



## REVISED PLAN NOVEMBER 2018

### BLOODY- NOSED BEETLE *Timarcha tenebricosa*

#### 1. INTRODUCTION

This distinctive, flightless, black leaf-beetle is found mainly in southern England where it generally inhabits grassland and heathland on well-drained sandy soils and feeds on various species of bedstraw plants (*Galium spp.*). However, in 2003 it became the subject of a Local Biodiversity Action Plan (LBAP) as it was found in only one area of Warwickshire, along a length of minor road and adjacent arable field margins, feeding on the abundant cleavers (*G.aparine*), a common plant in many habitats including hedgerows and roadside verges. Were it not for the fact that many beetles had become crushed, it would probably be passed by as not worth surveying (R.Wright, 2015). Although more locations have been found since 2003 the flightless habit of this beetle renders the localised Warwickshire population vulnerable and in need of protection.



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The species gets its common name from the fact that it exudes a blood-like substance from the mouth if disturbed; this reaction is supposed to frighten predators and apparently makes the beetle distasteful if eaten. In Warwickshire it feeds and breeds mostly upon cleavers but is thriving on hedge bedstraw (*G. mollugo*) at one release site populated with beetles from Yorkshire and Cheshire (see **Section 5**). However, native Warwickshire beetles showed signs of rejecting heath bedstraw (*G. saxatile*) when tested in 2010 (S.Lane, 2014). The adult beetles can be found during most months, but the majority emerge from hibernation in April to breed, at the same time as over-wintering eggs hatch into larvae. The larvae feed on the food plant in spring and early summer and they are very conspicuous due to their metallic black appearance and large size. By late July, another generation of adults is produced and these feed until late August when most either die or go into hibernation. Adults that breed in autumn produce over-wintering eggs.

2.	OBJECTIVES	TARGETS
Associated Action Plans are: 'Lowland Neutral Grassland', 'Field Margins' and 'Roadside Verges'		
<b>PLEASE CONSULT THE 'GENERIC SPECIES' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR OBJECTIVES COMMON TO ALL SPECIES PLANS</b>		
A.	To monitor and maintain the size and range of the Warwickshire population of bloody-nosed beetle.	ongoing
B.	To increase population size and range by looking at the potential of other sites in the county to support this species.	2020

### 3. NATIONAL BAP OBJECTIVES & TARGETS

The bloody-nosed beetle is not a UK Biodiversity Action Plan (BAP) Priority Species list published ([Joint Nature Conservation Committee](#), 2007).

### 4. CURRENT STATUS

The beetle is widespread in southern England and Wales, particularly in coastal counties of Wales and south-west England. In the [Victoria County History of Warwickshire](#) 1904 the species was recorded from 'all localities' in the county, but this phrase is interpreted to mean a number of historically well-worked sites in north-west Warwickshire which include the grounds of Knowle Asylum and [Sutton Park](#).

Having suffered a very serious decline in the county in the last hundred years or so the beetle is confined to localised areas in the Lawford Heath and Thurlaston districts although, despite its distinctive appearance and large size, it is likely to be under-recorded. Considering the unremarkable habitat where the beetle occurs, and the abundance of its food plants, it remains something of a mystery why the species seems to be absent from other parts of the county. Despite many decades of surveying for insects, the county entomologist has never seen one in Warwickshire (pers.com. Steven Falk, 2018). One possibility is that it is a relict species which may a rare survivor from an earlier period but any signs of heathland have long gone from the area other than the names.

