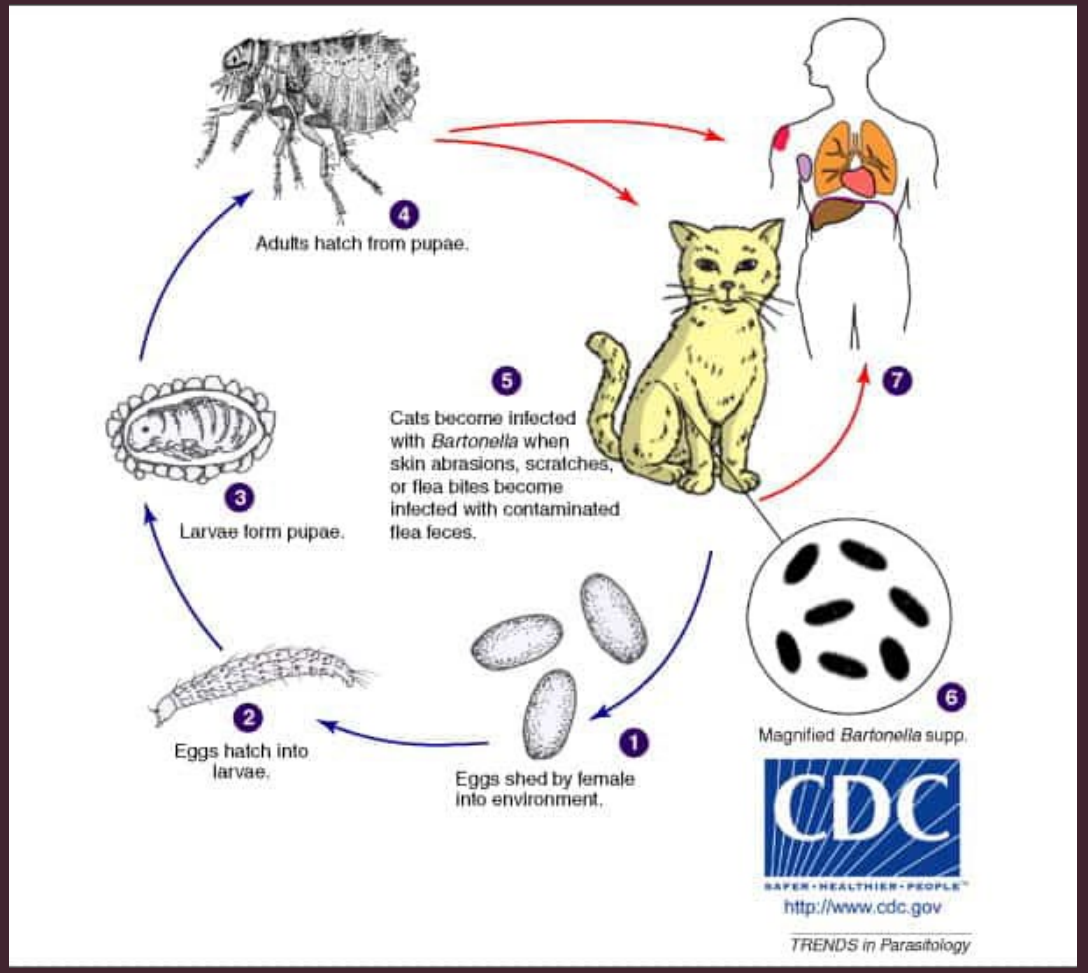
Infectious Diseases of Domestic Cats (Felis catus) in Kentucky, Tennessee, and Virginia

Madison Criswell*, Katherine Kirkendall*, Vina Faulkner, Matthew Marcum, Barbara C. Shock, Karen Gruszynski

Relevance

- → ~47.2 million households own at least one cat
- → ~40-70 million community cats in the US
- → Need to understand feline zoonoses and infectious diseases
- → Appalachia is an historically underserved region regarding public health and infectious disease research



(*Pet Ownership Statistics [2022]: U.S Pet Population*,

STUDY

Goal: determine the prevalence of selected infectious diseases in domestic cats from the Cumberland Gap Region of Appalachia

Cats sampled through SOAR Program from LMU-CVMor from Remote Area Medical (RAM) spay/neuter clinics for community cats

(*A Closer Look at Community Cats | Stray Cats | TNR | ASPCA*, n.d.)

Study

- → Sample kits
- → Why shelter cats and community cats?

