



Habitat-dependent variation of reservoir competence for tick-borne pathogens

Background

Ticks (*Ixodes* spp.) feeding on small mammals have been suggested to extend their distribution range northwards in Sweden; an extension that would also increase the risk of spread of tick-associated pathogens (e.g. *Borrelia* spp. and tick-borne encephalitis (TBE) virus). At present, our understanding of habitat type-specific reservoir competence (i.e. potential to produce pathogen-infected ticks) is very limited. This knowledge is however crucial for a holistic understanding of the ecology of tick-borne diseases.

Primary questions

1. Which rodent species show highest reservoir competence?
2. Does this reservoir competence vary among habitats?
3. To which extent varies reservoir competence between different cohorts of small mammals and between sexes?

Work plan and methods

1. Thorough literature study on ticks and reservoir competence
2. Development of study design and identification of suitable study areas and target pathogens
3. Life-trapping of small mammals and sampling of ticks attached to the mammals
4. Taxonomic identification of ticks and tick preservation for pathogen analyses
5. If interested, participation in pathogen analyses
6. Identification of tick prevalence in small mammals
7. Data analyses
8. Thesis compilation

Extent

Preferably 60 credits, but 30 credits might also work.

Contact

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