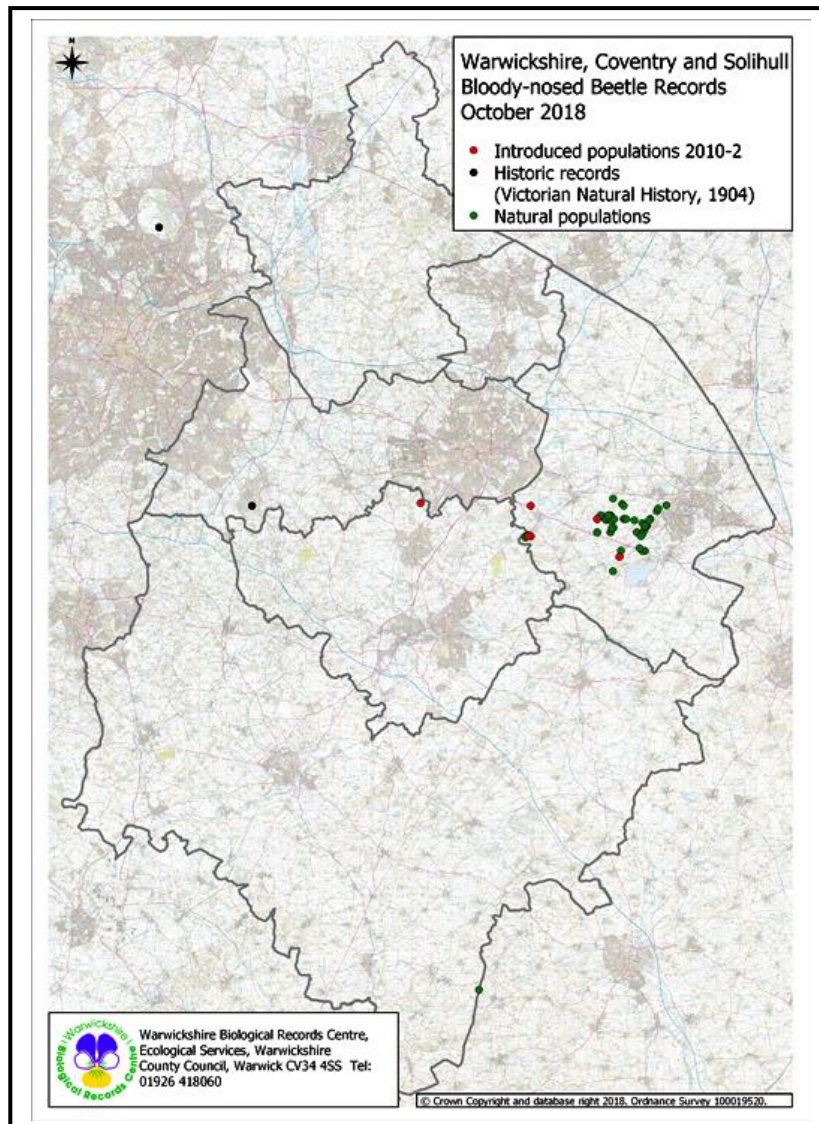
The beetle was discovered in 1975 on the disused railway cutting west of Cawston Grange Farm, which runs south-west from Bilton to Draycote; unfortunately the succession of vegetation along the track resulted in shading, impacting negatively on both the food-plant and the beetle. The area has been monitored on and off and in 2017 both [Sustrans](#) and the [Cawston Greenway Group](#) found the beetle during scrub clearance and the collection and seed and planting of *Galium* spp.

Also in 1975, a very large population was discovered in the Coalpit Lane/Ling Lane area of Lawford Heath; details and a map of the survey work carried out in this area in 2002 are given by Miles (2005). In 2010, 370 beetles were counted in one small area along an interior field margin, indicating a viable population. This seems to be the key area for the species and has been monitored by several people more or less annually since, with records still in 2018 (*pers.comm.* Steve Wright).

In 1993-94, and again in 2010, beetles were found along the footpath between Lawford Heath Farm and the railway line. In 2010-11 beetles were found along minor road verges south of Church Lawford and opposite Heath Farm, survivors of an introduction in 2010 from nearby Ling Lane. When this location was checked early in 2018 the cleavers was scarce and no beetles were found (*pers.comm.* Phill Parr).

