## Small bites, big problems

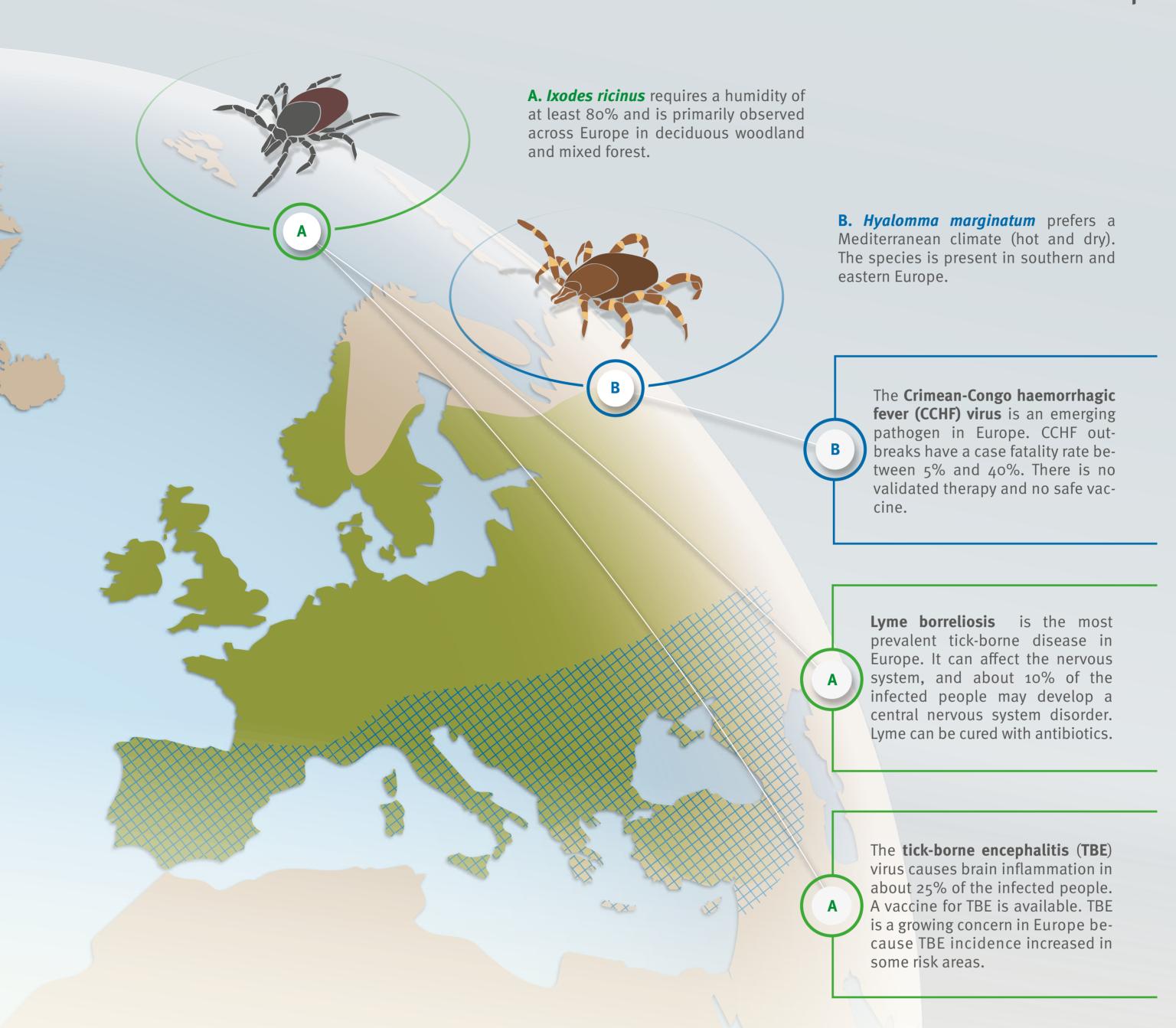
## Tick-borne diseases in Europe

Ticks do not directly cause disease but if ticks are infected, they can transmit pathogens through their bites and thus cause disease in humans.

Ticks are small ectoparasites (external parasites, 0.5–15 mm). They depend on a host (birds, mammals) to be able to grow and reproduce. Ticks also feed on humans.

