In a recent study conducted in central Pennsylvania, evidence of emerging pathogens, some also common to ticks, have been found in fleas. Various pathogens can be spread by ectoparasites among animal host populations in nature. Along with ticks, fleas are found to commonly infest small mammals. The role of pathogen transmission cycles for these vectors is unknown.

In this study, small mammals were captured and fleas were collected in an effort to better understand the enzootic cycle of flea-borne pathogens in central Pennsylvania. Pathogen testing was conducted in both the small mammal hosts and the fleas collected.

Seven species of small mammals were captured of which white-footed mice (*Peromyscus leucopus*) and southern red-backed voles (*Myodes gapperi*) accounted for over 94% of the captures. Only *P. leucopus* tested positive for the blood-borne pathogens examined, with 47 (18.1%) positive for *Anaplasma phagocytophilum* and ten (4.8%) positive for *Babesia microti*.

Of the 61 fleas collected from small mammals and tested for pathogens, *Orchopeas leucopus* was the most common flea
species. Pathogenic bacteria and parasites were detected in 33.3% of total fleas collected, and included *Bartonella vinsonii* subspecies *arupensis*, *B. microti*, and a *Rickettsia felis*-like bacterium. Researchers believe this to be the first report of *B. microti* DNA detected from a flea, as well as the first report of a *R. felis*-like bacterium from rodent fleas in eastern North America.

At this time, only plague (*Yersinia pestis*) is a nationally reportable flea-borne disease in the United States. Like tick-borne diseases, under-reporting of flea-borne illnesses limits understanding of the burden of disease from these vectors. The potential for new and re-emerging pathogens in fleas as well as the potential for fleas to play a role in natural transmission cycles of tick-borne pathogens is not understood. This study elucidates that further investigation is needed to understand the ecology of flea-borne disease transmission cycles, vector competence of fleas for tick-borne pathogens, and the risk to human health.

Read full article: Host distribution and pathogen infection of fleas (*Siphonaptera*) recovered from small mammals in Pennsylvania

**On the Uptick: Pet Insurance Company Cites Increase in**
Lyme Disease Claims, Cost

From prweb.com: As warmer weather leads pets and their people outdoors, pet insurance claims from this same time last year offer an important reminder: Tick season is in full bloom. According to Petplan pet insurance claims data, Lyme disease, a potentially serious infectious disease most commonly spread to pets by the bite of an infected tick, continues to be the top claim for pets in the month of April.* In fact, Lyme disease claims have been growing continually at Petplan, rising from $351 for the average cost of treatment in 2011 to $602 in 2017 – an increase of 72 percent in just six years. Click link to read more http://www.prweb.com/releases/-2018/03/prweb15375067.htm

Tick Exposure and Kidney Disease Risk in Dogs

From American Veterinarian: With another higher-than-average tick season looming, veterinarians should be preparing for the inevitable onslaught of tick-related veterinary visits. Even with knowledge of the dangers of tick-borne illnesses, pet owners continue to put off annual screenings. But a new study aims to help change that narrative. Click link to read more http://www.americanveterinarian.com/news/tick-exposure-and-kidney-disease-risk-in-dogs
**Precautions for Hunters and Hunting Dogs**

The American Veterinary Medical Association [http://www.avma.org/](http://www.avma.org/) has compiled a document which discusses many diseases affecting hunters and their dogs. A number of tick-borne disease are included such as Lyme, anaplasmosis, ehrlichiosis, babesiosis, RMSF, Q fever, tularemia. [link to PDF](#)

**Ticks and Mosquitoes: Could They Be Secretly Infecting Your Dog?**

The following link leads to IDEXX Laboratories, which provides a vast amount of information on Lyme disease in dogs, including maps showing distribution of canine Lyme disease, anaplasmosis and ehrlichiosis.

