

# Bird blow flies: Benign blood-suckers or RUBL range retraction rascals?

Charlotte Harding and Carol Foss

New Hampshire Audubon

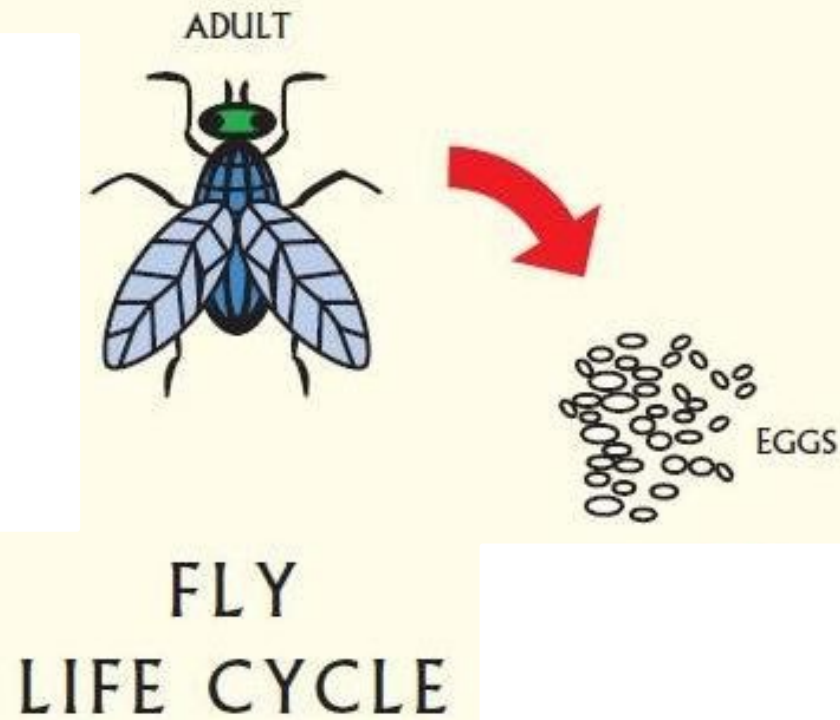


# Findings from last year

- Nestling found with larvae attached
- 26/38 nests with *P. shannoni* puparia
- Most severe: DIXI (31), MI14 (35), COBR (77)

