

## **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 (1967) recorded the species from 12 tetrads within the current administrative county boundary. Today it is recorded from 8 tetrads and 9 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.

No other action is currently being undertaken.

## **24.5 GREAT PIGNUT ACTION PLAN OBJECTIVES**

To maintain and enhance the current populations of Great Pignut.

To increase the number of sites where Great Pignut is found from 9 to 15.

## **24.6 PROPOSED ACTIONS**

### **24.6.1 Policy and Legislation**

No action proposed.

### **24.6.2 Site Safeguard and Management**

**GP1.** Establish sympathetic management regimes on all remaining road verge sites containing Great Pignut, by 1999.

**Action:** HCC, landowners.

**GP2.** Restore sympathetic management regimes to former Great Pignut sites, particularly road verges, by 2001, in order to encourage the return of the species and / or create suitable conditions for re-introduction.

**Action:** HCC, landowners.

### **24.6.3 Species Management and Protection**

**GP3.** Produce a report into the possibility of re-introducing Great Pignut to former sites, according to accepted scientific principles, by 2003.

**Action:** HERC, HMWT.

### **24.6.4 Advisory**

**GP4.** Provide advice to landowners of fields adjacent to Great Pignut sites, by 1999, encouraging retention of a buffer zone next to the road verges, which may also act as suitable habitat for spread of the species. The Arable Stewardship Pilot Scheme will be an option in NE Herts.

**Action:** HMWT, CMS, FWAG.

### **24.6.5 Research and Management**

**GP5.** Undertake a survey of all existing sites to ascertain population levels, by 1999. Repeat surveys every 5 years.

**Action:** HERC, HNHS.

**GP6.** Collate information on requirements of Great Pignut to aid management and re-introduction programmes, by 1998.

**Action:** HNHS, HERC.

**GP7.** Monitor newly established populations as necessary

**Action:** HERC, HNHS.

**24.6.6 Communication and Publicity**

No action proposed.