

## AN HISTORIC FLORA OF TWO ISLAND COMMONS

### C. Chatters

Until the emergence of the scientific study of habitat, biological recording has invariably been associated with the identification and location of species. Where comprehensive records are available for individual locations, it is possible to generate an impression of former habitats. The majority of readily available historical information is botanical and may be found in county floras.

In the past it has not been considered the purpose of a flora to describe the extent and variation of vegetation within a county. A flora identifies species, their abundance and distribution. Fortunately floras frequently refer to notable localities of the most interesting species. By gleaning a flora from records relating to specific sites one may begin to create an historical flora for those sites. This historical flora in turn may be interpreted using current knowledge of habitat preference and management tolerances of those species. By such a process one may accumulate sufficient information to produce a description of an historic habitat.

In his *Flora of Hampshire* (Townsend 1904) Townsend published a large number of records relating to Common lands at St. Helens and Colwell, Isle of Wight. Since publication of the *Flora* in 1904 both Commons have been modified by urban expansion and changes of management practices. The habitats, and consequently the floras, of both Commons are now very different from those implied by Townsend. It is necessary to exercise caution as to what the habitat was at any specific date. Townsend recorded a number of species which by the time of publication were probably already extinct. Similarly it is possible errors in recording or ambiguity in location may confuse matters. For example the re-assessment of A.G. Mores herbarium of 1864 by R.W. David revealed the presence of the rare dotted sedge *Carex punctata* at Colwell. More had erroneously labelled this specimen distant sedge *Carex distans* (Shepard 1984). Another case in point is the recording of western gorse *Ulex gallii* by Townsend. All material is now considered to be dwarf gorse *Ulex minor*. At St. Helens the majority of botanical records published by Townsend and others relate to the Duver (Shepard 1971). In collating records for St. Helens it was necessary to select those with precise locations such as The Green or The Common.

The location and boundaries of the Commons at St. Helens and Colwell may be accurately identified through the Parish Tithe Commutation Surveys of the 1840s and the Ordnance surveys of the 1860s (figs. 1 and 2). The species lists are drawn from Townsend (Tables 1 and 2); the botanical Latin has been updated to correspond with Dandy.

Table 1. Species list for St. Helens Green.

<i>Apium nodiflorum</i>	fools watercress
<i>Carex echinata</i>	star sedge
<i>Carex ovalis</i>	oval sedge
<i>Carex pulicaris</i>	flea sedge

<i>Chamaemelum nobile</i>	chamomile
<i>Chenopodium urbicum</i>	upright goosefoot
<i>Drosera rotundifolia</i>	round leaved sundew
<i>Eleocharis multicaulis</i>	many stalked spike-rush
<i>Eleocharis quinqueflora</i>	few flowered spike-rush
<i>Epilobium palustris</i>	marsh willow herb
<i>Hydrocotyle vulgaris</i>	marsh pennywort
<i>Juncus bulbosus</i>	bulbous rush
<i>Mentha pulegium</i>	pennyroyal
<i>Moenchia erecta</i>	upright chickweed
<i>Myosotis secunda</i>	creeping forget-me-not
<i>Potamogeton polygonifolius</i>	bog pondweed
<i>Pulicaria vulgaris</i>	small fleabane
<i>Ranunculus parviflorus</i>	small flowered buttercup
<i>Scirpus cernuus</i>	slender club rush
<i>Scirpus setaceus</i>	bristle club rush
<i>Scutellaria minor</i>	lesser skullcap
<i>Trifolium glomeratum</i>	clustered clover
<i>Trifolium micranthum</i>	slender trefoil
<i>Trifolium ornithopodioides</i>	fenugreek
<i>Ulex gallii</i>	western gorse
<i>Viola canina</i>	heath dog violet

Table 2. Species list for Colwell Common.

<i>Agrostis curtisii</i>	bristle bent
<i>Anagallis minima</i>	chaff weed
<i>Anagallis tenella</i>	bog pimpernel
<i>Apium nodiflorum</i>	fools watercress
<i>Aquilegia vulgaris</i>	columbine
<i>Blackstonia perfoliata</i>	yellow-wort
<i>Carex flava</i>	large yellow sedge
<i>Carex hostiana</i>	tawny sedge
<i>Carex panicea</i>	carnation sedge
<i>Carex paniculata</i>	greater tussock sedge
<i>Carex pulicaris</i>	flea sedge
<i>Chrysanthemum segetum</i>	corn marigold
<i>Eleocharis quinqueflora</i>	few flower spike-rush
<i>Epipactus palustris</i>	marsh helleborine
<i>Erica tetralix</i>	cross leaved heath
<i>Erigon acer</i>	blue fleabane
<i>Eriophorum angustifolium</i>	common cotton grass
<i>Eriophorum latifolium</i>	broad leaved cotton grass
<i>Filago germanica</i>	common cudweed
<i>Genista anglica</i>	petty whin
<i>Gentianella campestris</i>	field gentian
<i>Gymnadenia conopsea</i>	fragrant orchid
<i>Hydrocotyle vulgaris</i>	marsh pennywort
<i>Mentha aquatica</i> × <i>arvensis</i>	hybrid mint

