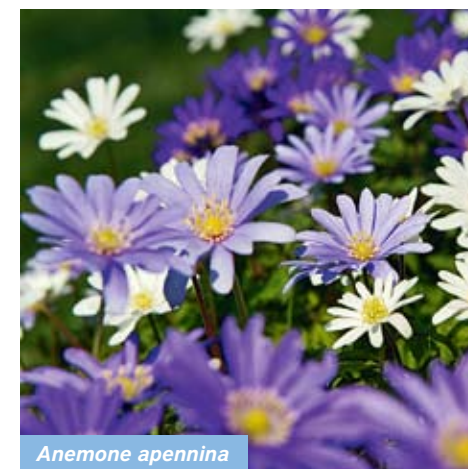
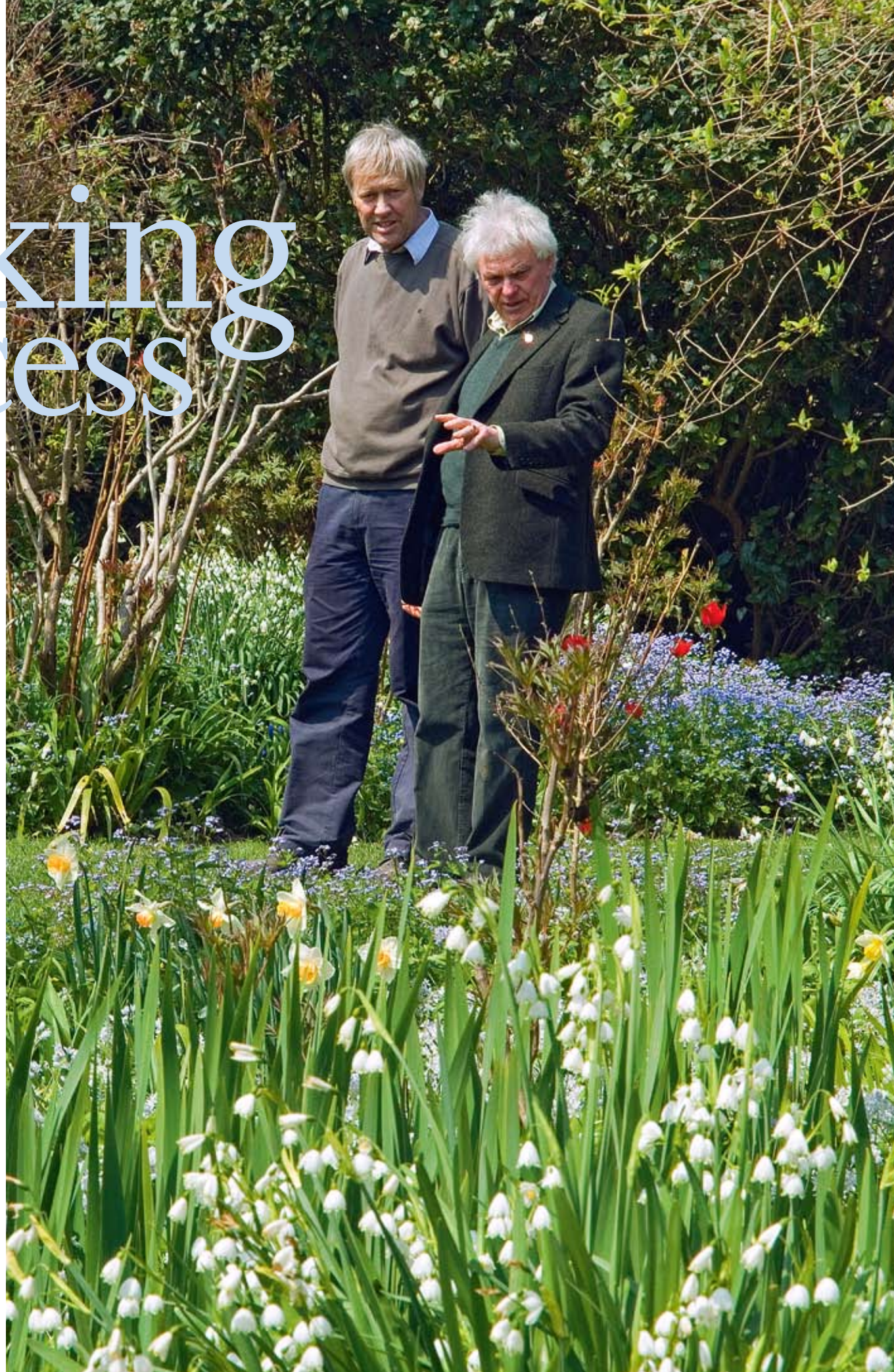


