



22 Stag Beetle species action plan

22.1 Introduction

The largest native British beetle (a large male can reach 70 mm in length) the Stag Beetle *Lucanus cervus* gets its name from the enlarged jaws of the male, which resemble the antlers of a stag. It uses these 'antlers' to display to the female which has much smaller jaws and to fight other males.

The Stag Beetle can be found around the edges of broadleaved woodland, parks, other pasture woodland and gardens. Adults fly well and are active mainly in the evening between May and August when they feed on fruit and tree sap.

The majority of the life cycle is spent in the larva stage which lasts about three and a half years from egg to pupa. Pupation occurs in the winter and the adults emerge the following June. After mating the female lays her eggs in suitable decaying wood of deciduous trees such as stumps and roots. Opinions differ as to the preferred host wood species but the stag beetle does not appear to be particularly selective and has been recorded utilising a number of species in Hertfordshire including: English Elm *Ulmus procera*, Alder *Alnus glutinosa*, and Plane *Platanus x hispanica*. Old tree stumps in hedgerows are thought to be particularly important (T. James, pers. comm.).

22.2 Current status

This large and conspicuous beetle is rare and protected in some European countries, but is still

widespread in southern England, especially the Thames valley, north Essex, south Hampshire and West Sussex. It also occurs in the Severn valley and coastal areas of the south-west. Outside these areas the records are sparse and often old, indicating some contraction of the beetle's range.

The Stag Beetle is listed on Annex 11 of the European Community Habitats Directive.

The species has never been common in the county. Its stronghold in Hertfordshire is an area in the Lea Valley centred around the western edge of Cheshunt. All recent records for this area are restricted to a six square kilometre block. This population is part of a larger population in SW Essex, perhaps extending into London. However, there are also records further north at Ware and as far north as Langley, near Hitchin.

22.3 Current factors causing loss or decline

22.3.1 Loss of habitat

The reason for the contraction in the range of this species is not fully understood. The decline in dead wood habitat would seem obvious (although the number of dead elms and elm stumps has increased dramatically in the last twenty years and many still remain).

22.3.2 Climate

Distribution appears to be determined by climate the beetle being limited to the south. Recent warm summers may explain some increase in records outside of its stronghold. However, it is presumed to be the winter temperatures particularly the depth of frost, which has most effect on the ability of the species to survive in an area. If this is the case then any increase in average temperatures as a result of global warming should have beneficial effects for the survival of this species.

22.3.3 Collection

Collection for sale may be a contributory factor as it is in Europe.

22.3.4 Accidental trampling/collision

Significant numbers are killed by being trodden on footpaths and run over or collided with on roads, especially where these pass close to breeding sites.

22.3.5 Magpie predation

Numerous observations have come to light of Magpies feeding on the adult beetles as a result of a public appeal for Stag Beetle records by Colchester Natural History Museum. However, it may be that much of this observed activity is simply scavenging off trampled/car impact victims. Magpies have greatly increased in numbers in suburban areas over the last 10 years and it is here that the Stag Beetle has its population strongholds.

22.4 Current action

The JNCC has been encouraging people to record sightings through articles in Wildlife Trust newsletters and similar publications.

Three sites have been proposed as Special Areas of Conservation for this species under the European Community Habitats Directive.

22.5 Stag Beetle action plan objectives

Maintain strong populations at all existing key sites throughout the current range.

22.6 Proposed actions**22.6.1 Policy and legislation**

SB1. Include Stag Beetle conservation measures in relevant policies.

Action: Broxbourne BC, LA's.

22.6.2 Site safeguard and management

SB2. Inform the Borough of Broxbourne of the importance of the Cheshunt area for this species by 1997.

Action: HMWT.

SB3. Seek to protect and ensure favourable management in parks and other greenspace in Cheshunt by 1999 (notably Cedars Park, Whithern Park, Grundy Park, New River corridor and Albury Walk), on land under local authority control.

Action: Broxbourne BC, HMWT.

SB4. Seek to maintain and enhance conditions through positive management, including the retention of dead wood, on all sites where the beetle is known to occur, by 2002, and on appropriate sites within the known range by 2005.

Action: HMWT, HBRC.

22.6.3 Species management and protection

No action proposed.

22.6.4 Advisory

SB5. Ensure landowners and managers are aware of the presence and importance of conserving this species, and of appropriate methods of management for its conservation, by 2002.

Action: HMWT, PTES, CMS, FWAG.

SB6. Ensure that the public and relevant organisations are aware of the ecological implications of collecting this species, by 2002.

Action: PTES, HMWT.

22.6.5 Research and monitoring

SB7. Undertake surveys during 1997-1999, including public participation surveys and linked to national surveys, to establish more precisely the current distribution and identify key sites for conservation action.

Action: HMWT, PTES.

SB8. Key sites to be monitored to establish long-term trends. Establish monitoring at three sites by 2000.

Action: HMWT, HNHS, local schools.

SB9. Carry out further research to establish habitat requirements by 2002. The fact that the larvae have been found in garden compost heaps suggests that there may be some way in which the species could be gardened for, i.e. the development of design recommendations for creation of suitable artificial breeding sites.

Action: EN.

22.6.6 Communication and publicity

SB10. Develop and implement a high profile campaign during 1998-2000 for raising public awareness (especially at the local community level) of the conservation needs of the Stag Beetle, in particular its reliance on dead wood. Campaign to include press releases, events and magazine articles.

Action: HMWT.