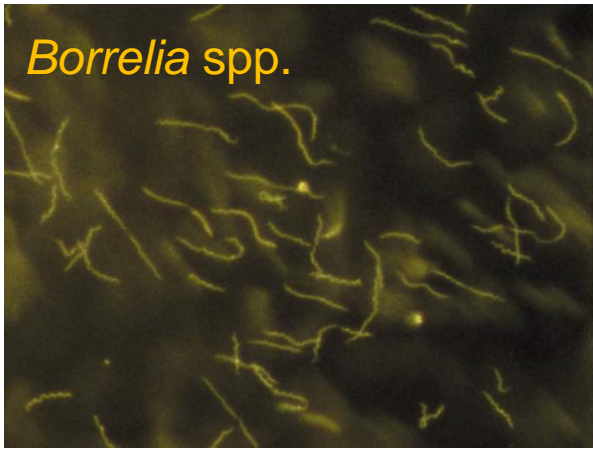


Borrelia spp.



The role of biodiversity in the ecology of zoonotic disease transmission

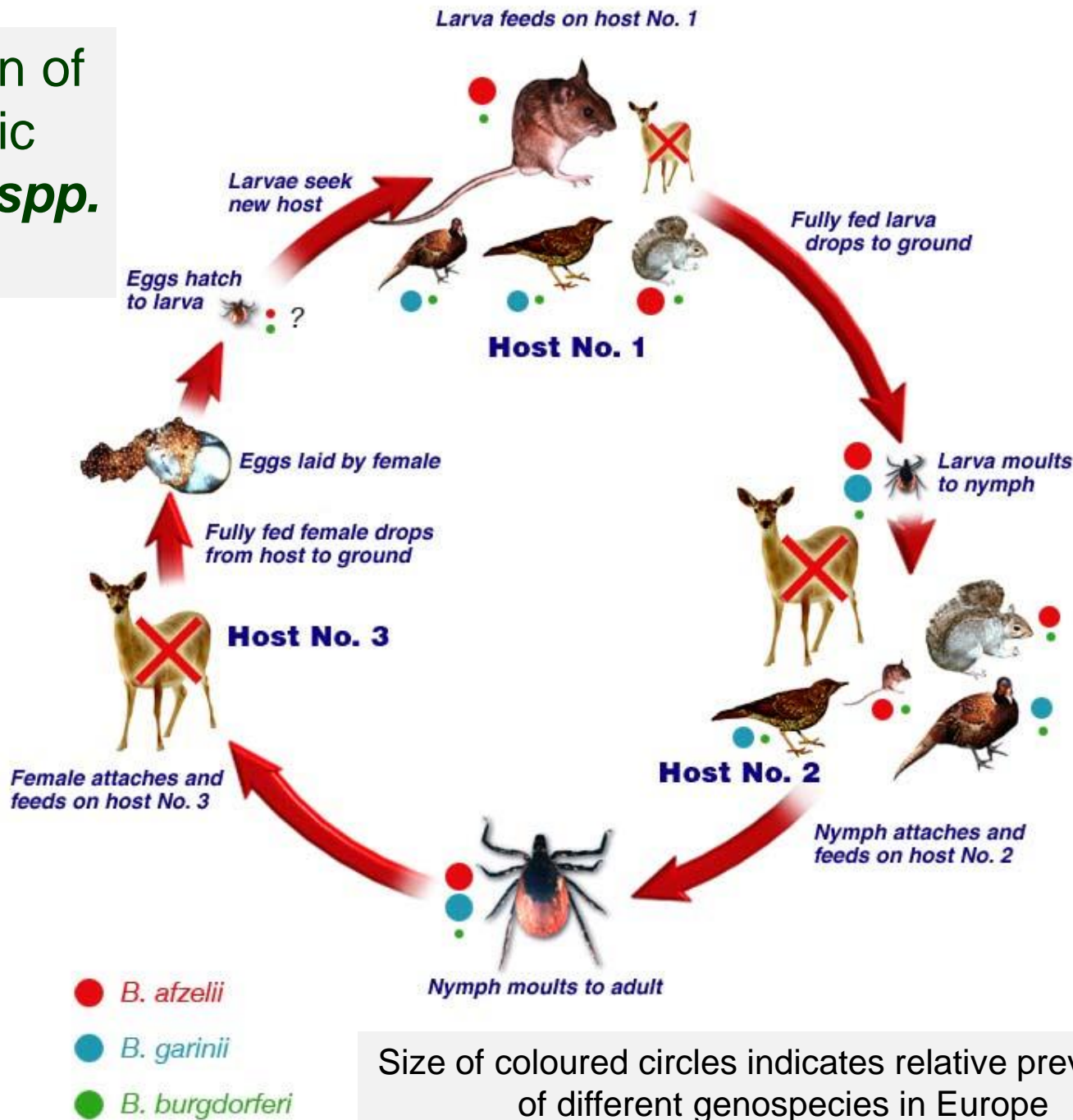
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Background

- Biodiversity loss labelled as cause of disease outbreak (Keesing *et al.* 2010)
- Defined as the dilution effect (Keesing *et al.* 2006)
- Looking at **Lyme disease** in Irish/European context provides ecological and epidemiological insights

Circulation of pathogenic *Borrelia* spp. in nature



Size of coloured circles indicates relative prevalence of different genospecies in Europe

Conclusions

- There are indications that Lyme disease in Ireland/Europe may increase with biodiversity
- The dilution effect may be valid in certain contexts (Keesing *et al.* 2006) but other factors may be important e.g. land use change (Jones *et al.* 2013)

Way Forward

Examine the ecological processes together with the force of infection to better appreciate human risk with respect to specific zoonoses