In 2013 the beetle was first seen at a plant nursery in Thurlaston where, despite its typical food plants (*Galium* spp) not being present, it remains although in smaller numbers in 2018. In 2017 it was found in an adjacent field, the site of a planning application (*pers.comm.* Louise Sherwell). Two more new locations, close to the Cawston Greenway, were reported in 2017/18, following a reawakening of interest in looking for the beetle by the review of progress with the action plan in 2017,

Attempts have been made to introduce the species to five new localities (see **Section 5**), only two of which seem to have been successful.



**Map of known distribution in 2018** © Louise Sherwell, Local Biological Record Office

The record in 2012 of two adults at the edge of Ditch Hedge Lane, a bridleway that forms the county boundary between Warwickshire and Oxfordshire has been included although the precise location is not known. Locations not shown are two introductions recorded in the 2013 revision of the action plan as it has not been possible to verify these releases: in 2010 on minor road verges on the Dunsmore Heath plateau and in 2012 at Bubbenhall Meadows. A map of records in the Cawston area is in the Appendix; full details of all records are held by the Local Biological Record Office and the LBAP Coordinator (Email: [ruthmoffatt@warwickshire.gov.uk](mailto:ruthmoffatt@warwickshire.gov.uk))

#### 4.1 Legal and Policy Status

A wide range of species and habitats are protected under international and domestic laws, including the [Wild Birds Directive](#) (1979), the [Wildlife and Countryside Act](#) (1981), the [Conservation Regulations](#) (1994) and [EC Habitats Directive](#) (1992). Protection of sites is afforded nationally through [Sites of Special Scientific Interest](#) (SSSI) designation, [Special](#)



[Areas of Conservation](#) (SAC) and [Local Nature Reserve](#) (LNR) statutory status. Other sites are offered recognition of their value through Local Wildlife Site status (LWS), Local Character Areas and identified Landscape Scale Areas. The [National Planning Policy Framework](#) (2012) chapter/section 11 states conditions with regard to any development negatively affecting biodiversity, including protected sites, ancient woodland and other irreplaceable habitats (paragraph 118). The Wildlife & Countryside Act and schedule 2 of the [Conservation of Habitats & Species Regulations](#) (2010) make it an offence to intentionally kill, injure, take, possess, sell, buy or transport a range of species.

No legal protection exists specifically for this species but the Cawston Greenway cutting was designated as a Local Wildlife Site (LWS) in 2011.

#### 4.2 Current Factors Affecting the Species

- **Death from impact with road vehicles** – along road verges, specimens that wander onto the road (particularly in autumn when the food plant has died-off) regularly get crushed or damaged by cars. Adults that have been swept up into vehicle wheel arches are regularly found dead or dying at the edge of the road. Although this allows for a convenient visual check of population numbers, its effect on the population is cause for concern. On occasions, hundreds of specimens have been reported in this state.
- **Mowing regimes of grass verge** – the current mowing regime along Lawford Heath road verges possibly favours conservation of the species because it creates short turf adjacent to the road, but leaves the base of the hedgerow and its associated cleavers intact.
- **Succession of vegetation to tall scrub** – this is a problem along the railway line west of Cawston Grange Farm, where it is proving detrimental to the beetle and its food-plant through over-shading of habitat.
- **Ploughing and herbicide treatment of field verges** has led to loss of potential habitat. This is an issue adjacent to the railway footbridge where arable farmland is ploughed very close to the footbridge leaving only a small but significant ‘mound’ of vegetation undisturbed; this verge has been sprayed with herbicide in the past. Additional herbicide treatment along the Rugby Western Relief Road has also caused localised habitat deterioration.
- **Disturbance and destruction of specimens** by the public on disused railway line, road verge and footpath across footbridge. Because the beetles are large they sometimes provoke a reaction of disgust and people might believe them to be noxious and destroy them.
- **Potential airport development** which could destroy the site of the Coalpit Lane colony.
- [Rugby Western Relief Road](#) – the construction of this route has destroyed habitat that may have supported the species and further fragmented populations by creating a barrier between the disused railway line and arable land to the west.
- **Field management** – the type of crops grown on farmland may affect the light regime at the field margins where the food-plant grows. Farmers may wish to discourage the growth of weed cleavers by spraying herbicide or ploughing close to hedges leaving very tight field margins. One field that supports the

largest number of beetles is regularly planted with maize, which can increase the shade at the margins occupied by the species and its food-plant.

