DATABASE

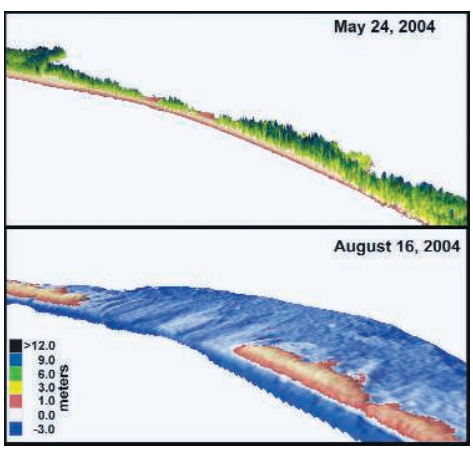
Carcinogen Hunt

Benzene and DDT make the list of compounds that cause cancer in lab animals, but caffeine doesn't. For an exhaustive roundup of this research, check out the Carcinogenic Potency Database from Lois Swirsky Gold, Bruce Ames, and colleagues at the University of California, Berkeley. The site collates data on the cancer-causing ability of 1485 compounds, drawing on more than 6000 animal tests from the 1950s through the 1990s. A chart atop each compound's page summarizes the results and, if they are positive, lists which organs develop tumors and the dose that spurred cancer in half of the animals studied. Read further for a synopsis of experiments on the substance. The authors are known for arguing that the risk to humans from synthetic chemicals is overstated, but their views don't color the site's coverage. >>
potency.berkeley.edu/cpdb.html

DATABASE

Wild Europe

Supervised by four natural history museums, Fauna Europaea is a taxonomic storehouse covering all of the continent's terrestrial and freshwater animals. It offers classification information and range maps for species such as the genet (*Genetta genetta*), a slinky cousin of the mongoose, and the parasitic flatworm *Diplozoon paradoxum*, which sups on the gills of fishes. >> www.faunaeur.org



CREDITS (TOP TO BOTTOM): NOAA OCEAN EXPLORER; USGS; MICHAEL THORPE/ASU

EDUCATION

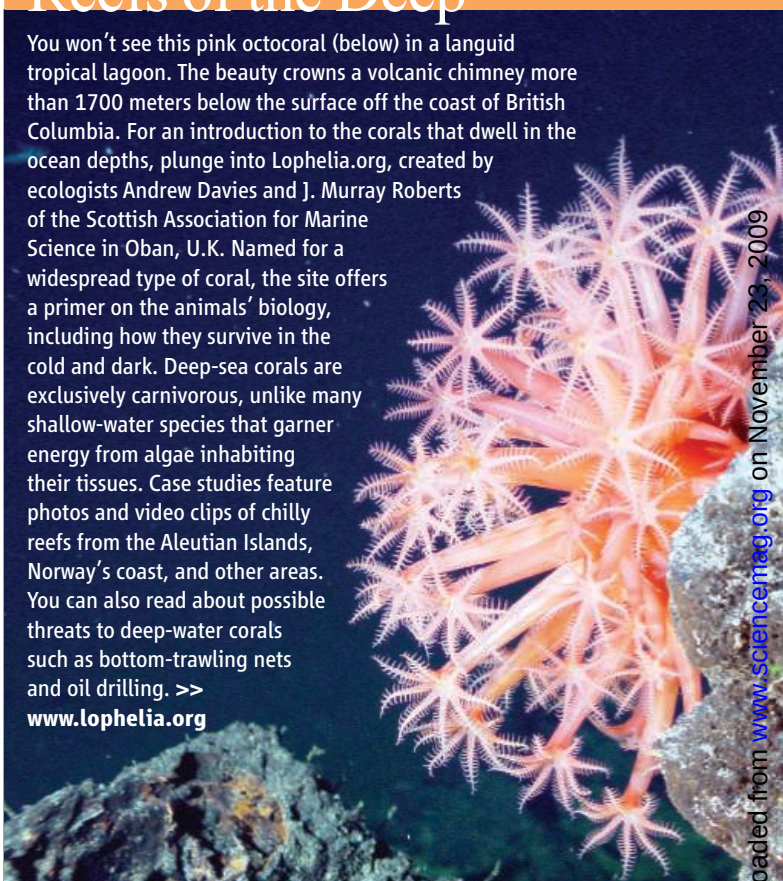
<< Earth, Wind, And Fire

The new Natural Hazards Gateway from the U.S. Geological Survey (USGS) offers students and the general public quick access to data on an almost biblical array of disasters, including hurricanes, earthquakes, wildfires, and floods. Each of the seven sections supplies fact sheets on a specific hazard and posts the latest alerts and activity reports. You'll also find plenty of links to other, mainly USGS, sites at which you can nab background information and up-to-date conditions. Wade into the flood section, for instance, and you'll be deluged by real-time stream-flow values from around the country. Another highlight is the hurricane impact studies, which feature dramatic images from recent storms. These before-and-after maps (above) based on laser altimetry, or lidar, show that Hurricane Charley severed Florida's North Captiva Island in 2004. >>
www.usgs.gov/hazards

RESOURCES

Reefs of the Deep

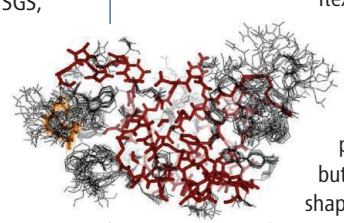
You won't see this pink octocoral (below) in a languid tropical lagoon. The beauty crowns a volcanic chimney more than 1700 meters below the surface off the coast of British Columbia. For an introduction to the corals that dwell in the ocean depths, plunge into Lophelia.org, created by ecologists Andrew Davies and J. Murray Roberts of the Scottish Association for Marine Science in Oban, U.K. Named for a widespread type of coral, the site offers a primer on the animals' biology, including how they survive in the cold and dark. Deep-sea corals are exclusively carnivorous, unlike many shallow-water species that garner energy from algae inhabiting their tissues. Case studies feature photos and video clips of chilly reefs from the Aleutian Islands, Norway's coast, and other areas. You can also read about possible threats to deep-water corals such as bottom-trawling nets and oil drilling. >>
www.lophelia.org



SOFTWARE

Flex Time

Like a beginning yoga student, some molecules just can't bend into certain positions. Chemical bonds and hydrophobic interactions can lock up a section of a protein or other macromolecule and prevent it from flexing and rotating. Researchers can home in on limber and stiff molecular segments with the program FIRST from biophysicist Michael Thorpe's group at Arizona State University, Tempe. Free for academics, the software doesn't predict how a protein or DNA strand will fold, but it can quickly determine the range of possible shapes. Such information is useful to scientists studying how a protein binds to a drug, or how the shell of a virus takes shape. In this image of the bacterial enzyme barnase (above), red denotes the rigid strands. >> flexweb.asu.edu



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