



Figure S22.1. Ventral view of adult female black-legged tick, *Ixodes scapularis*; note the hypostome with retrorse teeth and the genital opening between legs IV. (Photo by Lyle Buss, Department of Entomology and Nematology, University of Florida, Gainesville.)



Figure S22.2. A. Engorged female black-legged tick, *Ixodes scapularis*, the vector of the causative agent of Lyme disease. Note that the opisthosoma extends far beyond the dorsal shield due to the large volume of blood she has obtained. (Photo by Lyle Buss, Department of Entomology and Nematology, University of Florida, Gainesville.)



Figure S22.2. B. Unengorged adult female *Ixodes scapularis*. (Photo by Lyle Buss, Department of Entomology and Nematology, University of Florida, Gainesville.)





Figure S22.3. Life stages of the black-legged tick, *Ixodes scapularis*. There is a larva (right), nymph (left), and adult (center). It is sometimes difficult to see larval ticks when feeding on their host until after they become engorged due to their small size. (Photo by U.S. Centers for Disease Control, Atlanta, GA.)



Figure S22.4. Male and female *Ixodes ricinus* mating. This tick can vector *Borrelia burgdorferi*, the causal agent of Lyme disease. It is commonly found on farm animals and deer. The tick male is inserting the spermatophore into the genital opening on the venter of the larger female. (Photo by U.S. Centers for Disease Control, Atlanta, GA.)





Figure S22.5. Feeding by American dog ticks, *Dermacentor variabilis*, can cause loss of blood and anemia. (Photo by Lyle Buss, Department of Entomology and Nematology, University of Florida, Gainesville.)



Figure S22.6 A. A male brown dog tick, *Rhipicephalus sanguineus*. (Photo by Lyle Buss, Department of Entomology and Nematology, University of Florida, Gainesville.)





Figure S22.6 B. Engorged female brown dog tick and eggs. (Photo by Lyle Buss, Department of Entomology and Nematology, University of Florida, Gainesville.)





Figure S22.7. Cattle undergoing chemical treatment for ticks. (Photo by U.S. Centers for Disease Control, Atlanta, GA.)



Figure S22.8. Adult male (left) and female (right) of the lonestar tick *Amblyomma americanum*. This tick does not transmit Lyme disease, but is able to transmit ehrlichiosis, and Southern Tick-Associated Rash. The white dot (or star) in the center of her back is a key character. (Photo by Lyle Buss, Department of Entomology and Nematology, University of Florida, Gainesville.)