



Peterson, coldly pursuing a new mineral.

## Rock Candy For Martians?

A chilly wilderness quest has led a Canadian researcher to a new mineral that may be more at home on Mars. Ronald Peterson, a mineralogist at Queen's University in Kingston, Canada, first suspected the existence of the exotic substance in 2005, when the Mars rover Opportunity kicked up magnesium sulfate dust and photographed lens-shaped holes in sedimentary rocks on the cratered plain of Meridiani Planum. Peterson and his colleague Ruiyao Wang posited that the rover had spotted evidence of a novel platelike form of magnesium sulfate—a low-temperature cousin of Epsom salts, with 11 water molecules in its structure instead of the usual seven. To make the case for the mineral, Peterson and colleagues set out to find it on Earth.

Near the shore of a frozen-over lake in British Columbia, Peterson spotted kilograms of snowy off-white crystals growing amid the shredded bark of a dead tree trunk. The wood fibers had wicked up water along with magnesium and sulfate from old mines nearby. The team packed up samples on dry ice, and Peterson rushed them back to his lab. Working outside to keep the samples cold, he examined the crystals under a microscope and later confirmed their structure by x-ray diffraction. The mineral, christened meridianiite, is described in the October issue of *American Mineralogist*.

"New minerals that we find are usually tiny fly specks," Peterson says. "It's unusual to find one in kilograms." Mars's polar ice caps might harbor much more of the mineral, he says.



## Tongues Untied

A new center at the University of California, Irvine, is the first to specialize in using drugs to treat stuttering.

Stuttering affects approximately 1% of the adult population worldwide, says Gerald Maguire, the psychiatrist heading the new center, which opened 4 October. (Even the ancient Egyptians had stutterers among their ranks—and a hieroglyph to depict the condition.) Speech therapy is standard treatment, but it tends to help children more than adults, Maguire says.

Although no drug has been approved by the U.S. Food and Drug Administration for treating stuttering, a handful of studies have suggested that off-label use of dopamine-blocking antipsychotic drugs can be helpful, Maguire says. He has taken low doses of the antipsychotic drug olanzapine for almost 10 years to treat his own stutter. "Now my speech is more automatic," he says. "I used to be constantly anxious, constantly monitoring my words."

Patients at the clinic could also elect to enroll in a clinical trial to test the stutter-stopping ability of pagoclone, a drug that boosts activity of the neurotransmitter GABA. (Maguire acknowledges receiving consulting fees and research support from the company that makes the drug as well as from Eli Lilly and Co., the maker of



## Drugs may boost old-school therapy for stutterers.

olanzapine.) "It's a great thing to try," says Dennis Drayna, a geneticist who studies stuttering at the National Institute on Deafness and Other Communication Disorders in Bethesda, Maryland.

Researchers have long sought drugs to treat stuttering, with mixed results, Drayna says, but given its prevalence, "a good pharmacological therapy would be a great advance."

## Into the Woods

Looking for historical maps of Spanish woodlands? Curious about which invasive species have put down roots in Estonia's boreal forest? Drop by the newly sprouted Euroforest Portal, from the European Forest Institute and Finland's University of Joensuu.

Visitors will find hundreds of annotated links to forest information for more than 40 countries. You can check the results of Germany's most recent forest inventory, browse an atlas of Russia's remaining pristine forests, or read a World Wildlife Fund report on Europe's involvement in the illegal logging trade. For students, the site also lists opportunities for research and training in forestry. >>

[forestportal.efi.int](http://forestportal.efi.int)



## Fending Off a Killer

Boys have amused themselves for ages burning holes in leaves—or roasting the odd ant—by concentrating sunlight through a hand lens. The same technique may someday save civilization from destruction. A research team at the University of Glasgow in the U.K. has analyzed nine methods proposed for deflecting an asteroid from a collision course with Earth. The winner: concentrating sunlight on the asteroid to create a jet of hot gas that would nudge it off course.

The Glasgow group, led by space systems engineer Massimiliano Vasile, considered everything from hitting the asteroid with a speeding projectile to mounting a rocket on it. Most practical were asteroid-orbiting light-focusing mirrors and nearby nuclear blasts, they concluded in a presentation early this month. "We preferred the solar solution," says Vasile. "It's as effective as nuclear and less risky," one risk with nuclear being shattering the target into debris that could then strike Earth like a shotgun blast.

A swarm of 20-meter "mirror bees" could be launched within 20 years, the group says. The most important lesson from the work, says planetary physicist Jay Melosh of the University of Arizona, Tucson, is "to realize there are viable non-nuclear options for deflecting asteroids."



## "Mirror bees" sting an Earth-menacing intruder.

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