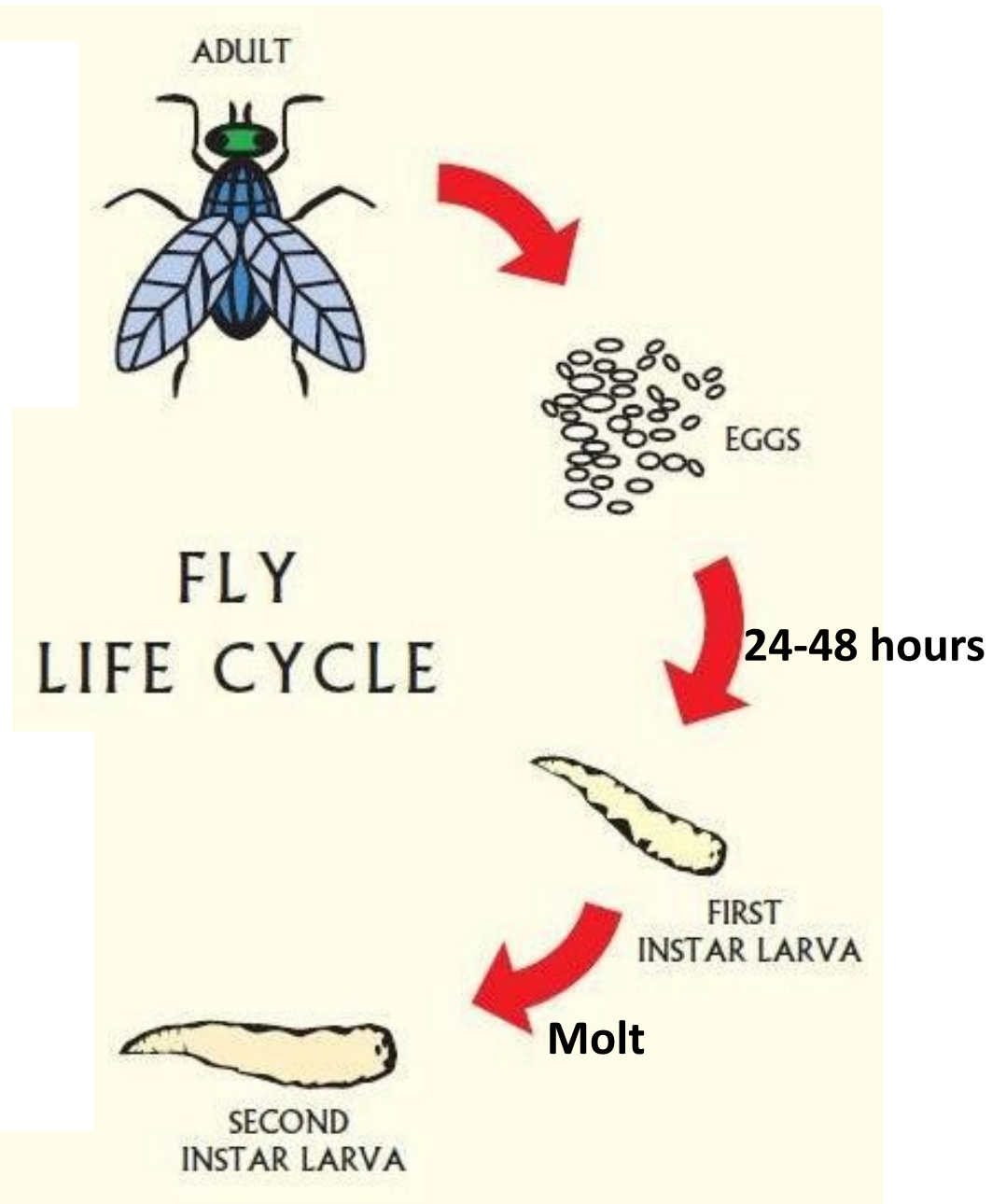


# Bird blow flies (*Protocalliphora*)

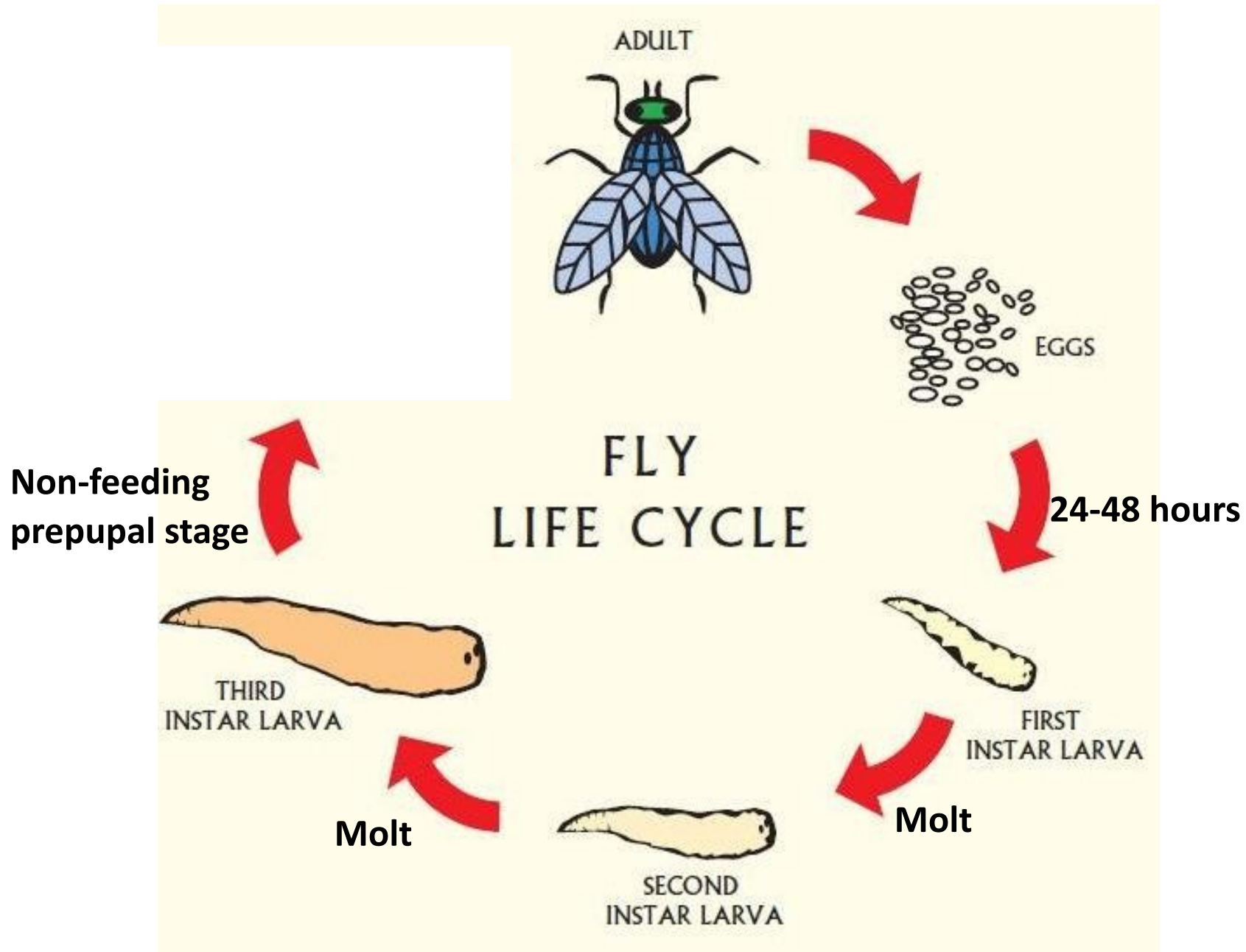




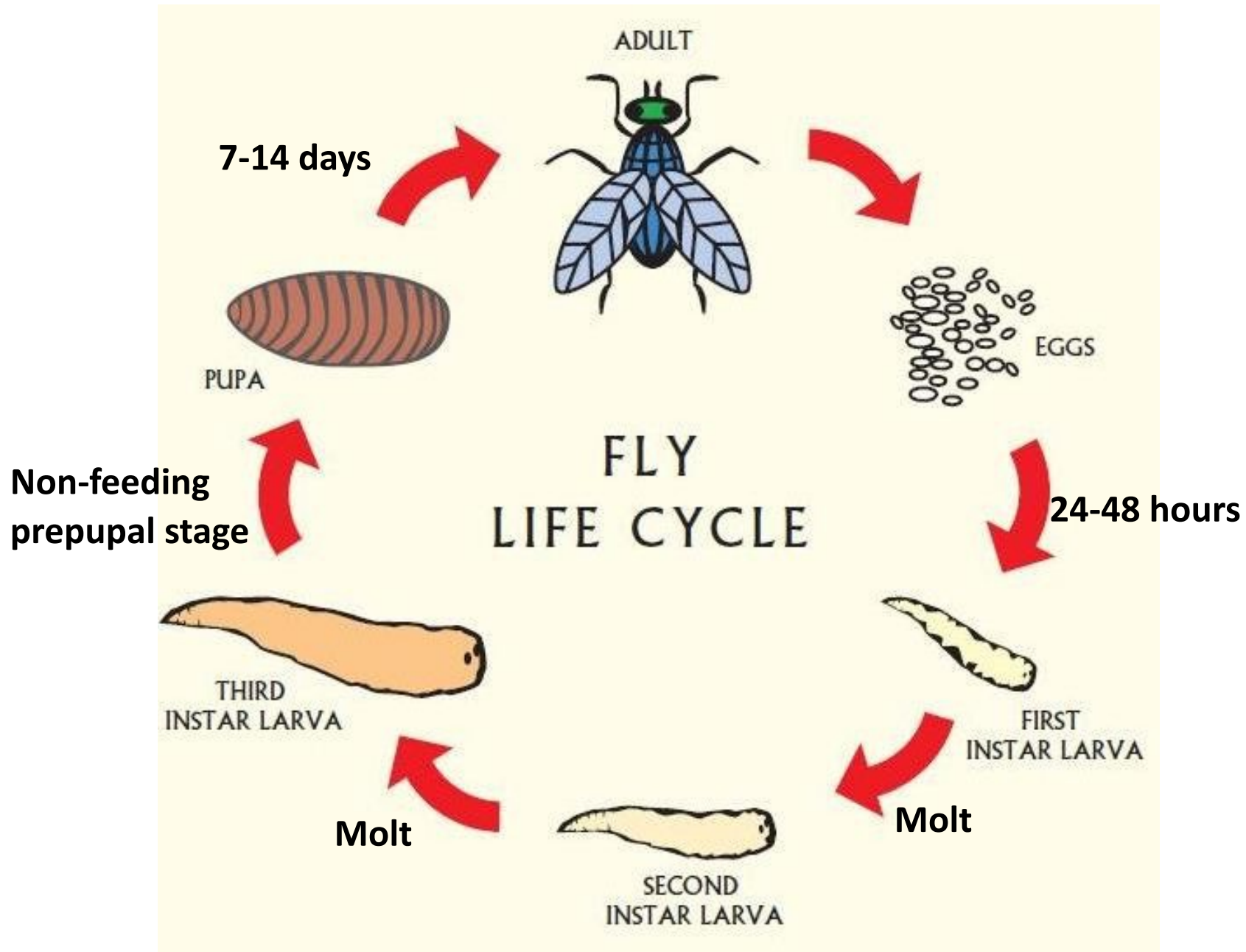
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# *Protocalliphora shannoni*

- Rare in west
- Intermediate stratum and canopy
- Commonly associated with American robins
- Other confirmed hosts:
  - Red-winged blackbird, common grackle, eastern bluebird, gray catbird, jays (blue and gray), thrushes (hermit; Swainson's, wood), sparrows (song and white-throated), cedar waxwing, house wren, yellow-rumped warbler



# 2016 Field Season

- Learn more about blow fly parasitism of RUBLs
- What makes nests more or less susceptible to severe infestation?
- Is blow fly parasitism decreasing RUBL nest success?
- Is threat of blow fly parasitism increasing with warmer weather patterns?
  - Explosion of other blood-sucking ectoparasites



# Our Approach

- 2 nest camera setups
- Monitored nest activity
- Nests collected after fledging and sent for analysis
- Rearing cages set up for 3 nests that had most severe infestations in 2015









1 CAM-03 LB A

05/23/2016  
20:25:41

stream\_000.003







# Nest Analysis

- 17/25 nests infested
- 6 nests - *P. shannoni* only
- 5 nests - *P. metallica* only
- 6 nests - mixed infestations

