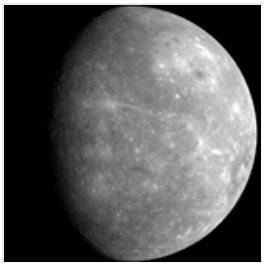
*Science*Shots

Smelly seeds. Amazonian ants know a good seed when they smell it. The ants (*Camponotus femoratus*) gather seeds from a relative of the black pepper plant and bring them to their nests, which hang from trees. The growing plants keep the nests from falling apart, and the ants fertilize the plants. So, how do the two species find each other on the forest floor? Researchers report online 22 January in the *Proceedings of the National Academy of Sciences* that they fooled the ants into approaching and picking up the wrong seeds by coating the seeds with an extract from the black pepper relative. Most ant-dispersed seeds offer a nutritional reward that ants can sense up close, but this is the first example of odorous seeds that attract ants from far away. *(Photo: PNAS)*

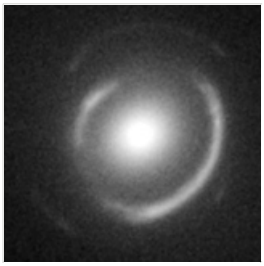
Scents and sensibility. Move over, James Bond, squirrels are going undercover. The bushy-tailed rodents chew on the shed skins of rattlesnakes and then immediately lick themselves, which has prompted researchers to suspect that the snake scent acts as either a camouflage or an insecticide. Now a study published online 15 January in *Proceedings of the Royal Society B* shows that rattlesnakes are less interested in squirrels when they sport eau de reptile. (The odor was useless for repelling fleas). Next up: figuring out whether squirrels rub themselves with weasel secretions for the same reason. *(Photo: Barbara Clucas)*

Faux fruit. Berry pickers beware. Scientists have discovered a parasitic worm that infects the giant gliding ant (*Cephalotes atratus*) and turns its rear end bright red so that it resembles a ripe, juicy berry. And if that's not enough, the worm lays hundreds of eggs that somehow make the ant wave its rosy rump in the air. This tricks birds into eating the unpalatable insect and spreading the parasite via their feces. The bird poop is then collected again by ants, fed to their young, and the cycle starts anew. The transformation is the first example of parasites causing fruit mimicry, a team reports in the April issue of *The American Naturalist*. *(Photo: Steve Yanoviak)*

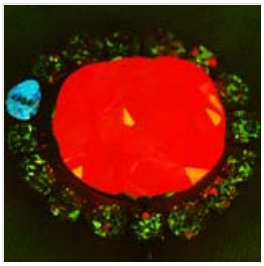


The dark side. On 15 January, researchers got their first close-up view of this side of Mercury after the MESSENGER spacecraft made the first flyby of the planet in 33 years. Always in the dark during past missions, this hemisphere sports the giant impact scar called Caloris basin (upper right). The contrast between the scar's brighter interior--revealed for the first time--and darker surroundings suggests that the asteroid or comet impact that formed the basin churned deep, otherwise undetectable rock to the surface where MESSENGER can decipher its composition. The craft has two more flybys of Mercury before it settles into orbit around the planet in 2011. *(Photo: NASA/Johns Hopkins University Applied Physics Laboratory/Carnegie Institution of Washington)*

All that glimmers. Tiny crystals of guanine make fish skin sparkle in the sun, helping the creatures blend in with the shimmering water. Now a team of researchers has found that fish optimize the shape of these crystals, growing them into thin plates instead of more boxy prisms. When the plates are stacked parallel to the fish's scales, they create this iridescent glow, researchers report in the January issue of *Crystal Growth and Design*. *(Photo: Stephen Frink/CORBIS)*

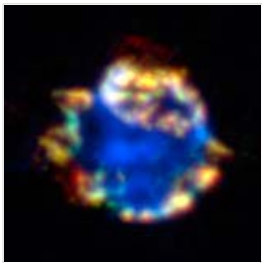


Ring, ring--Einstein's calling. The Hubble Space Telescope has snapped the first picture of a double Einstein ring, an extremely rare cosmic mirage predicted by Albert Einstein in the theory of general relativity. Three galaxies--respectively, 2 billion, 6 billion, and 11 billion light-years away--lie exactly behind each other as seen from Earth. The light from the more distant galaxies is bent by the gravity of the nearer one, creating the two nested rings. If more of these double Einstein rings are found, they may provide clues to how the expansion rate of the universe has changed over time. The image debuted 10 January at the annual meeting of the American Astronomical Society. *(Photo: NASA/ESA)*



Telltale glow. As if to confirm its reputation as a cursed gem, the Hope Diamond sometimes burns red. Scientists have long thought that this phosphorescence, stimulated by ultraviolet (UV) light, was unique to the world's largest blue diamond. But researchers report in the January issue of *Geology* that all natural blue diamonds, including the Hope, emit both red and blue-green light after UV exposure; it's just that in most diamonds, the stronger blue light masks the crimson glow. The variation probably arises from traces of boron and nitrogen and could be used to identify and authenticate diamonds, the researchers say. *(Photo: John Nels Hatleberg)*

