

Back from the Brink – Species summary

Brush-thighed Seed-eater Beetle

BftB project: IP03 Colour in the Margins

Project lead organisation: Plantlife

Contact: enquiries@plantlife.org.uk

GENERAL INFORMATION:	
Species name – common & scientific	Brush-thighed Seed-eater <i>Harpalus froelichii</i>
Photograph	 <p>© John Walters / Back from the Brink</p>
Taxon group	Invertebrates: Ground Beetle
Conservation status	Near Threatened
UK distribution	<p>Brush-thighed Seed-eater has a European distribution across a narrow latitudinal band, with England and central France marking a western limit. Records from the UK were collated from four sources, producing a total of 395 records:</p> <ul style="list-style-type: none"> • Ground Beetle Recording Scheme (208 records), • iRecord (8 records), • Buglife’s 2015 Breckland Ground Beetle Report (147 records), • Beetles of Britain and Ireland Facebook Group (1 record), • Supplied directly from individual recorders (31 records). <p>The records were mapped in two date periods: pre-1990 and post-1990 (Figure 1).</p> <p>The records cover 29 10km squares. There are no recent records from Dorset, where there are four old records, or the Suffolk coast where it appears to have been lost from. Nevertheless Brush-thighed Seed-eater still persists closer to Ipswich and over into Essex. The remaining records</p>

	<p>are mainly aggregated in the Norfolk and Suffolk Brecks, with a scattering of records on the Norfolk coast, Lincolnshire coast and into Cambridgeshire. In 2007, Thompson suggested that the species had been lost from the Norfolk coast, but new records indicate that this is (now) not the case.</p> <p>The Brush-thighed Seed-eater has been recorded from many new 10km squares since 1990 – roughly 65% of the recorded 10km squares had no records of the species prior to 1990. These largely fall around the edges of the four core historic Breckland records indicating a range expansion – or increase in recording effort – in this area.</p>
Habitat associations	Arable and dry short and tussocky grassland
BftB work carried out:	
Survey & Monitoring	<p>Five farms in north Norfolk were surveyed for Brush-thighed Seed-eater using a combination of methods including timed 20-minute hand searches and suction sampling. Annually cultivated uncropped margins, beetle banks and wildflower strips were targeted for surveys.</p> <p>Brush-thighed Seed-eater was found at one farm during the survey in an annually cultivated uncropped margin. Many other ground beetle species were also observed.</p>
Sites habitat management works	<p>No site management works were undertaken for this species. However, general management advice for ground beetles was provided to the farmers and farm managers along with maps using target notes about the management of habitat features for ground beetles on their holding. The farm with an observation of Brush-thighed Seed-eater was also given specific advice to maintain annually cultivated uncropped margins at and/or in the area of the record to maintain habitat connectivity and continuation for this species.</p>
Technical advice provision	<p>Three documents have been created through the Colour in the Margins project:</p> <ul style="list-style-type: none"> • Brush-thighed Seed-eater briefing sheet • Management for ground beetles guide • A technical report about the project's target species including Brush-thighed Seed-eater.
Links made with other taxa / conservation work?	Other ground beetles; Arable farmland flora
Wider engagement & advocacy activities?	The management guide and leaflets are available on the web and links were sent to Rob Hawkes who has been leading the work with the farm cluster across Breckland to pass onto the farmers.
BftB results obtained:	
Recorded Distribution (in BftB focal areas)	Breckland

<p>Recorded Abundance of species populations</p>	<p>Due to lack of structured monitoring in the past, it is not possible to directly compare abundance data. However, as part of the technical report commissioned by Colour in the Margins, convex mapping has been undertaken to investigate the scale of decline:</p> <p>At just 11,400 km² the range of the Brush-thighed Seed-eater (based on the convex hull of recent records) is the most limited of the three species, but does not meet the criteria for one of the threatened categories (see Figure 2). The extent of occupancy increased fractionally post-1990 and with 17 10km squares the number of locations is just above the threshold for Vulnerable (fewer than 10 locations). While the number of records, although well under 2,000, more than doubled post-1990. However, as it is neither widespread nor abundant, and its area of occupancy is only just over 20 km² (<20 km² being a criterion for classification as Vulnerable), we feel a review is not necessary and it should remain as Near Threatened at this time. However, as individual records have been cropping up outside of its previous core range in Breckland and given the dispersal ability, this species may be on the road to recovery.</p>
<p>Species Recovery Curve progress made</p>	<p>This species moved from position 5 (partial) to a possible limited achievement of step 8, with some trial work carried out, (although was not specifically targeted at this species and was not carried out by CitM) and an increase in records suggesting some recovery of this species. As Step 7 was bypassed and step 6 only partially achieved, and this progress was largely without the CitM project, this species is being scored 6 as there is still much to investigate regarding the habitat requirements. The perceived recovery may also be an artefact of increased recording effort for this species.</p>
<p>Recommendations for future work:-</p>	<ul style="list-style-type: none"> • Further strategic surveying of historical locations to identify whether this species has declined or is perhaps under-surveyed. • Identify the generic habitat factors that are most influential for this species, such as bare ground, ruderal plant seeds (forage), physical disturbance (depth and type of tillage and use of herbicides), pesticide use, undulating/varied topology, habitat continuity and extent, scrub and hedges and plant litter.

