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NATIONAL GEOGRAPHIC

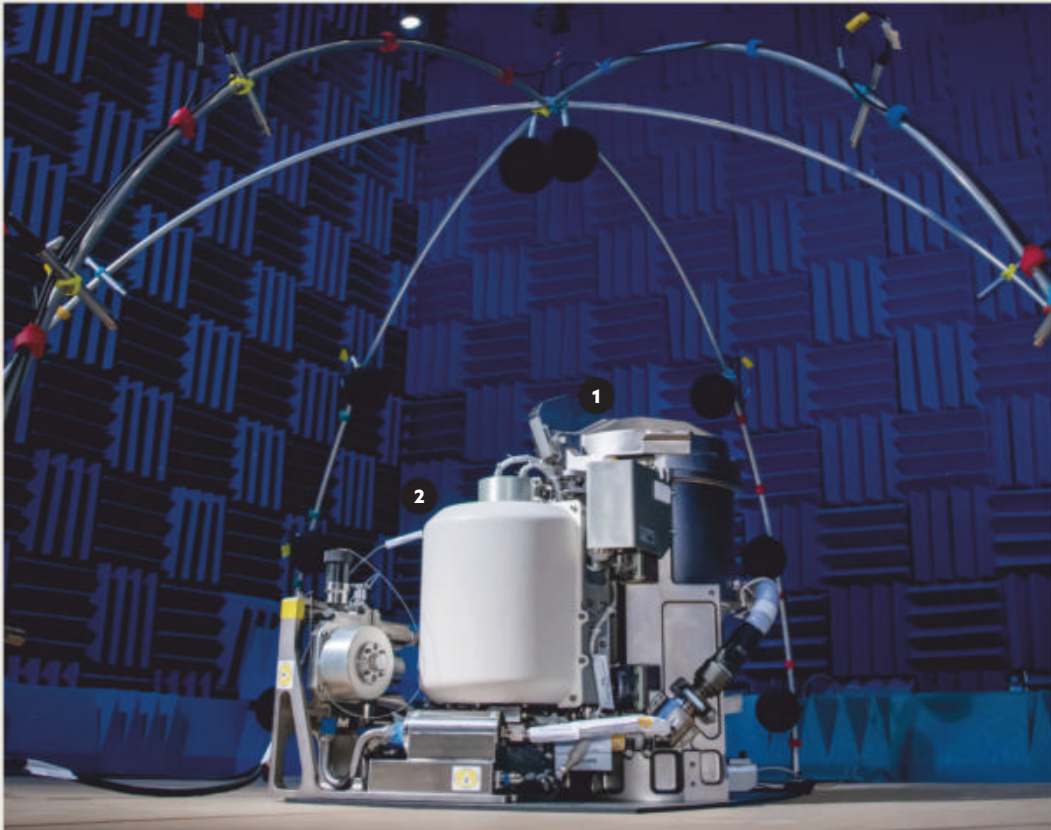
MYSTERIES
OF A

VIRUS

They kill us by the millions.
But without them, life is impossible.

DISPATCHES
FROM THE FRONT LINES
OF SCIENCE
AND INNOVATION

They're Not Real Eyes, But...
Big cats may give up the hunt if they think they've been spotted, so some Botswana ranchers try to deter the predators by painting eyes on their cattle's bums. A four-year study found that cattle with this paint job were less likely to be killed by leopards and lions than those without it. —AR



Key elements of NASA's new commode include (1) the seat, and (2) the tank that preps urine for recycling to potable water. (Or as astronaut Jessica Meir puts it: "Today's coffee is tomorrow's coffee!")

SPACE TRAVEL

AMENITIES, IMPROVED

NASA REDESIGNED THIS SPACE TOILET TO WORK BETTER, ESPECIALLY FOR WOMEN ASTRONAUTS.

IN SPACE, PROPERLY DEPOSITING human waste can be tricky. The lack of gravity can result in excretory anomalies, as ground control overheard during NASA's 1969 Apollo 10 mission: "Give me a napkin quick," Tom Stafford implored fellow astronauts. "There's a turd floating through the air." Now, for the first time since 1993, NASA has sent a brand-new, redesigned toilet to the International Space Station. Like its predecessor, the fancier throne uses suction to whisk away waste. Astronauts urinate into a handheld funnel and hose, and deposit the solid stuff exactly as you'd expect. But with more women visiting space, the new loo's seat was fashioned with female anatomy in mind. It allows women to more easily multitask—or perform what NASA refers to as "dual ops"—and the seat plus handrails provides options on approach. "Some of the crew like to hover over the seat, some crew like to firmly dock," says NASA's Melissa McKinley. "The main thing is you want the [seat] shape to guide you into the proper location." A bonus of the new design: Lifting the lid automatically turns on the toilet's suction, the better to prevent rogue floaters. —NADIA DRAKE

ECOSYSTEMS

Dig This: One More Talent of Lyrebirds

The superb lyrebird can crush scorpions with its rakelike feet. It can mimic sounds, from car alarms to human speech. And, a new study suggests, the multitasking bird turns over more soil than any other animal on land, even earthworms and gophers. Scouring the forest floor for insects, each bird can kick up a whopping 388 tons of leaf litter and earth a year across its range in eastern Australia. That beneficially aerates soils and reduces fire risk. —ANNIE ROTH

