

# Sea Kale and its cultivation at Penpont, Breconshire c.1828

Research in progress – J P D Williams – October 2011

John Claudius Loudon - the gardening guru of the early nineteenth century - was a Scotsman resident in England. He doesn't seem to have had much time for Wales.

In his 1822 Encyclopaedia of Gardening he describes the country as having *'A hilly and mountainous surface ... with a climate colder than that of England and more moist. The soil is generally of an inferior description ... fit only for planting [i.e. forestry] .... there are no public gardens; but few commercial ones; and the number of gentlemen's seats is very limited...'*

Breconshire - that most beautiful of counties - he decries as *'entirely mountainous with the exception of some of the narrow valleys; in general it is terra damnata as to every form of gardening, excepting planting.'*

He can find only three Breconshire gardens worthy of specific mention – as opposed to nearly 40 for Hampshire – and one of these, at Llangloed Castle, was merely in the planning stages. The gardens which actually did exist were Dan-y-Park, near Crickhowell, and *"Penpont House, near Brecknock. P Williams Esq. With a finely wooded park, watered by the Usk."*

## Penpont

Penpont is about five miles west of Brecon, right on the banks of the Usk. The present house was built around 1666 and altered around 1802 and 1835. In its heyday the estate owned some 7,000 acres in Breconshire, making it one of the largest in the county. And, unlike the owners of so many Welsh estates, the Williams family of Penpont were actually resident year round. As a result they were closely involved in the running of the estate, including the agricultural improvement of the farms and the development of the landscape and gardens.

In the eighteenth century, extensive kitchen gardening operations were recorded in the diary of the then owner, Penry Williams II, including the use of hotbeds to grow melons and force early crops such as carrots.

His son, Philip Williams, built a walled kitchen garden on the south facing slope across the river from the house. By the end of the century there was a hothouse and a greenhouse, and pineapples were being grown. In 1818, Philip's son Penry Williams III constructed a large new pinery, now ruinous. A peach house was added in 1828 and there was also a gardener's cottage which overlooked a frameyard.

I have recently discovered, from another of Loudon's works, the *Gardeners' Magazine* of 1828, that Penpont's kitchen garden also housed a very unusual – possibly unique – apparatus for forcing sea kale.



*John Claudius Loudon*



*Penpont c.1810*



*Sea Kale growing wild on Worthing Beach, West Sussex*

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## Sea Kale

Sea kale, *Crambe maritima*, is a perennial plant of the cabbage family.

It is widely found growing wild on coast of northern Europe, particularly on shingle beaches. It is believed that local people learned how to pile shingle around the emerging shoots to produce an edible, blanched vegetable with a natural season from march to may.

By the eighteenth century sea kale was being cultivated in kitchen gardens, where gardeners learnt how to force it to obtain crops as early as November or December, so covering a time when few other fresh vegetables were available.

Blanched sea kale is somewhat reminiscent of asparagus and can be served in similar ways. However, it is said to be more difficult to transport and to have a shorter shelf-life, which may be partly why it is almost never found in the shops today. A number of restaurants do serve it as an unusual delicacy however, and as there are few suppliers it can command a good price.

The blanching process could be achieved by covering with a layer of sand, gravel or leaves, but specially made blanching pots could also be used.

Forcing an early crop could be achieved in a number of ways. One method was to remove the plants from the open ground and plant them in a heated glasshouse – shoots could be cut for several weeks before the plant became exhausted, after which a replacement plant could be brought in. Instead of a full-sized glasshouse, the plants could be moved into a frame (heated either by a furnace or by a dung hotbed), in which case blanching could be achieved by placing mats over the glass of the frame.

The most common method of forcing, however, seems to have been to leave the plants growing in the open ground, cover them with blanching pots, and pack a thick layer of dung, or dung mixed with leaves, around the pots. When the heat died down the dung would need to be renewed.

Large quantities might be produced using these methods – Loudon suggests that a large family might get through the produce of as many as 200-300 plants. Sea kale could clearly form a really significant part of the winter diet.

## The Gardeners' Magazine article

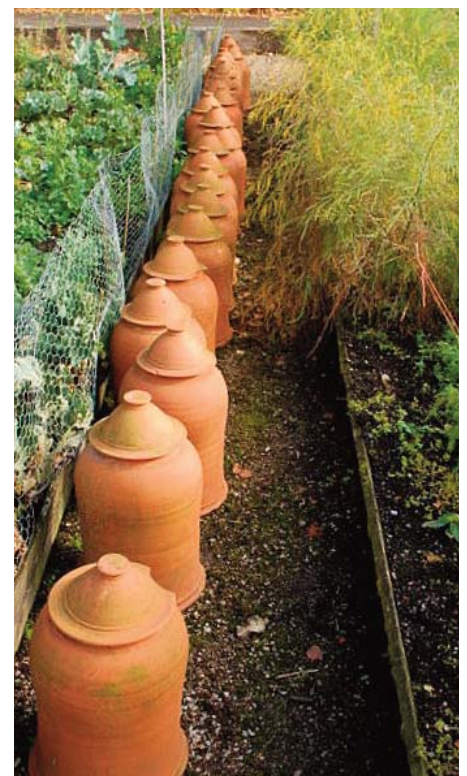
At Penpont the plants were also left in the open ground, but instead of dung used a specially adapted bed with artificial heat. The article which describes this, which is accompanied by a diagram, is from Loudon's *Gardeners' Magazine* of 1828. It is headed:

