

The relationship between *Haemaphysalis longicornis* and sika deer abundance on Tsushima Islands, Japan*

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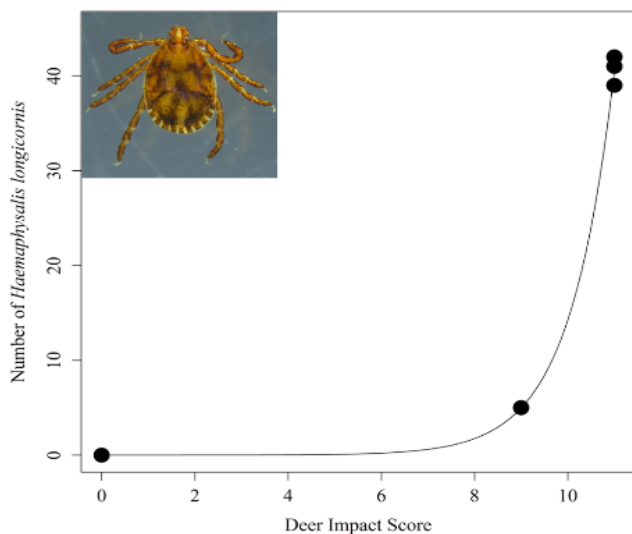


FIGURE 1. Relationship between *Haemaphysalis longicornis* abundance and Deer Impact Score on the Tsushima Islands. Measurement plots and regression curve.

among which *H. longicornis* was the dominant species. The abundance of *H. longicornis* increased with increased Deer Impact Score, which represents relative deer density based on five deer signs (bark stripping on *Cryptomeria japonica* or *Chamaecyparis obtusa* trees, browsing marks on the understory vegetation, deer fecal pellets, deer tracks, and deer trails). This study indicated that deer abundance may be an important factor in determining *H. longicornis* abundance. Notably, *H. longicornis* is known to serve as vector for several tick-borne pathogens, including SFTS virus. The relationships between ticks and wildlife hosts are expected to provide essential information from the perspectives of vector control, disease risk prediction, and conservation of rare species.

Keywords: Asian long-horned tick, *Haemaphysalis longicornis*, Deer Impact Score, Tsushima leopard cat, SFTS, Conservation medicine