

# THE LIFE CYCLE OF THE HEDGEHOG TICK *IXODES HEXAGONUS* and THE DOG TICK *I. CANISUGA*

*Ixodes hexagonus* is three-host tick widespread across Europe, primarily associated with hedgehogs. This species will feed on many other hosts including cats, dogs and also humans are regularly bitten. Despite the detection of several tick-borne pathogens in *I. hexagonus*, the significance of this species in the transmission of Lyme borreliosis in humans, or indeed as part of enzootic cycling of this and other tick-borne pathogens in nature is still largely unclear.



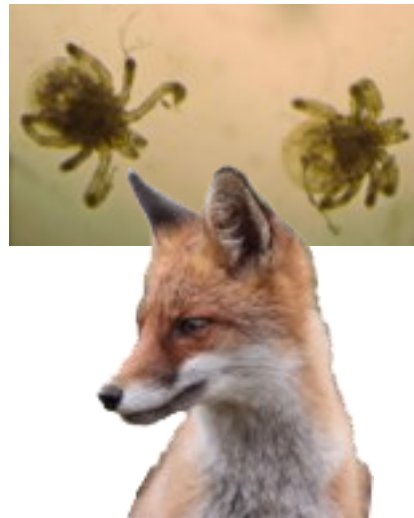
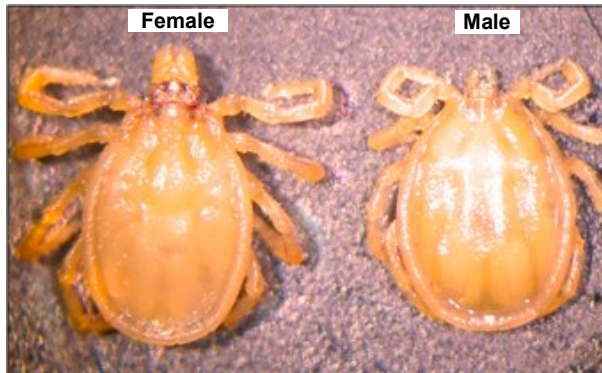
Note the broadly hexagonal shape of the scutum which give this tick its species name. The scutum of *I. ricinus*, with which this tick can be confused, is rounded.



*Ixodes hexagonus* has adapted to parasitize hosts which occupy fixed burrows or nests, such as hedgehogs and foxes. The life cycle is similar to that of *Ixodes ricinus* with egg, larva, nymph and adult occurring over three years, but all the parasitic stages usually feed on the same nest-dwelling host - usually hedgehogs - for approx. 7-8 days. *Ixodes hexagonus* is commonly found on hunting cats in surveys of tick prevalence. The ticks may be active from early spring to late autumn but peak mainly from April to May. On hedgehogs, the adult ticks attach behind the ears, as shown here. The image above shows how ticks increase in size as they engorge on blood over approx. 1 week.

*Ixodes canisuga* is another three-host tick widespread across Europe, a more specialist feeding species which is primarily associated with dogs and foxes; humans are rarely bitten. Infestation may cause host dermatitis and pruritis but this species is not known to be an important vector of disease. *Ixodes canisuga* is adapted to life in a den or lair. The life cycle is similar to *I. ricinus*, and takes three years. All the life cycle stages are found in the den, including larvae shown below, sampled from a dog kennel in Malham, 1981. Mating takes place off the host and inside the den and males are rarely found on the host. The females seem to lay relatively fewer eggs compared to *I. ricinus*.

Similar to *Ixodes hexagonus* in shape, this tick is somewhat paler and more yellowish



*Ixodes canisuga* can be a particular problem when the life cycle establishes in packs of dogs in kennels, and the parasitic stages are hidden away in crevices and under boards. This image shows a kennel which was infested in North Yorkshire