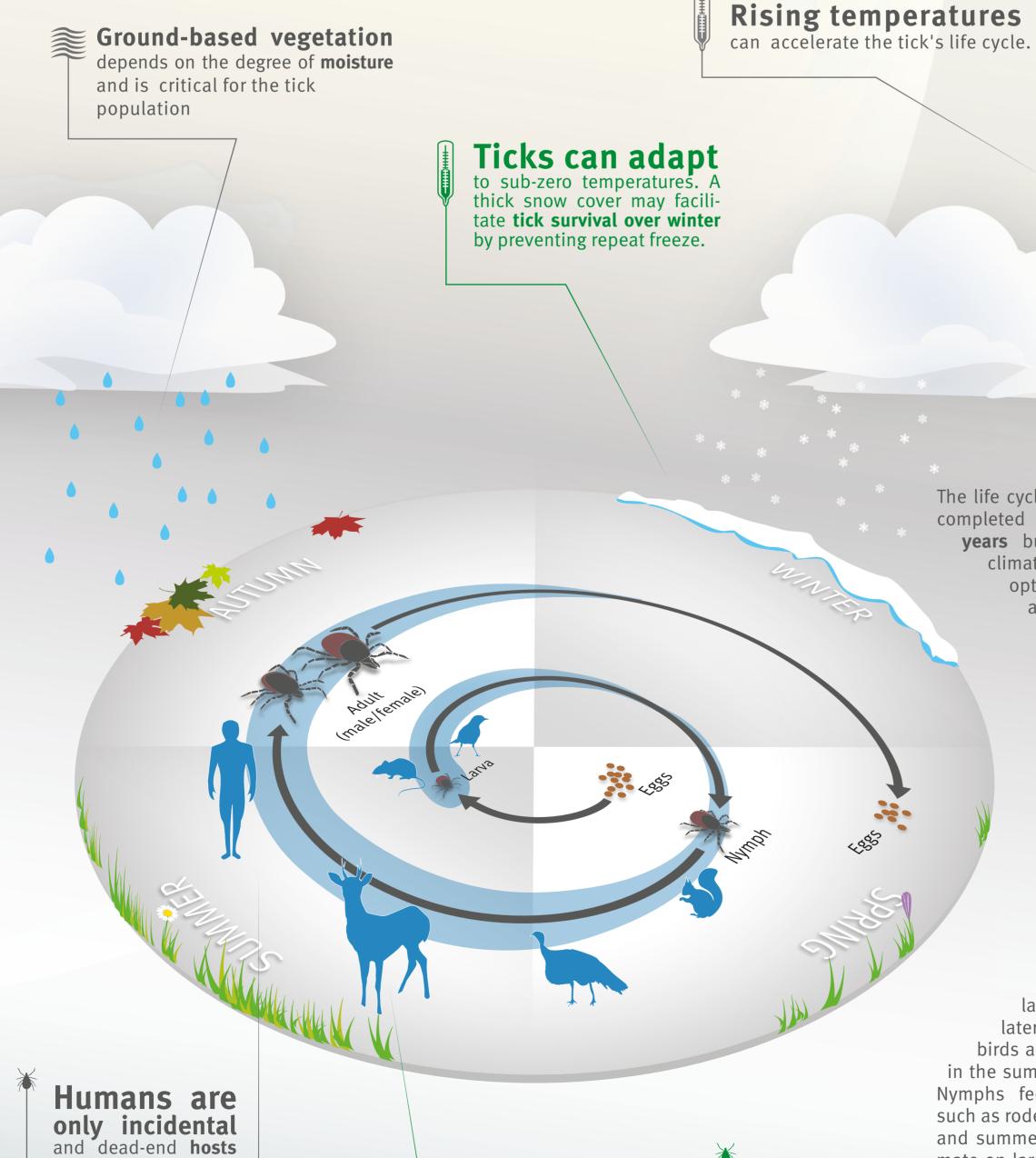
## The spread of ticks in Europe

Tick-borne diseases are endemic in Europe



## The life cycle of a tick\*

Disease transmission can occur in late spring, summer, and even in autumn



The life cycle of a tick\* is typically completed within two to three years but can be shorter if climatic conditions optimal and suitable hosts are abundant. Ticks go through four life stages: egg, larva, nymph and adult. Ticks must take a **blood** meal in order to moult to the next life stage and produce eggs. During the last two stages ticks might bite humans and transmit disease.

Eggs are typically laid in spring and hatch as larvae two to four weeks later. Larvae feed on mice, birds and other small animals in the summer and early autumn. Nymphs feed on small animals such as rodents and birds in spring and summer. Adult ticks feed and mate on large animals such as roe deer. In spring adult female ticks lay their eggs, completing the life cycle.

\* The example describes the life cycle of Ixodes ricinus



in the ticks' life cycle.

Tick bites can be

avoided by taking

protective measures.

Adult ticks prefer larger hosts such as roe

deer. Hosts can transport

ticks over vast distances.