

Back from the Brink – Species summary

Pillwort

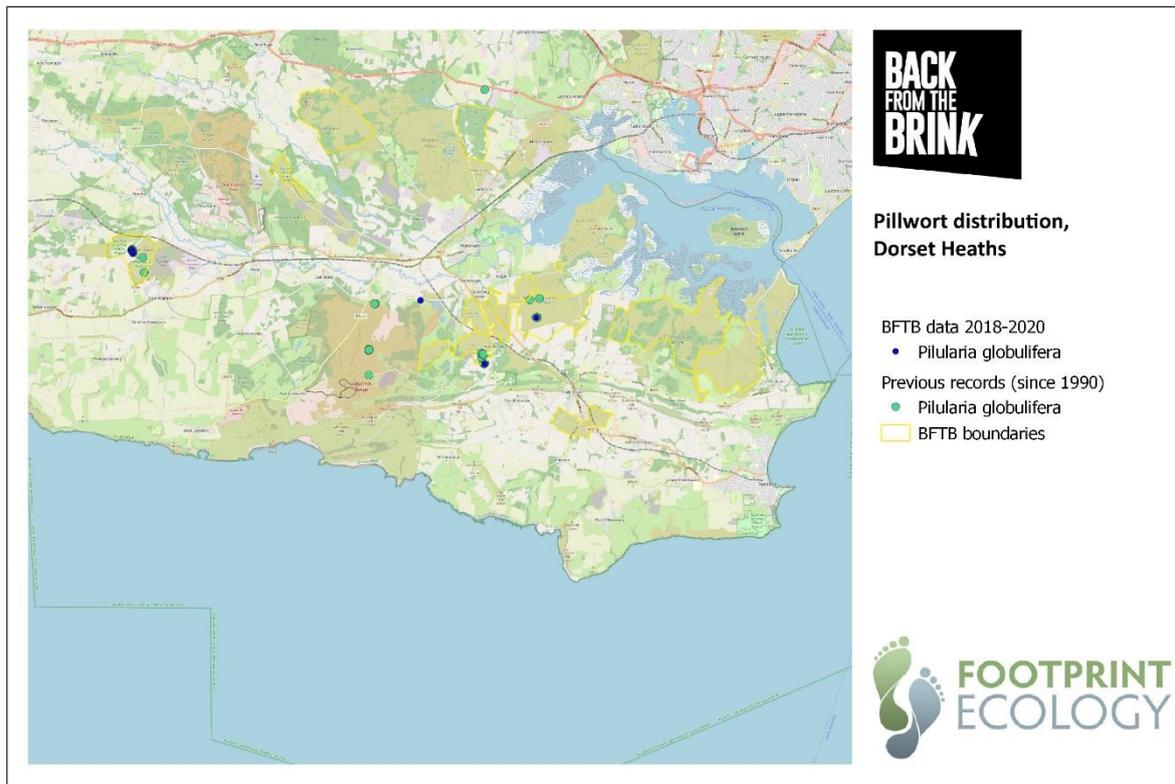
BftB project: IP01 Dorset's Heathland Heart

Project lead organisation: Plantlife

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Species name – common & scientific	Pillwort – <i>Pilularia globulifera</i>
Photograph	 <p>© Plantlife / Back from the Brink</p>
Taxon group	Vascular plant – fern.
Conservation status	NERC S.41.GB Red listed - IUCN Near Threatened, Eng Red listed - IUCN Vulnerable, Nationally Scarce.
UK distribution	Key areas include the Lizard in west Cornwall, the New Forest in south Hampshire and the commons in Radnorshire, mid-Wales, while it is probably under-recorded in the lowlands of Scotland.
Habitat associations	Pillwort thrives on bare clay, sandy peat and gravelly substrates where water levels fluctuate which, together with disturbance such as livestock trampling, prevents other species from outcompeting it. It is found in shallow ephemeral pools, winter-flooded ruts, muddy poached areas and in the drawdown zone of more permanent ponds or submerged within waterbodies. It is also occasionally found in mires and old mineral workings.
BftB work carried out:	
Survey & Monitoring	Pillwort populations at 3 of the 4 existing Dorset sites (Creech Heath, Winfrith Heath, Hartland Moor) were surveyed. Monitoring of habitat management was carried out at Creech Heath, but at Winfrith and Hartland was delayed due to Covid and will be undertaken by the Purbeck Natural History Forum members (a legacy of BFTB). (Access constraints prevented surveys of the remaining Dorset site). A new population was found during a BFTB Pennyroyal survey at an additional site.

Sites habitat management works	<p>6 shallow, ephemeral pools were created on Hartland Moor within a linear wetland system that supports Pillwort in one (highly vulnerable) location.</p> <p>6 existing scrapes (3 already supporting Pillwort) were extended at Winfrith.</p> <p>About 20m of overhanging Rhododendron and invasive Parrot's Feather was removed from a pool already supporting Pillwort at Creech Heath and Common Reed was cleared from a pool where there was an old record</p>
Technical advice provision	<p>Advice relating to livestock grazing and the need for open, periodically disturbed conditions was provided to landowners through direct discussion and a handover pack at the end of the project. Advice was also provided to a private landowner at a new site for the species.</p>
Links made with other taxa / conservation work?	<p>Interventions for Pillwort were combined with those for BFTB species Pondweed Leafhopper <i>Erotettix cyane</i> and also Medicinal Leech <i>Hirudo medicinalis</i> at 2 sites and for BFTB species Southern Damselfly <i>Coenagrion mercuriale</i> at the third.</p>
Wider engagement & advocacy activities?	<p>Awareness was raised through volunteer survey events and training in collaboration with Freshwater Habitats Trust. A factsheet was created for this species:</p>
BftB results obtained:	
Recorded Distribution (in BftB focal areas)	<p>See Map 1. Pillwort is currently known from several locations at 4 sites in Dorset and is likely be present at a 5th (not surveyed during the project). However, at one site it has not been seen for 2 years. At Creech Heath, it has been recorded from 2 locations. At Winfrith Heath it has been recorded from 8 locations. A new site was found during a BFTB Pennyroyal survey.</p>
Recorded Abundance of species populations	<p>Abundance was measured in terms of area occupied and cover within the area. In brief, the species was abundant at Winfrith, absent at Hartland, frequent at Creech and occasional at the new site, Squirrel Cottage.</p>
Species Recovery Curve progress made	<p>1 – 7 Best Approach adopted (<i>mostly</i>) – open margins of newly created ephemeral pools will be maintained by livestock grazing Monitoring to date suggests that the species is recovering at one site due to BFTB interventions and it is likely expanding within at least one more. However, this should be seen in the context of losses from 17 out of 28 recorded sites since 1900. The baseline score is considered to be an underestimate give work that has already been done in Dorset and elsewhere by Dorset Wildlife Trust and the Freshwater Habitats Trust.</p>
Recommendations for future work:-	<p>Pillwort populations are secure at Creech provided that ongoing scrub management is carried out around pools, as livestock levels are not high enough to maintain appropriate open conditions. The Hartland population is sporadic and future monitoring is required to establish the success of the new pools. Similarly, future monitoring will be needed at Winfrith and Tadnoll to establish the success of pools extensions. The grazing has however improved and the existing population is now more secure.</p>



Map 1: The distribution of Pillwort across the Dorset Heaths (note that Dorset Environmental Records Centre holds more recent records from the Lulworth Ranges).