<i>Mentha aquatica</i> × <i>arvensis</i> × <i>spicata</i>	hybrid mint
<i>Mentha rotundifolia</i>	round leaved mint
<i>Menyanthes trifoliata</i>	bogbean
<i>Pedicularis sylvatica</i>	louse wort
<i>Pinguicula lusitanica</i>	pale butterwort
<i>Platanthera bifolia</i>	lesser butterfly orchid
<i>Radiola linoides</i>	allseed
* <i>Rubus pulcherrimus</i>	bramble
* <i>Rubus selmerii</i>	bramble
* <i>Rubus thyresoides</i>	bramble
<i>Samolus valerandi</i>	brookweed
<i>Scirpus cernuus</i>	slender club rush
<i>Senecio sylvaticus</i>	heath groundsel
<i>Silene gallica</i>	small flowered catchfly
<i>Thesium humifusum</i>	bastard toadflax
<i>Trifolium micranthum</i>	slender trefoil
<i>Ulex minor</i>	dwarf gorse

\* *Rubus* nomenclature follows Townsend

### St. Helens

Using the species list drawn from Townsend one may make a number of inferences as to the habitat and management of the Common and Green. All of the plants listed are tolerant of soils that are neutral to acidic. Similarly all of the plants are tolerant of relatively hard grazing. Hard grazing, combined with the poaching of seasonally wet, acid grassland, is a major prerequisite for the persistence of species such as small fleabane and pennyroyal. In addition to the presence of wet grassland, the recording of fenugreek, clustered clover and upright chickweed testify to the presence of short, dry acid grassland. Broken ground species are represented by bulbous rush and small flowered buttercup. Wet peat associates include the sundew and bog pondweed; the wetter areas were probably drained by small runnels in which the club rushes would have grown. Dunging, either directly by Commoners' stock, or through the presence of dung heaps would have supported the upright goosefoot.

The above generates the impression of a tightly grazed green with close similarities to a heathland lawn. This may be combined with the known geology and drainage of St. Helens to produce the following. The highest lands of the Common were dry, being associated with the gravel capping. Upon the upper green lay a large pond. Passing down the slope springs and wells rose from the junction of the gravel cap and the Bembridge Marls. These flushed areas would have been peaty and crossed by a number of rivulets. As the influence of the flushes declined the land probably became increasingly dry.

One may see greens and commons similar to the above on the fringes of The New Forest, Hampshire (Ibsley, Cadham, etc). Whereas small fleabane and pennyroyal are now extinct on the Island, the hard grazed greens of The New Forest still support vigorous populations. The regular recording of small fleabane from St. Helens until 1918 (pers. comm. T. Hare) suggests the green was being grazed until at least this time.

Although nearly all the species listed by Townsend have been lost, St. Helens Green retains an interesting relic flora. The western green and the Common now lie under scrub. The upper Green is mown. Recent botanical surveys of the mown area have revealed the persistence of chamomile as well as the discovery of the glabrous rupturewort *Herniaria glabra*.



**Colwell**

The records pertaining to Colwell suggest a far more complex site than St. Helens. Species are present that are associated with habitats ranging through a wide variety of conditions of drainage and soil chemistry. The presence of a number of relatively tall herbaceous species also indicates that the Common was not as uniformly hard grazed as St. Helens Green.

One may allocate the majority of species recorded by Townsend at Colwell as being associated with five broadly defined habitats: namely, dry heathland, moist heath grading into poor fen, dry calcareous grassland and neutral marsh. Associates of these habitat types are as follows:

*Dry Heath*

Bristle bent  
Chaff weed  
Heath groundsel  
Field gentian  
Allseed

*Moist Heath*

Carnation sedge  
Flea sedge  
Few flowered spike-rush  
Pettywhin  
Marsh pennywort  
Lousewort  
Cross leaved heath  
Lesser butterfly orchid

*Poor Fen*

Bog pimpernel  
Large yellow sedge  
Tawny sedge  
Marsh helleborine  
Common cottongrass  
Broad leaved cottongrass  
Fragrant orchid  
Bogbean  
Pale butterwort

*Dry Calcareous Grassland*

Yellow wort  
Small flowered catchfly  
Bastard toadflax  
Columbine

*Neutral Marsh*

Greater tussock sedge  
Fools watercress  
Brookweed

It is probable that these habitats were not present in discrete areas but formed a matrix of communities, one grading into the next.

One may tentatively draw together a picture of the cliffs and coastal slopes of Colwell Common rising towards the present day Golden Hill. The Common had dry ridges composed of sands and gravels as well as broken limestones and calcareous clays from the underlying Headon Beds. Within these ridges lay a number of wet hollows which varied in water chemistry depending on the surrounding land and sources of water.

Such a complex of ridges and hollows persists on the northern slopes of the adjacent Headon Hill. Although locally much modified by the lack of grazing, Headon Hill and the former Colwell Common may be considered as comparable. The wetter areas apparently present on Colwell Common are not well developed on Headon Hill. The coastal slope is too severe at this point, and the principal inland wet hollows have been lost to scrub invasion. Nonetheless species such as cross leaved heath, fragrant orchid and marsh helleborine persist on the slopes of Headon Hill.