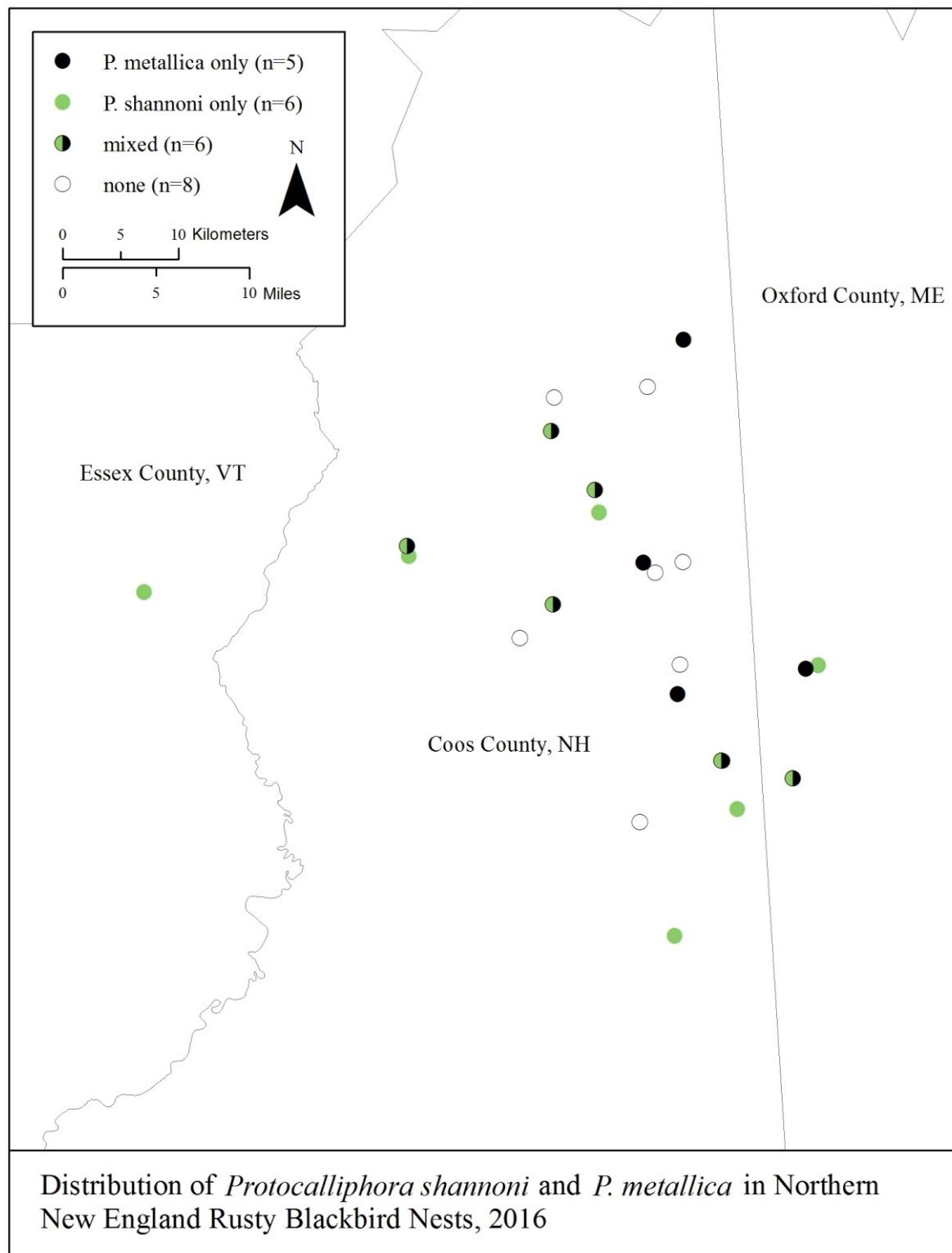
# Nest Analysis

- 17/25 nests infested
- 6 nests - *P. shannoni* only
- 5 nests - *P. metallica* only
- 6 nests - mixed infestations



