

president. She says that the group spent US\$2 million during this election cycle on items such as ads and voter-registration drives, and contributed another \$250,000 to various candidates' campaigns.

That wave of interest is “indicative of people’s desire to get involved, and a recognition that it’s no longer okay to sit on the sidelines”, says Benjamin Corb, director of public affairs at the American Society for Biochemistry and Molecular Biology in Rockville, Maryland.

The victories for science candidates came as Democrats regained a majority of seats in the House, taking the chamber back from Republicans — who still control the Senate and the White House. Recapturing the House is “no small feat”, says Elizabeth Gore, senior vice-president for political affairs at the Environmental Defense Fund, an advocacy group in New York City. “It is going to change the dialogue in Washington, and will certainly change the dynamic around science and the environment.”

▲ CHANGING CLIMATE

One of the most dramatic transitions will involve the House Committee on Science, Space and Technology. Representative Eddie Bernice Johnson, a Texas Democrat and vocal critic of the Trump administration, is likely to take the helm from retiring Representative Lamar Smith (Republican, Texas). As chair, Smith has repeatedly questioned the science behind climate change, sought to pare back the National Science Foundation’s research portfolio and launched dozens of probes into alleged wrongdoing by individual scientists and US government science agencies.

By contrast, Johnson released a list of policy priorities on 6 November that includes fighting climate change — “starting with acknowledging it is real” — and making the science panel “a place where science is respected”.

Smith is not the only Republican with a strong



Eddie Bernice Johnson (left) is in line to become the next leader of the House science committee.

interest in science who will exit Congress at the end of year. Voters rejected a bid for re-election by Representative John Culberson of Texas, a space enthusiast who leads the House spending panel that oversees NASA, the National Science Foundation and the National Oceanic and Atmospheric Administration. Culberson’s stalwart support for a NASA mission to Jupiter’s moon Europa became a campaign issue after his opponent accused him of favouring pet projects and neglecting local issues in his district near Houston.

Culberson is “probably the strongest supporter of planetary science, maybe in history”, says Casey Dreier, senior policy adviser at the Planetary Society in Pasadena, California. “It was so neat to see someone in Congress who had a personal passion for the search for extra-terrestrial life.”

Holding even a slim margin in the House will give Democrats the power to investigate

the Trump administration’s policies. Gore says that this is likely to translate into congressional hearings that probe the administration’s efforts to roll back a variety of climate and environmental regulations, and explore whether they are justified by the available science.

“Some of the oversight that we will see in a Democratic House will be focused on re-establishing scientific integrity and highlighting the failure of the Trump administration to use scientifically based information for policy-making,” Gore adds.

Others worry that with Democrats taking the House and Republicans solidifying their majority in the Senate, political gridlock will worsen in the coming years. “The polarization in the Congress has increased,” says Robert Stavins, an environmental economist at Harvard University in Boston, Massachusetts. “What was left of moderate Republicans — those are the people who systematically lost to Democrats.” ■

ANCIENT GENOMICS

Migration to Americas traced

Genomes show that the Americas’ earliest settlers moved far and fast across the continent.

BY EWEN CALLAWAY

Ancient genomics is finally beginning to tell the history of the Americas — and it’s looking messy.

Genomes from dozens of ancient inhabitants of North and South America, who lived as much as 11,000 years ago, suggest that the populations moved fast and frequently. The findings, published on 8 November^{1,2}, indicate that North America was populated widely over a few hundred years, and South

America within 1,000–2,000 years by related groups. Later migrations on and between the continents connected populations living as far apart as California and the Andes.

“These early populations are really blasting across the continent,” says David Meltzer, an archaeologist at Southern Methodist University in Dallas, Texas, who co-led one study².

The studies also suggest that the prehistory of the Americas — the last major land mass to be settled — was just as convoluted as that of other parts of the world.

“I think this series of papers will be remembered as the first glimpse of the real complexity of these multiple peopling events,” says Ben Potter, an archaeologist at the University of Alaska Fairbanks. “It’s awesome.”

For decades, the peopling of the Americas was painted in broad brushstrokes, using data from archaeological finds and DNA from modern humans. Scientists discerned that groups crossed the Bering land bridge from Siberia into present-day Alaska, and then moved steadily south as the last ice age ended. Humans ▶



An arrowhead that belonged to people associated with the Clovis culture, early settlers in the Americas.

