should represent, but Varmus almost certainly will put a scientist on COPR. Scientists "are one of our major constituencies," he said last week, and several panelists agreed. "I would like to see the scientific lion lie down with the public lamb," said Robert Abendroth of the Amyotrophic Lateral Sclerosis Foundation.

"Or vice versa," said Varmus.

–BRUCE AGNEW

Bruce Agnew is a writer in Bethesda, Maryland.

KENYA

Leakey Back as Head of Wildlife Service

Politics has again created strange bedfellows in Kenya. Just a week after ousting conservationist David Western as head of the embattled Kenya Wildlife Service (KWS), President Daniel arap Moi has reappointed one of his most prominent critics—anthropologist Richard Leakey—to the job of overseeing some of Africa's best known parks and protecting the country's rich biodiversity. The move comes just 4 years after Moi picked Western to replace Leakey, who resigned from the KWS in 1994 after complaining of political interference by Moi's cronies.

Full circle. Richard Leakey gets old job back.

The latest switch, announced on 24 September, marks yet another twist in a political tale that has captivated and concerned conservationists around the world (*Science*, 25 September, p. 1931). In May, Moi fired Western, only to rehire him 6 days later following complaints from international donors and conservationists who supported Western's efforts to downsize the KWS and involve people living outside the agency's 53 parks in conservation. Some of Western's supporters charged that the ouster had been engineered by Leakey, who has been critical of Western's community-based wildlife policies and management style. At the time, Western himself ascribed the firing primarily to his opposition to granting mining concessions in the parks.

When Moi abruptly fired Western again on 17 September, few observers publicly predicted that the president would try to woo one of his leading opponents back into the government. In the past, Moi has reportedly called Leakey a "racist" and "arrogant" and has threatened to have him arrested for sedition. And since January, Leakey has been a member of Parliament representing the Safina party, a small but vocal opposition group. On 24 September, however, Leakey announced he was reclaiming his old job after direct negotiations with Moi assured him that KWS would be insulated from political meddling. "I did due diligence and believe I have the government's commitment," Leakey told *Science*. "Obviously, one does not knowingly put his head in a noose," he commented at an earlier press conference.

Some observers say Leakey's reinstatement was primarily driven by Moi's increasingly frenetic efforts to shore up his sagging regime and Kenya's shattered economy. In particular, says Gilbert Khadiagala, a Kenyan who teaches African politics at the Johns Hopkins School of Advanced International Studies in Washington, D.C., Moi has sought to regain support among Kenya's powerful Kikuyu ethnic group as political parties begin talks over a new democratic constitution that could sharply curtail his Kanu party's power, and as the government negotiates an aid package with the International Monetary Fund. Last month Moi took one step toward that goal by politically rehabilitating Charles Njonjo, a Kikuyu elder statesman, by naming him chair of the KWS board of directors. Njonjo, whom Moi forced into internal exile in 1984, is Leakey's lifelong friend and mentor. One likely scenario, Khadiagala says, is that Moi brought Leakey into the government to provide Njonjo with a trusted ally and to demonstrate to foreign governments that he is ready to share power. "The appointment makes Moi look like a moderate, not an ethnic leader," Khadiagala says.

Kenyan politics aside, Western's supporters are concerned that Leakey—who focused on protecting animals within the parks during his first stint as KWS chief—will undo Western's community conservation programs, which attempt to preserve biodiversity in areas around the parks. "The worry is that Leakey will return to policies that are no longer supported by conservation science," says University of California, San Diego, biologist David Woodruff. Some donors also fear an abrupt shift. "There is quite a lot of donor concern," says a knowledgeable source. Funders such as the European Union and Germany, which have pumped millions of dollars into the community projects and other reform efforts, "would like to be assured by the new management that major changes are not going to take place."

Leakey, who says he "can't imagine why donors should have any concern about changes," says his first priority will be to find funds to pay off a $3.5 million deficit, caused largely by declining tourism and the end of some outside grants to KWS. "We simply don't have any incoming money to pay bills and salaries," he told *Science*. "We are going to have to cut costs." **–DAVID MALAKOFF**

PALEONTOLOGY

Tracks of Billion-Year-Old Animals?

Could paleontologists have missed a third of the preserved history of animals? That's the implication of a startling claim on page 80. Researchers have grown accustomed to competing claims about when multicellular animals first appeared. In February, new fossil embryos from China pushed the date back tens of millions of years to just before 600 million years ago (*Science*, 6 February, p. 803), and some molecular biologists sorting through animals' genes have inferred an even earlier origin. Now the new find may extend the fossil record of animals more than 400 million years to 1.1 billion years ago, supporting the oldest molecular estimates of the origins of animals.

In this issue of *Science*, an international team of scientists argues that wiggly grooves on the surface of ancient sandstone from central India are the tracks of burrowing,

The first burrows? Half-centimeter-wide grooves in sandstone from India may push the origin of animals back almost half a billion years.

CREDITS: (TOP) W. STONE/GAMMA LIAISON; (BOTTOM) F. PFLÜGER /YALE UNIVERSITY

half-centimeter-thick, wormlike animals. "If it's true, it's staggering," says paleontologist Charles Marshall of the University of California, Los Angeles (UCLA). "It would be the first evidence of macroscopic animals."

For now, experts in such trace fossils—most of whom haven't yet seen these specimens—are divided on the claim, torn between the convincing appearance of the tracks and their appearance in rock radiometrically dated to hundreds of millions of years before any other animal traces. "I'm a believer," says Tony Ekdale of the University of Utah, Salt Lake City, who has seen one specimen. "I find them convincing." Others are not so sure that these squiggles are traces of life. "I wouldn't be surprised if they turn out to be inorganic," says Sören Jensen of Cambridge University.

