

SUCCESSFUL TRANSLOCATION OF ISLE OF MAN CABBAGE ON THE SEFTON COAST, MERSEYSIDE

Philip H. Smith February 2006

Introduction:

Isle of Man Cabbage (*Coincya monensis* ssp. *monensis*) is a Nationally Scarce, annual or short-lived perennial, mainly found by the sea on open sand-dunes in north-west England, south-west Scotland and south Wales. The *New Atlas* shows it as native in 34 post-1986 hectads (Preston *et al.* 2002). One of few British endemics, this is a Priority Species in the UK Biodiversity Action Plan and the subject of a Species Action Plan in the north Merseyside BAP.

On the Sefton Coast (v.c. 59, South Lancashire), the Isle of Man Cabbage has always been extremely localised. For many decades, it was restricted to coastal sand-dunes at Crosby and Blundellsands (Savidge *et al.* 1963) but its habitat was progressively destroyed by housing development (V. Gordon *in litt.*). By 1989, the plant was confined to a sandy footpath about 60m long and 4m wide on the north side of Park Drive, Blundellsands at SD 302999. A total of 35 plants in flower was counted, together with a larger number of small, non-flowering rosettes (Smith & Hall 1991). In 1992, this relict colony was lost when the footpath was top-soiled and turfed over but, in July of that year, a rescue operation organised by the Lancashire Wildlife Trust and the Sefton Ranger Service led to 385 young plants being translocated to six ostensibly suitable dune sites nearby at Hall Road (SD 300006) and Crosby Marine Park (SJ 305993). The results of subsequent monitoring are the subject of this article.

Methods:

Translocation:

One-year-old plants were heavily watered before being dug up with as much of the tap-root as possible and transported in large plastic fish-boxes. They were planted out on the same day about 15cm apart and were watered-in thoroughly. Each of the transplantation sites chosen was on the leeward side of semi-fixed dunes within 100m of the sea, characterised by an open plant community, including Kidney Vetch (*Anthyllis vulneraria*), Sand Sedge (*Carex arenaria*), Sand Couch (*Elytrigia juncea*) and Lyme-grass (*Leymus arenarius*) and an intermittent rain of blown sand from the west (Rooney 1992, Smith 1994).

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Monitoring:

The translocation sites were searched in June at one or two-year intervals. All *C. monensis* plants were counted and from 1998 onwards, areas occupied by the plants were estimated by pacing. Notes were made on the condition of the habitat and apparent health of the plants.

Results:

The first monitoring exercise took place in 1994, two years after the introduction. Only 30 plants were found, 14 at Hall Road and 16 at Crosby. All were mature rosettes, 30 to 100cm in diameter, with plenty of flowers and fruits, and were probably the original transplants. The poor survival rate of 7.8% may have been due to drought conditions during late summer 1992 (Smith 1994).

Subsequent visits usually revealed an increase in the populations, though numbers fell in 1998 and 2001 (Fig. 1). By 2005, there were 988 plants, representing a 93.7% increase on the total in 2003. Hall Road held 376 plants, while the number counted at Crosby was 612. Each population included a wide size range of individuals from large, mature plants 150cm or more in diameter, with abundant inflorescences, to small first-year rosettes.

The area of dune-land occupied by Isle of Man Cabbage plants also increased progressively during the monitoring period from about 960m² in 1998 to over 7000m² in 2005 (Fig. 2). Especially at Crosby, the boundaries between the original introduction sites became indistinct, while plants spread from the semi-fixed back-slope of the dune ridge to the western, more mobile side. Similarly, at Hall Road, colonisation of blow-outs was noticed.

Since 1992, habitat conditions at Crosby and Hall Road have remained relatively unchanged with adequate thinly vegetated areas and bare sand for colonisation at all sites. It seems clear that moderate levels of human disturbance, by pedestrian trampling, at both localities have maintained suitable conditions for this species. Also, there appears to be plenty of suitable habitat at both locations for future spread.

No evidence of insect or fungal attack or drought stress in *C. monensis* plants was recorded throughout the study.

