

## SELINUM CARVIFOLIA (L.) L. IN BRITAIN

By S. M. WALTERS

This Umbellifer was first discovered in Britain by the Rev. W. Fowler at Broughton, Lincs., in 1880; it was identified and fully described by F. A. Lees (1882, a, b) who, it is clear from the accounts, had no doubt that it was native, predicting that it would be discovered elsewhere in the Eastern Counties. This prediction was quickly fulfilled by W. J. Cross, a young botanist of Ely, who discovered the plant 'on swampy land near Fordham [misprinted as Foulham], Cambridgeshire', in August 1882. W. Marshall of Ely, who contributed the note on the discovery (1882) stated that the plant was in his opinion quite native at Fordham, 'and in the two adjacent parishes of Snailwell and Chippenham the plant is abundant'. (Lees, 1882, c). A. Bennett and A. Fryer, however, visiting the Chippenham Fen locality in 1883, came to the conclusion 'that it was not an indigenous species', a conclusion unacceptable to Lees; and eventually a somewhat touchy 'exchange of notes' was published (Bennett, A., et al, 1899). Reading between the lines, one is tempted to conclude that Bennett and Fryer were so ashamed at not having recorded the plant that they decided it was a relatively recent introduction which had spread rapidly. Actually the complete absence of records of Chippenham Fen plants in Babington's *Flora of Cambridgeshire* or elsewhere for the period 1840 to 1880 suggests strongly that no Cambridge botanists visited the fen until Cross's discovery of *Selinum* drew their attention to it! Druce and Riddelsdell, visiting the fen in 1903, saw no reason to doubt that *Selinum* was native there, pointing out its resemblance in habit to *Daucus* . . . 'it is quite conceivable and probable that botanists, even careful and keen-eyed men, may have overlooked it time after time'. (Riddelsdell, 1903).

In 1909, J. W. Carr discovered the plant in Notts.; this time even Bennett, who was consulted, conceded that the plant was native *there* . . . but still implied that it was introduced in the Lincs. and Cambs. localities by suggesting that the Notts. plant resembled the Continental one and differed from the others in its less robust habit! (Carr, 1909).

The plant has now apparently disappeared from the Notts. locality through drainage; and in the original Lincs. locality it has not been seen in the last few years. Localities in Cambs. are therefore at present the only known ones. These are (1) the well-known Chippenham Fen locality; (2) a locality in the grounds of Fordham Abbey, about a mile from the fen; (3) a small wet grazed pasture near Sawston. This last is a newly-discovered

locality, and is of great interest in that the species here associated with *Selinum* resemble those at Chippenham remarkably closely. (See lists). The Fordham Abbey station is presumably a relic of the original distribution of the plant in the Chippenham-Fordham-Snailwell area; it was good to verify that the plant still grows here, however, as there is now little ground in this area which has not either been drained or become woodland.

The conditions under which *Selinum* grows at Sawston suggest strongly that it might be surviving elsewhere in the Eastern Counties in rough-grazed marshy pasture where there is a high calcareous water-table, perhaps unable to flower properly and thus showing only radical leaves. Indeed, I have no doubt that the combination of late flowering (August to September) and similarity of foliage to *Silaus* and *Peucedanum palustre* (and to a lesser extent to *Daucus*) could explain the mystery and confusion which has surrounded the plant and caused it to be overlooked and unrecorded.

Certain generalisations can be made about the habitats of *Selinum* in Britain, which resemble rather closely its habitats on the Continent. In all British localities the species list suggests strongly, even if the records do not state, that the ground water is calcareous—thus *Juncus subnodulosus* occurs in all the lists except Fordham. It is also clear that the habitats are marshy throughout the year, probably with regular winter flooding; and, further, that the plant is intolerant of shade from trees (cf. Lees' description of the Lincs. locality (1882, c)); so that suitable habitats may be of a rather temporary and fluctuating nature. Thus ill-drained marshy pasture will be colonised by trees if grazing or other interference is absent; if grazing, etc., is too intense (and particularly if accompanied by attempts at drainage) the plant will be unable to flower properly and presumably will in time be eliminated. One would expect, therefore, an optimum grazing or interference effect, large enough to prevent tree colonisation, but not large enough to damage the plant directly. This optimum seems to be found at present in the Chippenham locality, but it is quite clear that there is a delicate balance of factors, and a good deal of variation in the size of the *Selinum* population and the luxuriance of growth seems to have occurred over the 70 years since the plant was first recorded at Chippenham.

