NEWS FEATURE

Rewilding has been in the news lately, associated mainly with re-introducing lost predator species to the UK. But, as a pioneering new farming model in Sussex demonstrates, it's much more than that.

Unbridled nature

Report by James Fair

Rather than farming in a conventional way, Charlie Burrell and Isabella Tree have let their land in Sussex run wild, introducing longhorn cattle and wild boar to stimulate a complex mosaic of habitats.

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Charlie admires a purple emperor. Sallow scrub has provided these butterflies with an important habitat.

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On a short walk around Knepp, the estate's ecologist Penny Green stops to point out three different oak trees. One is a tiny sapling, no more than a foot or so high that is doomed to be browsed to oblivion in the next year or so.

Nearby is a 400-year-old gnarled and stately veteran, home to a little owl, that lives in a burrow at its base, and a rare bracket fungus. A fine specimen, but one that tells us little about the Knepp experiment because it was already mature centuries long before anyone felt the necessity to consider coining a term such as 'rewilding'.

It's the one of medium stature, perhaps a decade or two old, that is of most significance, because around its base, growing up to a height of some 3m, is a thick skirt of impenetrable brambles that have protected it so far. "It will eventually overshadow the brambles and shade them out," Green says. "This is how we think oak trees grew in a British wood pasture system."

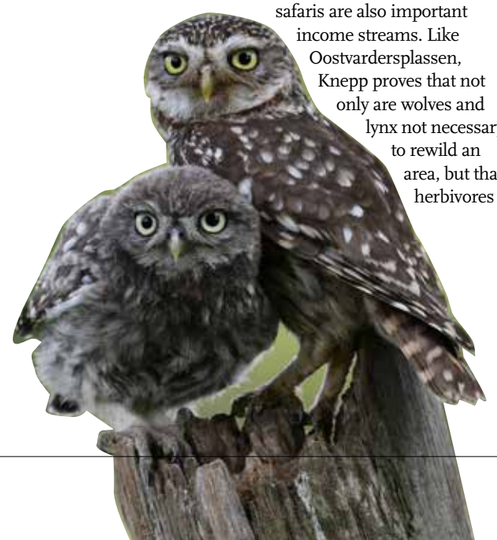
This oak, in other words, is a demonstration so tangible you could hug it of how regeneration can occur without reference to introduced predators - a gentle rebuke to the "Wolves Now!" school of rewilding thought, so prevalent in recent years.

Grazing ecology

The solution they arrived at was to put it out to nature instead. Burrell was inspired by the pioneering rewilding work of Frans Vera at Oostvardersplassen in the Netherlands, where 5,500ha of wetland and reclaimed polder was left to run wild with the introduction of red deer, konik ponies and Heck cattle, the latter two being artificially bred likenesses of the European wild horse, or tarpan, and wild bovid, the auroch.

Burrell started to leave fields fallow in 2000, then added his own herbivore 'proxies' into the mix – longhorn cattle for aurochs, Tamworth pigs for wild boar and Exmoor instead of Konik ponies. Then he left them to get on with it. "It's a long-term, minimum-intervention, natural process-led initiative," he says. Some farming activity takes place (longhorns are 'culled' for their beef), but the only intervention that is done purely for wildlife is putting up barn-owl boxes.

As figures show, the biggest money earner now is renting out buildings that would have previously been used to enable a loss-making agricultural business. Farming and environmental subsidies – though these are likely to diminish post Brexit – camping and safaris are also important income streams. Like Oostvardersplassen, Knepp proves that not only are wolves and lynx not necessary to rewild an area, but that herbivores ▶



MAKING KNEPP PAY

£220k per year comes from an environmental stewardship subsidy (highest level).

£195k per year comes from a single farm payment (via EU funds).

Knepp Estate (*bottom left*) is the largest rewilding project of its kind in lowland Europe. It has increased biodiversity in a short space of time. Little owls (*below*) are one of many species that can be found here.

Success stories

Five species bucking the national trend at Knepp.

PURPLE EMPEROR

No purple emperors had ever been recorded at Knepp before 2010. Numbers have slowly increased in the intervening period, with 546 sightings in 2016. Trends for the rest of Britain are unclear, but Knepp is said to have the largest population in the country.

BROWN HAIRSTREAK

Numbers of this butterfly exploded in 2017, such that there were 222 observations where there had been just one in the previous decade. The estimated population trend in the rest of the UK is a decline of 43 per cent since the 1970s.

NIGHTINGALES

The number of nightingale territories has grown from nine in 1999 to at least 42 in 2013, an increase of 367 per cent. Studies suggest they love Knepp's overgrown hedgerows. In contrast, in 2010 the BTO reported a UK decline of 90 per cent since 1970.

BECHSTEIN'S BAT

Knepp has 13 out of Britain's 17 bat species, including one of the rarest, Bechstein's bat, which is found in mature woodlands in southern England. In 2005, there were only six known breeding colonies, and its overall UK population is estimated at 1,500 individuals.

TURTLE DOVES

In 2017, 16 singing males were recorded in Knepp's southern block alone, compared with just three on the whole of the estate in 1999. In the UK, the population has crashed by a catastrophic 96 per cent since the 1960s and it's regarded as the bird most likely to go extinct in Britain.