Discussion:

The only other extant population of Isle of Man Cabbage on the Sefton Coast is one discovered by R.A. Hall and D. Nissenbaum in 1989 on dunes west of Southport Marine Lake (SD 338186). At least 347 plants were then present (Smith & Hall 1991), rising to 874 in 1997 (Brummage 1997). By 2004, for reasons which were not apparent, this colony had declined to a total of 281 individuals, (Smith 2004). The only other Sefton site recorded for this species in recent years was at Birkdale Sandhills (SD 319160), where 55 plants were found in July 1983 (Smith & Hall 1991). This increased to 168 plants in 1986, followed by a steady decline to extinction in about 1993 as the habitat changed to a closed plant community with much Sea Buckthorn (*Hippophae rhamnoides*).

Vascular plant associates of *C. monensis* at the translocation sites and at Southport Marine Lake were recorded in 1994 and 2004 respectively (Smith 1994, 2004). Table 1 shows that the lists are quite similar, containing characteristic species of mobile and semi-fixed dunes on the Sefton Coast, the most constant being Kidney Vetch (*Anthyllis vulneraria*), Smooth Hawk's-beard (*Crepis capillaris*), Sand Couch (*Elytrigia juncea*), Field Horsetail (*Equisetum arvense*), Cat's-ear (*Hypochaeris radicata*), Lyme-grass (*Leymus arenarius*) and Dandelion (*Taraxacum* sect. *Ruderalia*).

The original objective of this conservation project was to save from extinction what was, at the time, the only known population of Isle of Man Cabbage in north Merseyside. Rooney (1992) emphasised the importance of recording the circumstances of the translocation and of subsequent monitoring. Pearman & Walker (2004) state that plant translocations should only be used as a last resort, pointing out that many have failed due to lack of understanding of the needs of the species concerned. They also stress the need for monitoring and state that scarce resources are best spent on reintroducing native species to a native site. The current project seems to have fulfilled all these recommendations and has largely been achieved by volunteers. Its future success will depend on habitat protection and appropriate

management – in this case moderate levels of pedestrian activity to maintain the open sward and bare patches of sand that this species seems to require..

Acknowledgements

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References:

BRUMMAGE, M.K. 1997. Marine Lake, Southport. Wildlife Survey. Unpublished report to Sefton Coast Life Project, Bootle

PEARMAN, D. & WALKER, K. 2004. Comment: Rare plant introductions in the UK: creative conservation or wild flower gardening? *British Wildlife*, **15** (3): 174-182.

PRESTON, C.D., PEARMAN, D.A. & DINES, T.D. (eds.) 2002. *New Atlas of the British & Irish Flora*. Oxford University Press, Oxford.

ROONEY, P.J. 1992. Isle of Man Cabbage, Park Drive, Blundellsands. Unpublished report, Sefton Ranger Service, Bootle.

SAVIDGE, J.P., HEYWOOD, V.H. & GORDON, V. (eds.) 1963. *Travis's Flora of South Lancashire*. Liverpool Botanical Society, Liverpool.

SMITH, P.H. 1994. Translocation of Isle of Man Cabbage at Blundellsands and Crosby, Merseyside. *Lancashire Wildlife Journal*, **4**: 31-34.

SMITH, P.H. 2004. Isle of Man Cabbage at Southport Marine Lake, July 2004. Unpublished report to Sefton Coast Partnership, Bootle.

SMITH, P.H. & HALL, R.A. 1991. The Isle of Man Cabbage in South Lancashire. *Lancashire Wildlife Journal*, **1**: 31-34.

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Table 1. Vascular taxa associated with Isle of Man Cabbage at the two translocation sites and Southport Marine Lake.