## 5. LOCAL ACTION

- Casual recording by entomologists has provided regular feedback to the Warwickshire Biological Records Centre regarding the continuing presence of the beetle population and counts of adults and larvae.
- There has been a degree of public awareness about the species by word-of-mouth to villagers in the vicinity of the known site and the [Warwickshire Museum](#) and [Warwickshire Wildlife Trust](#) (WWT) have known about the beetle's existence here for many years.
- An M.Sc. student project was undertaken between 2003 and 2005 by Lee Miles. This detailed survey of the population and its requirements provided much needed information about the species in Warwickshire.
- A potential re-introduction of the species to Sutton Park, under consideration in 2010 was abandoned when initial research suggested that Warwickshire's bloody-nosed beetles appear to reject heath bedstraw (*Galium saxatile*), the commonest species of bedstraw present at the Park. Cleavers is only occasional and hedge bedstraw appears to be absent.
- Monitoring work in 2010 revealed a very strong core population and new satellite populations at hitherto unknown field and road verges in the Church Lawford / Long Lawford region. [Butterfly Conservation Warwickshire](#) (BCW) members were alerted in 2013 in order to get more people to report any signs of the insect. The help of [Sustrans](#) Rugby Group Volunteers, WWT Rugby Group volunteers and regular cyclists in the area has also been requested (*pers.comm.* Phil Parr, 2014).
- Monitoring of the following introductions is required:
  - in 2010, the beetle was introduced to a location on the road to Draycote from the B4453; these were seen in 2015 and again in 2018 (*pers.comm.* Phil Parr).
  - in 2010, some beetles was moved locally from Ling Lane to opposite Heath Farm; when checked in 2017 there were no sightings.
  - in 2010, 70-80 captive-bred beetles from Yorkshire, and then in 2012, 25 more of Cheshire origin, were released at [Ryton Wood Meadows](#), a BCW reserve, after the seeding of large areas with hedge bedstraw (*Galium mollugo*). The beetles were still present in 2017 (*pers.comm.* Mike Slater).
  - in 2011, 40 adult captive-bred beetles from Yorkshire were released at [Brandon Marsh](#) but no individuals have been seen since. By 2015 the introduction area was densely covered with willow herb (*Epilobium* sp.) (*pers.comm.* Richard Brown).
  - in 2012, beetles were introduced along the cycle route from Warwick University to Kenilworth, north of Cryfield Grange Lane, and did well initially; they disappeared after a wet summer (*pers.comm.* Ian Tanner).

- Survey work was carried out during 2015 by Richard Brown (Coventry University) to assess how far these introductions had become established. He did not observe beetles eating other bedstraw species than cleavers but believes that hedge bedstraw, if not lady's bedstraw as well, would work as a food source. A report and map showing what seemed to be the main distribution and known range within Warwickshire was produced; this has been updated (R. Moffatt 2018).
- The 2017 review of this action plan in the 2011-2020 Programme of Reporting on LBAP Progress awakened interest in the species and resulted in the following surveys and management work:
  - In 2017 a survey was carried out by Warwick County Council for a Rugby Borough Council application for a proposed commercial warehousing site to the east of Cawston disused railway line. A population was discovered on site and the process of securing mitigation as part of the planning application process has begun; this comprises a recommendation to translocate beetles when some hedgerows are removed and to include *Galium* spp. in the planting scheme.
  - In 2017 Sustrans cleared scrub at 3 locations on the Greenway:
    - At Sow Brook, approx. 8000m<sup>2</sup> was cleared and seed from 3 spp. of *Galium* taken for other sites.
    - On the bridge over A4071, approx.3000m<sup>2</sup> was cleared and reseeded from the Sow Brook location.
    - At Manor Farm, Draycote, approx.6000m<sup>2</sup> was cleared where the path crosses the road.
  - In 2017 BCW carried out bramble management at Ryton Wood Meadows.
  - In 2018 Sustrans carried out surveys and planting of *Galium* spp. on the Cawston Greenway, 200m south of the A 4071 crossing.