From following the history of records for species such as the butterwort, broad leaved cottongrass and field gentian, it appears that Colwell Common was destroyed between 1879 and 1929. The site of the Common is now under housing with a small urban park. The coastal slope and cliff remains partially intact and may reward a diligent botanist by sustaining a relic flora.

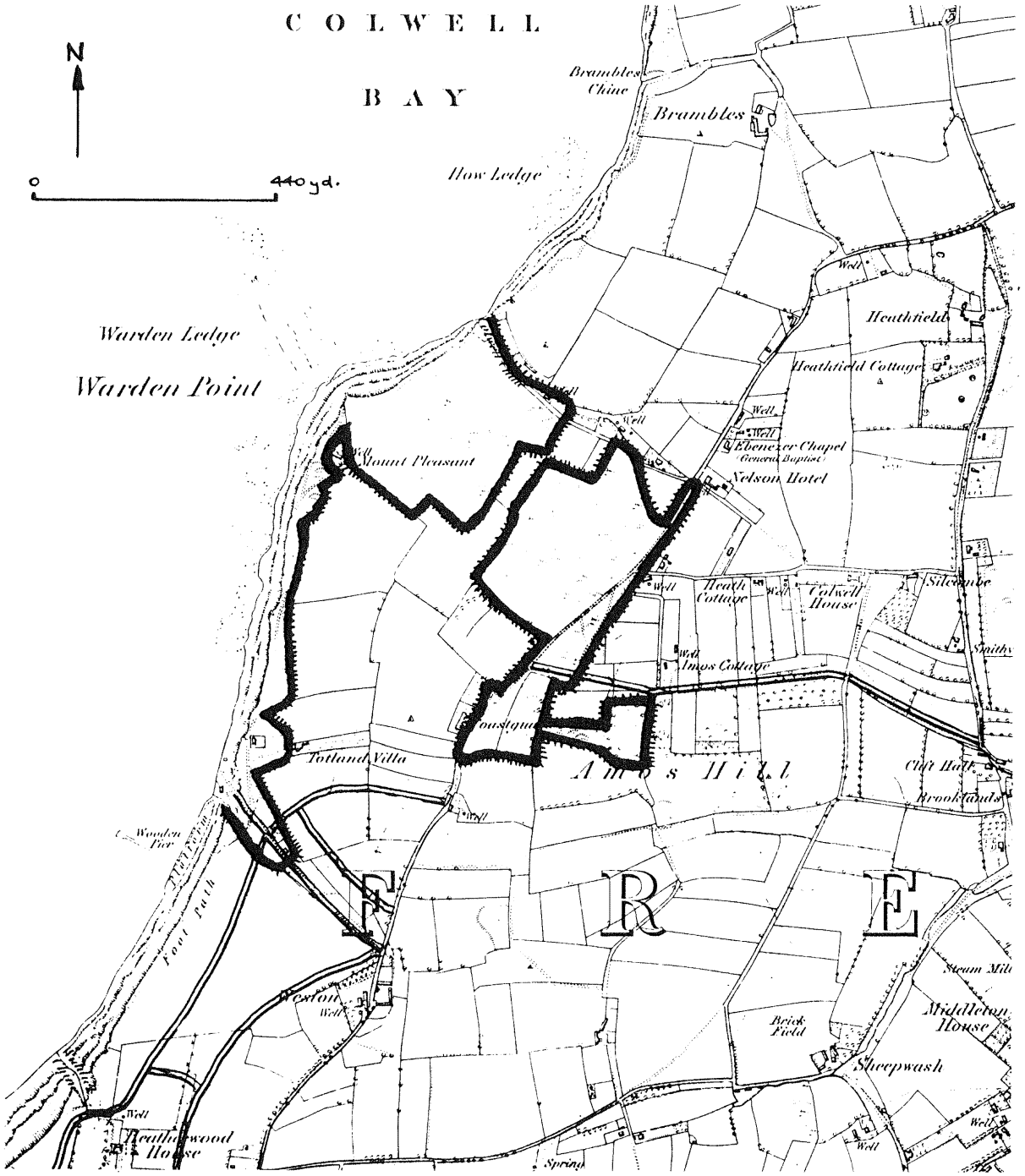


Figure 2. The boundary of Colwell Common outlined on the Ordnance Survey 1862 6 in. map.

### **A continuing trend**

The vegetation of St. Helens and Colwell both exhibited characteristics of heathland. The Island's heaths have been dramatically reduced from a dominant land use in the late Tudor to a scattered remnants persisting today. It is noteworthy that of all the species recorded from St. Helens and Colwell by Townsend, nine are now extinct; of the remainder, ten are very rare, being found only in two or fewer Island localities. Those heaths which survive today are botanically depauperate relics of once more extensive and diverse habitats. Even the surviving heaths are becoming further impoverished by lack of management leading to the consequential dominance of the more robust species and the invasion of scrub. It is likely that future generations will be able to draw on floras such as the *Flora of the Isle of Wight* (Bevis *et al.* 1978) to catalogue the further loss of species, indicative of a continued loss of habitat.

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