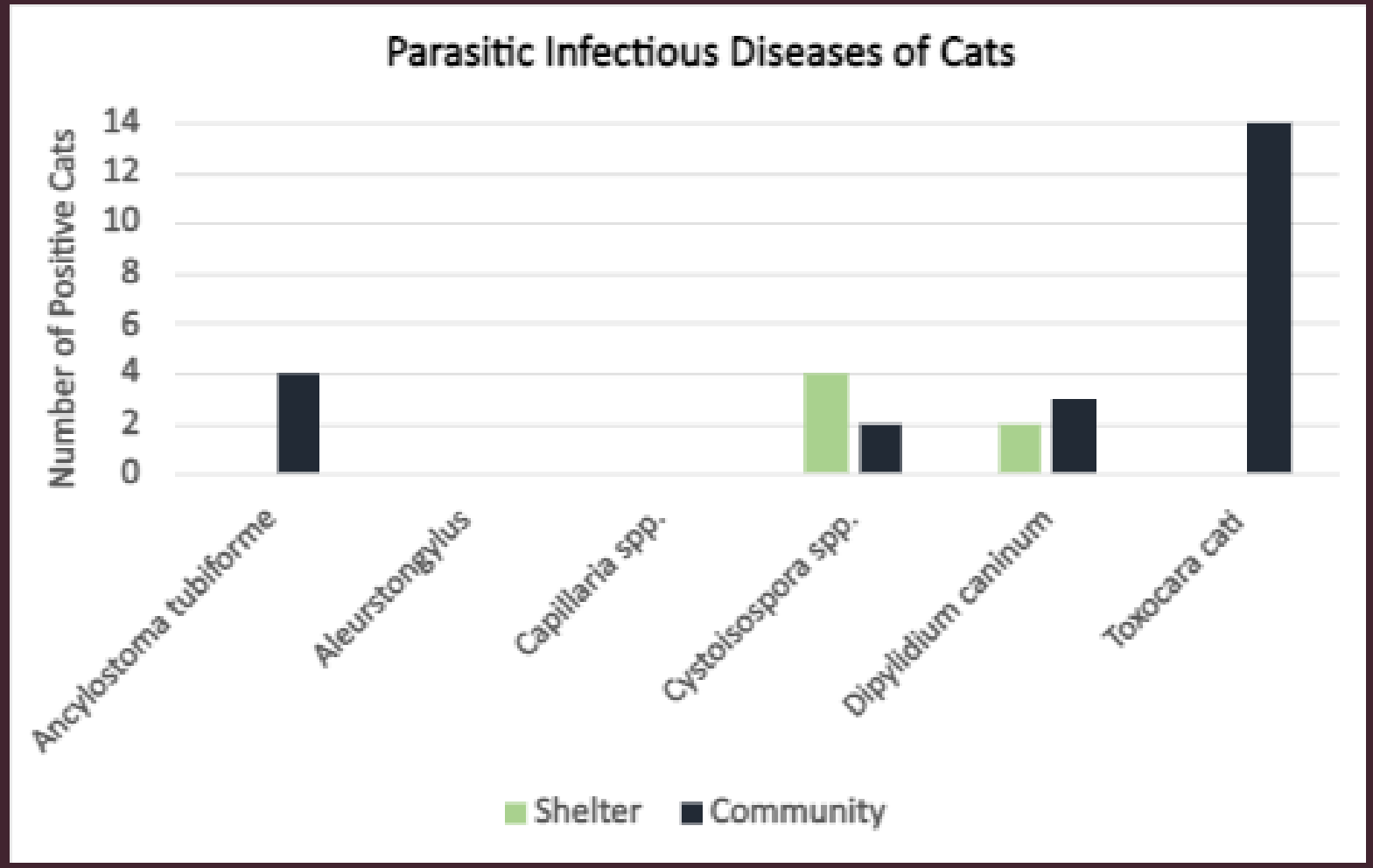
Photo Courtesy of Remote Area Medical Clinics

Methods

- → Collected fecal samples were internally tested and parasites identified through morphological criteria
- → Blood samples were sent out for testing at IDEXX Reference Laboratories
  - → REALPCR™ Panel-Feline assays
- → Results and prevalence of diseases and parasites were compared between shelter and community cat groups

Fecal Results

- → 75 Fecal Samples obtained
  - → 25 shelter cats
  - → 50 community cats
- → One *Dipylidium caninum* found externally on a community cat