## 6. PROPOSED LOCAL ACTIONS

ACTION	Lead	Partners	By
<b>PLEASE CONSULT THE '<i>GENERIC SPECIES</i>' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL SPECIES PLANS</b>			
<b>Policy, Legislation &amp; Protection</b>			
<b>PL1.</b> Actively encourage that biodiversity policies account for the needs of this species on the inhabited section of the disused railway west of Cawston Grange Farm and to protect the Coal Pit Lane site and other minor roads in the immediate area from localised development.	WCC	SDC RBC SusT	ongoing
<b>PL2.</b> Submit responses to any development proposals that may affect known populations to ensure that its existing sites to the west of Rugby are secured through mitigation and compensation measures.	WCC	WWT SDC RBC SusT	ongoing

ACTION	Lead	Partners	By
<b>PLEASE CONSULT THE '<i>GENERIC SPECIES</i>' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL SPECIES PLANS</b>			
<b>Site / Species Safeguard &amp; Management</b>			
<b>SM1.</b> Manage sites of existing populations to meet the ecological needs of the species, including the planting of its food-plants ( <i>G.aparine</i> and <i>G. mollugo</i> ) and relevant mowing regimes.	LOs	WBRC SusT SDC RBC	ongoing
<b>SM2.</b> Continue to manage appropriately the areas at Ryton Wood Meadows where an introduction took place in 2012, including further habitat enhancement and re-introduction as required.	BC	RBC LOs	ongoing
<b>SM3.</b> Create the potential for other suitable sites to support the species by phased introduction of its food-plants ( <i>G.aparine</i> and <i>G. mollugo</i> ), followed by trial if conditions are suitable, e.g. at Kenilworth Common sidings (a designated LWS)	WART	WDC WCC HSC SusT LOs Unis	2020
<b>SM4.</b> Take opportunities to implement seeding and management of the species food-plants (( <i>G.aparine</i> and <i>G. mollugo</i> ) along recent and future development footprints along the Greenway in the Lawford Heath area.	SusT	WCC RBC      LOs	ongoing
<b>Advisory</b>			
<b>A1.</b> Provide appropriate advice to the local authorities and their contracted verge management companies, Sustrans and local landowners. Ensure they are informed of the known beetle populations, their distribution, their regional significance and their requirements, and of best practice management for the benefit of the beetle.	WCC	WBRC SusT SDC RBC      LOs	ongoing
<b>A2.</b> Actively promote that any site management plans and proposals for the disused railway (Cawston Greenway) account for the needs of the beetle.	WCC	WBRC RBC	ongoing
<b>A3.</b> Actively promote that any site management and development proposals for road and field verges account for the needs of the beetle.	WCC	WBRC RBC	ongoing
<b>Research &amp; Monitoring</b>			
<b>RM1.</b> Continue to monitor existing natural bloody-nosed beetle populations (counting dead and live adults and larvae and mapping these observations). Record any changes in response to management practices at all locations.	BC	Unis WBRC WWT RNHS	2015 onwards

