



Field trials

The Prairie at The Barn,
Serge Hill, Hertfordshire
The home of Mr and Mrs
Tom Stuart-Smith

How feasible is it to grow
a North American prairie
in southern England?
Non Morris finds out

Photographs by Jason Ingram

SOWING a prairie is 'an act of terrifying alchemy' proclaims James Hitchmough, professor of Horticultural Ecology at Sheffield University and most famous, perhaps, for his role in designing the intoxicating rainbows of planting at the Queen Elizabeth Olympic Park for the London 2012 Olympics. 'When you create a prairie, it's like throwing a pebble into a pond, the ripples come out, but you don't really know what eventually is going to happen.'

This sense of a journey into the unknown attracted rather than deterred eminent landscape designer Tom Stuart-Smith, who asked Prof Hitchmough to help him create a North American Prairie at his own richly textured garden at Serge Hill, Hertfordshire.

'I had worked with James on a few similar projects and I wanted to do one for myself and learn, otherwise I was speaking from half experience.' Mr Stuart-Smith was drawn to the idea of creating a space that would sit easily within the gently shifting mosaic of his garden, with its wonderful rolling stretches of traditional wildflower meadow. At the height of summer, when the yellow sunflower-like heads of *Silphium laciniatum* dance on 9ft of slender stem, the Prairie offers an intense dose of 'what evolutionary biologists call supernormal stimuli—the kind of heightened reaction that a blackbird might have to a cuckoo's egg appearing in her nest'.

The project began in 2010 on half an acre of species-poor pasture close to the kitchen garden. The prairie-to-be was isolated with both a rabbit-proof fence and a new beech →

Half an acre of poor soil was sown with a seed mix containing 40 different species of North American prairie plants



hedge, then sprayed to eradicate weeds. Mr Stuart-Smith designed a series of curving organic beds to separate the distinct areas of heavy clay and sandier soil, adding broad mown paths to link everything together. An irrigation tank was sunk into the ground to supply the irrigation tripods that would be used for watering in the early years and a 4in mulch of sharp sand was spread over the beds. A specially created seed mix of 40 North American prairie species, adapted for the two different soil types, was sown into the sand in January 2011 and the irrigation—and the intensive weeding—began.

After years of observation and experimentation, Prof Hitchmough has developed an algorithm to predict desired numbers of each plant per square metre which—if the soil is cleared, the seed mix carefully curated and there is unfailing irrigation in the germination window—will produce ‘pretty much what you expect. Of course, the site itself always picks winners and losers, basically things that are smaller and slower and shade intolerant tend to lose out,’ he explains. In 2017, he published *Sowing Beauty* as a practical ‘cake-making’ guide and recommends paying for top-quality seed to underpin the success of a project. Jelitto Perennial Seeds, for example, tests its seed every three months.

‘If germination drops below 70%, they throw the sample away. It would have been no good rocking up to the Olympics in July 2012 to find a whole load of grass!’

In the Serge Hill prairie, although the irrigation regime was immaculate and although Mr Stuart-Smith (who, happily, loves weeding) was standing by with a supportive gardening team, there were, inevitably, some surprises. The prairie had been used for pasture and had a very high worm population. ‘The consequence of the irrigation was that the worms brought the casts up through the sand and on top of every cast germinated a creeping buttercup.’

‘On top of every worm cast germinated a creeping buttercup’

There was suddenly a sea of willow, too, which must have come in with the sand. ‘One particularly dogged gardener spent 50% of the first year pulling out buttercup and willow.’ Hard-earned advice is to check that the sand you are sourcing from a quarry or builders’ merchant has not been standing around for too long. If it has, it is likely to arrive full of unwanted seed.

Generally—as with all meadows—the thugs will win. In the early days, one problem was over-abundance of the lovely lavender-flowered *Symphytotrichum oblongifolium*—selected, of course, for its robustness. Last year, the hazy-flowered golden rod, *Solidago speciosa*, suddenly flourished and ‘about a ton’ was pulled out.

