

Back from the Brink – Species summary

Corn Buttercup

BftB project: IP03 Colour in the Margins

Project lead organisation: Plantlife

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| Species name – common & scientific | Corn Buttercup <i>Ranunculus arvensis</i> |
| Photograph |  <p>© Alex Hyde / Back from the Brink</p> |
| Taxon group | Vascular plant |
| Conservation status | Critically Endangered |
| UK distribution | In the UK, this species was formerly widespread across lowland England and Wales, extending to Scotland. The population declined by more than 80% across the core of its range during the 20th Century, but there remains a stronghold in the south-west Midlands. There are also scattered recent records from Cornwall in the south-west to Newcastle in the north-east and Glamorgan in the west to Suffolk in the east (see page 9-10 of the Portfolio for more information). |
| Habitat associations | Autumn-cultivated arable fields (see pages 5 and 8 in the Portfolio for more information). |
| BftB work carried out: | |
| Survey & Monitoring | Population count/survey of extant populations and reintroduced populations (see pages 6-7, 12 and 18-21 of the Portfolio for a brief description, a case study focused on monitoring a population and survey form). |

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| Sites habitat management works | <p>There have been two interventions for this species:</p> <ul style="list-style-type: none"> • farm management advice provided at extant locations (see pages 12-15 of the Portfolio for information on management and three case studies) • reintroductions undertaken to create a model for undertaking this type of activity (see pages 16-17 in the Portfolio for information about how to reintroduce this species and a case study). |
| Conservation 'interventions' incl. reintroductions & translocations | 5 reintroductions undertaken in Cambridgeshire (3 sites) and Somerset (2 sites). All the reintroductions have successfully produced new plants in the first year. |
| Technical advice provision | Tailored reports on survey results and management advice sent to landowners. Production and dissemination of an ecology and conservation portfolio. |
| Links made with other taxa / conservation work? | Shepherd's-needle and other arable farmland flora; Shrill Carder Bee; Harvest Mouse. |
| Wider engagement & advocacy activities? | A Species briefing sheet or Portfolio was sent to approximately 40 farms/sites with post-2010 records. |
| BftB results obtained: | |
| Recorded Distribution (in BftB focal areas) | <p>There are approximately 90 'natural' records of Corn Buttercup populations that have been recorded since 2000 (Figure 1: Natural populations are those that originate from the soil seed bank and are not sown). There are 9 records of populations within the CitM Wessex focus area, 1 in Cornwall and Devon focus area, 1 in the Mid-Somerset Hills, 1 in the North Downs and 1 on the edge of the Brecks. The project has specifically targeted a few farms in Worcestershire to increase the number of Corn Buttercup populations that could be surveyed (record data analysed as part of Natural England's Species Recovery Programme funded Mapping IAPA and S41 species by Plantlife).</p> <p>A survey undertaken between 2008 and 2013 found Corn Buttercup at just nine out of 49 pre-selected locations. Seven of these sites had post-2000 records, and just two of these sites had last been recorded between 1970 and 1999. Most populations surveyed were small with an average of 39 plants (group range 11-100) with some exceptional populations of more than 3,000 individuals.</p> |
| Recorded Abundance of species populations | Annual plants vary enormously on a temporal and spatial basis and site-specific assessment has been undertaken where this is possible. It is not possible to say whether the species has a positive or negative trend overall due to this variability. For example, at Fivehead Arable Fields SSSI in Somerset and Lower Smite Farm in Worcestershire, the populations of Corn Buttercup vary enormously from year to year, from very few to over 10,000 individuals in a good year. |
| Other results documented? | <p>The additional seed biology information (i.e. dormancy, maturation of seed and seed coat) collated by Kew MSB has been essential to gain a fuller understanding of the requirements of this species (see pages 3-4 in the Portfolio).</p> <p>The information about soil nutrients and texture at extant sites, and the arable plant communities within which Corn Buttercup grows is also new and captured in the Portfolio (pages 5, 8-9).</p> |

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| <p>Species Recovery Curve progress made</p> | <p>Landowners that CitM worked with are trialling different management following advice developed through the project. Reintroductions have been undertaken to establish new populations and identify management and environmental factors for successful translocations of Corn Buttercup. The reintroductions have been effective at establishing populations in the first year or two but demonstrating long term persistence is necessary for them to be deemed successful. Volunteers have been recruited to continue monitoring. These activities are working towards trialling of recovery solutions and therefore Corn Buttercup is deemed to be at step 6 on the recovery curve.</p> |
| <p>Recommendations for future work:-</p> | <ul style="list-style-type: none"> • Continued annual monitoring of reintroduction sites. • Analysis in ~10 years of the success of the reintroductions and explore factors that correlate. • Further reintroductions, following CitM protocols. • Investigation of seed longevity in natural conditions within the soil seed bank. |

