

**SHARP CLUB-RUSH *SCHOENOPLECTUS PUNGENS*
ON THE SEFTON COAST**

Philip H. Smith January 2005

Sharp Club-rush *Schoenoplectus pungens* is a nationally rare UK Species of Conservation Concern. It has only been recorded from two localities in Britain : St Ouens Pond in Jersey, where it has not been seen since the early 1970s, and wet dune-slacks in v.c. 59 South Lancashire (Savidge, Heywood & Gordon 1963; Stace 1997).

The plant was first collected on what are now the Sefton Coast sand-dunes by W.G. Travis in 1909, though he did not identify it correctly until 1928. It was “found in a hollow among the dunes near the sea-coast in the vicinity of Formby”, as a patch of about 25 square yards in area. Associated species included *Salix repens*, *Parnassia palustris*, *Pyrola rotundifolia* ssp. *maritima* and *Schoenoplectus tabernaemontani*. As the Sharp Club-rush had obviously been there a long time and no aliens were present, Travis concluded that the colony was native (Atkinson & Houston 1993), though Clapham, Tutin & Moore (1987) record it as “introduced in Lancashire.”

Whether or not the plant is native in v.c. 59 is an on-going debate. Certainly, its habitat in Massams Slack was only formed shortly before Travis’s original discovery. In the late 19th century the Weld-Blundell estate erected extensive brushwood fencing on the backshore, successfully creating a high dune ridge which isolated the slack. One possibility is that, early in the 20th century, a botanist collected *S. pungens* in Jersey and planted it in apparently suitable habitat in the young Massams Slack. “A lot of this sort of thing went on amongst botanists..... Charles Elton, the eminent animal ecologist, admitted to the Nature Conservancy that his botanist brother had planted Sundew and Butterwort down Fishermans Path” (N.A. Robinson *in litt.*).

Blanchard (1952) described the habitat in the northern part of Massams Slack in what later became Ainsdale Sand Dunes National Nature Reserve, as “the damp *Salix repens* association”, finding *S. pungens* co-dominant with *Eriophorum angustifolium*. She also noted it further south in the same slack, growing in a peat-cut, from which it was spreading to surrounding, dryer areas.

The colony in Massams Slack, close to the well-used Fishermans Path, still existed in 1968 when N.A. Robinson (*in litt.*), Warden Naturalist for the reserve, was shown it. “It was in the dry margin amongst sparse vegetation, but it looked depauperate, just short pale shoots.” In 1972, A.C. Aldridge, the Reserve Warden, counted 39 plants (12 in flower), covering an area of about 20 x 15 ft (28 square metres). He noted that the plants were shorter than in the 1950s, were often chlorotic, subject to rabbit grazing and that the “slack has dried out drastically in recent years”. Associates included *Hydrocotyle vulgaris*, *Mentha aquatica*, *Parnassia palustris*, *Pulicaria dysenterica* and *Salix repens*.

By 1978, this colony was extinct, possibly due to the progressive drying out of the slack, competition from maturing vegetation and rabbit grazing. Sand-blow from pedestrian-damaged dunes at Fishermans Path may also have been a contributory factor.

Fortunately, in 1972, material from Massams Slack had been translocated by A.C. Aldridge to the edge of a newly excavated pond near the Reserve Office. Here, a small population (40 plants in 1972) survived to the early 1990s, though it had to be protected from rabbits by an enclosure. It gradually declined in vigour and eventually disappeared, perhaps due to overshadowing by scrub and dramatic fluctuations in the water-table (Simpson 1990; N.A. Robinson *in litt.*)

In 1990, material from Ainsdale stock which had been grown on at Liverpool University was transplanted by D.E. Simpson to four adjacent sites at Birkdale Sandhills Local Nature Reserve, about 4km to the north. They were chosen on the basis of a literature search which suggested that optimum conditions for *S. pungens* were “on the edge of ponds in salt-marshes where freshwater is running out of the dunes” and “at the margins of ponds near the sea” (Simpson 1990).

Subsequent monitoring revealed that, at two of these sites, Tagg’s Island scrape and slack 39 scrape, the plant flourished, forming large, spreading patches (personal observations). Then, in 1999, D. Wrench came across a patch of Sharp Club-rush on a recently formed area of embryo dune, dune-slack and salt-marsh on the nearby foreshore, known as Birkdale Green Beach. The site was close to a drain outfall from Tagg’s Island marsh so it was reasonable to conclude that the plant had spread naturally from the translocated population at Tagg’s Island scrape. By 2003, this patch measured 11 x 8.5m (personal observations).

