

The history MAN

The ruins of medieval monasteries continue to fascinate, but we sometimes forget they had a huge impact on the wider landscape. UEA historian ADAM LONGCROFT investigates...



My first visit to a monastic site was a memorable experience. I had joined my grandparents on a trip to Scarborough and we took a detour to Whitby.

A summer storm was brewing, the sky was dark and threatening and a strange light cast its spell over the ruins of the magnificent medieval ruins of Whitby Abbey. The experience has stayed with me all my life – indeed I think it was one of the triggers that prompted a lifelong interest in history.

In East Anglia, we have our own fair share of monastic foundations. Some like Binham and Castle Acre priories rightly attract large numbers of visitors.

However, the way in which monastic sites are presented to the public often gives the impression that the monastic landscape was confined to the area of the monastic precinct. This is not true. Over generations most monasteries acquired estates via charitable bequests. These estates often covered many thousands of acres and included many manors. At the time of the dissolution, the church held more than 200 manors in Suffolk alone. Beyond the monastic church, infirmary, refectory, dormitory, reredorter, kitchen, barns, guest lodgings and gatehouse of the precinct itself was to be found a wider range of monastic landscapes that reflected the engagement of the monasteries with the world of agriculture, trade, and commerce.

Many monasteries possessed Granges – monastic farms worked by lay brothers. These were normally much larger than normal 'peasant farms' and tended, by the 14th century, to possess substantial barns, granaries and other buildings like dovecotes which were unique to 'manorial' sites. Monasteries were the grain producing 'giants' of the Middle Ages and their estates often included vast tracts of arable land.

Monasteries were clearing woodlands on a vast scale by the post-Conquest period. Peterborough Abbey created a new estate of some 600 acres in Paston (Huntingdonshire) between 1175 and 1225 – an estate which consisted of newly cleared (assarted) woodland. The Abbey assarted a further 400 acres at Oundle Wood. Fen & marsh drainage schemes were the stock in trade of the medieval monasteries who were among the few landlords who could muster the finance, labour, engineering expertise and administrative efficiency to undertake ambitious schemes of this kind.

Sheep farming was carried out with ruthless efficiency by the monasteries – as a group, the Yorkshire monasteries possessed a minimum of 60,000 sheep by the 14th century – vast numbers which dwarfed the flocks of most lay landlords. We can add to this the myriad fish ponds and vineyards owned by the monasteries, and the quarries, coal mines, windmills, shops, warehouses, hospitals and hospices. Monasteries were, in many ways, the economic powerhouses of their times, as well as powerhouses of prayer!

Over the past couple of years children in Norfolk have had their creativity sparked by a series of visits from local scientists, and now the results have been collected in a book. KEIRON PIM spoke to Anne Osbourn about her successful project, the Saw Trust.

The beauty in science

THIS PHOTOGRAPH SHOWS COLONIES OF SOIL BACTERIA – or with a little imagination, marbles split in half, human eyes or peacocks' feathers.

Children's imaginative responses to scientific photographs can show us new ways of seeing the beauty in things that we might otherwise think of as mundane: bacteria, fungal spores, pollen grains, aphids, to name a few.

Now a new book showcases a project in which Norwich-based scientists went to local schools and fired the pupils' creativity by showing them such images and discussing their work.

Children from 15 schools wrote poems and painted pictures during days spent with scientists from the John Innes Centre (JIC) and the Institute of Food Research (IFR), and a selection of the results is on display in the book *Saw Showcase*.

Saw, which stands for Science, Art and Writing, was founded by JIC scientist Anne Osbourn, who runs a laboratory researching metabolic biology and is also a keen writer. She explained how the scheme came about.

"I had a year as a fellow at the UEA school of English and American studies. I was writing my own poetry, and through my own writing I became intrigued by scientific images as a starting point for exploration.

"That led me to run the first *Saw* project, which was at Rockland St Mary Primary School in March 2005. I started being approached by schools around the county, asking if they could run *Saw* projects too."

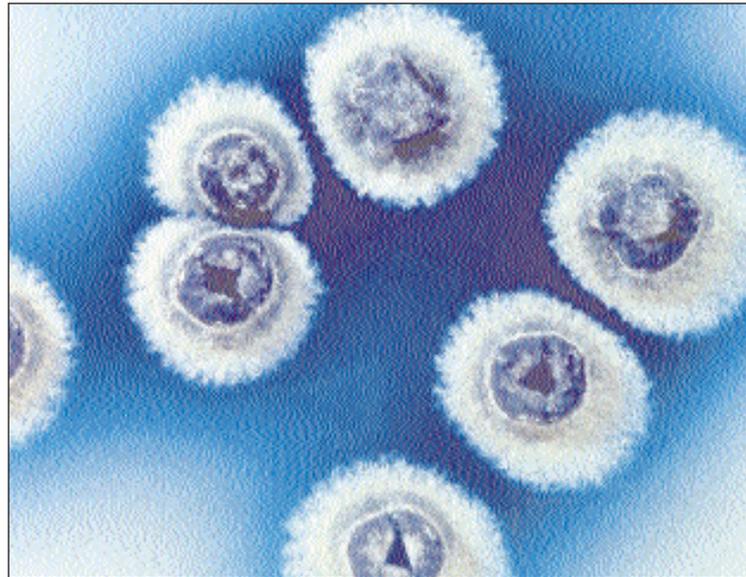
The book collects work from the *Saw* projects that took place last academic year, between September 2007 and July 2008. Rockland St Mary featured again, with the children being visited by JIC scientist Keith Chater, whose career has been dedicated to studying soil bacteria of the genus *Streptomyces*, as pictured here.