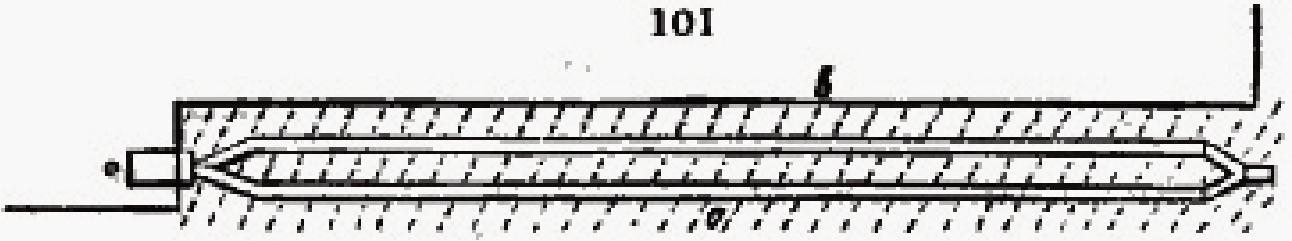
*Description of an easy and convenient Method of forcing Sea-kale in the open Ground, as practiced in the Garden of Pendry Williams, Esq, Pen-pont, near Brecon.*

It is written by a Mr W Vaughan – this is probably the William P Vaughan who made a few other contributions to similar publications, writing from the Archdeaconry, Brecon. Vaughan was probably gardener to the then archdeacon,

*Blanching pots, similar to those traditionally used for blanching and forcing sea kale, at Chatsworth, Derbyshire*

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Richard Davies. Davies – clergyman, militia officer and sometime parliamentary candidate – was a highly eccentric character who alternated between bursts of prodigious energy and weeks of lethargy when he would take to his bed reading novels. The latter may have been the preferable state as, in the words of the diarist Benjamin Newton “when up he does so many extravagant things that he will certainly ruin himself”. Davies was a cousin of Penry Williams III of Penpont, so it is not surprising that Vaughan should be familiar with the garden there.

Vaughan’s article continues:

*Illustration of the forcing apparatus at Penpont from Loudon’s Gardeners’ Magazine*

*A border at the back of the hot-house is heated by a double flue, which, proceeding from a fire-place in a shed, branches into two divisions at the distance of 4ft from the furnace. Before reaching the further end, the flues again unite and pass out at the end; the smoke escaping by a hole, which is closed with a flat stone, as soon as the flue is warm enough and the fire put out.*

*The divisions of the flue are parallel, and at the distance of 3 ft from each other. Two rows of plants occupy the space between the flues, 1 ft apart from the flues and each other, and at the distance of 18 in. plant from plant, alternating in the rows. At similar distances are two rows on each outside of the flues, being six rows in all. In the autumn the bed receives a dressing and covering, 1 ft. thick, of old tanners’ bark, through which the shoots easily rise, completely blanched. When the crop is required, fires are put to about a fortnight before; and, if so early as the first of December, the bed continues to yield shoots till the month of May. The branches of the flue nearest the fire-place have each a damper fitted in, to allow throwing the heat to one side or the other, as may be necessary; and, if both removed, to the whole at once.*

This would appear to be a potentially more controllable – and less messy – method of production than using dung. The article suggests that the layer of tan bark – presumably left over from use in Penpont’s pinery – was responsible for blanching the shoots. There is no specific mention of blanching pots.

Anecdotally, traces of horizontal underground flues were found at Penpont a few years ago, but their purpose was then unknown and they were not recorded. Investigation on the ground is now needed to see whether any traces still remain.

The most likely location for the furnace was in one of the stoke holes behind the pinery which can still be seen today. We can only guess what the published diagram was based on and how accurate it might be, but it seems to suggest that the flues ran close behind and parallel to a glasshouse (or at least the back sheds behind a glasshouse). The sketch plan on the right shows what may be the most likely location in red, although it could very possibly have been the other side (shown in light red). Traces of rubble above this area may be from a freestanding chimney, and it may be worth investigating whether this might have been associated with a later system.

### The wider context

Initial research suggests that this was a highly unusually and perhaps innovative method. Other references to the artificial heating of the open ground seem very few. In the 1850s Isambard Kingdom Brunel may have designed a heated garden for his estate at Watcombe Park (now Brunel Manor) in Devon. In the 1860s Mr Wykeham Martin of Leeds Castle in Kent developed an unusual form of ‘hypocaust’ heating which he applied both to glasshouses and to an area of open ground, where plants were covered with moveable frames. Soil heating using electrical cable or waste heat from industry was tried on a commercial scale in the US during the 20<sup>th</sup> century.

I’d be interested to know of any more examples people may have come across.

*Sketch plan of Penpont walled gardens showing location of stoke holes and possible locations for heated sea kale beds*

