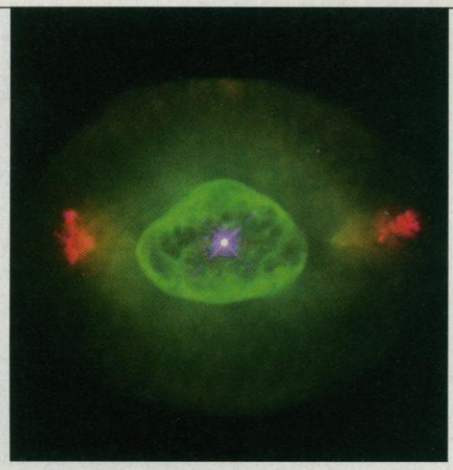
NETWATCH

edited by LAURA HELMUTH



COOL IMAGES

Eyes of Flame

Thousands of years ago a dying star coughed up the gases now forming the "white" of this so-called blinking eye nebula, formally known as NGC6826. Now a hot wind from the star's smoldering remnants is pushing a newer bubble of gas into the dissipating older one. Astronomers are still debating the cause of the red streaks shooting from the white of the eye.

This image and nearly 80 more are showcased in the Images of Galactic Planetary Nebulae site* compiled by astronomers Arsen Hajian of the U.S. Naval Observatory and Yervant Terzian of Cornell University. These exotic structures got the "planetary" in their name from their relatively bright colors, which reminded early astronomers of planets. In their dying throes, medium-sized stars swell to many times their original size before collapsing under their own gravity into orbs of iron, carbon, and oxygen called white dwarves. Not all matter sticks to the central remnant, however; some bounces off and puffs away to linger as a nebula for tens of thousands of years.

One of astronomy's major riddles, Hajian says, is why these nebulae aren't perfectly round. "There are butterflies, ellipses, footballs, all kinds of goofy shapes," he says. Researchers have suggested that a Jupiter-sized planet's gravity might stretch a nebula; alternatively, a binary star system or a spinning star could spew out irregularly shaped nebulae. Planetary nebulae foreshadow our own solar system's fate: Five billion years from now, after the bloated sun has incinerated Earth, it should also collapse and spin off a nebula that will be beautiful, perhaps, to the eye of some distant beholder.

* aries.usno.navy.mil:80/ad_home/pne

NET NEWS

Building a Brain Trust

You needn't be a brainiac, but if you have an abiding interest in cognitive science, become a charter member of a new online club devoted to the subject. CogNet,* a production of the Massachusetts Institute of Technology, is under construction but operational—and free—until September 2000. Join now to get discounts on books and journals and have a say in how the site develops.

CogNet offers more perks than most virtual academic communities, including a searchable library of full-text journal articles and books, online utilities for creating and posting a CV, job listings, news updates, bibliography-building programs, and an almanac of programs, seminars, and lecture series.

The site's most stimulating locale promises to be the Forum. Here members—from psychologists to computer scientists to physiologists—debate theories, review books, and pose questions. One current discussion is hashing out how the brain's language centers might have evolved. Like protowings that could not help a bird ancestor fly, it's not obvious how protogrammar areas of the brain evolved before humans could speak. Talk is cheap now, but joining next September will probably cost you about $30.

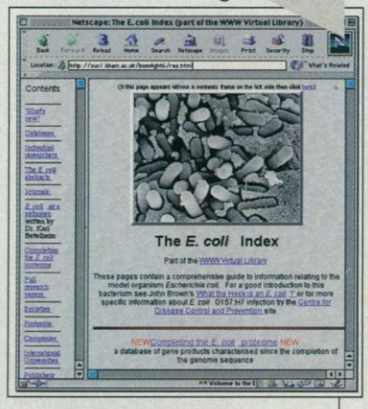
* cognet.mit.edu/welcome.html

SITE VISIT

Good Bug, Bad Bug

Escherichia coli bacteria have fallen into ill repute thanks to a particularly nasty strain, O157:H7, that in the last few years has killed several children who ate infected undercooked meat or unpasteurized milk or juice and sickened thousands of more people in the United States. Most strains, however, carry on unnoticed in our guts, with a few even helping us stay healthy by making vitamins K and B-complex.

sun1.bham.ac.uk/bcm4ght6/res.html



To get better acquainted with the many faces of *E. coli*, pay a visit to the *E. coli* Index. There, microbiologist Gavin H. Thomas of the John Innes Centre in Norwich, U.K., has posted a few primers on the bug—including an essay entitled "What the heck is *E. coli*?"—and a teeming colony of resources for scientists, including links to *E. coli* databanks, updates on proteins characterized since the *E. coli* genome was sequenced in 1997, abstracts from conferences, and protocols for various lab techniques. A Who's Who of *E. coli* microbiology gives a rundown on which group is up to what research. No other bacterium has been as closely studied as *E. coli*, which Thomas says stands the best chance among bacteria of having its biological riddle completely unravelled.

HOT PICKS

The next best thing to being there. Want to hike up the Grand Teton, dig in the Burgess Shale, or watch glaciers calve on the antarctic coast? Don't call your travel agent, simply log onto the Web and visit this University of Houston, Texas, site for virtual geology field trips. www.uh.edu/~jbutler/anon/anontrips.html

Tallying your daylight savings. For fraction-of-a-second precision, synchronize your watch with the time kept by the National Institute of Standards and Technology. Here the keepers of atomic clocks can give you the exact Coordinated Universal Time for a chosen U.S. time zone. An accompanying error estimate accounts for lost tenths of seconds the signal spends ricocheting across the Internet. www.time.gov

Science ONLINE

If you don't feel like waiting until today to find out which science sites and Internet news are featured in NetWatch, visit *Science*NOW, *Science*'s daily news service. Subscribers can now get sneak previews of Friday's NetWatch earlier in the week. www.sciencenow.org

Send Internet news and great Web site suggestions to netwatch@aaas.org

CREDITS: (TOP) BRUCE BALICK