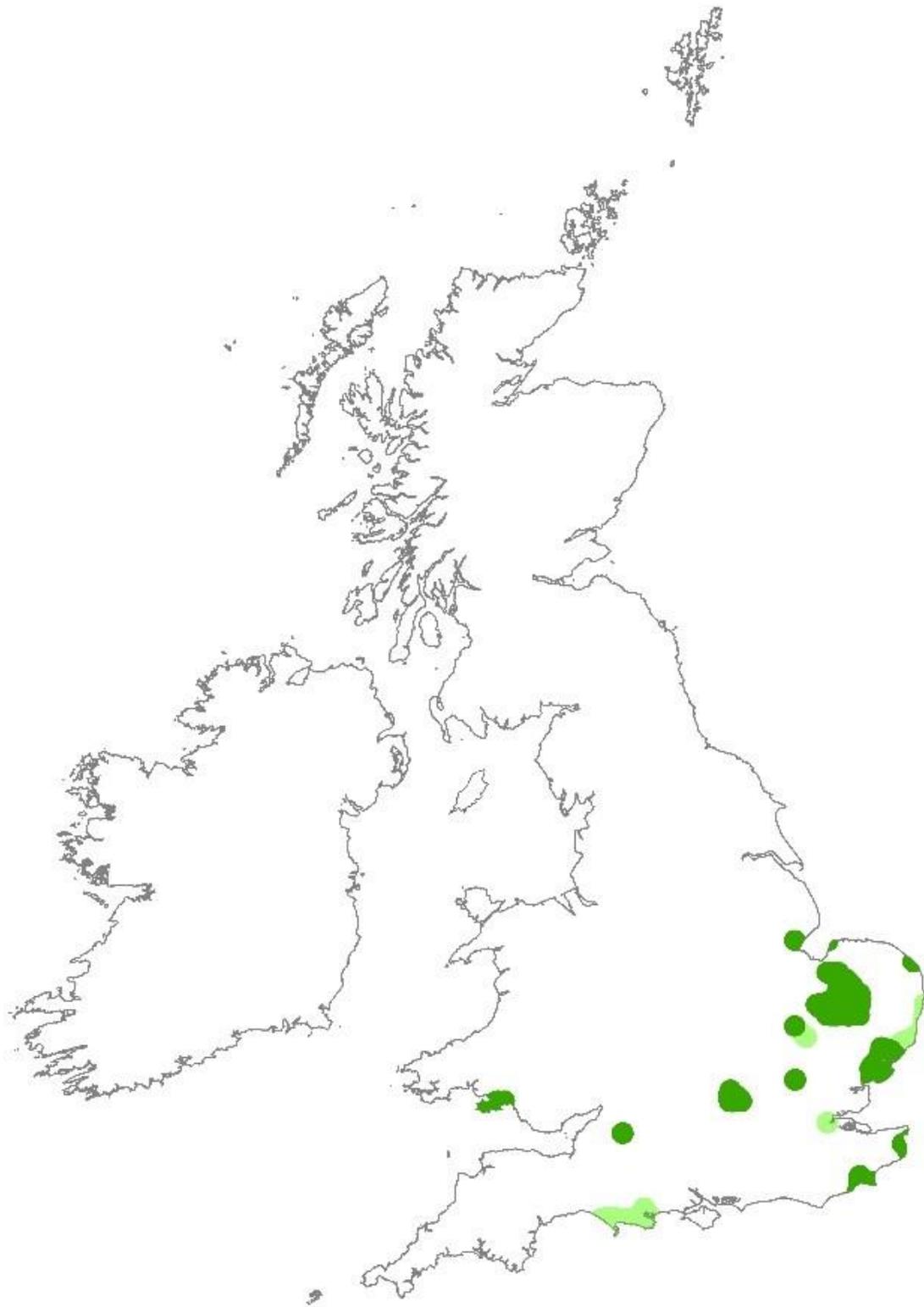


Figure 1: Distribution of Brush-thighed Seed-eater *Harpalus froelichii* (dark green post 1990 and light-green pre-1990).

