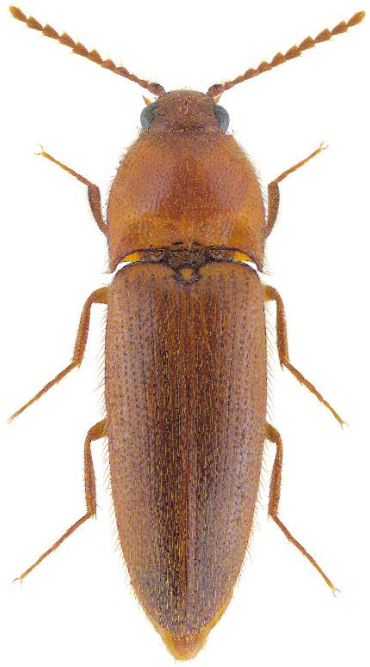
BACK FROM THE BRINK

SPECIES INFORMATION GUIDE

Golden hair click beetle

Brachygonus ruficeps



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The Golden hair click beetle is about 6mm long with a tawny coloured body covered in yellow hairs. Classified as Near Threatened on the European Red List of Saproxylic Beetles (2010), it is a Red Data Book species in Britain.

Distribution

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

Habitat

The larvae develop in hollowing oaks, with records from the lining of red-rotten cavities in trunks and large boughs, and from wood mould in a cavity quite high on a trunk.

Distribution of Golden hair click beetle in the United Kingdom

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Red-rotten wood develops during heartwood decay through the actions of wood decay fungi. Wood mould is the woody debris that develops in a cavity through the combined actions of wood-decay fungi and saproxylic invertebrates. Suitable hollows are only likely to develop in oak when the tree is more than 200 years old. At Windsor, the Golden hair click beetle is associated with old oak trees in wood pasture. Larvae develop exclusively in oak, in addition to the importance of the quality of the substrate and stage of decay.

Old oak, Windsor Park, Berkshire

Life cycle

Little is known about the habits of adult Golden hair click beetles, which have only been found in rotten wood substrates 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 unknown.

Red-rotten heartwood in oak

Reasons for decline

- The Golden hair 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, which 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.

Habitat management

- Ascertain whether tree recruitment rates have been sufficient to prevent an age gap in the availability of red-rotten oak trees, and that recruitment is still taking place.
- Maintain longevity of existing old trees (both dead and alive).
- 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.
- 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-exclosures.
- 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.

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. Another click beetle species recorded in the same red-rotten wood is the Cardinal click beetle (*Ampedus balteatus*). This is a widespread species, and the only associated click beetle in Windsor Forest.

Nieto.A and Alexander.K.N.A. (2010) European Red List of Saproxylic Beetles, IUCN

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