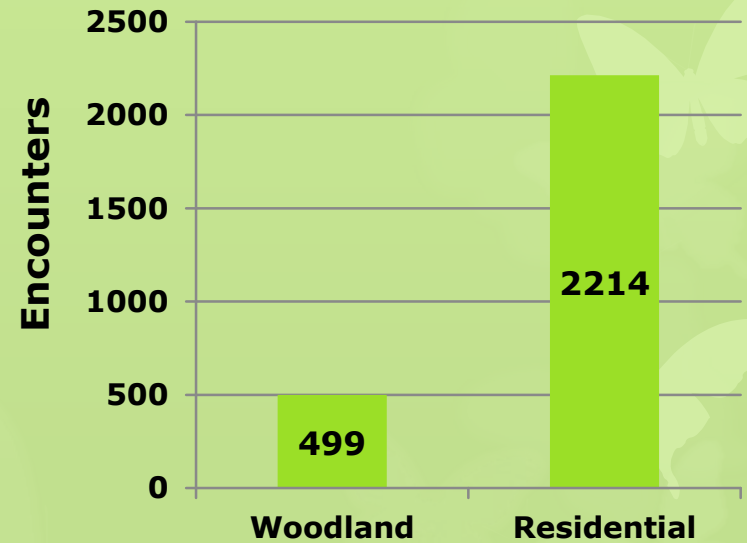
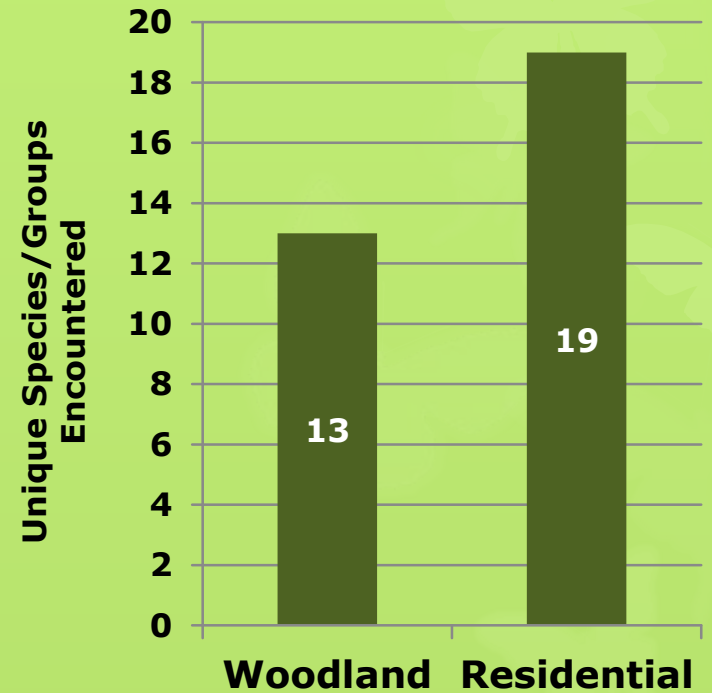
- Set out cameras in 30 residential properties in Redding
- 18 cameras in “intact” water company, CWSF, SCCRWA, and private lands
- Used a long-distance call lure
- Set cameras out for 10 days on 5 different 10-day occasions in 2015 and 4 in 2016





# Results

- Had encounters with 13 unique hosts in woodland areas
- Had encounters with 19 unique hosts in residential areas
  
- 2214 encounters in residential areas
- 499 in woodlands



# Horses

- Encounters/camera group
- Residential = 0
- Woodland = 0.33





# Cat

- Residential = 2.9
- Woodland = 0



24 JUL 2015



# Woodchuck

- Residential = 0.9
- Woodland = 0





# Dog

- Residential = 1.9
- Woodland = 1.5



18 SEP 2015 07:29 am

MOULTRIE



77°F



# Humans- Foresters

- Residential = 3.3
- Woodland = 1.7





# Humans- Foresters

- Residential = 3.3
- Woodland = 1.7





# Humans- Celebratory Foresters

- Residential = 3.3
- Woodland = 1.7





# Humans- Celebratory Foresters

- Residential = 3.3
- Woodland = 1.7





# Humans- Celebratory Foresters

- Residential = 3.3
- Woodland = 1.7





# Humans- Landscapers

- Residential = 3.3
- Woodland = 1.7





# Humans- Landscapers

- Residential = 3.3
- Woodland = 1.7





# Humans- Landscapers

- Residential = 3.3
- Woodland = 1.7





# Humans- Landscapers

- Residential = 3.3
- Woodland = 1.7





# Humans- Landscapers

- Residential = 3.3
- Woodland = 1.7





# Humans- Landscapers

- Residential = 3.3
- Woodland = 1.7





# Humans- Landscapers

- Residential = 3.3
- Woodland = 1.7





# Humans- Applicators

- Residential = 3.3
- Woodland = 1.7





# Humans-Skipping Seasonals

- Residential = 3.3
- Woodland = 1.7





# Humans- Faceless Bikers

- Residential = 3.3
- Woodland = 1.7





# Humans- Homeowners

- Residential = 3.3
- Woodland = 1.7





# Raptors

- Residential = 0.4
- Woodland = 0





# Trash Pandas

- Residential = 28.3
- Woodland = 5.5





# Turkey

- Residential = 5.4
- Woodland = 3.5





# Turkey

- Residential = 5.4
- Woodland = 3.5





# Skunk

- Residential = 1.1
- Woodland = 0





# Rabbit

- Residential = 3.8
- Woodland = 1.8





# Opossum

- Residential = 2.4
- Woodland = 0.8

**CAT FOUND!!!**



LIGHT TAN w/  
BLACK and GREY

FE-  
- MALE - NO COLLAR  
- NOT VERY FRIENDLY, I  
THINK SHE MIGHT BE SCARED  
- NOT HOUSE BROKEN EITHER ☹️  
- FOUND ON 75<sup>TH</sup>  
- IF SHE'S YOURS, CALL DAN 784-[REDACTED]



# Coyote

- Residential = 2.1
- Woodland = 3.7





# Squirrel

- Residential = 142
- Woodland = 35



18 NOV 2016 11:56 am



27 AUG 2016



# Squirrel

- Residential = 142
- Woodland = 35





# Birds

- Residential = 4.5
- Woodland = 1.8



22



18



78°F

02



# Fox

- Residential = 20.1
- Woodland = 2.2



**MOULTRIE**



71°F



14 NOV 2016 06:32 pm



# Bobcat

- Residential = 1.4
- Woodland = 0





# Bobcat

- Residential = 1.4
- Woodland = 0





# Bobcat

- Residential = 1.4
- Woodland = 0





# Bobcat

- Residential = 1.4
- Woodland = 0





# Bobcat

- Residential = 1.4
- Woodland = 0





# Bobcat

- Residential = 1.4
- Woodland = 0





# Bobcat

- Residential = 1.4
- Woodland = 0





# Bobcat

- Residential = 1.4
- Woodland = 0





# Bear

- Residential = 0.1
- Woodland = 0





# Deer

- Residential = 26.3
- Woodland = 23.8





# Deer

- Residential = 26.3
- Woodland = 23.8





# Deer

- Residential = 26.3
- Woodland = 23.8





# Deer

- Residential = 26.3
- Woodland = 23.8





# Deer

- Residential = 26.3
- Woodland = 23.8





# Chipmunk

- Residential = 29.0
- Woodland = 1.5





# Take Home Message

- Better habitat diversity in residential areas
- Wildlife better adapting to humans
- More wildlife hosts in residential areas
- More dilution of pathogens in residential areas
- More ticks as the result of more hosts