▶ carrying artefacts, such as sophisticated projectile points, from a culture known as Clovis began to populate the interior of North America about 13,000 years ago. For decades, scientists thought that people associated with this culture were the continent's first inhabitants.

But the discovery of 'pre-Clovis' settlements — including a nearly 15,000-year-old site at the southern tip of Chile — pointed to an even earlier wave of migration to the Americas.

The first ancient-DNA studies from the region, appearing in 2014, began to add detail to this picture. The genome of a baby boy who was buried roughly 12,700 years ago in Montana alongside Clovis artefacts³, and genomes from other ancient individuals⁴, hinted at two early populations of Native Americans.

The Montana baby, known as the Anzick boy, belonged to a population known as the Southern Native Americans, who are most closely related to present-day Indigenous populations from South America. They split from Northern Native Americans, who are genetically closer to many contemporary groups in eastern North America, around 14,600–17,500 years ago. And

the common ancestor of those two groups split from East Asians some 25,000 years ago, as scientists established earlier this year by sequencing the genome of 11,500-year-old human remains from Alaska⁵.

But this timeline was based on just a few ancient genomes from the Americas, and scientists expected further data to paint a more detailed, complex picture of the continent's history, as well as reveal later migrations there.

SAME GENES, FAR APART

The two latest studies include genome data from 64 ancient Americans, and provide the first detailed look at the ancient inhabitants of Central and South America and their early movements into the region.

To chart these migrations, Meltzer and his colleague Eske Willerslev, a palaeogeneticist at the Natural History Museum of Denmark in Copenhagen, compared genetic data from the Anzick boy with those from 10,700-year-old remains in a Nevada cave and 10,400-year-old remains from southeastern Brazil.

The genomes were remarkably similar,

despite the great geographical distances between them, Willerslev says, pointing to a rapid population expansion from Alaska. "As soon as they get south of the continental ice caps, they're exploding and occupying the land," he says.

An independent team led by David Reich, a population geneticist at Harvard Medical School in Boston, Massachusetts, also found evidence¹ for a rapid expansion into South America, through analysing 49 ancient genomes from Central and South Americans.

Both teams documented multiple later human migrations into South America. Reich's group found, for instance, that the genetic signal of the earliest inhabitants — closely related to the Anzick boy — had largely vanished from later South Americans, suggesting that different groups had by then moved in from the north.

Potter says that the main conclusions of the two papers are broadly consistent. "Complex and realistic are the two adjectives I would use," he says.

Even with dozens more newly discovered ancient genomes from the Americas, important aspects of the region's population history are probably still missing, says Reich. "There are many dots that are not filled in," he says. "I think as these studies scratch the surface, they make things more, rather than less, complicated."

Jennifer Raff, an anthropological geneticist at the University of Kansas in Lawrence, says that the emerging picture of the Americas is less a revision of the earlier models and more an elaboration. "It's not that everything we know is getting overturned. We're just filling in details," she says. ■

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INSTITUTIONS

Sanger whistle-blowers dispute inquiry findings

Leading genomics institute stands by conclusions of an investigation that clears its management of bullying.

BY HOLLY ELSE

Six current and former employees are calling for the Wellcome Sanger Institute in Hinxton, UK — one of the world's top genomics centres — to reopen an investigation that last month cleared its management of

bullying, gender discrimination and misuse of grant money.

The group raises concerns about the process of the investigation and questions the decision to clear senior management at the institute of the allegations. Among other things, the group says that the investigation did not interview

enough people, and that its scope may have been too narrow. Its members, who say they are among 12 people who contributed evidence to the April complaint that prompted the probe, also question the investigation's transparency.

Their concerns "cast doubt as to whether the investigation was conducted in a manner that was as effective as it could be, given the seriousness of the allegations", they say in a statement seen by *Nature*. On 2 November, Serena Nik-Zainal, a clinical scientist who now works at the University of Cambridge, sent the statement to Genome Research Limited (GRL), which oversees the Sanger and commissioned the investigation from barrister Thomas Kibling. "We firmly believe sufficient evidence was not unearthed to make an appropriate judgement," says the statement.

David Willetts, chair of the board of GRL, told *Nature* that the investigation was independent