## By Ann Parson

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f you're headed to London, here's some blasphemous advice. Put the kings and queens, art museums, and Shakespeare on hold, and instead jump down a rabbit hole into London's unparalleled history of science.

London has more than two dozen museums devoted to science and medicine, some large, some small, some spiffy, some dusty, and all vastly interesting. (There's no such thing as an uninteresting science museum, some of us would argue.)

Clearly, the English themselves appreciate what they have. On a sunny day in February, a handful of people stood outside the Victoria and Albert waiting for it to open, while across the street — "Exhibition Road," it's called — the lines in front of the Science Museum and the Natural History Museum were endless, quite literally. Granted, it was school vacation week, but adults far outnumbered children, I couldn't help but notice.

London's Science Museum is an excellent first stop. Once there, just keep moving. Or its exhibits, which span over 250 years of technology, could steal you away for a week.

To mention a few: "James Watt and Our World" is a dramatic display of early steam engines and a perfect preface to "Making the Modern World," a vast assembly of revolutionary objects — the first sewing machines, the first typewriters, the first motor cars, and so on. A new addition, the "Clockmakers' Museum" illustrates, by way of hundreds of exquisite timepieces, London's famous clock and watchmakers of old.

Flight is a constant theme, from a stable of early aircraft to Leonardo Da Vinci's flying machines, some based on helical forms in nature that, like a maple seed, can spin great distances.

Like a maple seed, I was blown away by this awesome museum.

Next door, the colossal cathedrallike Natural History Museum and its founder Richard Owen, a paleontologist, make for an interesting chapter. Dinosaurs, or "terrible lizards" (from the Greek, Dinosauria), were named by Owen. So it's appropriate they turn up everywhere, from "Dippy" the Diplodocus in Hintze Hall to marine fos-



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## The science of London

## Clocks, flight, and natural history have their place beside royalty

sils to animated life-sized models.

Owen, who is remembered as "cantankerous" but brilliant, was a harsh critic of Charles Darwin, and one of the monkey heads carved on an archway in Hintze Hall is said to bear Darwin's likeness. But Darwin seems to have won out. His statue now occupies the Hall's seat of honor, while Owen's statue has been moved to a back room.

At the center of London's well-preserved past lie unique collections amassed by physicians and naturalists to better understand our own and other species.

The Hunterian Museum at the Royal College of Surgeons provides an eyepopping look at the collection of John Hunter, Europe's celebrated 18th-Century anatomist and surgeon. Time and again the Hunterian was described to

me as "London's best-kept secret." But I'm not so sure that's true anymore, judging by how crowded it was.

Hunter and his assistants bottled more than 4,000 animal and plant specimens, particularly to compare anatomical parts and look for answers about disease, about form and function, about reproduction. Two-thirds of the specimens were destroyed when the College was bombed in 1941. Still, an amazing display remains, and it's not for the squeamish.

Here floats, in their original bottles and bleached by alcohol, isolated tumors and hernias, an orangutan's head, mice testicles enlarged in spring and reduced in fall, sets of teeth, normal bone and syphilis-affected bone, the alimentary canal of a stick insect, and half of mathematician Charles Babbage's brain.

There's much more to the Hunterian than bottled parts. You'll find a riveting history of surgery as well as the Evelyn Tables, the oldest anatomical relics in existence. Acquired by The Royal Society in the 1600s, they represent a person's arterial and venous systems laid on thick board. Noticeably missing is the heart, since its role in circulation wasn't yet understood.

Of the museums I visited, my own vote for London's best-kept secret goes to the Alexander Fleming Laboratory Museum, which is tucked away in St. Mary's Hospital in northwest London. (I nearly ended up in a men's room trying to find it.) It was in this very lab, as curator Kevin Brown masterfully recreates, that a bit of mold, Penicillium notatum, blew in through an open

Two of Da Vinci's flying machines in the exhibit "The Mechanics of Genius" at London's Science Museum.

window and landed in a Petri dish in which Fleming was growing bacteria, leading to his famous 1928 discovery.

The Faraday Museum at The Royal Institution maintains the original lab of another important scientist, Michal Faraday, inventor of the first electric transformer and generator. An added bonus is an array of keepsakes tied to other important scientists. Here's the glass tube that helped John Tyndall deduce why the sky is blue. Here's the spectrometer that Rosalind Franklin used to find DNA.

Wherever you go in London's science underground, you'll run into the name "Wellcome," as in Henry Wellcome, the Wisconsin-born researcher who ended up a knighted Brit at the forefront of pharmaceuticals in the UK. The Wellcome Trust, a major funder of biomedical research worldwide, is also a generous supporter of science museums, mirroring Henry Wellcome's obsession with collecting.

The Wellcome Collection's permanent exhibition "Medicine Man" gives a fine sense of this hungry collector, who, by the time he died in 1936, had acquired over one-million medical objects.

Here's dedication and quirkiness too: amputation saws and artificial limbs dating back to the 16th-century; glass eyeballs, phallic amulets, and early stethoscopes. Wellcome was criticized for muddying his collection with non-medical items. Lucky for us he did! Darwin's walking cane, for instance, comes with the story of how much Darwin loved to walk — it was his thinking time — and how the cane's striking the ground alerted people of his approach.

All these museums can be reached via one of London's most historic innovations, the Tube, the world's oldest underground railway (1863). Many have free admission, although chances are you'll want to make a contribution.

Thanks, London, for keeping centuries of science so wonderfully alive.

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