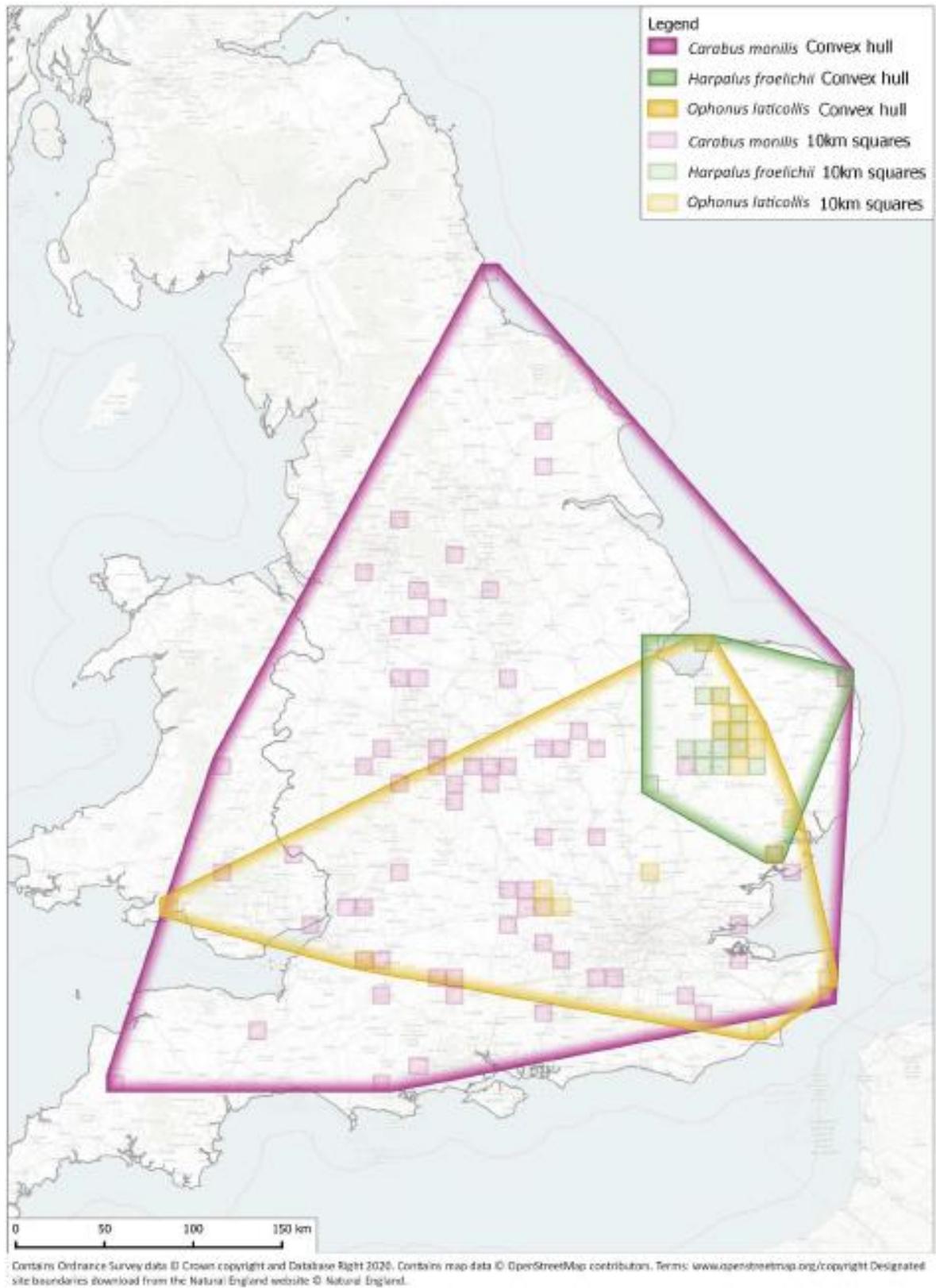


Figure 2: Convex hull based on post-1990 records of Brush-thighed Seed-eater *Harpalus froelichii*.