It is easy to make mistakes when weeding during the initial germination period. At Serge Hill, desirable North American grasses were accidentally whisked away with unwanted European cousins. ‘The key thing about it is that you’ve got this window in the first year when you can rebalance everything,’ explains Mr Stuart-Smith. ‘It’s a bit like cooking an omelette. When the thing is still in the pan, you can add more spices and perhaps fish out some mushroom, but when it’s cooked, it’s cooked. Largely speaking, after that, the changes you are going to make are largely cosmetic, they are not going to be radical.’

Would Mr Stuart-Smith have done things differently if he had his time again? He may have included more plants for spring and perhaps added more grasses in the second year to replace those accidentally weeded out, but, fundamentally, he has relished the sense of continual surprise as the plants work it for themselves—and the planting is so dense that weeds are barely an issue. ➔



Facing page: Late summer brings all the yellows, with *Rudbeckia fulgida* var. *deamii* and, behind, the tall tickseed *Coreopsis tripteris* with *Silphium laciniatum* and *Eryngium yuccifolium*. *Above:* *Verbena bonariensis* and blue *Salvia uliginosa* (left) in the clay section

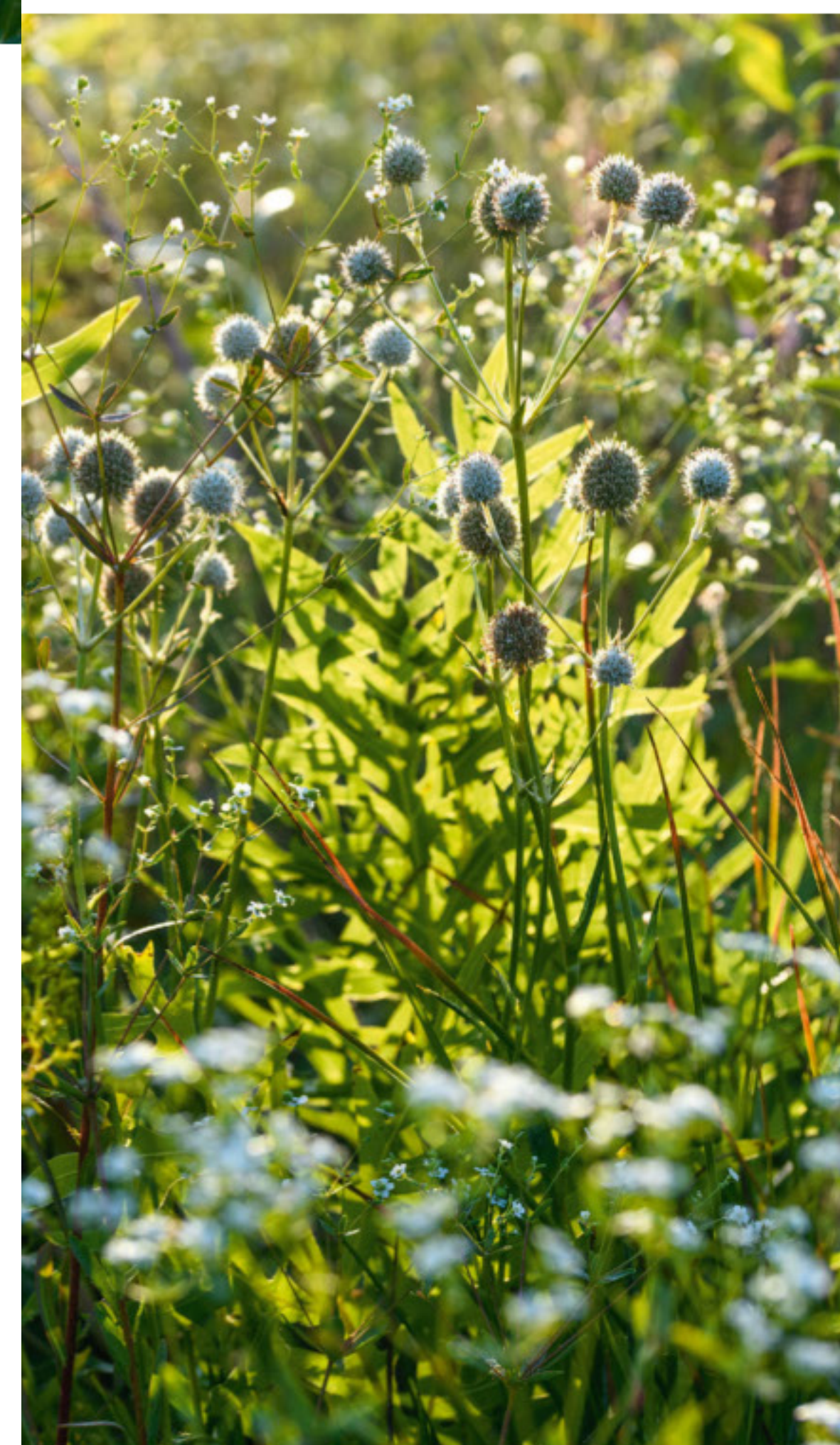


Above: *Echinacea pallida* seedheads with *Liatris pycnostachya*. Below: *Symphotrichum* (formerly *Aster*) *novae-angliae* 'September Ruby'

The season begins in May with Pointillist rivers of magenta *Dianthus carthusianorum*. By July, an elegant upright surge of green foliage is overlaid with skeins of bobbing *Echinacea pallida* with their shredded petals of palest pink. In late summer, you enter a world of constantly shifting colour. The yellows—swathes of the dark-centred *Rudbeckia fulgida* var. *deamii*, floating drifts of lemon *Coreopsis tripteris* and quirky telescopic stems of *Silphium laciniatum*—are anchored by airy mounds of the white-flowered *Euphorbia corollata* and vertical dashes of soft mauve *Liatris pycnostachya*.

‘He has relished the continual surprises’

New plants, perhaps replacing shorter-lived perennials that have quietly faded out, are set in cleared spaces to give them a chance. The gorgeous mildew-free *Monarda bradburiana* has been an early season success, but Mr Stuart-Smith admits that probably about 40% of additions don't make it. He has experimented with shrubs, too, for year-round structure and colour. *Arbutus unedo* struggled against such feisty competition, but →



