



COOL IMAGES

Glow-in-the-Dark Clouds

These glowing wisps high in the Scottish sky are no ordinary clouds: They're noctilucent clouds, a name that means "shines at night." Thought to be made up of ice crystals illuminated by the sun, these mysterious clouds form about 82 kilometers above Earth in the frigid upper atmosphere—far above storm clouds and nearly as high as the aurora. Noctilucent clouds appear at twilight in summer, usually at high latitudes in places like Russia, Scotland, and Canada. In recent decades they've been spotted more often and farther south. That intrigues atmospheric scientists, as it suggests that the clouds might be tied to the buildup of humanmade greenhouse gases. For more info and photos, visit the Noctilucent Cloud Observers' Home Page run by amateur astronomer Tom McEwan, who snapped the shot above in July 1997 from Glengarnock. www.kersland.u-net.com/nlc/nlchome.htm

HOT PICKS

Corpus to cosmos. Bone up on body parts with the classic *Gray's Anatomy*, or read Einstein's popular explanation of his ideas in his 1920 *Relativity: The Special and General Theory* at this site posting free online books. Other science tidbits can be gleaned from an online encyclopedia and book of quotations. www.bartleby.com

Jell-O science. So-called "sol-gel" chemistry involves drying a solution into a gel to make everything from glasses to insulators and biomaterials. The Sol-Gel Gateway offers articles on new research and methods, a researcher directory, links to tutorials and books, and forums. www.solgel.com

Crossing the channel. This Web textbook on nerve impulses is packed with interactive simulations of ion channels—the proteins that shuttle ions across the nerve cell membrane. Click to see demos of diffusion across membranes, a propagating action potential, sodium and potassium channels in action, and more. Reach related sites through the linked ion channel Web ring. pb010.anes.ucla.edu

NET NEWS

Animal Activists Win Domain Name Battle

PETA—that is, People Eating Tasty Animals—has lost its domain name (peta.org), the culmination of a 4-year battle with the better known People for the Ethical Treatment of Animals (PETA). A federal judge in Alexandria, Virginia, ruled on 12 June that the site owner, Mike Doughney, was guilty of trademark infringement and cybersquatting—snapping up someone else's name in hopes of selling it.

In 1996, Doughney, a suburban Maryland Internet entrepreneur, set up what he calls a "parody" Web site, which describes itself as "a resource for those who enjoy eating meat, wearing fur and leather, hunting, and the fruits of scientific research (and more!)" (*Science*,

NETWATCH

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19 January 1996, p. 297). PETA, presently at www.peta-online.org, promptly complained, and the name "peta.org" was put on hold by the domain name registrar, Network Solutions Inc. Then last year, PETA sued under the newly passed Anticybersquatting Consumer Protection Act, arguing that Doughney was misleading people and profiting from the PETA name.

Doughney, co-founder of a group called the Domain Name Rights Coalition based in Herndon, Virginia (www.domain-name.org), says this is a free speech matter, and he's appealing the ruling. He's not all that interested in animal rights these days, he says. But his PETA site, now at mtd.com/tasty, still gets hits even though he hasn't updated it for 4 years.

SITE VISIT

When Snails Attack

No mere garden grazers, the tropical marine snails called cone shells are hunters that launch harpoons tipped with a paralyzing poison at their prey and enemies. Long collected for their elaborately patterned shells, these mollusks have attracted a new set of fans among biochemists and molecular biologists, who are finding benign uses for cone shell venom. One toxic snail protein is being tested in clinical trials, for instance, as a stroke treatment and a nonaddictive alternative to morphine for relieving severe pain.

For a fascinating roundup of cone shell biochemistry, ecology, lore, and links, pay a visit to the Cone Shell and Conotoxins Home Page, created 5 years ago by neurochemist Bruce Livett of the University of Melbourne in Australia. Researchers may want to seek out a growing bibliography of cone shell papers, pages offering molecular structures of snail toxins, or the site's discussion group. Also valuable is the "What's New" section, where Livett posts everything from abstracts and meeting notices to links to popular articles and online museum exhibits.

Cone shell poisonings are rare—only about 30 deaths are known—but the site offers plenty of info about this intriguing topic, which Livett says is "a painless death." Don't miss the video clips of cone shells, including a sequence in which the snail's mouth opens like an umbrella to engulf a squirming fish. For a more sedate experience, browse photos of striking specimens.

grimwade.biochem.unimelb.edu.au/cone



Science ONLINE

In this week's issue, Jager *et al.* report the development of what may be the world's tiniest robot yet: a microfabricated arm that can manipulate objects the width of a human hair. *Science Online* features five video clips of the microrobot arm in action—flexing its minuscule fingers, rotating at the "wrist," and grasping glass beads a mere 100 micrometers in diameter. www.sciencemag.org/cgi/content/full/288/5475/2335

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