## *Protocalliphora metallica*

- Ubiquitous
- Frequently occurs in marsh habitats and infests ground-nesters

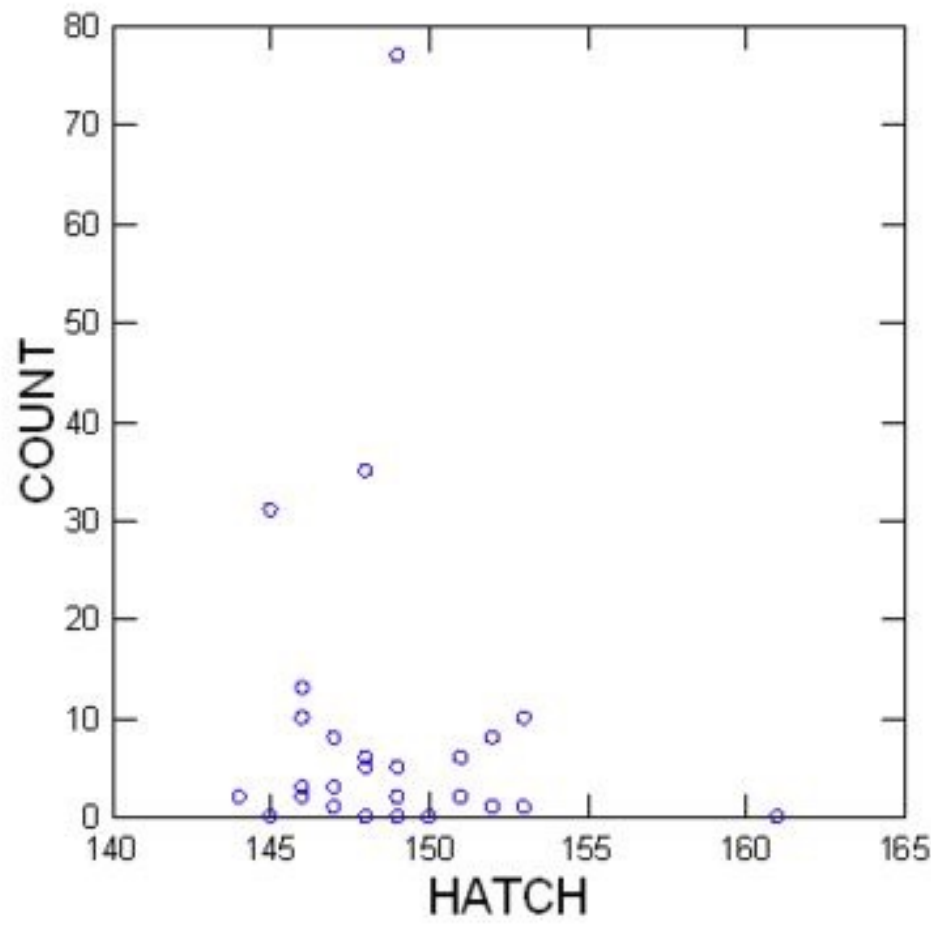


# Possible correlations

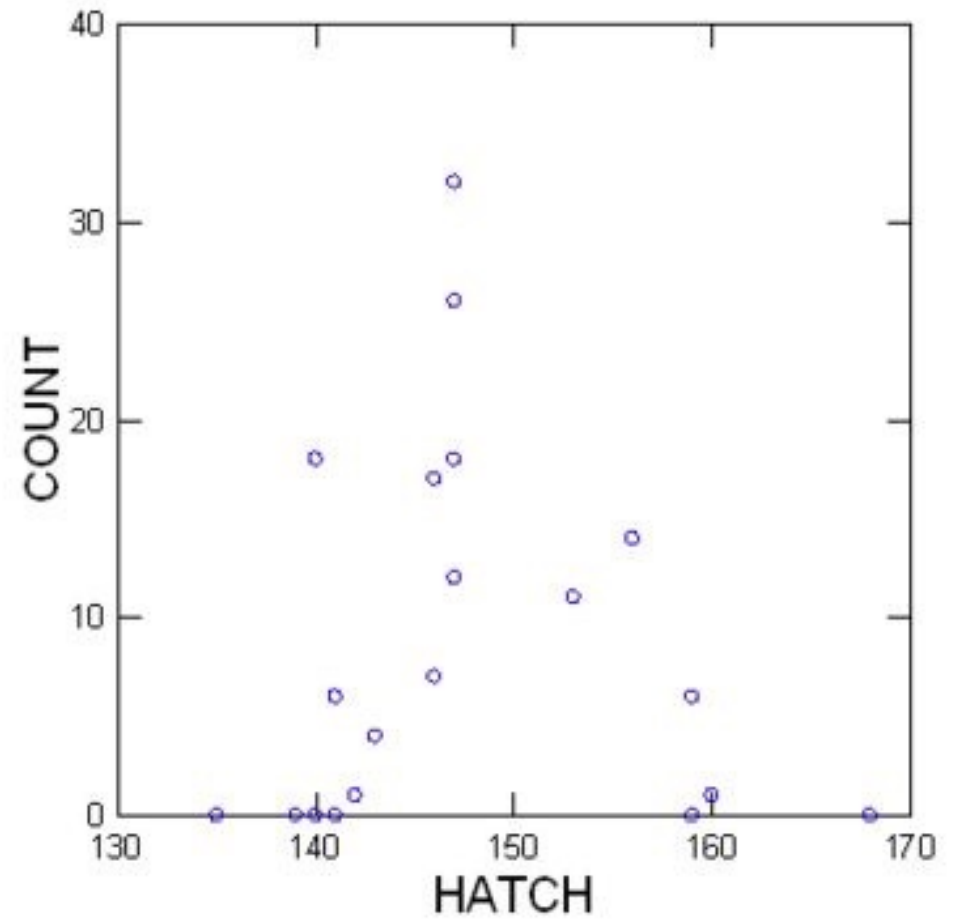
- What makes nests more or less susceptible to blow fly infestation?
  - Nestling hatch date
  - Nest elevation
  - Nest latitude
  - Proximity to water sources
  - Proximity to roads