Gimme shelter. Even plants need protection when it pours. Falling rain can wash away or damage pollen, which is crucial for carrying sperm from one flower to another. So the dove tree, *Davidia involucrata*, does something sensible: It forms an umbrella over its pollen with curved white leaves called bracts. The strategy works: When researchers removed the bracts, a single day of rain stripped away 8% of the plant's pollen. The bracts' white color also attracts pollinators, the team reports in the January issue of *The American Naturalist*, suggesting that the arboreal rain gear aids reproduction on dry days, too. *(Photo: Shuang-Quan Huang)*



10,000 Earths. That's how much potential planetary material astronomers have discovered in the dusty remnants of supernova Cassiopeia A, about 11,000 light-years away in the constellation of the same name. This composite image, taken in infrared light by the Spitzer Space Telescope and released on 20 December, reveals for the first time the materials (in red) needed to form a new planetary system--including silicon, iron, carbon, and aluminum. The find clinches the long-standing but unproven idea that the explosions of supermassive stars throughout the eons have forged the heavier elements needed for rocky bodies--and human beings--that were missing from the universe as products of the big bang nearly 14 billion years ago. *(Image: NASA/JPL-Caltech)*

Hot stuff. The female Barbary macaque isn't shy. Known to be promiscuous, she solicits sex by swinging her hindquarters shamelessly in the faces of possible suitors. But the lasciviousness doesn't end there: Once the male mounts, the female begins calling, ramping up the pitch and rate to encourage her mate to pick up the pace and improve the likelihood of ejaculation. The findings, reported online 18 December in the *Proceedings of the Royal Society B*, suggest that rather than an advertisement of fertility, as previously thought, the calls are the female's way of getting as much sperm from as many mates as possible. *(Photo: Dana Pfefferle)*

Cosmic fire hose. Don't even think about standing on a planet in the path of this energetic jet of radiation and particles. The burst, depicted in this artist's conception released 17 December, is shooting forth from a supermassive black hole in one galaxy and slamming through to a neighboring galaxy, both about 1.4 billion light-years from Earth. Astronomers studying the phenomenon think it's a "bad news/good news" situation. The jet's radiation is powerful enough to fry any unfortunate planet lying along its 1.7-million light-year length. But its particle stream eventually will compress the neighbor's interstellar clouds enough to spark a new generation of stars. *(Image: NASA/CXC/M. Weiss)*

Meow!?! A kitten mewing or a baby crying, there's not much difference as far as your brain is concerned. When researchers ran magnetic resonance imaging scans on people exposed to an array of positive and negative cat, monkey, and human sounds, they discovered that sad animal calls were as likely to trigger activity in the brain's orbitofrontal cortex--a region responsible for decision-making--as were sad sounds coming from humans. This indicates, the team reports in the *Proceedings of the Royal Society B*, that the brain's response to emotional cues is more similar among the species than previously thought. *(Photo: D. Grimm)*

Jumping jerboas! With its elephant ears, kangaroo legs, and piglike nose, this palm-sized rodent may look wildly out of proportion, but it's well adapted for the deserts of northern China and southern Mongolia. The long-eared jerboa (*Euchoreutes naso*) burrows during the day, emerges at night, and can jump straight up as high as a meter, more than 10 times its height. Yet researchers know little else about the creature, which is listed as endangered by the World Conservation Union. That may change thanks to this footage (video1, video2)--captured by the Zoological Society of London and released on 10 December--the first of the long-eared jerboa in the wild. *(Photo: Jonathan Baillie, Zoological Society of London)*

A familiar smell. Why count heads when a whiff of urine will do? According to a study reported online 4 December in *Biology Letters*, elephants rely on scent to keep track of their kin. When researchers relocated pee-drenched dirt around Amboseli National Park in Kenya, female elephants at the front of a roaming group showed the most interest when the transferred tinkle belonged to either a relative not currently traveling with the group or a relative that was actually traveling behind the leader. The scent, researchers say, may have prompted the elephants to make a mental note: My sister or daughter has moved. *(Photo: R.W. Byrne)*

Outta here! Sir Isaac Newton, meet the white dwarf. In a dramatic display of the famous physicist's third law of motion, the white dwarfs astronomers have detected in this image are careening through space because they ejected much of their mass in the opposite direction. The dramatic weight loss resulted in the stars shedding their previous identities as red giants. Now they're jetting away from the cluster--NGC 6397--at speeds 50% faster than normal. The finding, announced 4 December, has helped astronomers figure out why there aren't more white dwarfs in such clusters, as models have predicted. *(Photo: NASA/ESA/H. Richer/University of British Columbia)*

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