

Information to be entered in the online Abstract Submission form

1. Author Field

- Authors and affiliations

2. Title Field

- Title should be in **Sentence case, NOT BOLD**
- Scientific names should be underlined

Prevalence of Lyme disease, human Granulocytic Ehrlichiosis, and human Monocytic Ehrlichiosis ticks and blood collected from Odocoileus virginianus (white tailed deer) from Southcentral Pennsylvania

2. Abstract Field

- Only the **Abstract Body** to be entered
- Scientific names should be *italicized*
- No spaces or returns before or after abstract

The results of this study are part of a continuing surveillance to determine the prevalence of the causative agents of Lyme disease, human granulocytic ehrlichiosis (HGE), and human monocytic ehrlichiosis (HME) in ticks and blood collected from hunter killed deer in South Central Pennsylvania. Two tick species, *Ixodes scapularis* and *Dermacentor albipictus*, and blood from *Odocoileus virginianus* (white tailed deer) were screened using polymerase chain reaction assays for DNA from *Borrelia burgdorferi* (Lyme Disease), *Anaplasma phagocytophilum* (HGE) and *E. chaffeensis* (HMG). *Anaplasma phagocytophilum* was detected in a significant percentage of both tick species as well as blood collected from deer, while *Borrelia burgdorferi* was detected in a low percentage of *I. scapularis* ticks and *E. chaffeensis* was not detected in any samples. Co-infections of *B. burgdorferi* and *A. phagocytophilum* were also detected in a low percentage of *I. scapularis*. G-tests of independence were run comparing tick species, the sex and stage of development of ticks as well as the sexes of the deer. The G-tests of independence showed a dependent relationship only between sex of the deer and infection with *A. phagocytophilum*, with female deer demonstrating significantly higher levels of infection.