## ASSOCIATION TABLE

1. Fordham Abbey grounds, Cambs. List made September 1949 (S.M.W.).
2. Sawston, Cambs. Lists made September 1949 (S.M.W.), and September 1955 (F. H. Perring).
3. Chippenham Fen, Cambs. List made September 1949 (S.M.W.).
4. Broughton, Lincs. Composite list of Lees (1882, c) and Woodruffe-Peacock (1908); those with asterisk added or confirmed by Miss E. J. Gibbons 23.8.49.
5. Teversall, Notts. Carr's list, 1909 (clearly incomplete).

	1	2	3	4	5
<i>Selinum carvifolia</i> ... ..	+	+	+	+	+
<i>Succisa pratensis</i> ... ..	+	+	+	+	+
<i>Eupatorium cannabinum</i> ... ..	+	+	+	+	*
<i>Mentha aquatica</i> ... ..	+	+	+	+	(a)
<i>Filipendula ulmaria</i> ... ..	+	+	+	+	
<i>Carex flacca</i> ... ..	+	(a)	+	+	
<i>Cirsium palustre</i> ... ..	+	+	+	+	
<i>Molinia caerulea</i> ... ..	+	+	+	+	
<i>Serratula tinctoria</i> ... ..	+	+		+	
<i>Gallium uliginosum</i> ... ..	+		+	+	
<i>Holcus lanatus</i> ... ..	+		+	+	
<i>Senecio jacobaea</i> ... ..	+	+	+		
<i>Festuca ovina</i> ... ..	+		+		
<i>Agrostis stolonifera</i> ... ..		+	+	+	
<i>Centaurea nigra</i> ... ..		+	+	+	
<i>Prunella vulgaris</i> ... ..		+	+	+	
<i>Anagallis tenella</i> ... ..		+		+	
<i>Alnus glutinosa</i> ... ..		+		+	*
<i>Angetica sylvestris</i> ... ..		+		+	*
<i>Lythrum salicaria</i> ... ..		+		+	
<i>Carex distans</i> ... ..		+			+
<i>Juncus articulatus</i> ... ..		+			+
<i>Senecio aquaticus</i> ... ..		+			+
<i>Juncus subnodulosus</i> ... ..		+	(a)	+	(a)
<i>Cirsium arvense</i> ... ..	+				
<i>Dactylis glomerata</i> ... ..	+				
<i>Festuca arundinacea</i> ... ..	+				
<i>Heracleum sphondylium</i> ... ..	+				
<i>Lathyrus pratensis</i> ... ..	+				
<i>Trifolium repens</i> ... ..	+				
<i>Plantago lanceolata</i> ... ..	+	+			
<i>Viola cracca</i> ... ..	+	+			
<i>Carex disticha</i> ... ..		+			
<i>C. lepidocarpa</i> ... ..		+			
<i>C. panicea</i> ... ..		+			
<i>Juncus inflexus</i> ... ..		+			
<i>Leontodon leysseri</i> ... ..		+			
<i>Linum catharticum</i> ... ..		+			
<i>Lotus corniculatus</i> ... ..		+			
<i>Ranunculus flammula</i> ... ..		+			
<i>Sieglingia decumbens</i> ... ..		+			
<i>Cladium mariscus</i> ... ..		+	+		
<i>Deschampsia cespitosa</i> ... ..		+	+		
<i>Equisetum palustre</i> ... ..		+	+		
<i>Potentilla erecta</i> ... ..		+	+		
<i>Valeriana dioica</i> ... ..		+	+		
<i>Potentilla reptans</i> ... ..			+		
<i>Schoenus nigricans</i> ... ..			+		
<i>Cirsium dissectum</i> ... ..			+	+	
<i>Hydrocotyle vulgaris</i> ... ..			+	+	
<i>Phragmites communis</i> ... ..			+	+	

	1	2	3	4	5
<i>Potentilla anserina</i> ... ..			+	+	
<i>Silaum silaus</i> ... ..			+	+	
<i>Epilobium parviflorum</i>				+	
<i>Fragula alnus</i> ... ..				+	
<i>Geum rivale</i> ... ..				+	
<i>Juncus acutiflorus</i> ... ..				+	
<i>Lychnis flos-cuculi</i> ... ..				+	
<i>Lysimachia vulgaris</i> ... ..				+	*
<i>Samolus valerandi</i> ... ..				+	*
<i>Stachys officinalis</i> ... ..				+	
<i>Triglochin palustris</i> ... ..				+	+
<i>Blysmus compressus</i> ... ..				+	*
<i>Achillea ptarmica</i> ... ..					+
<i>Carex hirta</i> ... ..					+
<i>C. nigra</i> ... ..					+
<i>Juncus conglomeratus</i> ... ..					+
<i>J. effusus</i> ... ..					+
<i>Lysimachia nummularia</i>					+

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