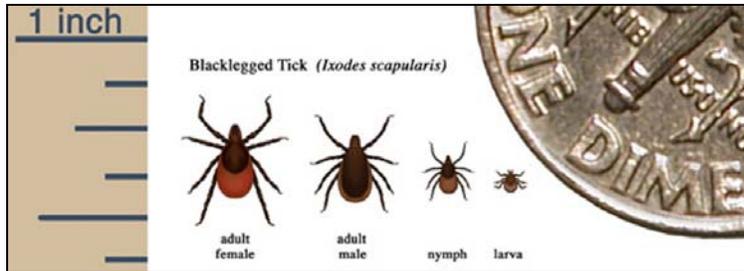


Safety Note #79

## FIELDWORK SAFETY: LYME DISEASE



Illustrative Chart Courtesy of CDC

Information available from the Centers for Disease Control and Prevention (CDC) indicate there were 1,066 reported cases of Lyme disease in California between 1993 and 2002. The disease can usually be cured with antibiotics within the first few weeks of infection. However, if untreated soon after onset of symptoms, arthritic, cardiac or neurologic abnormalities may develop weeks or months later.

Lyme disease is caused by the bacterium *Borrelia burgdorferi* which is transmitted from mice, squirrels, and other small mammals to humans through the bite from either a nymph or adult female stage of the western blacklegged tick. In California, the western blacklegged tick is most common along the western slope of the Sierra Nevada Mountains and within and nearby coastal areas.

The following fieldwork precautions should be taken for Lyme disease prevention:

- Since there is no vaccine against the disease, the best defense against Lyme disease is to not be bitten by a tick. Therefore, avoid conducting fieldwork in favorable tick habitat such as moist shaded portions of woody, brushy, or grassy areas.
- Wear a long-sleeved shirt and long pants with boots in the field. Tucking your pants into your boots or socks helps prevent tick access to your skin. Light-colored clothing is preferable since dark-bodied ticks are easier to spot against a light-colored background.
- Use insect repellents containing compounds such as DEET (repels ticks) on exposed skin and permethrin (kills ticks on contact) on clothing only.
- Frequently check yourself and help check field colleagues for ticks.
- Ticks may attach to humans almost anywhere on the body, but those that bite fully-clothed persons commonly attach to such sites as the scalp, behind the ears, or on a limb. Therefore, pay particular attention to these areas while checking yourself or others for ticks.
- Remove attached ticks as soon as they are found by using fine-tipped tweezers to grab the tick's mouthparts against the skin and steadily pulling to remove the tick. Do not jerk or twist the tick. After removal, wash the bite site, apply an antiseptic, and cover the site with a band aid.
- Do not apply alcohol, fingernail polish, heat (e.g. with a lit match) or petroleum jelly to the tick; these methods have proven ineffective for tick removal.
- Promptly seek professional medical attention if you suspect you are experiencing Lyme disease symptoms such as muscle aches, joint pain, fatigue, chills fever, swollen lymph nodes, heart palpitations, and/or an expanding "bull's eye" rash termed erythema migrans.



"Bull's Eye" Rash  
Photograph Courtesy of CDC

Information Sources: CDC at: <http://www.cdc.gov/lyme/> and Calaveras County Cooperative Extension at: <http://cecentralsierra.ucanr.edu/>