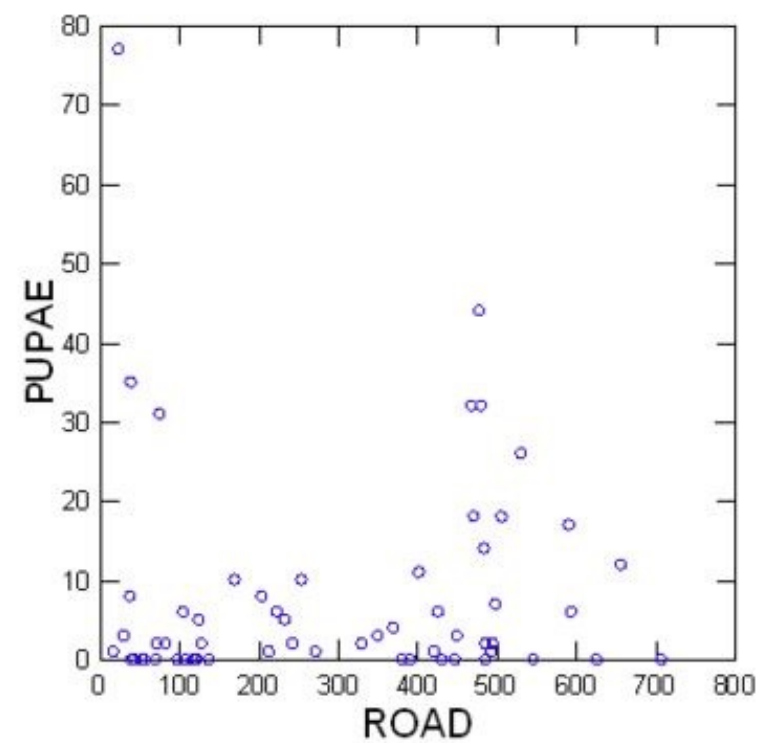
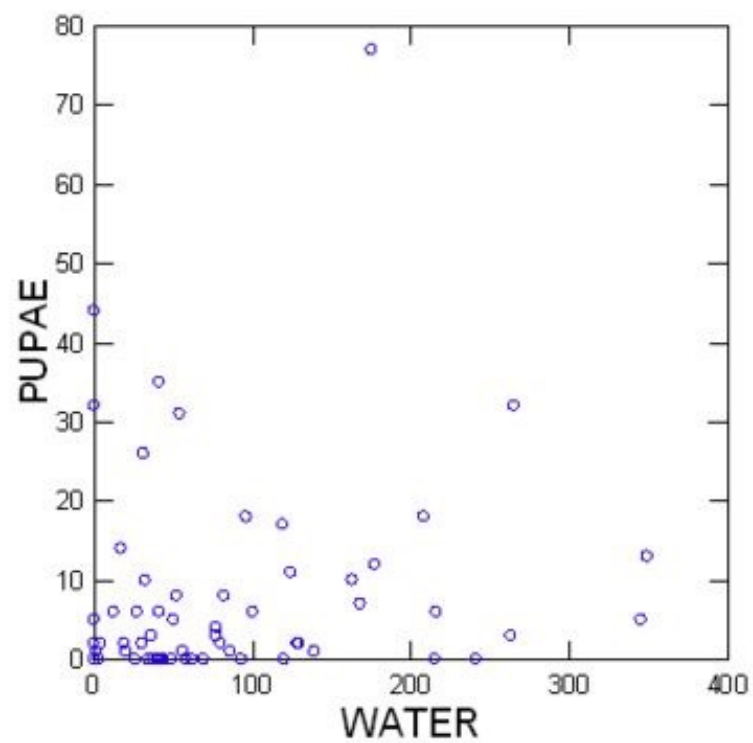
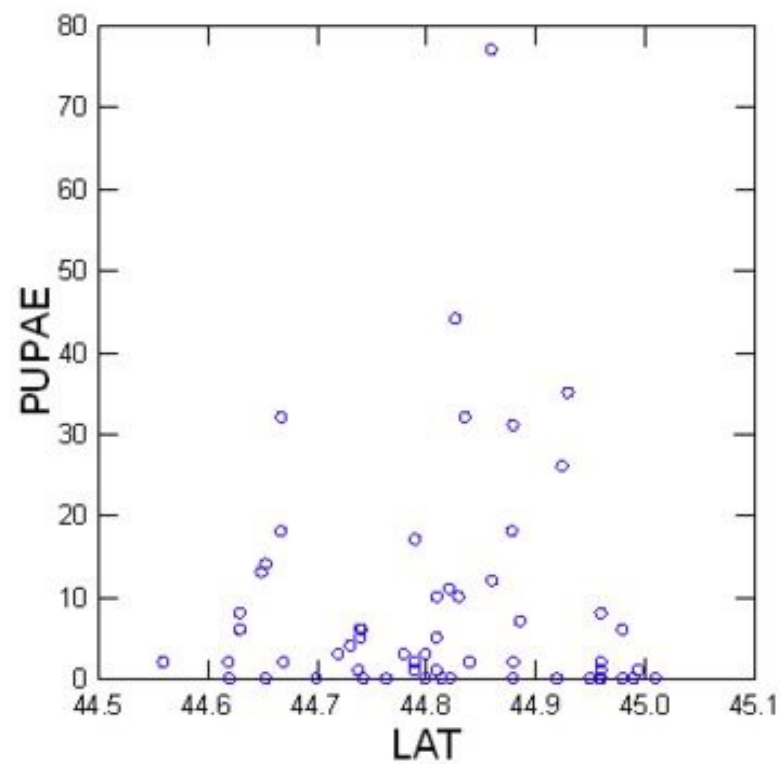
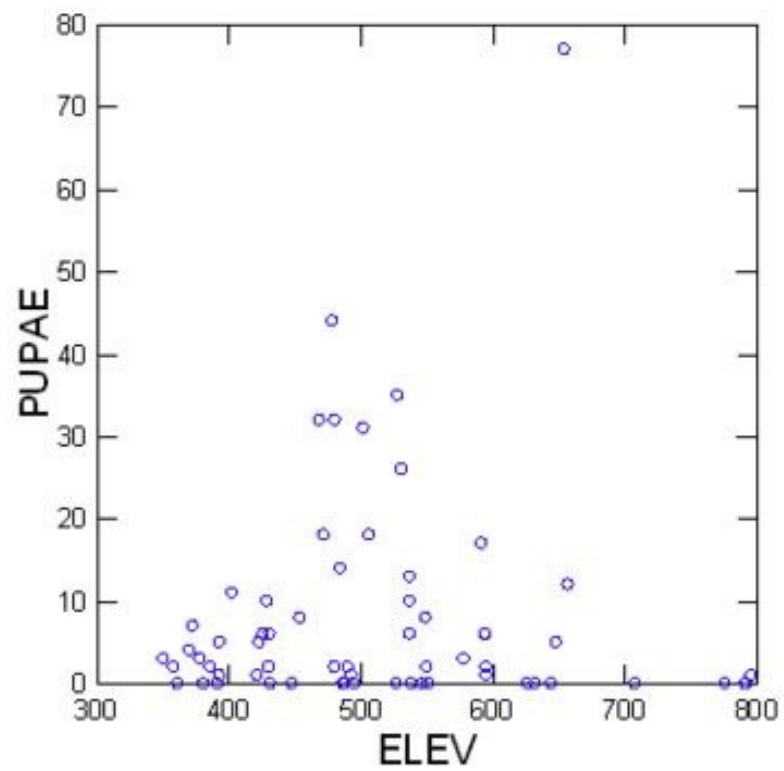


