PREVALENCE OF SELECTED PATHOGENS IN ECTOPARASITES FROM FERAL CATS OF CENTRAL OKLAHOMA

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Why study the ectoparasites of feral cats?

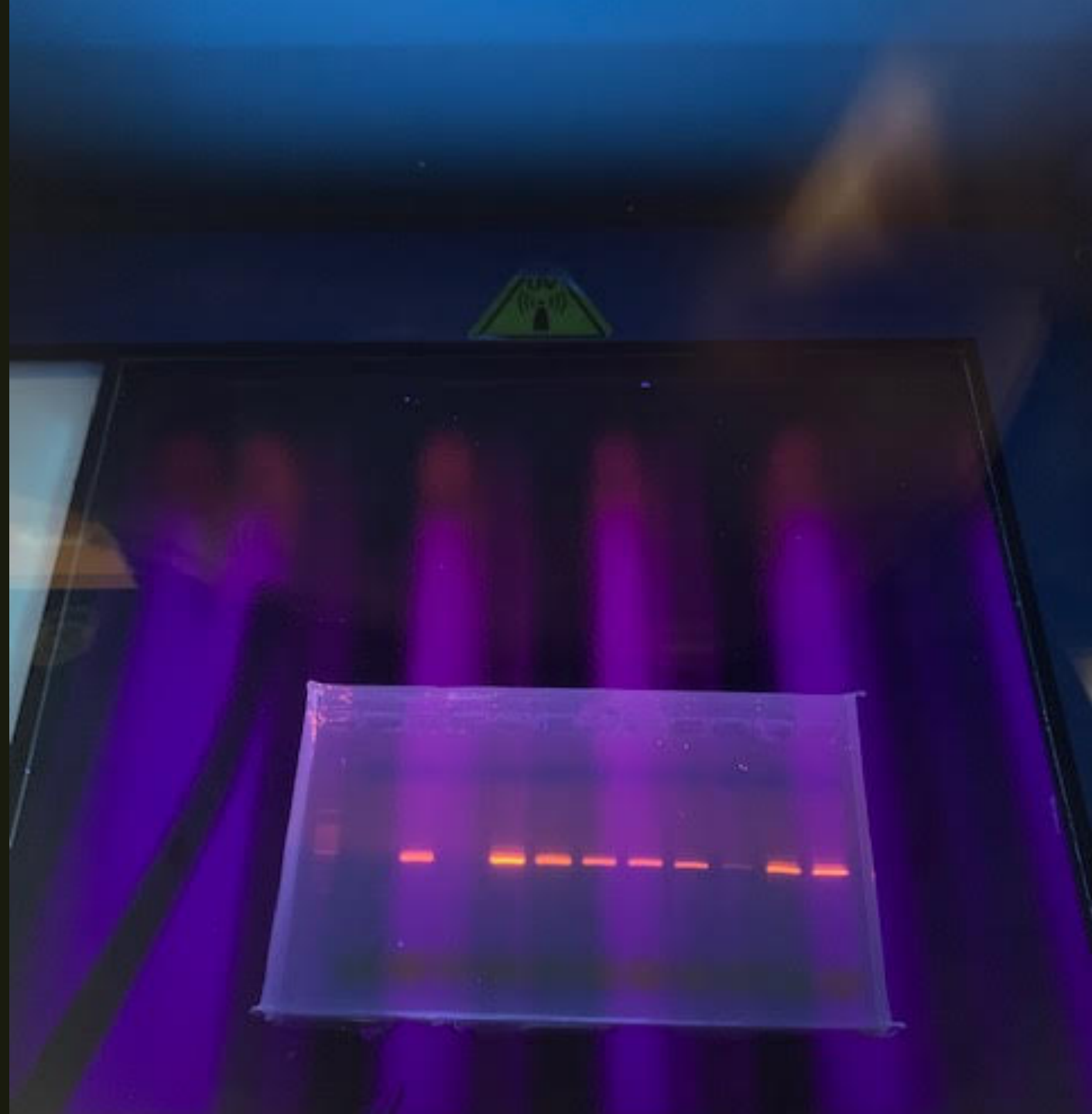
- Implications for human and domestic animal health
- Compare to previous ectoparasite prevalence study
- Expand current knowledge by testing for pathogens
    - *Rickettsia spp.*
    - *Bartonella spp.*

Methods: The Sample Population

- Operation Catnip Stillwater
- January and February 2020
- Every fourth cat combed for fleas and ticks and ears swabbed for mites

Methods: In the lab

- Ectoparasites identified
- DNA extracted
- PCR and gel electrophoresis
- Band purification
- Sequenced by OSU DNA lab



Results: Ectoparasites

- % with fleas
- % with ticks
- % with mites
- Fleas: *Ctenocephalides felis*
- Ticks:
  - *Amblyomma americanum*
  - *Ixodes scapularis*
- Mites:
  - *Otodectes cynotis*

Results: Pathogens

- Fleas:
  - 10 *B. clarridgeiae*
  - 7 *B. henselae*
  - 2 unknown *B. spp.*
  - *11 R. felis*
  - *7 coinfected with B. henselae and R. felis*
- Ticks: 1 *R. felis*
- Ear mites: 1 *B. clarridgeiae*

Map to come

Conclusions

- Two zoonotic flea pathogens in central Oklahoma
- High levels of co-infection between *R. felis* and *B. henselae*
- An unknown *Bartonella* species
- Evidence for the need of flea and tick preventative year round

Feral cats serve as a reservoir for zoonotic pathogens infecting both humans and domestic cats