Parasite Prevalences

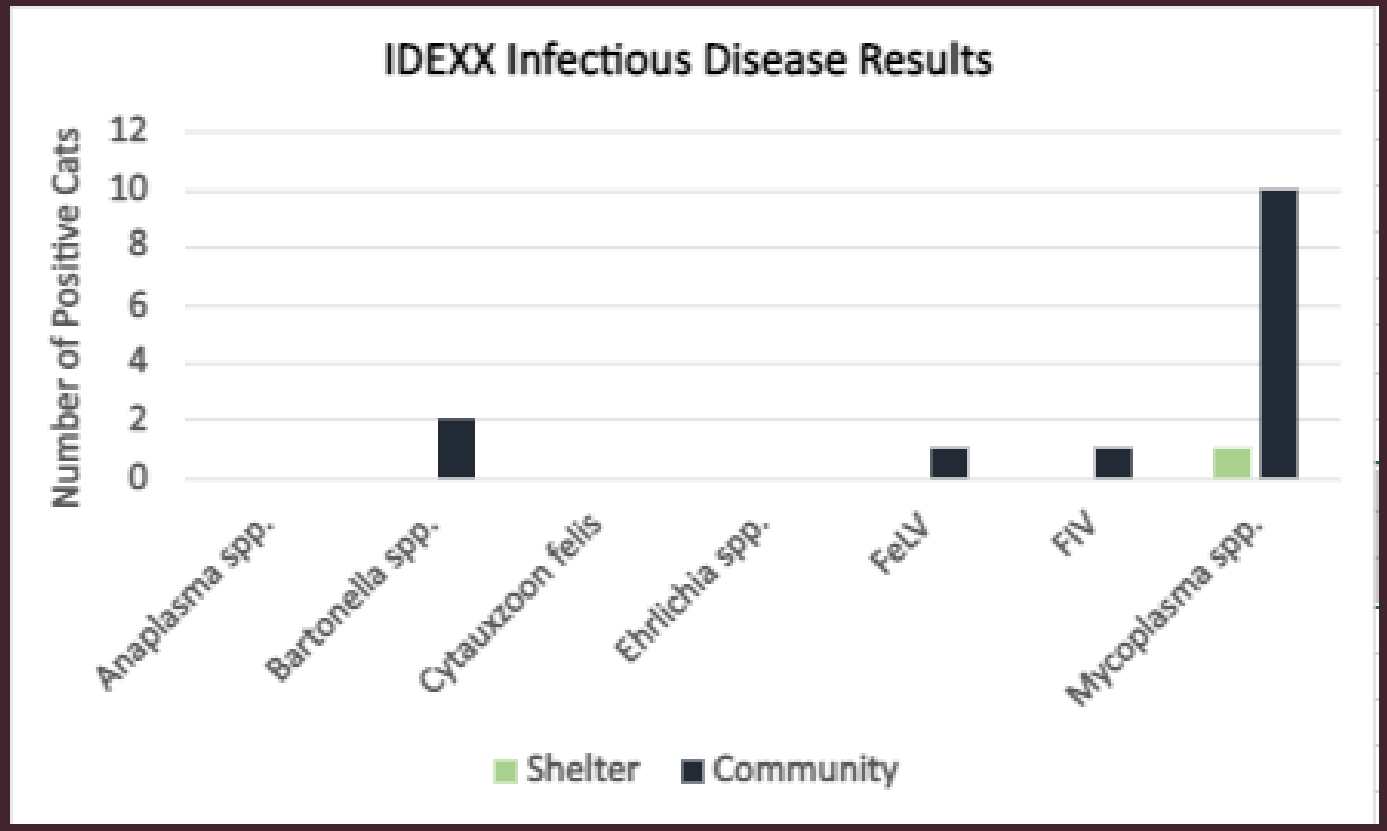
	Totals (95% CI) n= 75	Shelter Cats (95% CI) n= 25	Community Cats (95% CI) n= 50
Toxocara cati	18.75% (10.6-29.3%)	0% (0-13.7%)	28% (16.2-42.5%)
Ancylostoma tubiforme	5.3% (1.5-13.1%)	0% (0-13.7%)	8% (2.2-19.2%)
Capillaria spp.	0% (0-4.8%)	0% (0-13.7%)	0% (0-7.1%)
Cytoisospora spp.	8% (3-16.6%)	16% (4.5-36.1%)	4% (0.5-13.7%)
Aleurostrongylus	0% (0-4.8%)	0% (0-13.7%)	0% (0-7.1%)
Diplydium caninum*	6.6% (2.2-14.7%)	8% (1-26%)	5.9% (12.3-16.2%)

*sample size = 76

Toxocara Cati Eggs

Cytoisospora spp.

IDEXX Blood Test Results



- → 62 samples were sent for testing at IDEXX laboratories
  - → 16 shelter cats
  - → 46 community cats

Prevalence of Infectious Diseases

	Totals (95% CI) n= 62	Shelter Cats (95% CI) n= 16	Community Cats (95% CI) n= 46
Anaplasma spp.	0% (0-5.6%)	0% (0-20.6%)	0% (0-7.7%)
Bartonella spp.	3.2% (0.4-11.2%)	0% (0-20.6%)	4.4% (0.5-14.8%)
Cytauxzoon felis	0% (0-5.6%)	0% (0-20.6%)	0% (0-7.7%)
Erlichia spp.	0% (0-5.6%)	0% (0-20.6%)	0% (0-7.7%)
FeLV	1.6% (0-8.7%)	0% (0-20.6%)	2.2% (0-11.5%)
FIV	1.6% (0-8.7%)	0% (0-20.6%)	2.2% (0-11.5%)
Mycoplasma spp.	17.7% (9.2-29.5%)	6.3% (0.2-30.2%)	21.8% (11-36.4%)

Discussion

- → Limitations – sample size and antigen panel
- → Community cats have a wide variety of diseases and parasites
  - → Outdoor, Feral, and/or Indoor-Outdoor cat and human health implications?
- → CBC and Blood Smear results being evaluated to understand the overall health of the cats
- → Testing of ectoparasites for vector-borne diseases as well

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