

A Quarterly Newsletter from the Indiana Animal Disease Diagnostic Laboratory at Purdue University



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www.addl.purdue.edu

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From the Director.....

We are pleased to announce that as of July 1, Kenitra Hammac, DVM, PhD joined the ADDL as the Head of the Microbiology Section and as a Clinical Assistant Professor in the Department of Comparative Pathobiology. Dr. Hammac received her DVM degree from Auburn University and recently finished a residency in Microbiology and the requirements for a PhD at Washington State University. We are also pleased to announce that Grant Burcham, DVM, Diplomate of the American College of Veterinary Pathology, has accepted the position of diagnostician and Head of the Heeke ADDL at the Southern Indiana Purdue Agricultural Center (SIPAC) near Jasper, IN. Dr. Burcham received his DVM degree and completed a residency in Veterinary Pathology at Purdue. Following completion of the requirements for a PhD early in 2014, Dr. Burcham will begin as the veterinary pathologist at the Heeke laboratory. We are excited by the addition of these two veterinarians to the Purdue ADDL staff!

Parasitology!

The ADDL will begin offering parasitology services as of November 1, 2013. Please see our website for complete details.

Tick-borne Diseases of Companion Animals: An Update

By Hannah Atkins

Edited by Dr. Virginia Charney

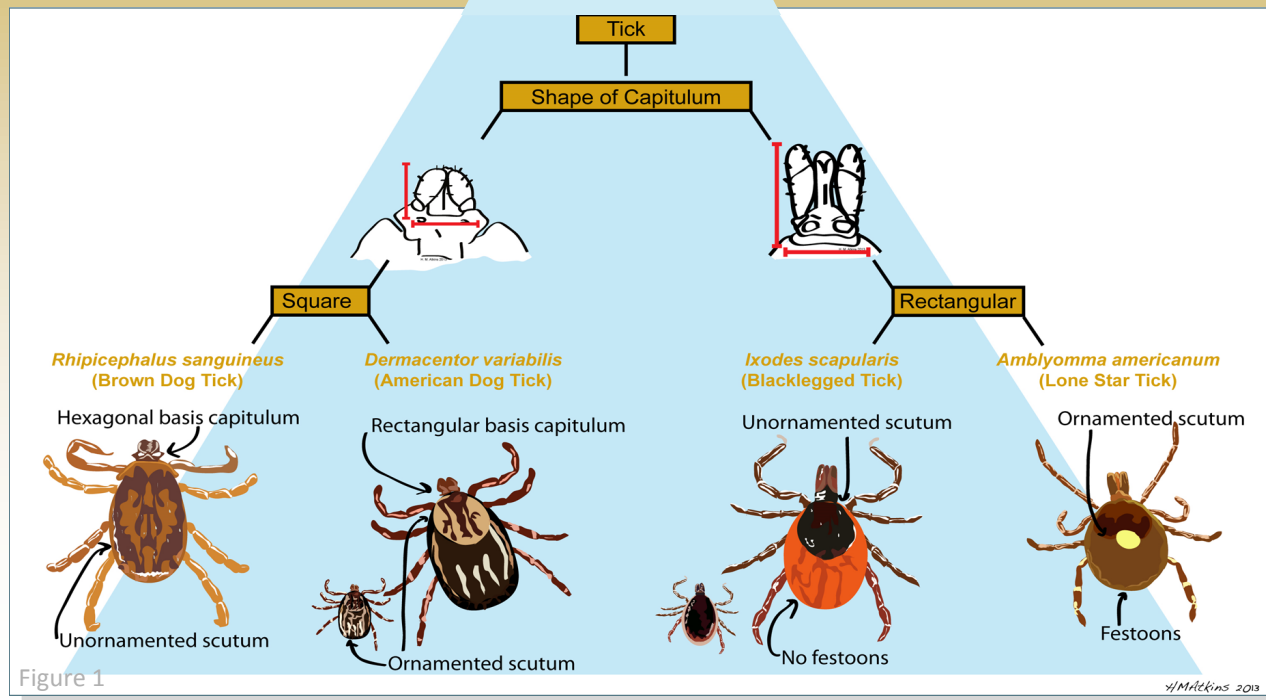


Figure 1

Indiana Ticks and Changes in Distribution

Indiana is home to more than 15 different species of ticks. However, four species of ticks represent the most common and important vectors of tick-borne disease in companion animals. These are the Blacklegged tick (*Ixodes scapularis*), Lone Star tick (*Amblyomma americanum*), American dog tick (*Dermacentor variabilis*), and brown dog tick (*Rhipicephalus sanguineus*). Changes in climate and increased pet transportation have increased the prevalence of tick-borne diseases within the mid-eastern United States.