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NEWS FEATURE

are. The longhorns can carry up to 200 different seed species in their gut, acting as dispersers. The Tamworth pigs create disturbed ground in which vetches, trefoils and scarlet pimpernel can all get a hold and grow. Turtle doves, in turn, feed on these plants' tiny seeds. "How they find enough to eat, I don't know," says Green, "but they clearly do."

Habitat creation

Today, Knepp looks like nowhere else in Britain. The borders of the roughly 10ha fields still exist in the shape of voluminous hedgerows that are as distinct from those found in most of our countryside – bigger, bulkier and tangibly wilder. Sallow and bramble scrub is dotted across the fields, lending them the aura of an East African savannah. There's the ghost of the former wheat fields somewhere, but it really is just a spectre. Classic mosaic habitat, you might think, but Penny Green says, "We're calling it kaleidoscopic because it's constantly changing."

In mid-May, the calls of multiple cuckoos provide an incessant background noise, and we also catch the rare murmur and sight of a turtle dove, of which there were 16 pairs counted in 2017, making Knepp the only place in the UK where numbers are increasing. Down by the Hammer Pond, a nightingale pumps out its vibrant, synth-song music. "We counted 88 harvest mice nests here last year," Green says with pride.

Scrub provides nesting habitat for whitethroats and dunnocks, while the sallow is also the larval food plant for one of Britain's most sought-after butterflies, the purple emperor. Safaris focusing on just this species take place in June and July.

But none of this was planned or intended. Knepp has no targets for luring rare migrants to its Elysian fields, and Burrell is wary of focusing purely on these successes. "You don't want to say Knepp is the place to hear nightingales, because they might then disappear because of what's happening in Africa or the rest of England."

Indeed, one of Burrell and Tree's fears is that Knepp could gain official designation for, say, its turtle doves, forcing them to manage the estate for them. "Slapping specific conservation targets on Knepp would straitjacket the dynamism that has brought us such exciting and unexpected results so far and compromise the opportunities for other species yet to emerge," Tree writes in *Wilding*.

Grazing fallow deer (*above*) and Exmoor ponies (*right*) at Knepp disturb the environment, transfer nutrients and disperse seeds over a wide area, enabling fauna and flora to thrive.

MAKING KNEPP PAY

£447k per year

comes from renting out offices, workshops and light industrial units on the estate.

£140k

comes from renting out houses and cottages, ranging from a seven-bedroom country manor to a bedsit flat.

But as well as challenging the predator-led model of rewilding, Knepp also throws up questions about the way we protect nature in this country. Wildlife conservation is largely based upon expensive, intensive management of reserves, in which habitat is moulded to encourage particular species. Hay meadows are cut and grazed for orchids and butterflies, and reedbeds planted and cut for bitterns. Knepp's challenge to this is why bother if you can do nothing and achieve great results.

Burrell recognises, of course, that they are doing it on a scale – 1,400ha – that our nature conservation organisations can only dream about. An average Wildlife Trust might have 50 or 60 reserves but most of them will cover fewer than 20ha, with the largest perhaps 200ha. Even a bluechip RSPB reserve such as Minsmere at 1,000ha is smaller than Knepp.

Christopher Williams, conservation director for Berks, Bucks and Oxon Wildlife Trust, visited Knepp the same day as *BBC Wildlife* and was impressed by what he saw, but says it holds limited lessons for them. "Take our hay meadows," he says. "If you don't manage them in a particular way, they will become dominated by coarse grasses, the invertebrates will disappear and you'll lose your nesting curlews. With woodlands, you create rides and glades to replicate the natural process of having cattle and boar crashing through."

Replicating Knepp

Martin Harper, conservation director of the RSPB, says wildlife groups are trying to achieve Knepp-type scales where they can. "On the Suffolk coast we are working across landowning groups to create dynamic wetlands because that's what species such avocets like," he says. "Scale and heterogeneity [diversity] is what conservation is all about, and if you haven't got scale you have to manage really hard to achieve heterogeneity."

Where does Knepp take us from here, then? Burrell would like to see the Government encourage landowners with financial incentives to create similar initiatives that "crash onto the boundaries" of nature reserves, allowing their arks of fauna and flora to spill out into the wider countryside. He also posits the idea of 'pop-up' Knepps, whereby farmers are allowed to let their land go wild for 25 years then return to farming again if they want to. Could we protect nature by making it less sacrosanct?

There are other issues to consider. We still need land to grow crops and graze livestock and, as Burrell puts it, "Every time you say, 'Let's give more space to nature', you're just exporting the problem elsewhere." But then he adds: "We do need space, and not just for our heads. If we don't have it, we're all doomed anyway."

MAKING KNEPP PAY

£120k

comes from selling organic longhorn cattle beef. Meat from Tamworth pigs and red and fallow deer is also sold.

£200k

comes from camping (huts, luxury tents and campsite), vehicle-based safari bookings and guided walks.

Above: tourists look out for butterflies on a guided walk. The estate's purple emperors are a sought-after species.

FIND OUT MORE Knepp Wildland: **https://knepp.co.uk**; read our review of *Wilding: The Return of Nature to a British Farm* by Isabella Tree on p110.