Chalking up success

Having a garden on chalk need not compromise your planting. Roy Lancaster visits Highdown in West Sussex, the home of the late Sir Frederick Stern who surprised many gardeners with the plants that still thrive in its alkaline soil. Photography by Tim Sandall

FIFTY YEARS AGO this year a book was published which, it might be argued, changed and enriched the lives of the many people who garden on alkaline soils. It was written by Sir Frederick Stern VMH (1884–1967) under the simple title *A Chalk Garden*, and described the making of his garden at Highdown on the slopes of Highdown Hill, 82m (269ft) above Worthing, on the West Sussex coast. Begun in 1910, the garden was regarded by Stern as ‘an experiment to see what would grow on the chalk soil of the Downs’. The conditions were daunting: no part of the garden had a soil pH less than 8.0, and at best just 15cm (6in) of loam overlaid almost solid chalk.

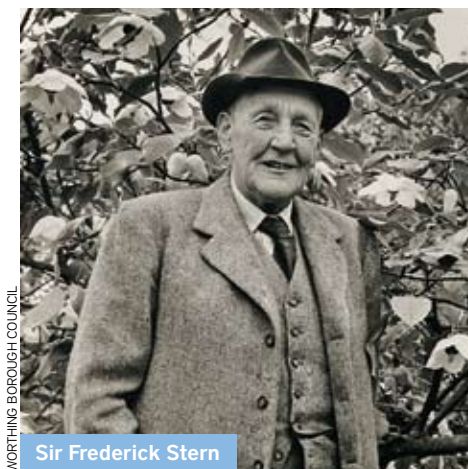
Central to the experiment was a large chalk pit, then used to house pigs and chickens. Unsure initially as to what, if anything, might grow there, Stern sought advice from gardening friends receiving both negative and positive responses. Encouraged by the latter and being of a determined, even adventurous nature, he went ahead with his plans and within a few years was sufficiently



Anemone apennina



Fruit of *Viburnum betulifolium*



Sir Frederick Stern



Iris bucharica

‘HE SOUGHT PLANTS WHICH HE KNEW OR SUSPECTED TO HAVE AT LEAST A TOLERANCE OF ALKALINE SOILS’

encouraged to throw himself wholeheartedly into his task. This coincided with his marriage, in 1919; his wife Sybil became a great supporter of his endeavours, which were many and varied. Stern helped support many plant hunters of the early 20th century including Wilson, Forrest, Kingdon-Ward, Farrer, Rock, and Ludlow and Sherriff which resulted in seed – and eventually plants. Some of the most notable of these can still be admired in the garden to this day.

Stern was also an ardent supporter of the RHS, serving for many years on, in all, nine RHS plant committees. He was a Vice President of the Society and a member of RHS Council for, remarkably, 33 years in all.

An increasing collection

Stern did not deliberately set out to grow plants which were rumoured or known to have an aversion to lime, though he could not resist the occasional challenge. Rather, he sought plants which he knew or suspected to have at least a tolerance of alkaline soils and though he suffered his fair share of disappointments (not all soil related), he enjoyed an even greater degree of success which must have provided him with lasting pleasure.