The Importance of Tick Identification

If a tick is found on an animal, the client or clinician should attempt to at least identify the genus of the tick. Identification of a tick parasite aids in shortening the differential diagnosis list for many hemolytic and thrombocytopenic diseases. It is also important in monitoring the potential distribution of tick-borne diseases in both humans and animals.² Figure 1 provides a very basic algorithm for identification of the four most common ticks in Indiana. If a tick cannot be identified, it should be submitted to the Indiana Animal Disease Diagnostic Laboratory (ADDL).

Read the full article on our website at:

www.addl.purdue.edu to find out more about tick-borne diseases and prevention.

Get to Know the Lab!

Dr. Kenitra Hammac joined the Indiana Animal Disease Diagnostic Laboratory on July 1st, 2013 as a Clinical Assistant Professor of

Veterinary Diagnostic Microbiology.

Welcome aboard Dr. Hammac!



Abstract. Porcine Epidemic Diarrhea virus (PEDV) is a swine enteric virus that, like transmissible gastroenteritis (TGE) virus, is in the family *Coronaviridae*. Since the first diagnosis in the United States in May 2013, PEDV has been identified in swine herds in Indiana and 15 other states. Because PEDV is widespread in Europe and Asia, it is not considered a trade-restricting disease, but a production-related disease. PEDV is usually spread by ingestion of contaminated feces or through fomites. Clinical signs like those of TGE develop in 12-36 hours, and include vomiting and watery feces, with secondary dehydration and metabolic acidosis. The disease occurs mainly in young piglets; however, in naïve herds, morbidity is high in all age groups. Mortality may reach 80% in suckling pigs. Postmortem, stomachs are empty due to vomiting,



Porcine Epidemic Diarrhea Virus

By Tyler Peat

Edited by Dr. Peg Miller

and lacteals contain little or no chyle. The small intestines are thin-walled and fluid-filled. Microscopically, atrophied small intestinal villi are bordered by flattened enterocytes. Diagnosis is based on history, clinical signs, postmortem examination, and laboratory testing. The most common ancillary test is detection of virus by RT-PCR. Treatment is symptomatic with fluid therapy to prevent further dehydration. Biosecurity measures must be stringent to avoid introduction of PEDV infection.

View the entire article at www.addl.purdue.edu

Meet Toxicology

The Toxicology Section at the Animal Disease Diagnostic Laboratory provides diagnostic toxicology testing services to the state of Indiana in order to diagnose animal poisonings. Since 2008, the Toxicology Section has been led by Dr. Christina Wilson. In addition to Dr. Wilson, the section has two Laboratory Technicians, Mary Mengel and Jonathan Butz, both Purdue University alumni. The lab performs routine testing of biological specimens from animals and foodstuffs for drugs, toxins, or toxicants in order to help guarantee the health and safety of pet animals, livestock and the human food supply. This testing is accomplished using a variety of analytical instrumentation including liquid chromatography (rodenticides, vitamin E analysis), gas chromatography/electron capture detection/mass spectrometry (selenium, drug screens, pesticides, white snakeroot toxins), graphite furnace/atomic absorption spectrophotometry (heavy metal analyses), ELISAs (drug screens, mycotoxin screens), and gravimetric analyses (percent bone marrow fat, phosphorus, sulfur). If you have any questions or need guidance with regard to what toxicology tests to perform on a case, please feel free to contact the Toxicology Section. For a list of toxicology

tests and specimens to submit for testing, please visit the ADDL website at <https://www.addl.purdue.edu/TestsFees/BySection.aspx> or contact the Toxicology Section.



From left to right: Jonathan Butz, Mary Mengel, Dr. Christina Wilson

Questions? Comments? Concerns?

**We value your opinion. Please
contacts us at:**

Phone 765-494-7440

Email ahighlan@purdue.edu

Did you know?

In 1913 the first law regarding Hog Cholera was passed in the state of Indiana which opened the door for animal disease diagnostic testing. 100 years later and animal disease diagnostic testing is bigger and better than ever.

Here's to another 100 years Indiana!

CONGRATULATIONS

To Dr. Sarath Meduru from Banfield Pet Hospital!
Dr. Meduru is the winner of the Apple Ipad Mini drawing at this years Veterinary Medicine Fall Conference.

ADDL Lab Results are available by:

- ◆ Email (call ADDL with your email address)
- ◆ Fax
- ◆ Internet/Web

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