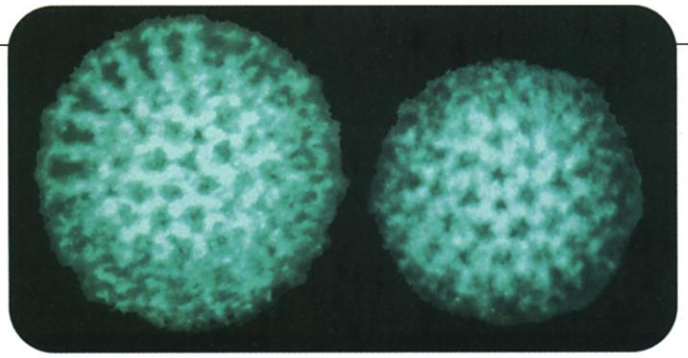
# NETWATCH

edited by JOCELYN KAISER



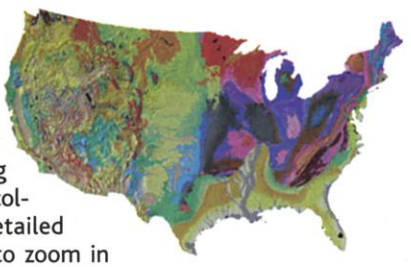
IMAGES

## Virus Portraits

"After many, many years of peering at virus particles through the electron microscope, I have still not ceased to be amazed and excited by the precision and intricacy of design in something so very, very small." So writes Linda Stannard of the University of Cape Town in South Africa on her Virus Ultrastructure site,* a tutorial that shares her fascination with these capsules of genetic material, half a billion of which could fit on the head of a pin. Above, for example, are the 75-nanometer-across outer and inner protein shells, or capsids, of a rotavirus, an RNA-containing virus best known for leading to diarrhea. Besides such classic icosahedral soccer balls, check out ghostly micrographs of other animal viruses such as helically wound paramyxoviruses, which cause measles and mumps.

* www.uct.ac.za/depts/mmi/stannard/linda.html

HOT PICKS



**What a relief!** Take a virtual jaunt across 2.6 billion years of U.S. geological history at this Web version of a stunning new map that combines color geologic zones and detailed topography. Follow links to zoom in on dozens of features—from the ribbon of granite and metamorphic rocks at the bottom of the Grand Canyon, to fingerlike Cape Cod and Long Island, formed by terminal glacial moraines. Or click on a geological timeline to pull up continental maps of rocks from a single period. tapestry.usgs.gov

**Best of biochemistry.** Need to review the Krebs cycle or see an amino acid in 3D? This site, which accompanies a biochemistry textbook, offers a terrific list of links ranging from molecular models to online texts, molecular biology quizzes, and enzyme databases. www.harcourtcollege.com/chem/biochem/GarrettGrisham/WebLinks/WebLinks.html

NET NEWS

## Free Articles Site Debuts

In the latest experiment in free access to biomedical research articles, a British publisher later this month will launch a Web site providing peer-reviewed research papers at no cost to authors or readers. BioMed Central has some top scientists as supporters, but even they admit it may be hard to convince researchers to submit their work to unknown, digital-only journals.

BioMed Central (www.biomedcentral.com) is the brainchild of Current Science Group chair Vitek Tracz, who's been talking it up for the past year. The site will publish peer-reviewed primary research in around 40 subjects ranging from biochemistry to urology; it also plans to post preprints eventually. The loosely termed "journals," which are still forming editorial boards, will begin soliciting manuscripts later this month. The attraction for authors: No page charges (at least initially) or cost to readers, and authors will retain copyright. Tracz also promises speedy publication, with articles instantly archived in the National Institutes of Health's (NIH's) PubMed and the full-text PubMed Central. He plans to make money from ads and by charging for material such as news and reviews.

Attracting papers, however, may be tough: "They have to establish enough prestige that a young assistant professor is not risking their career by publishing there," says Steve Hyman, director of the National Institute of Mental Health. Hyman is among several prominent advisers to the project, including Harold Varmus, former NIH director and head of the Memorial Sloan-Kettering Cancer Center in New York City, who calls it "an incredibly interesting experiment."

Hyman adds that BioMed Central is not the only game in town, pointing to ventures such as Highwire Press (publisher of *Science* Online), which recently announced free access to back issues of many journals. "The important thing is to get as much of the literature freely available on the Web as possible," Hyman says. To further the debate, BioMed Central is sponsoring a conference on free access at the New York Academy of Medicine from 6 to 7 July.

SITE VISIT

## Search for Alien Life

Researchers hoping to find life in space—and figure out how it got started on Earth—have spawned a whole new discipline: astrobiology. So far, the evidence for extraterrestrial life is scanty—a Mars meteorite containing what might be fossilized microbes, organic molecules sifted from interstellar dust. But two sites devoted to astrobiology exude the enthusiasm pervasive in this field, which embraces everything from the search for extrasolar planets to the study of microbes thriving in boiling volcanic vents.

Catering to students and casual visitors, NASA's main astrobiology site (astrobiology.arc.nasa.gov) offers video clips of interviews with researchers, feature stories, news releases, and an "Ask an Astrobiologist" bulletin board. A link leads to the home page for NASA's Astrobiology Institute, an 11-institution collaboration launched in 1998. The private Astrobiology Web (www.astrobiology.com) aims to be "truly a starting point" for astrobiologists, says site editor Keith Cowing. His site offers Cowing's own articles, a steady stream of daily astronomy news, and pointers to Web sites ranging from NASA's Microgravity News to futuristic sites devoted to "terraforming," or converting barren planets to support life.


Both sites also link to pages for scientific meetings, including last month's First Astrobiology Science Conference (*Science*, 28 April, p. 603). But neither offers much hard technical information. Perhaps that's understandable, as for the moment only Earth is known to harbor life.

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

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