



24 Great Pignut species action plan

24.1 Introduction

Great Pignut *Bunium bulbocastanum* is an erect perennial herb with stems up to about 50 cm. These are solid and arise from a spherical tuber. Leaves are 2-3 pinnate, deeply cut with linear lobes. They become mostly withered by the time the flowers emerge. The flowers are typical umbells of the Umbellifer family, but with several bracts and bractioles. Flowering occurs in June and July. The fruits are 3-4.5 mm long and slightly laterally compressed. They are less than twice as long as wide, hairless with low rounded ridges. It is a species, which requires winter frosts for effective germination. Seed can lie dormant for some time in adverse conditions.

The species occurs on chalk grassland and chalky banks such as road verges. It also formerly occurred occasionally as an arable weed.

24.2 Current status

This species has a very localised national distribution being found in Hertfordshire, Buckinghamshire, Bedfordshire and Cambridgeshire. It is also localised in its occurrence in each of these counties.

In Hertfordshire, Dony *et al.* (1967) recorded the species from 12 tetrads within the current administrative county boundary. Today it is recorded from eight tetrads and nine sites within the

administrative county boundary. It is now largely confined to chalk grassland road verges, though in the past was found in rough chalk pastures and arable field margins on the chalk. The largest extant population is at Whiteley Hill, where there may be more than 1000 in a good year.

24.3 Current factors causing loss or decline

24.3.1 Habitat deterioration

A decline in habitat quality has been responsible for the loss of the species from many sites. Over the past 15-20 years road verges, which were previously cut across their full width, have been cut only 1 m back from the road. This has allowed many road verges to become dominated by coarser grasses and even scrub, to the detriment of this species. Some sites have been directly destroyed.

An additional problem associated with road verge management has been the timing of cutting. Most rural verges where the species occurs are cut only once a year, usually during May and June. Cutting during June may prevent flowering and could over time result in a decline in this species.

24.3.2 Nutrient enrichment

The increase in road traffic has resulted in many road verges becoming polluted as a result of car exhaust fumes. As a result nutrient enrichment occurs, favouring the growth of coarser species, and even changing soil conditions to favour more neutral rather than calcareous grassland species. Increased spraying of salt along country roads has also had a negative impact on road verge grasslands and perhaps this species. This problem is further compounded by run-off from neighbouring arable fields.

24.4 Current action

One road verge where Great Pignut still occurs is designated and managed as a Heritage Road Verge.

24.5 Great Pignut Action Plan

Objectives, actions and targets

Objective 1: To ascertain the current status of Great Pignut

Target: Produce an updated distribution map by 2004, establish a 5 year re-survey programme by 2008

Action code	Action	Target start date	Target end date	Lead partner	Other partners
GP/A/1.1	Collate all historical and current records and map onto GIS		2004	HBRC	HNHS
GP/A/1.2	Re-survey all sites where records are greater than 10 years old to re-establish population size		2005	HNHS/BSBI, Flora Group	HBRC, CMS
GP/A/1.3	Produce a historical/current distribution map to inform road verge management		2005	HBRC	
GP/A/1.4	Conduct a re-survey programme	2008	2008	NHNS/BSBI, Flora Group	HBRC, CMS

Objective 2: To protect maintain and enhance the current populations of Great Pignut

Target: Appropriate management regimes on all former sites by 2008

Action code	Action	Target start date	Target end date	Lead partner	Other partners
GP/A/2.1	Identify and designate key sites as County Wildlife sites/Heritage Road Verges		Annually	WSP	
GP/A/2.2	Ensure existing sites are managed appropriately		Ongoing	CMS	HCC Highways
GP/A/2.3	Extend appropriate management for all former road verge sites		2008	CMS	HCC Highways

Relevant Action Plans:

Hertfordshire Plans

Farmland; Grassland and Heathland

National Plans

Cereal field margins; Lowland calcareous grassland

Abbreviations (Partners)

CMS - Countryside Management Service

HBRC - Hertfordshire Biological Records Centre

HCC – Hertfordshire County Council

HNHS/BSBI – Hertfordshire Natural History Society/Botanical Society of the British Isles

WSP – Wildlife Sites Partnership (HMWT, HBRC, CMS, FWAG, EA, EN, DEFRA, Chilterns AONB)

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