British Mummies Are the Sum of Parts

Talk about a tight community: According to DNA evidence, Britain's oldest mummies are actually "jigsaws" of body parts assembled from several individuals before being buried. The 3600-year-old mummies were discovered in 2001 in the prehistoric village of Cladh Hallan in Scotland by archaeologists from the University of Sheffield. Radiocarbon dating and analysis of bone mineralization suggested that the four people had been deliberately mummified in peat bogs and then reburied intact 300 to 500 years after their deaths, as some soft tissue was preserved that held the bones together.

Puzzled by the unnatural position in which the mummies were curled, ancient DNA specialists at the University of Manchester took a closer look. By analyzing mitochondrial DNA, which is better-preserved than genomic DNA and is passed down from mother to child, the researchers recently discovered that the mummies were each constructed of parts from at least three different individuals who were not related on the maternal side. It's not yet clear why they were buried this way, but the archaeologists suspect it was ritualistic.

CREDITS (TOP TO BOTTOM): MICHAEL PARKER PEARSON/UNIVERSITY OF SHEFFIELD; JACKSON LABORATORY; COURTESY OF THE EUROPEAN RESEARCH COUNCIL; MARK A. KLINGLER/CARNEGIE MUSEUM OF NATURAL HISTORY

and fell back to Earth on 24 August, Russia announced on 29 August that it would postpone its next manned mission to ISS for at least a month to do safety checks.

The loss of the cargo had little immediate impact, but a long-term consequence could be the temporary abandonment of ISS until scientists determine what went wrong with the Soyuz rocket that boosted the freighter into space. That rocket is similar to the Soyuz rocket that takes astronauts to the station.

Three of ISS's six crew members are now slated to return to Earth on 16 September. Their replacements, originally set to launch on 22 September, now won't head to ISS until late October or early November.

NEWSMAKERS

Three Q's


Dingwell

On 1 September, Canadian-born volcanologist **Donald Dingwell** of Ludwig Maximilian University in Munich will become secretary general of the European Research Council (ERC). Dingwell, 53, will be the liaison between the ERC's Scientific Council and its Executive Agency. **http://scim.ag/Dingwell**

Q: What made you apply for this job?
The ERC is by far the most exciting thing that has happened in the research landscape in Europe, possibly in the world, in the last decade. But … one has to be constantly on the watch for how these things develop. I'm happy to take that onto my shoulders for 2 years.

Q: You don't have a lot of experience in European research policy.
Not in making policy, no. But from the point of view of somebody who is impacted and makes use of the policy, yes. Twenty-five years of research in Europe, and I have been on over 20 panels. I have a lot of experience in the practicality of how these panels are run.

Q: As secretary general for ERC, you will have few formal powers. Will that be a problem?
I'm sure that when I walk into the building, it's not all going to be "*Friede, Freude, Eierkuchen* [peace, joy, egg pancakes]." I'm sure there will be friction points. My job is to communicate the wisdom of the council to the agency and to communicate the practicalities of the agency back to the council. But I know I have the support of all sides. How many times in life can you say that?

Edison Liu Leaves Singapore To Head Jackson Lab

Cancer researcher **Edison Liu**, 59, will be the next president of the Jackson Laboratory in Bar Harbor, Maine, the lab announced 26 August. Liu is leaving the Genome Institute of Singapore, where he has been executive director for nearly 11 years, since its founding. He's one of several high-profile scientists to depart Singapore recently (*Science*, 8 April, p. 165). Jackson Lab, a nonprofit organization that produces inbred mice and conducts research, is looking for ways to expand, and Liu says he is eager to help it do so. Although a proposed Jackson branch failed to launch recently in Florida, Liu argues that Jackson-West in Sacramento, California, has shown that new sites can make money and do excellent science.


Liu

Liu received an M.D. from Stanford University in 1978; trained at the University of California, San Francisco; and taught medicine at the University of North Carolina, Chapel Hill. In 2001, Liu was running the 1200-person clinical sciences division of the National Cancer Institute in Bethesda, Maryland, when he was recruited to Singapore. Some of his important work has been on tyrosine kinase receptors, particularly the HER2 receptor, which affects breast tumors. **http://scim.ag/EdisonLiu**

FINDINGS

'Jurassic Mother' Found in China

A new, 160-million-year-old fossil discovery pushes back the earliest appearance of placentals, the peculiar group of mammals to which we and many other mammal species belong. >>

Distant cousin. A skeleton and body of Jurassic mammal *Juramaia*.