ACTION	Lead	Partners	By
<b>PLEASE CONSULT THE '<i>GENERIC SPECIES</i>' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL SPECIES PLANS</b>			
<b>RM2.</b> Continue to monitor introduced populations.	BC	Unis WBRC LEs	2015 onwards
<b>RM3.</b> Continue to monitor other sites in the Lawford Heath area for additional satellite populations.	BC	RNHS WBRC RBC Unis LEs	2015 onwards
<b>RM4.</b> Continue to record new observations and update the distribution map with the new locations.	WBRC	Unis BC RBC	2018 onwards
<b>Communication &amp; Publicity</b>			
<b>CP1.</b> Maintain contact with all parties involved in habitat management and research, including BC (Warks.) members and WWT Rugby area group.	WBRC	WWT WCC RBC BC LOs RNHS	ongoing
<b>CP2.</b> Promote awareness of the species within the local community along the Greenway.	SusT	WWT WBRC RBC RNHS	ongoing

**Abbreviations:** BC - Butterfly Conservation, CRec – County Recorder, HAuth. – Highways Authorities, LEs – Local Entomologists, LOs – Landowners, RBC – Rugby Borough Council, RNHS – Rugby Natural History Society, SDC – Stratford District Council, SusT - Sustrans, Unis – Universities, WBRC – Warwickshire Biological Record Centre, WCC – Warwickshire County Council, WDC – Warwick District Council, WWT – Warwickshire Wildlife Trust.

## 7. PROGRESS WITH ACTIONS

From 2015–2020 there will be a rolling programme of reporting on progress, of 10 action plans per year with an annual summary of results. Progress with this plan up to 2018 can be seen at [www.warwickshirewildlifetrust.org.uk/LBAP](http://www.warwickshirewildlifetrust.org.uk/LBAP).

## 8. BIBLIOGRAPHY

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- Lawton, J.H. (2010) [Making Space for Nature](#): a review of England's wildlife sites and ecological network. Report to Defra, advocating a landscape-scale approach guided by four key principles, summarised as 'more, bigger, better and joined'.
- Defra (2011) [Biodiversity 2020](#): A strategy for England's wildlife and ecosystem services.
- Wright, R. (2015) Wildlife Reports, British Wildlife vol. 256, no.6, pp.4436-7.
- Brown, R. (2015) Bloody Nosed Beetle (*Timarcha tenebricosa*) population and distribution in Warwickshire (report for Butterfly Conservation Warwickshire and the Warwickshire Biological Record Centre, unpublished).
- RSPB (2016) [State of Nature](#) – a stocktake of all our native wildlife by over 50 wildlife organisations.
- Natural England (2016) The [Conservation Strategy for the 21<sup>st</sup> Century](#) sets out how NE will help deliver DEFRA's ambitions for the environment to reverse biodiversity loss, sustain distinctive landscapes and enhance engagement with nature.



Richard Jones, R. (2018) Beetles. New Naturalist series no 136.

## 9. FURTHER INFORMATION

Kirby, P. (1992) [Habitat management for Invertebrates](#): a Practical Handbook. RSPB.

[Buglife](#) - The Invertebrate Conservation Trust

[Rugby Wildlife](#) is a group of like-minded mostly volunteer individuals from different Trusts, Groups, Societies and Councils who enjoy the local wildlife and wish to promote, record and enhance it. The group encourages people to use, appreciate and be involved in surveying and conservation activities around the area

The [Cawston Greenway Group](#) manages the disused railway west of Cawston Grange Farm via an agreement with Sustrans which owns the site. Contact Paul Hart on [paul.hart@gmx.co.uk](mailto:paul.hart@gmx.co.uk) or 07834177662.

## 10. CONTACT

Mike Slater: Butterfly Conservation Warwickshire Branch Conservation Officer.

Tel: 01788 335881. Email: [mikeslater1956@outlook.com](mailto:mikeslater1956@outlook.com)

Phil Parr: Butterfly Conservation Warwickshire, Rugby Area Liaison Officer and Warwickshire Wildlife Trust Rugby Group, Conservation Officer.

Tel: 01788 578 272. Email: [phil.parr@warwickshire-butterflies.org.uk](mailto:phil.parr@warwickshire-butterflies.org.uk)

## 11. APPENDIX.

### Bloody nosed beetle locations in the Cawston area of Rugby, to assist with monitoring

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