Above: *Coreopsis tripteris* and a little *Solidago speciosa*, at the back on the left-hand side. Left: *Eryngium yuccifolium*, which is good in dry conditions, with *Euphorbia corollata*

Seeding capital

Tom Stuart-Smith and James Hitchmough's appetite for experimental sown schemes is unstoppable. Further projects—designed in collaboration and independently—include:

The Walled Garden at Middleton Lodge, a hotel and wedding venue in North Yorkshire. Mr Stuart-Smith explains: 'I have done a couple of prairies in walled gardens—it's a great use of this huge space.' The request was for 'no yellow'. Instead, there are masses of pink echinacea and clear-blue *Catananche caerulea*

Prof Hitchmough is increasingly interested in adding shrubs to sown schemes. 'I'm working in an old apple orchard near Dublin

in Ireland. We will change the seed mix so that, as you go into the shade, it grades into slightly different plant communities'

At Chatsworth, Derbyshire, the pair has collaborated on a huge swathe of perennial Eurasian/European meadow. Much of the meadow has been sown from seed, but species such as *Iris sibirica* and *Euphorbia palustris* are planted as small plants to guarantee their success

In the walled garden at Knepp, West Sussex, Mr Stuart-Smith describes a new sustainable approach: 'We have ripped out the lawns, leaving broad 'dirty paths'—a layer of soil with 4in of gravel on top—which will be sown with foraging plants, such as sea kale and perennial spinach'

mounds of fiery glowing red *Cotinus 'Flame'* create successful resting points throughout.

Could anyone follow suit and make a prairie of their own? 'Yes, I would be very supportive if someone wanted one. You—and your gardener—have got to have a proper commitment to it. It is a lot more upkeep than a meadow, but, after the first couple of years, less work than a traditional border.'

Mr Stuart-Smith's curiosity, enthusiasm and appetite for continually considering new adjustments is infectious. Taking a stem of electric-blue *Salvia uliginosa* from beyond the Prairie, he wades in amid lacy piles of aster to try it out. His case is easily made and a new plan formed. Who would say no to that? 🦋
For more details, visit www.tomstuartsmith.co.uk and www.sheffield.ac.uk