Published by AAAS

>>FINDINGS

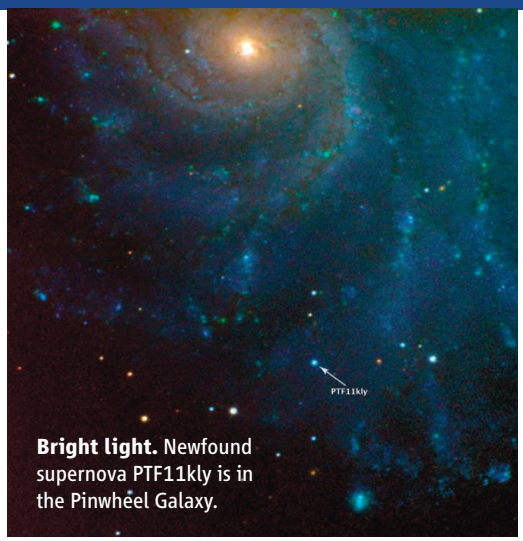
Living mammals are split into three subgroups: egg-laying monotremes, pouched marsupials, and placental mammals, which includes everything from humans to bats to whales. Determining when marsupials and placentals diverged has been problematic: Fossil discoveries point to about 125 million years ago, whereas genetic differences among living mammals suggest that the split happened even earlier.

Now the discovery of a partial skeleton of a small, shrewlike mammal, described online 24 August in *Nature*, pushes back the date of the divergence to 160 million years ago. Found in the famous fossil beds of Liaoning, China, the newly discovered little mammal has been named *Juramaia sinensis*, or "Jurassic mother from China."

Juramaia probably ate insects and was a skilled climber. Based on the arrangement of its teeth and on characteristics of its arms and wrists, *Juramaia* belonged to a group of animals called eutherians, a lineage that includes placentals and their forebears, says lead author Zhe-Xi Luo of the Carnegie Museum of Natural History in Pittsburgh, Pennsylvania.
http://scim.ag/Jurassicmom

Supernova Ready For Closeup

A supernova discovered 23 August in the nearby Pinwheel Galaxy, just 21 million light-years from Earth, is no mere flash in the pan. Astronomers are calling the stellar explosion, detected at Palomar Observatory in California and dubbed PTF11kly, a Rosetta Stone for deciphering the origin and evolution of type 1a supernovas, a class of stellar eruptions critical for probing the expansion history of the universe because they all have similar luminosities. The new-found supernova is the closest type 1a spotted since 1986, and it was caught earlier in time—just hours after it blew up—than any other such explosion, says Andy Howell of the University of California, Santa Barbara. Expected to reach maximum brightness on 7 September, the supernova can be seen with a small backyard telescope near evening twilight in northern skies. On 27 August, the Hubble Space Telescope recorded ultraviolet spectra of the eruption, which is expected to provide new clues about the star that exploded.



Bright light. Newfound supernova PTF11kly is in the Pinwheel Galaxy.

Random Sample

Pathological Museum In Sore Trouble

German pathologist Rudolf Virchow fathered three sons and three daughters. But his "dearest child," he once said, was his vast collection of deformed fetuses and wax models of diseased organs. During Virchow's lifetime, he offered his collection—thousands of medical specimens and curiosities, including preserved brain tumors and stomach ulcers, skeletons, deformed organs, and knives used for bloodletting—as both a three-dimensional textbook for his medical students and a public museum. After his death in 1902, the collection remained available to the public as the Pathological Museum.

But Charité, the Berlin Medical University, which made Virchow's collection the center of its Medical History Museum in 1998, has been in financial trouble for years—and is now toying with the idea of getting rid of the museum, which attracts 100,000 visitors a year but earns only a third of the €1 million it costs to run.

"The museum is very important to us, but we have to significantly cut costs," said Stefanie Winde, a spokesperson for the Charité. Among the options being considered are: give the collection to another museum, find a private sponsor to foot the bill, or simply close it down.

A final decision will be made at the end of September, according to the Charité. Meanwhile, the deliberations continue to outrage many doctors and scientists. That public outcry has caught the Charité by surprise; they may have taken the title of a current exhibition about the history of nursing—titled "Who Cares?"—a bit too literally.

'Time Cells' Weave Events Into Memories

Neurons in a part of the brain called the hippocampus encode the "gaps" between sequential events as precisely as the events themselves, new research shows. The hippocampus, a center for navigation and memory, contains "place cells" that fire when a person or animal is at a certain location. The new findings suggest that the hippocampus may also contain "time cells" that encode "episodic" memories of events.

Howard Eichenbaum and colleagues at Boston University trained rats to perform a two-part task with a 10-second delay in the middle while fitted with surgically implanted electrodes that recorded neural activity in the hippocampus. Recordings from 300 hippocampal neurons showed that during the delay, about a third of the cells that fired did so one after another throughout the delay even though nothing was happening, the team reported 25 August in *Neuron*. The researchers surmised that the hippocampus was encoding the passage of time during the empty period, bridging the gap between the two phases of the test.

"The study shows how we can retain our memory of distinct events while also being aware of time passing in the background," says Wendy Suzuki of New York University.
http://scim.ag/timecells

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