In June 2004, I conducted a detailed monitoring exercise at Birkdale for the North Merseyside Biodiversity Action Plan. Five discrete colonies of *S. pungens* were found, two on the edge of the scrape in slack 39, one at the southern end of Tagg’s Island scrape (these being sites of the 1990 translocation), a new one on the western side of Tagg’s Island marsh, and Wrench’s patch on the Green Beach. Locations and quantitative data are given in Table 1. The total area occupied by the plant is about 173 square metres, the largest patch being that on the Green Beach (90 square metres).

A list of associated vascular plants is shown in Table 2. A total of 44 taxa was found, most being typical of dune-slacks on the Sefton Coast. Site 5 (the Green Beach) is the most maritime of the localities, supporting *Juncus maritimus* and *Aster tripolium*, as well as freshwater species.

Although samples to determine National Vegetation Classification communities were not taken, it is clear that Sharp Club-rush favours the S21c *Bolboschoenus maritimus* swamp, *Agrostis stolonifera* sub-community and the SD16 *Salix repens* – *Holcus lanatus* dune-slack. In places, especially at sites 1 and 2, it was apparent that *S. pungens* was spreading upwards onto the dryer fringes of the scrape, about 0.5m above the current water-table.. However, the most vigorous shoots were generally confined to seasonally-flooded areas. Although the plant seemed to be competing well with most vegetation at all sites, it is clearly restricted at sites 2 and 3 by *Salix cinerea* bushes, which could do with being removed. No effect of rabbit grazing was noticed.

Clearly, *S. pungens* is now well-established and thriving at Birkdale and consideration is being given to transplanting it back to Ainsdale NNR where it was originally found 95 years ago.

Table 1. Distribution and status of Sharp Club-rush at Birkdale on the Sefton Coast

Site no.	Location	Grid Ref. (SD)	Approx. area (m ²)	Max. shoot ht. (cm)
1	Scrape, slack 38	31482 15645	8	70
2	Scrape, slack 38	31473 15637	18	80
3	Tagg's Is. Scrape	31202 15430	50	90
4	Tagg's Is. Marsh	31257 15550	7	105
5	Green Beach	31315 15696	90	90

Table 2. Vascular plants associated with Sharp Club-rush at five Birkdale sites

Taxon	Site				
	1	2	3	4	5
Agrostis stolonifera	+	+	+	+	+
Alisma plantago-aquatica					+
Apium nodiflorum		+	+		
Aster tripolium					+
Blackstonia perfoliata	+				
Bolboschoenus maritimus	+	+	+		+
Carex arenaria	+	+	+		
Cirsium arvense	+	+	+	+	
Dactylohiza incarnata		+			
Dactylorhiza praetermissa			+		
Eleocharis palustris					+
Epilobium hirsutum					+
Epilobium parviflorum	+				
Epipactis palustris	+				
Equisetum arvense			+	+	
Festuca rubra		+	+	+	
Galium aparine				+	
Galium palustre					+
Holcus lanatus	+	+	+	+	
Hydrocotyle vulgaris			+		
Juncus articulatus					+
Juncus maritimus					+
Leontodon saxatile			+		
Lotus corniculatus		+			
Lycopus europaeus	+				
Mentha aquatica	+	+	+		+
Myosotis laxa	+				
Oenanthe crocata			+		
Ononis repens				+	
Pastinaca sativa			+		
Phragmites australis				+	+
Plantago lanceolata		+			
Ranunculus ficaria					+
Ranunculus lingua	+				
Ranunculus repens	+	+	+	+	
Rhinanthus minor			+		
Rumex crispus			+		
Salix cinerea		+	+		
Salix repens	+	+	+	+	
Samolus valerandi					+
Taraxacum officinale agg.				+	
Trifolium repens			+		+
Tussilago farfara			+		
Typha latifolia	+				+

Totals 44 15 14 23 11 15

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References:

ATKINSON, D. & HOUSTON, J. (eds.) 1993. *The Sand Dunes of the Sefton Coast*. National Museums & Galleries on Merseyside, Liverpool.

BLANCHARD, B. 1952.. *An ecological survey of the sand dune system of the south west Lancashire Coast, with special reference to an associated marsh flora*. Unpub. Ph.D. Thesis, University of Liverpool.

CLAPHAM, A.R., TUTIN, T.G. & MOORE, 1987. *Flora of the British Isles*. 3rd ed. Cambridge University Press, Cambridge..

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

SIMPSON, D.E. 1990. The conservation of *Scirpus americanus* on the Sefton Coast : the introduction of this species to Tag's Island. Unpub. project plan, Ainsdale Sand Dunes NNR archive.

STACE, C.A. 1997. *New Flora of the British Isles*, 2nd ed. Cambridge University Press, Cambridge.

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