Taxon	Hall Road	Crosby	Southport
<i>Agrostis capillaris</i>		+	+
<i>Agrostis stolonifera</i>		+	+
<i>Ammophila arenaria</i>	+		+
<i>Anthyllis vulneraria</i>	+	+	+
<i>Cakile maritima</i>			+
<i>Carex arenaria</i>		+	
<i>Cirsium arvense</i>		+	+
<i>Crepis capillaris</i>	+	+	+
<i>Diplotaxis muralis</i>			+
<i>Elytrigia juncea</i>	+	+	+
<i>Equisetum arvense</i>	+	+	+
<i>Eryngium maritimum</i>			+
<i>Euphorbia portlandica</i>			+
<i>Festuca rubra</i>	+		+
<i>Hypochaeris radicata</i>	+	+	+
<i>Leymus arenarius</i>	+	+	+
<i>Lolium perenne</i>		+	+
<i>Medicago lupulina</i>		+	
<i>Oenothera fallax</i>			+
<i>Phleum arenarium</i>	+		+
<i>Plantago coronopus</i>	+	+	
<i>Plantago lanceolata</i>	+	+	
<i>Poa pratensis</i> agg.	+	+	
<i>Raphanus raphanistrum</i> ssp. <i>maritimum</i>			+
<i>Rumex acetosella</i>		+	
<i>Sedum acre</i>	+		
<i>Senecio jacobaea</i>			+
<i>Senecio squalidus</i>			+
<i>Taraxacum</i> sect. <i>Ruderalia</i>	+	+	+
<i>Tragopogon pratensis</i>	+		
<i>Vulpia fasciculata</i>			+
Total 31	15	17	23