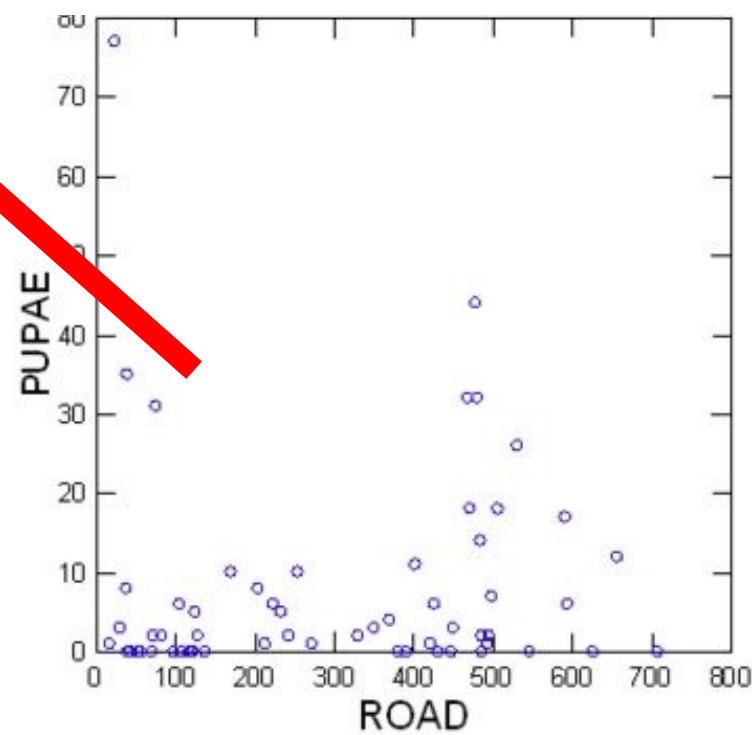
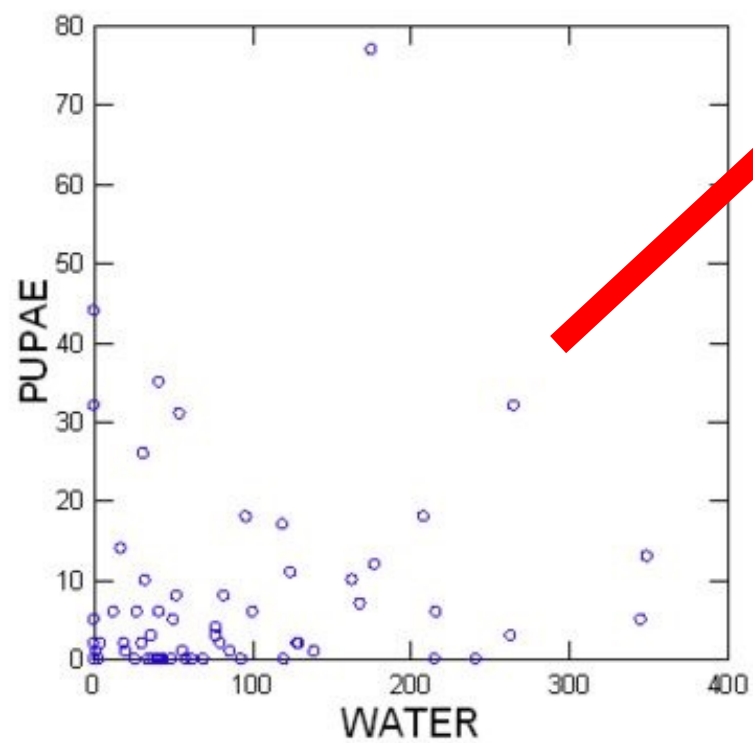
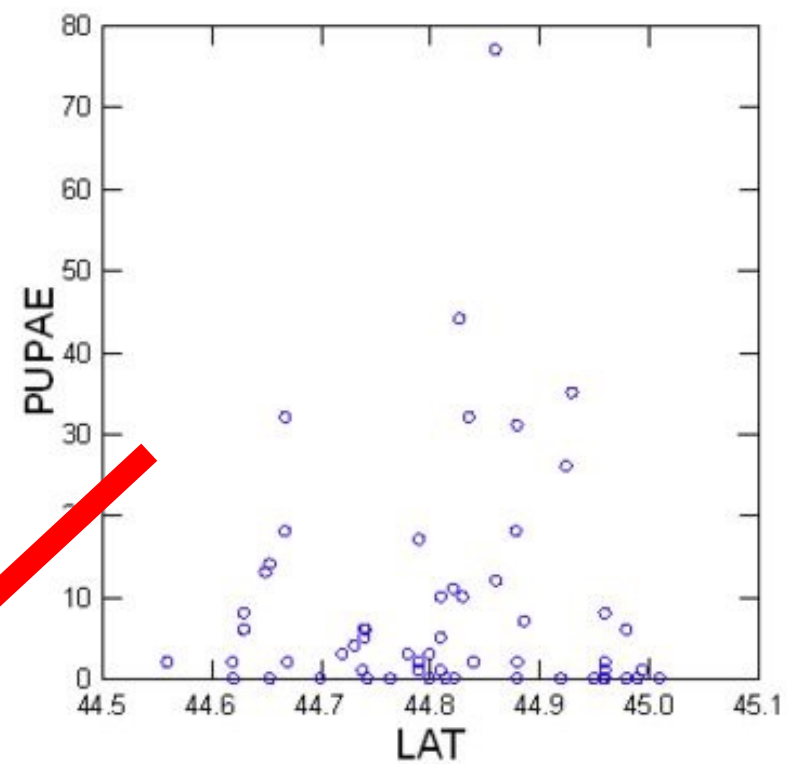
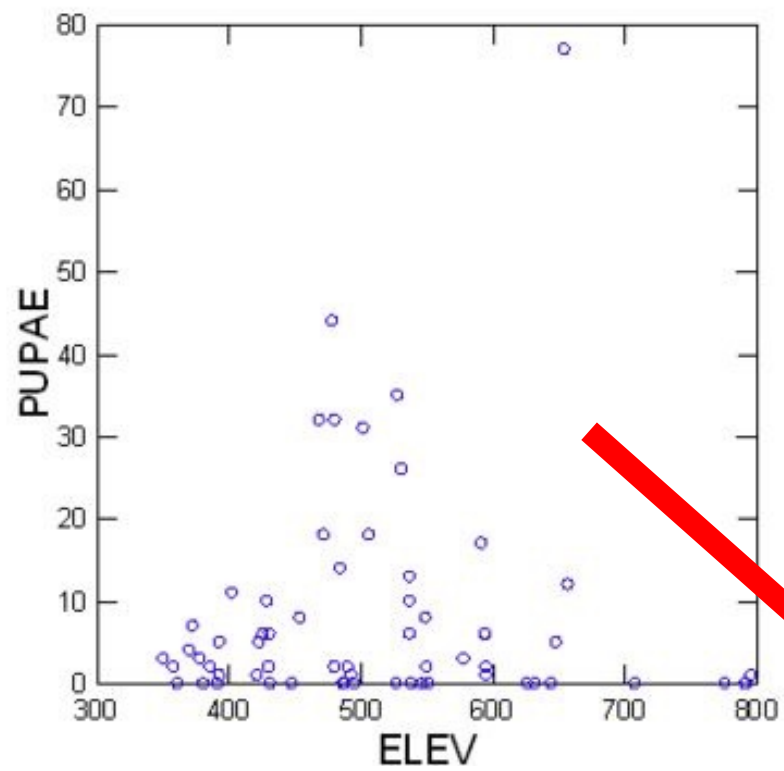
2015



2016







# Future Directions

- Continue nest collection
- Better-quality nest footage
- Nestling telemetry
- Anemia testing







# Thank you!

- Carol Foss
- Terry Whitworth
- Peter Mason
- The 2016 RUBL field season team:  
Patti Wohner, Shannon Luepold,  
Cassandra LaVoie, Katrina Fenton  
and Grace Mitchum

1 CAM-03 LB A

05/26/2016  
05:17:00



COBR female eating eggshells



1 CAM-03 LB A

05/31/2016  
08:19:25



COBR nestlings getting fed

1 CAM-01 LB A

06/06/2016  
06:17:17



DIXI nestlings getting fed