He found planting in pockets made in the chalk often resulted in the plants failing, but if the chalk was broken up to around 75cm (30in) and organic matter such as old cow manure added, plant roots could spread out and establish. ▶

PLANTSMEN ON CHALK

Head Gardener at Highdown Chris Beardsley and Roy Lancaster admire spring flowers in the late Sir Frederick Stern’s chalk garden (left)



WORTHING BOROUGH COUNCIL

IN THE PIT
The most challenging conditions at Highdown are in the old Chalk Pit (above, in Stern's time) where soil is little more than chalk rubble. Despite this many plants thrive, such as vibrant *Anemone pavonina* (right)

Planting small specimens generally proved more successful, too. Stern also mulched his plants with beech leaf mould or spent mushroom compost. Inevitably, the garden expanded to accommodate the increasing collection, ending only with his death aged 83 in 1967, followed by that of his wife in 1972. In 1968, the 4ha (10 acre) garden was gifted to Worthing Borough Council which has been responsible for its development and care to the present day. My first visit to Highdown was in spring 1984. I was impressed with the many rare trees and shrubs, and colourful swaths of bulbous plants including anemones, daffodils, tulips, scilla and chionodoxas. The gardens were being cared for by Chris Beardsley who had been manager since 1976, and remembered visiting with a group of parks' apprentices in the 1960s when an elderly Stern waved to them from the

house. Chris was full of energy and I left feeling that Stern, who was knighted for 'services to horticulture' in 1956, would have been pleased to have had Chris in charge.

Renewing acquaintance

It was with anticipation therefore, that I visited Highdown again in April. I was delighted to find Chris still in the post, though soon to retire. Following an all too brief meeting with his excellent staff, we set out on what was to be a trip down memory lane.

Close to the entrance, in an area known as The Orchard, I was thrilled by a collection of trees and shrubs including a fine, three-stemmed *Zelkova sinica* planted by Chris in 1979. Nearby was an equally impressive though much

'HIGHDOWN IS A MUST VISIT, MORE SO IF YOU GARDEN ON AN ALKALINE SOIL FOR THERE IS MANY A USEFUL LESSON TO BE LEARNED'

older original planting of *Acer davidii*, branching into several smooth stems from 1m (39in) high. Another of Stern's plantings here is South American tree *Maytenus boaria*, in excellent condition with multiple stems and a well rounded crown of semi-pendent branches clothed with narrow, evergreen leaves.

Not far from here, I noted a huge *Buddleja colvilei*, producing in early summer panicles of large, reddish bell-shaped flowers, and red-barked *Arbutus andrachne* (Greek strawberry tree) to which Chris had added equally red-barked *Arbutus menziesii* (madrone) which, despite its reputed dislike of chalk soils, looked to be in good health.

Just before leaving this area, I was surprised to see a huge *Viburnum betulifolium* with arching branches still carrying rich red (somewhat wrinkled) berry clusters from the previous autumn.

Our tour now led us to the old Chalk Pit, through shaded areas where the white-flowered crucifer *Pachyphragma macrophyllum* combined with narcissus, pulmonarias and forget-me-not-flowered *Brunnera macrophylla* to form a lush ground cover. There were large carpets of bulbs too: pale-blue *Scilla messeniaca* self-seeding in shade and chalk rubble, and in full sun stoloniferous scarlet-flowered *Tulipa praecox*. The Chalk Pit had suffered at the hands of the recent winter with plants of



Mediterranean origin damaged or killed. *Cistus*, *Choisya* and *Teucrium fruticans* seemed worst hit though these survived elsewhere.

On the plus side however, were fast emerging clumps of blue-flowered *Agapanthus praecox*, bright pink *Nerine bowdenii* and bold evergreen stands of *Euphorbia characias* subsp. *wulfenii*, its flowers brassy yellow against the white chalk walls. Pink *Tulipa saxatilis* Bakeri Group was also in good form sharing its chalk rubble home with blue, red and pink blooms of *Anemone pavonina*, which Chris has grown from seed and planted in drifts. The same anemone together with *A. coronaria* forms drifts along a grass walk just as in Stern's day, while *A. apennina* has been planted in a patch at the base of amber-stemmed *Prunus maackii* (Manchurian bird cherry), forming a pool of blue and white flowers.

Magnificent blooms

Two-tone yellow-flowered bulbous perennial *Iris bucharica* thrives in the Lower Garden and elsewhere, forming fine clumps popular with many visitors – though what they think of the huge clump of dark-purple flowered and evil-smelling *Dracunculus vulgaris* (dragon arum), I can only guess.

