Introduction

- *Ixodes scapularis* (Say), or the blacklegged tick, first established in the Southeast corner of Manitoba in 2006, and has since expanded its range north and westward.
- *I. scapularis* is a vector of pathogens causing Lyme disease, babesiosis, and human anaplasmosis.
- Surveillance for emerging blacklegged tick populations has been ongoing in Manitoba. More resources should be put towards promoting passive surveillance in the province.
- Passive surveillance localities do not always yield ticks when active surveillance is performed.
- Passive surveillance (Figure 1) involves collecting ticks from vegetation and logging trails. "Adventitious ticks" are ticks that attach to migratory birds and detach later in flight.

Surveillance

- Passive surveillance (Figure 1) involves the voluntary submission of ticks found on humans and domestic animals, by the public, veterinarians and healthcare professionals.

- Active surveillance (Figure 2) involves collecting ticks to determine whether a population has become established.
  - Drag Sampling was conducted using a 1m x 1m white cloth checked for ticks every 10m for 2000m (Rochon et al. 2012).
  - 16 sites sampled in 2013 and 79 sites in 2014.
  - A minimum of 1500m was sampled at each locality.

Trends

- Submissions East of Winnipeg are frequent in all years.
- Passive surveillance localities do not always yield ticks when active surveillance is performed.
- Passive surveillance North of Riding Mountain and Lake Winnipeg are thought to be "adventitious ticks".

Limitations

- "Adventitious ticks" are ticks that attach to migratory birds and detach later in flight.
- "Adventitious ticks" can detach in areas where *I. scapularis* populations are not yet established, and then be submitted via passive surveillance representing a false signal (Koffi et al. 2012; Ogden et al. 2008).
- Number of passively submitted ticks per year is determined by the human population density due to greater search efforts in these areas (Koffi et al. 2012).
- Active surveillance is expensive, and time consuming so not all areas can be sampled.

Suggestions

- Areas where tick populations are emerging can be targeted to alert the public to the potential risk (Koffi et al. 2012).
- More resources should be put towards promoting passive surveillance in the Western half of the Province.
- Active surveillance should continue in areas such as South of Riding Mountain National Park, and Southeast of Brandon to the Turtle Mountains where passive surveillance indicates the potential for emerging tick populations.
- Public awareness of *I. scapularis* should be a top priority in areas of Manitoba that are frequented for leisurely and recreational activities in the Summer.

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References