Each colony in the photograph is about 8mm across and contains millions of cells.

The children responded to learning about them and various other forms of bacteria by creating tie-dye art, which created shapes similar to bacteria colonies, and by writing poems.

In the book, Prof Chater notes that the day had benefits for him too, saying: "Amazingly, I observed something about how *Streptomyces* colonies grow that had escaped my notice in the previous 39 years!"

Meanwhile in a couple of other examples, JIC scientists Jenni Rant and Andrew Staphnill spent a day at Great Ellingham Primary School showing the pupils how plants get diseases, and Gillian Rich, of the IFR, got kids at Barford Primary School thinking about



Blue Bacteria by Joseph Burrell, of Rockland St Mary Primary School.

Like a marble cut in half, blue black and white, Jewels around a white eyeball, clouds surrounded by black raindrops, black marbles sparkling like diamonds, a pair of binoculars left in the mud, black circles like aliens, bouncing around the clouds.



INSPIRATION: Children from Barford Primary learn just how long a human gut is while other youngsters were inspired to poetry by these photographs of soil bacteria (top) and fungus spores.

the human intestines.

"Each project lasted for one school day," said Prof Osbourn, who added that funding from the Biotechnology and Biological Sciences Research Council and from Society in Science made the scheme possible.

"The day was divided into thirds, the first third being science, the second poetry and the final third art.

"All projects were carried out in primary schools with children aged seven to 11.

"The scientists were briefed on how to set up their projects and worked with teachers, artists and writers to deliver their projects.

"One of the very interesting outcomes was the cross-fertilisation between the experts that took part in these projects. Some of the scientists involved were inspired to write poetry about their science.

"The artists, writers and the musician who took part in the projects became absorbed in the science experiments."

The local writers included Martin Figura, Helen Ivory and Tom Corbett,

and artists included Sarah Jarrett, Tony Keeler and Julia Sorrell.

The project has received high praise for the way it captures children's imaginations. Barford Primary teacher Nick King said: "The excitement of seeing the test tubes and equipment made them feel like they were 'in a real lab'."

"I will long remember their faces." And just to emphasise that the project has excited adults as much as children, Norfolk County Council chief executive David White wrote to Prof Osbourn after attending a *Saw* presentation evening at the JIC last summer.

"*Saw* is truly inspirational," he said. "The children's work is really outstanding, and I am very impressed by the quality of the poetry and artwork in this book."

"As someone who has not specialised in science I can also add that I have learned a lot and quite simply had not previously been exposed to the beauty of science."

■ For more information and to purchase the book visit www.sawtrust.org

QUOTES OF THE DAY

"Before this ordeal, torture was an abstract word to me. I could never have imagined that I would be its victim" – **Guantanamo Bay detainee Binyam Mohamed.**

"I think Jacqui Smith followed the rules. It is the rules that are bloody stupid" – **Labour activist and psychotherapist Derek Draper on the Home Secretary's problems over her second home expenses.**

"French public opinion is like tinder and could easily catch fire. The

president, Mr Sarkozy, has enviable energy, but pitifully little tact. He might say or do almost anything and is capable of crass misjudgments" – **Cross-bench peer Lord Rees-Mogg.**

"It doesn't do you any favours to be the smartest person in the room, because if you're surrounded by idiots and you point out that someone is an idiot, all the idiots look at you as though you are an

idiot" – **Comic actor Ricky Gervais (pictured).**

"The task today is not to shout for blacks or women, but to break the grip of white men who went to public school. That's our job" – **Trevor Phillips, head of the Equality and Human Rights Commission.**

"This is my first time ever at the Academy Awards, but I only think about this love of my life. I made a tuxedo for

her to wear tonight. If I'm on stage I'm carrying that empty tux with me" – **Actor Mickey Rourke on his beloved Chihuahua, Loki, who died.**

"She is like a little one who's just woken up on Christmas Day" – **Max Clifford on Jade Goody's wedding day.**

"The old cannot be seen as a bundle over there in a corner with younger people taking all the decisions" – **Veteran broadcaster Dame Joan Bakewell, named as The Voice of Older People.**