In the Middle Garden meanwhile (a large area of informal beds in grass) several of Stern's most interesting trees can be found, principal among them *Carpinus turczaninowii*, grown from seed collected on the Farrer-Purdum expedition to Gansu, China in 1913. It is a beautiful tree with a stout stem and broadly weeping crown of slender branches, clothed in summer with leaves that turn orange-brown in autumn. It is now recognised by The Tree Register as the Champion of its kind in Britain and Ireland.

In the same bed is a fine example of *Chionanthus retusus* (Chinese fringe tree), whose branches in summer are covered with white, narrow-petalled flower clusters. In his book, Stern commented on this being a good example of the Chinese species of a genus having no dislike of lime while the American species, *C. virginicus*, has

an aversion to it. Other unusual trees here include May-flowering *Cercis racemosa* (Chinese Judas tree), differing from *C. siliquastrum* in its racemed not clustered flowers and a large, dense, bushy-crowned *Laurus azorica* (Canary Island bay), from the Atlantic Isles, whose hairy shoots and large leaves differentiate it from those of *L. nobilis* (common bay), though they have the same aroma when bruised.

Many of the acknowledged chalk-tolerant trees and shrubs are represented here especially Japanese cherries, lilacs, mahonias, crab apples, *Philadelphus*, buddlejas and *Chaenomeles*, so too less often seen *Abelia triflora* – the example here is a veteran of a plant, now split into three main stems. Stern enjoyed its sweet fragrance in June claiming that 'one of the charms of the garden is to have plants scattered around with pleasant scents, not too strong or heavy, but just right like the scent of this abelia'.

Stern authored two classic books on garden plants: *Snowdrops and Snowflakes* and *A Study of the genus Paeonia*. Examples of both genera are well represented at Highdown each, in their season, being sufficient reason alone to visit this garden which is open to the public throughout the year. For any gardener, especially a beginner, Highdown is a must visit, more so if you garden on an alkaline (especially chalk) soil for there is many a useful lesson to be learned.

As a major collection of trees, shrubs and perennials Highdown continues to delight, satisfy and surprise. We must sincerely hope that the pleasure it brings to so many people will continue without end. ■

Roy Lancaster VMH is a member of the RHS Woody plant Committee

Highdown Gardens, Littlehampton Road, Worthing, West Sussex BN12 6PG. Tel: 01903 501054. Visit: www.highdowngardens.co.uk. Admission free; open daily April–September, 10am–6pm. From October–March the garden is open during the week; different opening times apply. ● *A Chalk Garden* by Sir Frederick Stern is currently out of print

HIGHDOWN'S SUCCESS STORIES

Sir Frederick Stern was a pioneer gardener who experimented with many plants in his West Sussex garden. Among the often surprising successes he noted in his book *A Chalk Garden*, were:



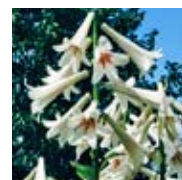
Magnolia wilsonii
A superb summer-flowering species with scented white flowers. Stern grew a plant he called *M. x highdownensis*, now thought to be a selection of *M. wilsonii*.



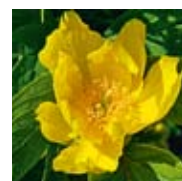
Hydrangea aspera
Villosa Group
While *Hydrangea macrophylla* dislikes dry lime-rich soils, this magnificent plant was a great success in the Chalk Pit at Highdown.



Cornus nuttallii
This showy species, with its large white flowerheads in summer, grew well at Highdown – it is more often seen in gardens with acid soil.



Cardiocrinum giganteum
Incredibly, Stern had success with this giant lily; it does not mind chalk although it must have shelter and humus-rich, moist soil.



Paeonia ludlowii
This easy-going tree peony which flowers in spring, produces large, butter yellow flowers. It grew to 2.4m (8ft) or more on the chalk.

Other successful plants at Highdown include: **Carpenteria californica**, **Cornus capitata**, **C. kousa** var. **chinensis**, **Daphne odora**, **Davidia involucrata**, **Hoheria lyallii**, **Iris**, **Osmanthus**, **Paeonia**, **Poncirus trifoliata**, **Rosa**, **Syringa** and **Viburnum**.

PHOTOGRAPHY (FROM TOP): GRAHAM TITCHMARSH / RHS; GRAHAM TITCHMARSH / RHS; PHILIPA GIBSON / RHS; RHS; TIM SANDALL