

Occupational Health and Hygiene & Health Promotion

It is Butterfly Conservation policy to promote methods of working which, as far as reasonably practicable, are without risk to health. This policy relies on all staff and volunteers, particularly those working alone, taking a high degree of responsibility for their own working practices. It is the responsibility of the responsible member of staff as defined in Part 2 to ensure that a sufficient risk assessment has been undertaken for all tasks (see Risk Assessment). Chemicals, oils and some plants are hazardous, and in the outdoors, micro-organisms are a hidden hazard and may be dangerous.

Butterfly Conservation will promote good general health through provision of a good working environment and the recognition of specific hazards.

7.2 Occupational diseases

7.2.1 Lyme disease

7.2.1.2 The Disease and the Tick

Lyme disease is an infection in humans that can be caused following a bite from a tick (*Ixodes ricinus*) infected by the spirochaete bacterium *Borrelia burgdorferi*. The tick may be found on vegetation and animals, in a variety of habitats. Ticks are most active from April to October. In their first year, tick larvae remain inactive, sheltering in leaf litter. In their second year, in spring, the tick larvae climb up vegetation and wait to attach themselves to their hosts, normally small mammals such as field mice, or voles, for a blood meal. It is during these blood meals that the tick can become infected by the bacteria that can cause Lyme Disease. In their third year, tick nymphs become active again in spring, searching for a blood meal. After feeding on larger mammals such as rabbits and hares, the nymphs fall to the ground and mature into adults. In autumn, the adults emerge, climb up vegetation and attach themselves to larger hosts (commonly deer but also sheep, horses and dogs). It is in this third year that transmission to humans by a bite can occur from infected nymphs.

However, not all ticks are infected by the bacterium, and not every bite from an infected tick will transmit the bacterium. An infected tick will not usually pass on *Borrelia burgdorferi* unless it has been attached to a host for more than 24 hours.

7.2.1.3 Health Hazard from Lyme disease

Early symptoms are a reddish-pink rash, which spreads out from the site of the bite after three to thirty days. Some people may become feverish (flu-like symptoms) and have some enlargement of their lymph gland near the site of the bite. They may also complain of aches and pains and feel very tired. The rash may spread to cover quite a large area (1–18 inches) but will gradually clear, starting from the centre outwards. This will occur even without antibiotics, but antibiotics will shorten the duration of the rash and should prevent complications. You may develop symptoms up to a year after you have been bitten.

If untreated, later symptoms can include nervous system complications such as weakening or paralysis of the muscles in the face, mild meningitis-like symptoms and sensitisation of the skin. Lyme Disease can lead to pain in the joints and arthritis-like symptoms, and in rare cases, abnormalities of heartbeat rhythm, all of which should respond well to treatment.

7.2.1.4 Groups at Risk

People who work and walk in the countryside are most at risk – especially those who walk/work in long grass, in forests, woodland, heath and moorland. In Butterfly Conservation this would include:

conservation and other fieldwork staff, Branch volunteer field officers, volunteer groups working on reserves, other volunteers carrying out activities such as transect walking, and volunteers and members attending field trips. There is also a potential risk to members of the public who walk or pursue leisure activities in affected areas, which may include some BC reserves.

Since the tick is a well-known deer parasite, staff and volunteers who frequent areas where deer are present are considered to be at greater risk. In the UK, carrier ticks are commonly found in most of southern England (with the exception of most parts of Kent), the Pennines, the Lake District, Thetford Chase, Wales and the Welsh Marches, Northern Ireland and the Scottish Highlands. However, it is possible for infected ticks to be present in any location where appropriate conditions exist.

7.2.1.5 Precautions

- **Avoid tick habitats when possible:** For example, keep to the middle of pathways.
- **Prevention of tick bites:** The skin, especially the legs, should be covered – wear long trousers, tucked into socks if possible, and long-sleeved shirts. Light coloured clothing will help you spot ticks and brush them off. Consider spraying your clothes with an effective anti-tick pesticide. Clothes should be inspected every few hours. At the end of the day's outdoor work, undress and completely check your body for ticks. They usually crawl about for several hours before burying their feeding tube into your skin. Undertake further thorough checks the next morning.
- **Prompt removal of ticks:** If not attached, ticks can easily be picked off and destroyed. If the tick is attached to the skin, remove it as soon as possible, preferably within 24 hours, as the virus is then unlikely to have been transmitted. Remove ticks by grasping them as close to the skin as possible using tweezers or a proprietary tick remover, twisting anti-clockwise, and gently pulling upwards. It may take several twists before the tick lets go. Part of the tick may remain embedded, but you will have prevented the tick from transferring the infection to you. If it is suspected that mouthparts have been left in the skin, consult a doctor as this may result in local infection by other bacteria. The use of Vaseline is not now recommended. Save the tick in a sealed container in case you develop symptoms later. All field staff are issued with proprietary tick removers.

7.2.1.6 Immunisation/Treatment

If any of the symptoms described above appear after a known tick bite or exposure to an area where ticks are likely to be prevalent, seek advice from your GP as soon as possible. It is important to tell your GP the nature of your work in the field so that Lyme Disease can be considered. If Lyme Disease is confirmed, staff must inform their line manager (who will then inform the Health & Safety Advisor at Head Office) without delay and volunteers must inform the Health & Safety Advisor at Head Office (see Legislation, below).

Early detection and treatment normally results in complete recovery – delay may lead to (or some susceptible individuals may develop) complications that require a longer period of treatment and recovery. Treatment is by antibiotics. The earlier the diagnosis the better.

7.2.1.7 Legislation

Lyme Disease is a reportable disease under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR).

7.2.1.8 Reference

<http://www.lymediseaseaction.org.uk/ticks.htm>