

Back from the Brink – Species summary

Queens Executioner

BftB project: IP02 Ancients of the Future

Project lead organisation: Buglife

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Species name – common & scientific	Queens Executioner – (<i>Megapenthes lugens</i>)
Photograph	 <p>© Udo Schmidt_Flickr (CC BY-SA 2.0)</p>
Taxon group	Invertebrate-Coleoptera (Elateridae)
Conservation status	Near Threatened on the European Red List of Saproxyllic Beetles (2010). It is a Red Data Book species in Britain.
UK distribution	All known modern records are from Windsor and Silwood Park, Berkshire. Wider South East England distribution prior to 1950
Habitat associations	Some of the habitat associations are known, for example the association with heartwood decay in Elm and Beech trees where the larvae feed within hard, dry, little-rotted wood, or rotten wood lining cavities in trunks and boughs. The adults have been observed on the flowers of Hawthorn and Holly, but their diet is unknown as is much of the information regarding larval development, among other elements of their life cycle, leaving significant gaps in our understanding of their autoecology.
BftB work carried out:	
Survey & Monitoring	General beetle recording was undertaken at Windsor in 2018 but no individuals were recorded.

Sites habitat management works	Veteranising management techniques have been implemented and site management plans influenced to maintain existing trees with rotten wood lined cavities in trunks and boughs and plan for future recruitment of veteran trees. Some of this has been as a result of the project but with the deadwood assemblage in mind, not the specific requirements of this species due to gaps in our ecological understanding.
Conservation 'interventions' incl. reintroductions & translocations	None specific to this species beyond the provision of management advice
Technical advice provision	Advice issued to Crown Estates at Windsor through the provision of the Cross taxa guidance document.
Links made with other taxa / conservation work?	Links with other species that use heartwood decay in Beech and Elm.
Wider engagement & advocacy activities?	None, bar promoting management for dead wood assemblages
BftB results obtained:	
Species Recovery Curve progress made	The species remains at 2 reflecting its rarity, the need to fully understand the species' autecology to effectively conserve it and the long-term nature of managing habitats for them before they come to maturity. We know aspects of its habitat associations and that there are problems with habitat continuity as a result of the age structure of trees on its sites. However, there is insufficient evidence to date that the works to bridge the age gap, retain existing trees or plan for future veteran trees will directly benefit the species, with very long timescales at play. Some elements of Steps 5 and 6 have been actioned by the project, with habitat works delivered on site, but they are very much works in progress and based on an incomplete picture of their autoecology. We remain confident that improving the resources of ancient trees and dead wood features on sites will help the species to recover, but a score beyond 2 would be based on significant assumptions.
Recommendations for future work:-	Species specific surveys to improve understanding of its distribution on key sites, and long-term funded species monitoring to assess the success of veteranisation techniques in providing suitable habitat.