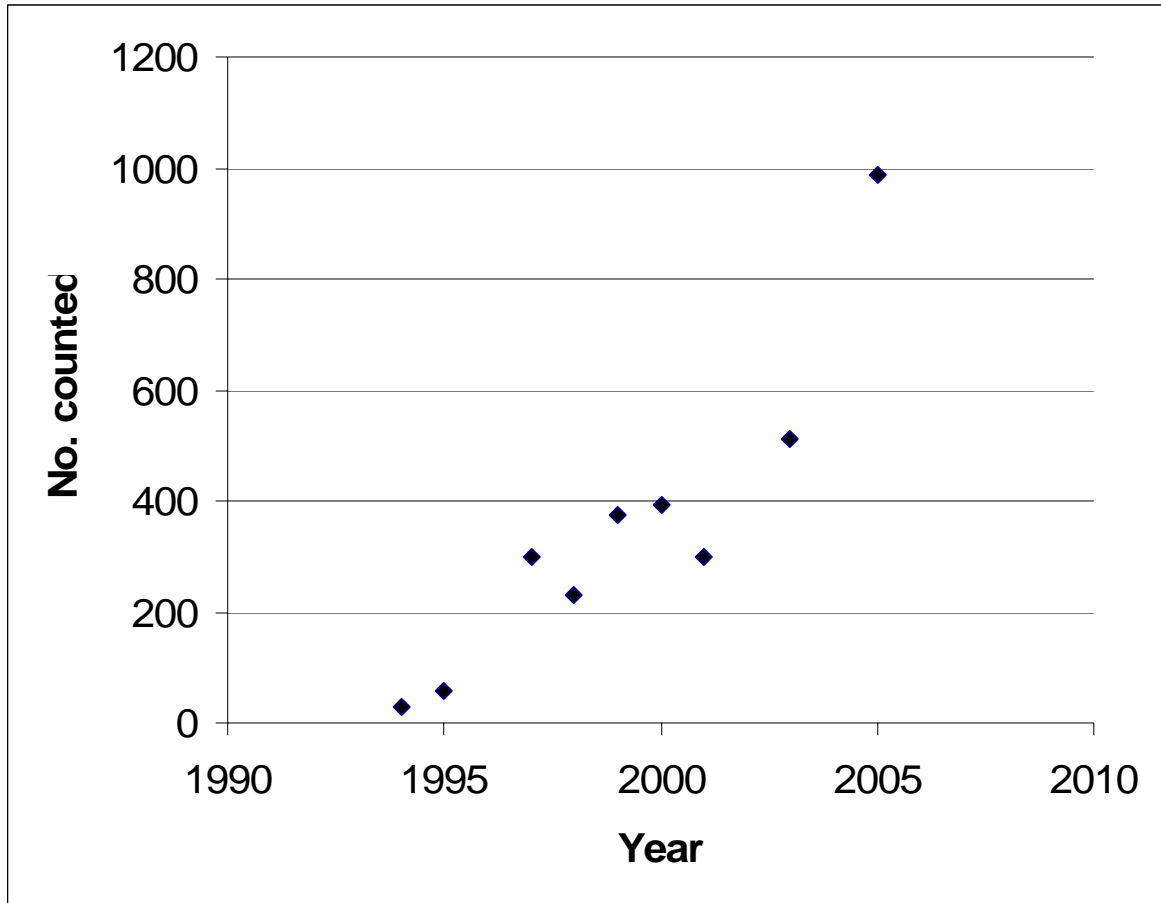


Fig. 1. Total number of Isle of Man Cabbage plants at translocation sites from 1994 to 2005.

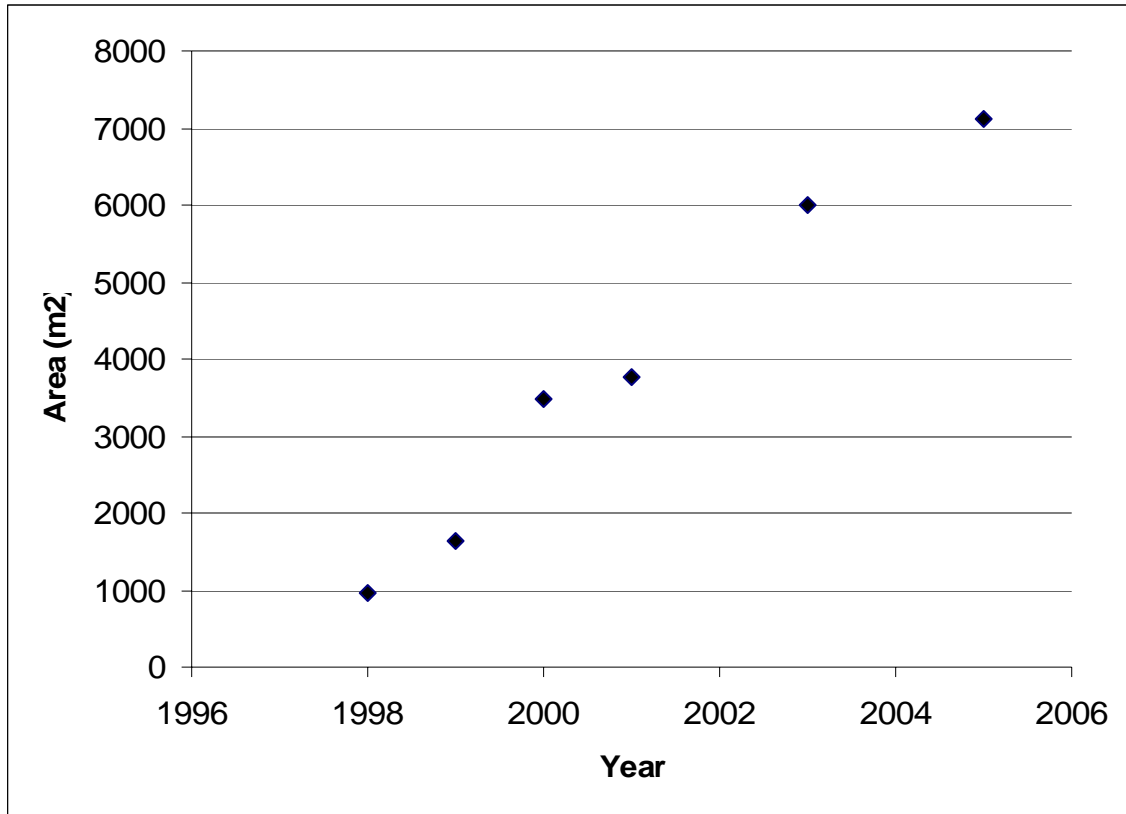


Fig. 2. Areas occupied by Isle of Man Cabbage plants at both translocation sites, 1998 to 2005.