Ecologists predict that this year will see an increase in the number of ticks searching for a blood meal from humans and domestic animals. Populations of white-footed mice increase dramatically following years when acorn crops are abundant, as was seen in 2010. This in turn leads to increased numbers of black-legged ticks (also known as deer ticks, *Ixodes scapularis*). Larvae produced during last year’s mouse boom are this year’s nymphs, the poppy-seed-sized intermediate form which is particularly effective at transmitting *Borrelia burgdorferi*, the bacteria that causes Lyme disease. Larvae acquire these bacteria during their first meal from an infected host, which leads to high levels of nymphal infections. Because oaks produced far fewer acorns last year, the mouse populations this year have crashed, which means that ticks are looking elsewhere for their blood meals, and will seek out other mammals in the woods. A mild winter has also led to earlier tick activity in the Northeast. Ticks wait for a passing host from low-lying vegetation or shrubbery, exposure to ticks may be greatest along trails and the fringes of fields or woods. After tick attachment, bacteria are not transmitted for 12-24 hours, but prompt detection and removal may be difficult in heavily furred animals.

Diagnosis of this disease has proven challenging, as infection may be subclinical and chronic. Many naturally-exposed dogs are asymptomatic. Early signs are nonspecific, and may include malaise, fever, lameness and lymphadenopathy. Arthritis is the most consistent chronic sequela to infection. Some cases of glomerulonephritis or myocarditis have been described in infected dogs, with particular breed predispositions, but have not been conclusively proven to be caused by *Borrelia* infection. Co-infection with *Anaplasma phagocytophilum*, another bacterium carried by *Ixodes* ticks, has been correlated with increased incidence of clinical signs. Serologic testing is the most reliable indicator of infection, but it should be emphasized that seropositivity does not correlate well with the appearance of clinical signs.
**Is Blastomycosis in the Northeast? YES**

Blastomyces dermatitidis, a thermal dimorphic fungus, is the etiologic agent of blastomycosis in dogs and cats. The organism is ubiquitous; in North America, it is considered endemic in the Mississippi river and Ohio river basins and around the Great Lakes. However, the southeastern seaboard of the United States and St. Lawrence River valleys and southern Ontario are also locations of frequent cases in dogs and humans. Blastomyces exists as a mold in the soil or when cultured at room temperature, and as a broad-based, budding yeast form in tissues or when cultured at body temperature. The mold, which is the infectious form, is generally restricted to moist, acidic soil habitats that are rich in decaying vegetation. Such environments are found near river valleys or other waterways; in the habitats of wild animals, particularly beavers, pigeons, and waterfowl; and in areas of soil disruption, such as construction sites.

Although blastomycosis has been reported in a wide range of animal species, including horses, primates, dolphins, and cats, it is most commonly diagnosed in the dog. Dogs are probably infected with *B. dermatitidis* by inhalation of windborne or soilborne spores, which results in a primary focus of infection within the lung. In the alveoli, the spores transform into the yeast form and multiply within macrophages. Most often, this causes self-limiting pulmonary infection. A generalized or disseminated form of blastomycosis may occur when the organism spreads via the blood or lymphatic system, causing pyogranulomatous inflammation in the eyes; brain; bone; lymph nodes; urogenital system; and skin, subcutaneous tissues, or both. Direct inoculation into the subcutaneous tissue via puncture wounds has also been reported in dogs and humans, causing local cutaneous infection. Interestingly, porcupine quills have been associated with the cutaneous form of the disease. While any dog may contract blastomycosis under the right circumstances, there is increased risk for 2- to 4-year-old, sexually intact, male dogs of sporting and hound breeds, which may be housed outside, and which are likely to be working in areas suitable for the growth of *B. dermatitidis*. Proximity to a body of water is also a significant risk factor.

Clinical signs of canine blastomycosis vary with the organ involved and are nonspecific. Cutaneous lesions may occur and are usually small and slightly raised, ulcerated areas with sero-sanguineous to purulent exudate. Dogs with localized pulmonary disease usually exhibit anorexia; depression; exercise intolerance; weight loss; cough, dyspnea, or both; and fever that is nonresponsive to antibiotics.

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.....the NHVDL can send reports via email?

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Many of you are aware that the United States Postal Service has gone through major restructuring and has recently closed several mailing processing centers. Unfortunately, changes and closures have caused delays in receiving specimens from some of our clients.

In an effort to expedite deliveries, the NHVDL will soon offer Federal Express service to clients who wish to purchase our histology, microbiology or cytology mailers. Also, Federal Express labels will be available for purchase for clients shipping Coggins samples.

The new service will make a significant advancement in our service to you. Please visit our website for updates on this service and for information on all our diagnostic tests and fees.

**New Staff**

We are pleased to announce that Karen Tobey has joined our staff as a part-time office assistant. For over ten years, Karen worked in the medical office field and, prior to her arrival, was a laboratory employee at the NE Equine Medical and Surgery Center in Dover, NH.

In 2003, Karen graduated from the NH Community Technical College with a degree in Veterinary Technology and is currently pursing a degree in medical laboratory science. With her vast experiences in office and laboratory practices, she will be an asset in our laboratory sections as we continue to expand services.

Outside of work, Karen enjoys spending time with her family and riding her quarterhorse, Hershey.