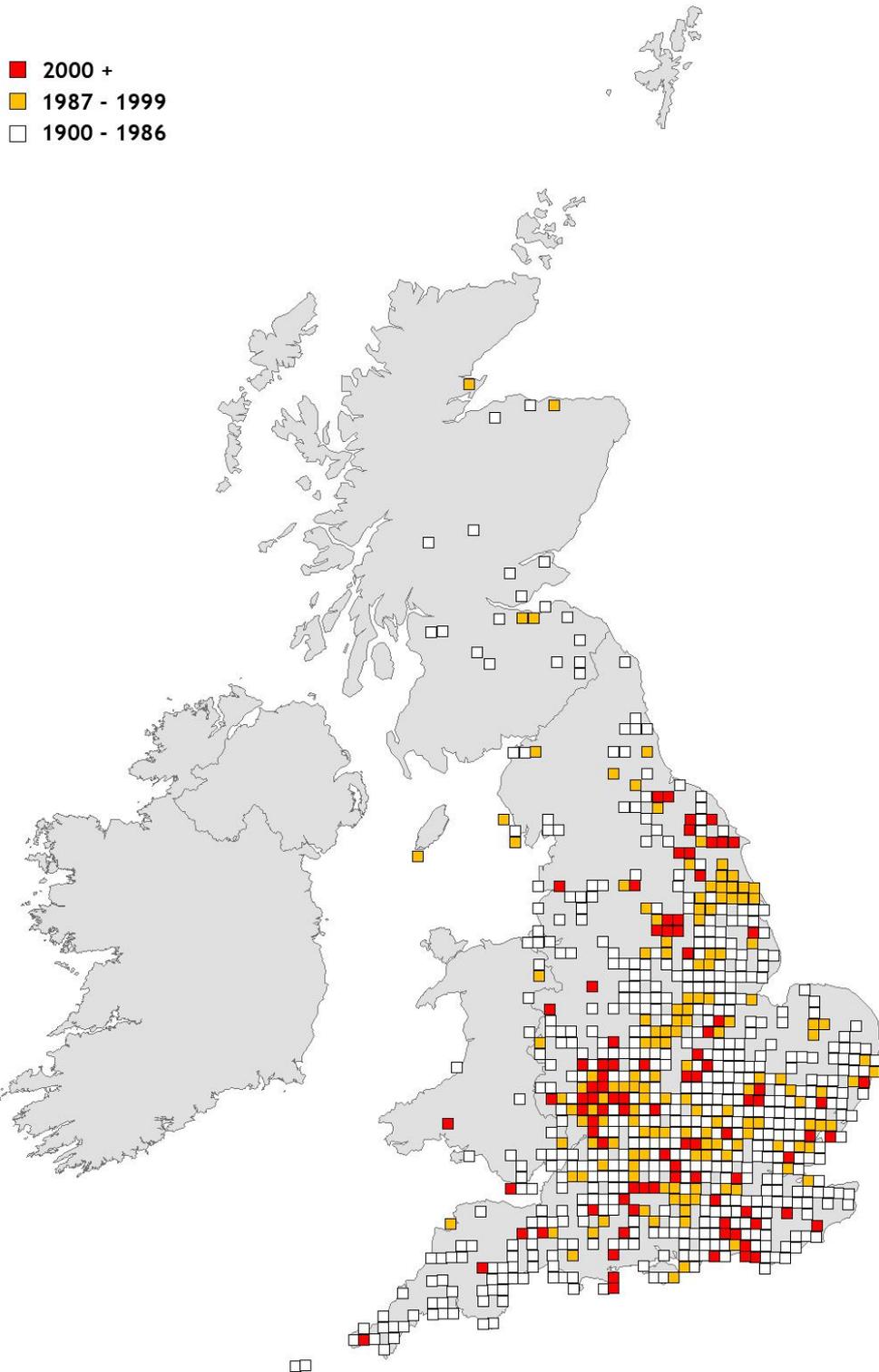


Figure 1: Corn Buttercup *Ranunculus arvensis* distribution across Britain and Ireland. The data used to create this map has been provided under licence from the Botanical Society of Britain and Ireland (BSBI) and accessed from the Society's online database in 2020.