[IDEXX Brochure on Ticks and Mosquitoes](#)

Visit their website at [www.dogsandticks.com](http://www.dogsandticks.com)
LDA Partners with IDEXX Laboratories to Stop the Spread of Lyme and Other Tick-Borne Diseases in People and Pets

Pat Smith, President, LDA, with Dr. Matt Eberts, DVM, Lakeland Veterinary Hospital, Baxter Minnesota. Ms. Smith attended Dr. Eberts’s presentation on Tick-Borne Infections: The Basics at NAVC (North American Veterinary Conference) in Orlando, Florida, January 15, 2007. Dr. Eberts spoke about Lyme disease and the unexpected rise in cases of anaplasmosis in dogs in his Minnesota-based practice. Anaplasmosis is a Lyme disease co-infection carried by the same ticks that carry Lyme and can infect both people and pets, including dogs, cats and horses. Dogs are sentinels for Lyme disease and are 50 to 100 times more likely to be diagnosed with Lyme disease than their owners. When canine Lyme disease incidence is on the rise, human case numbers generally follow since people share the same space and activities as their pets.

LDA’s Lyme Disease in Pets Printable Fact Sheet

- Dogs, cats, horses & cows can contract Lyme & other tick-borne diseases & can be tested.
- Dogs act as sentinels for Lyme disease.
The disease is often recognized in dogs before it’s recognized in humans.

• Dogs are 50% more likely to get Lyme disease than people.

• Lyme disease symptoms in dogs:

  Lameness, fever, lethargy, swollen joints, enlarged lymph nodes & loss of appetite.

• Ehrlichiosis and anaplasmosis, also tick-borne diseases, are on the rise in dogs in the USA.

• Dogs tend to roll in leaves & run unchecked into tick habitats.

“Rocky at Work”

• Children and their dogs & cats often play together. Increasing the exposure of children to ticks.

• Dogs can bring ticks into homes thus into close proximity to people.

• Cats can get Lyme disease, too.

• Lyme disease symptoms in cats:

  Lameness (may shift leg to leg) stiffness, pain, fever, decreased appetite & lethargy.

• Talk to your vet about protecting your animals from tick-borne diseases.

  Protecting your pet helps to reduce tick exposure of your human family, too!
• Do a daily Tick Check on all pets as well as family members.

• Remove ticks from pets with the same care as used for humans. Learn how to correctly remove a tick.

/index.php/about-lyme/prevention-tick-removal/tick-removal

*This material is presented to provide practical and useful information on the subject matter covered. It is being presented with the understanding that the LDA is not engaged in rendering medical or other professional services. If medical or other expert assistance is required for your pets, the services of a licensed Veterinarian should be sought.

Click here for pdf printable version of Pet Fact Sheet

The latest news and in-depth, veterinarian-approved articles on equine health care from The Horse magazine

Online News

As many as 20% of adult horses in certain areas of the United States are infected with Borrelia burgdorferi, the spirochete (a type of spiral-shaped bacterium) that causes Lyme disease, according to Cornell University researcher and clinician Tom Divers, DVM, Dipl. ACVIM. Horses are infected through Ixodes tick bites. Divers said that many horses in endemic areas are, or have been, infected, which is evidenced by the fact that 75% of horses in the Northeast and Mid-Atlantic states already have antibodies against the organism.

For full article go to their website

Above used with permission from TheHorse.com
Dogs Have More Reasons Than Ever to Be Ticked Off

Veterinary medicine at the forefront of uncovering multiple tick-borne diseases

WESTBROOK, Maine (May 8, 2006) — When people think of ticks lurking in the woods, their backyard or a park, they often consider the dreaded Lyme disease they may carry. However, new research is discovering many of these eight-legged creatures carry multiple diseases that can be contracted by people — and even more so by their four-legged friends.

Press Release

For more information on Lyme in Dogs go to http://www.dogsandticks.com/, which is operated by IDEXX Laboratories, Inc.

Interactive map with the number of reported cases for dogs across http://www.dogsandticks.com/diseases_in_your_area.php

Hover your mouse over an individual state to see the actual numbers for Lyme, Ehrlichiosis and Anaplasmosis.