To the authors of the study—paleontologist Adolf Seilacher of Yale University and the University of Tübingen in Germany, and sedimentologists Pradip Bose of Jadavpur University in Calcutta and Friedrich Pflüger of Yale—the ancient tracings paint a detailed picture of one creature's life 1.1 billion years ago. The wormlike animal, about the thickness of a drinking straw, plowed through the sediment a few millimeters below the floor of a shallow sea, the group suggests. They argue that the creature propelled itself with rhythmic muscle contractions, or peristalsis, leaving open burrows with raised edges like those of modern worms that move by peristalsis. The animal was probably grazing on the decaying base of a thin mat of microbial life on the sea floor, says Pflüger, because the burrows follow the base of a thin veneer of darker sandstone that may be the remains of the mat. (At press time, Seilacher was in the field in Libya.)

Burrowing by peristalsis suggests to Seilacher and his colleagues that the animal was rather complex. Peristalsis implies a fluid-filled cavity that can be contracted by muscles, and they argue that it also implies the existence of a coelom, a lined cavity between the gut and body wall. Coeloms are common to mollusks, annelid worms, and arthropods but are absent in the simpler flatworms and roundworms. If so, the fossil evidence would support one date offered by some molecular biologists: a 1.2-billion-year age for a major evolutionary split among the coelomate animals, between a group including the annelids and one including the echinoderms.

Pflüger admits that distinguishing true trace fossils from all manner of sedimentary cracks, wrinkles, and ripples is a tricky business, but says that he is "85% confident" that the features were left by an animal. He points out that the burrows are too irregular to be the type of cracks commonly found in such sediments and too sharply delineated to be wrinkles in the sediment surface. The grooves vary in width, but each has a constant width throughout its length, unlike a crack. "If they were 700 million years old," says Pflüger, "there would be no reaction [challenging] the paper." But given the antiquity of the finding, "there will be people contesting it."

Indeed there are. "This is not the smoking gun," says paleontologist and early life expert Bruce Runnegar of UCLA. "It is almost impossible to tell trace fossils from tubular body fossils [of large algae] when they are poorly preserved, as these are. I'd say the jury is out."

Paleontologist Mary Droser of UC Riverside is more persuaded, agreeing with Pflüger that "if we found this in the Paleozoic [younger than 544 million years], we would say it is a trace fossil." But she notes that "there have been a lot of examples [of sedimentary features] that people thought were trace fossils and they were not." And because no large worm burrowings turn up again in the rock record until about 600 million years ago, "I wonder why we go 400 million years without another one," she says. Paleontologist Andrew Knoll of Harvard University agrees that "if you see centimeter-scale, coelomate organisms and then don't see them for 400 million years, you have a lot to explain."

It's possible that relatively complex animals did appear very early but died out, says Marshall, only to evolve again later. Or perhaps there are older animal fossils that haven't been found yet, and the gap is only apparent. "I'm not sure enough people have looked at the right rocks for the right thing," he says. "Five or 10 years from now, are the gaps in the record going to be filled in? That will be the proof of the pudding."

–RICHARD A. KERR

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Mexican Fires Charge Up U.S. Clouds

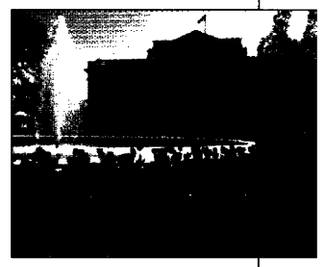
The ancient Greeks believed that lightning bolts sprang from the rage of Zeus in his home on Olympus. Now an odd new discovery suggests that Zeus' moods have a long reach indeed: Last spring, smoke from massive fires in Mexico spawned stronger, more sustained lightning than normal over the Great Plains, thousands of kilometers away. According to lightning records, storms that had absorbed the smoke zapped the ground with three times the usual number of positively charged lightning strokes, which typically last longer than negatively charged ones and can inflict worse damage. Moreover, these positive bolts carried twice as much current as similar flashes produced by smoke-free storms.

ScienceScope

PROJECT RECRUITS WOMEN TO RUN FOR PRESIDENT

Could the first female U.S. president be a scientist? The White House Project believes it's a possibility.

To encourage more women to consider a run at the Oval Office, the nonpartisan, nonprofit group last week released a list of 20 prominent women it thinks might make good candidates. Three women with scientific credentials made the list: psychologist Judith Rodin, president of the University of Pennsylvania; cardiologist Bernadine Healy, a dean at Ohio State University and former National Institutes of Health director; and chemical engineer Mae Jemison, NASA's first female African-American astronaut.



The group is now asking people to vote for the five women they would like to see run for office. It has mailed ballots to more than a million people and will also be inserting them into popular magazines such as *People*. But it's not clear that the winners will respond to a groundswell of support. Healy, for one, says she won't "deal with a theoretical."

MALAYSIAN MIT STILL A DREAM

Political turmoil has delayed for a year Malaysia's plans to open a graduate research university run by the Massachusetts Institute of Technology (MIT). But neither side is abandoning the project, which was supposed to enroll its first students this month.

"We're on hold, waiting for the government to act," says MIT's Fred Moavenzadeh, co-director of the project to create the Malaysia University of Science and Technology outside the capital, Kuala Lumpur (*Science*, 6 March, p. 1474). A private foundation is paying MIT $25 million over 5 years to instill its research-based curriculum into an elite group of scientist-entrepreneurs. But a similar contribution from the Malaysian government has been blocked by political upheavals precipitated by the country's yearlong economic crisis. In particular, last month's firing and arrest of Finance Minister Anwar Ibrahim has disrupted activity at the ministry, which must approve the spending.