

Black click beetle

Ampedus nigerimus



© Paul Brock

As the name suggests, this extremely rare click beetle is entirely black and about 9mm long. It is classified as Near Threatened on the European Red List of Saproxyllic Beetles (2010). It is a Red Data Book species in Britain.

Distribution

Currently only found at Windsor Forest (Berkshire). The importance of this site for saproxyllic invertebrates is reflected in its designation as a Site of Special Scientific Interest (SSSI) and a Special Area of Conservation (SAC).

Habitat

Larvae develop in red-rotten oak which develops through the actions of wood decay fungi. Suitable

hollows are only likely to develop when the tree is more than 200 years old. Black click beetle larvae are most often found in oak stumps but also in the trunks and large boughs of standing trees, and in logs. At Windsor, the beetle is associated with oak in a high forest setting, having only been recorded once in the adjacent Great Park. Larvae develop exclusively in oak, in addition to the importance of the quality of the substrate and stage of decay.



Distribution of the Black click beetle in the United Kingdom



High Standing Hill, Windsor, Berkshire

Life cycle

Little is known about the habits of adult Black click beetles, with most reported in association with red-rotten wood suitable for larval development. Larval diet is unknown within the red-rotten wood substrate. The usual period required for larval development is unknown, although pupation takes place in late summer and adults hibernate over the winter. Pupal chambers are probably formed within chunks of dead wood within the cavity lining. The newly formed adults remain in their pupal chambers over winter before emerging the following spring to copulate and lay eggs. The oviposition site is presumably in cracks within the decaying wood lining the cavity. Adult diet is also unknown but these have been seen at Hawthorn so may feed on pollen or nectar, or else rely on stores laid down during the larval period.

Reasons for decline

- The Black click beetle requires the continuous presence of old decaying oak trees in a landscape. The natural or deliberate loss of decaying oak trees is the greatest threat the beetle faces, particularly the potential loss of continuity if replacement trees are not available.
- The beetle may have poor dispersal abilities, having only been recorded once in Windsor

Great Park which is adjacent to Windsor Forest. This may prevent it colonising suitable habitat away from its current stronghold.

- Old trees are under threat from a wide range of factors including under-management, tree diseases, and climate change.
- Increasing canopy density due to lack of grazing can lead to some old trees being shaded out by younger trees, leading to premature death.
- Intensive activity around the roots of old trees, such as heavy grazing, ploughing, chemical spraying, and visitor footfall can lead to direct damage of roots and soil compaction, as well as disrupting vital mycorrhizal (fungal) associations that help sustain trees.
- The arrival of novel tree pathogens, increased temperatures, extended periods of drought, or heavy rainfall causing soil instability, may mean that some tree species die prematurely, or are no longer able to reach the age at which red-rot develops.
- Cessation of traditional management has left old pollards at risk of collapse due to top heavy crowns.



© Alex Hyde
Red rotten heartwood in oak

Habitat management

The aim of the following management advice is to ensure the long-term continuity and connectivity

of red-rotten oak across a landscape through the provision and protection of old trees.

- Ascertain whether tree recruitment rates have been sufficient to prevent an age gap in availability of decaying oak trees, and that recruitment is still taking place.
- Maintain longevity of existing old trees (both dead and alive).
- Allow natural regeneration/plant oak trees in places where they can be allowed to persist for hundreds of years to provide the next generation of old trees.
- Acorns can also be collected and distributed into suitable areas.
- Establishment will be greatest where the trees are protected by thorn bushes. If grazing is preventing regeneration, it may be necessary to establish temporary stock-exlosures.
- Resist urge to tidy away pieces of fallen decaying wood or to remove old standing dead trees.
- Continue/reintroduce traditional practices such as pollarding and coppicing.
- Establishment of new trees near old oak trees needs to be carefully planned, as oak is a light-demanding tree and sensitive to overcrowding.
- Where important trees are experiencing crown competition from adjoining younger trees, the younger trees should be removed gradually over a period of years.
- Consider veteranising younger trees to accelerate development of decay and help prevent gaps in the availability of suitable trees.
- Veteranisation techniques could include pollarding a new generation of young trees, and there is also a need to study the potential of fungal inoculation to start the creation of suitable red-rotten wood.
- Maintain or plant nectar sources such as Hawthorn and Elder to provide food for adults.

Survey methods

The best method available for landowners and site managers is to monitor the availability of trees based on their suitability. Searching potential/known trees for adults may produce results, although the red-rotten substrate should not be disturbed due to the disruptive effect this will have on the condition of the rotten wood. Tapping Hawthorn blossom with a stick over a sheet or tray could reveal feeding adults. Another click beetle species recorded in the same red-rotten wood is *Ampedus balteatus* (a widespread species, although noted it as the only associated click beetle in Windsor Forest).

The Back from the Brink Ancients of the Future project is led by Buglife in partnership with Plantlife and the Bat Conservation Trust.

