NETWATCH

edited by JOCELYN KAISER

COOL IMAGES

Leather Look

This little fellow (*Chamaeleo ellioti*), a young chameleon who hails from Rwanda, is one of a slew of images linked to the Web's biggest reptile taxonomic database.* Zoologist turned yeast geneticist Peter Uetz started the project in 1995 at the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany, after concluding that "old-fashioned taxonomy is much neglected, compared to molecular biology," in studying life. Besides leading to photos of more than 1000 species, the EMBL Reptile Database serves up taxonomic information (such as synonyms and distribution) for nearly all 7900 or so living species in the Reptilia class—from crocs to pit vipers and threatened leatherback turtles.

* www.embl-heidelberg.de/~uetz/LivingReptiles.html

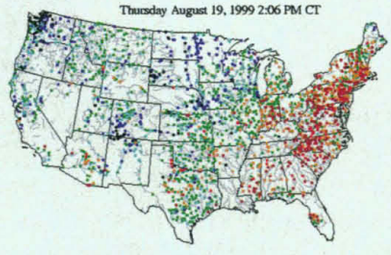
CREDIT: (TOP) PETER UETZ/UNIV. OF WASHINGTON

HOT PICKS

Dark secret. One of the cosmos's most intriguing phenomena is the focus of The Truth About Black Holes, the latest lesson at the Space Telescope Science Institute's education page. Illustrated with cool graphics and Hubble images, it answers questions such as, "Is a black hole really a hole?" and "How many kinds are there?" amazing-space.stsci.edu

MEDLINE robot. Want some help keeping up on the latest biomedical journal articles in your field? Fill in a form at this free site, and it will search MEDLINE each week for your key words and e-mail you the results. bioinformatics.weizmann.ac.il/cms

Water, water everywhere ... Keep tabs on the drought that's choking the eastern United States—or the floods last month in Las Vegas—at this U.S. Geological Survey (USGS) site, which features maps showing stream gage readings from 3000 sites color-coded to show high or low readings (right). You can also pull up actual streamflow data from decades or hours ago, USGS news bulletins, maps of acid rainfall, and other water info. water.usgs.gov



NET NEWS

Linking a Universe of Databases

Imagine a search engine that can dig into a slew of scientific databases scattered across the Internet, then return the info as downloadable data. Such a tool is in the works, for instance, to troll the specimen collections of museums (*Science*, 7 May, p. 888). And Robert McGrath's group at the National Center for Supercomputing Applications (NCSA) in Urbana-Champaign, Illinois, is developing software that can do the same for astronomy databases.

So far, the NCSA team's search tool, known as Emerge, is only hooked up to a few databases—including NASA's astrophysics abstracts collection and the NCSA's own Astronomy Digital Image Library. Using the Emerge software,* astronomers can search these resources not only by title or topic, but also by the position of a celestial object—say, a comet or galaxy. Eventually, the search options will include properties such as brightness and wavelength, says McGrath, who discussed the project last week at the Digital Libraries '99 meeting in Berkeley, California. The data come back in a series of files, like Web pages but in a special astronomy markup language, that includes a small image and a description of the data. The user can then download and work with the relevant portions.

Before the team can add more databases, a group of astronomers at NCSA, NASA, and elsewhere needs to hash out a standardized format for describing, say, a table or an image. "A lot of the problems tend to be sociological rather than technological," says Robert Wilensky, director of the digital libraries project at the University of California, Berkeley. McGrath's group is also adapting the same tool for the National Cancer Institute, which wants to link more than 50 databases with such information as case histories of genetic disorders.

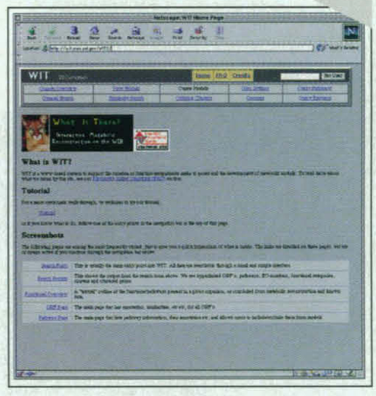
* webstar.ncsa.uiuc.edu/Project30

SITE VISIT

Untangling What Genes Do

As raw genetic code for everything from slime molds to people pours out from sequencing labs around the world, researchers are scrambling to figure out the role of various snippets of DNA in the cells of living organisms. A major station on the Web for doing this—particularly for microbes, with the largest number of completely sequenced genomes so far—is a site called WIT, which stands simply for What Is There?

wit.mcs.anl.gov/WIT2



Based at Argonne National Laboratory outside Chicago, the site has as its core nearly 3000 diagrams, rather like circuit board wiring designs, showing metabolic pathways—such as glycolysis or DNA replication. Visitors can input a DNA sequence and find out what pathways it might tie into, in both the organism it came from and in others. Or they can ask a more general question, such as "How is isoleucine produced in *Escherichia coli*?" The 39 genomes right now are mostly prokaryotes; the main users, says WIT designer Ross Overbeek, are industrial scientists engineering bacteria to perform such tasks as eating chemical waste. But more eukaryotic data—from plants and humans, for example—will be added eventually.

WIT is undergoing a transformation, as Overbeek has moved from Argonne to a company called Integrated Genomics, which plans to market a souped-up version of the database stocked with proprietary genome data. But the company expects to work with Argonne to maintain a free site, too. "There will be a public site one way or the other," Overbeek promises.

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