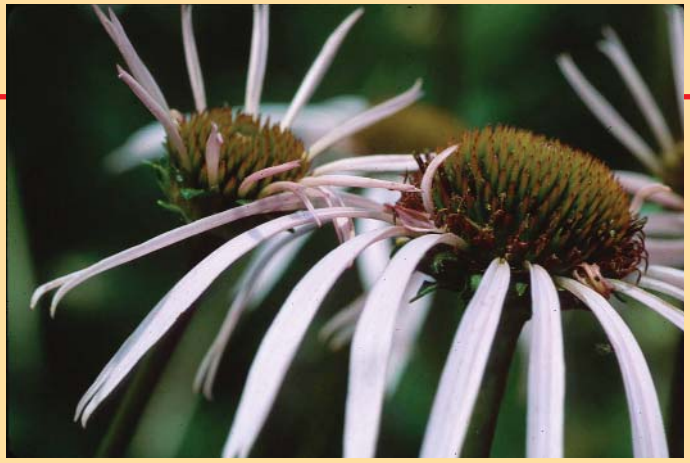
NetWatch

edited by Mitch Leslie



DATABASE

Web Haven for Imperiled Plants

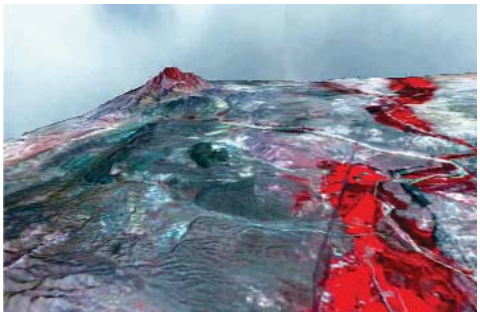
The smooth coneflower (*Echinacea laevigata*, above) was never abundant, but now it's confined to 23 populations in forest clearings across five states. It's one of many plant species in the southeastern United States that are losing out to human meddling, invasive weeds, or other threats. At SERPIN, a new taxonomic and conservation database, everyone from botany students to land managers can harvest information on the region's rare plants. Sponsored by a consortium of southeastern institutions, the site encompasses all state or federally listed species that grow in Georgia, the Carolinas, and northern and central Florida. The entry for each species supplies data on classification, habitat, and conservation status in each state, along with a bibliography. You can also find out which botanical gardens, herbaria, and other collections harbor specimens and which researchers are studying the plant.

www.serpin.org/index1.html

RESOURCES

Making Ecological Research Last

Unraveling the workings of an ecosystem and tracking how it changes over time can take decades. That's why the National Science Foundation set up the Long Term Ecological Research (LTER) program. Now 23 years old, the LTER Network offers scientists more than 2000 data sets from the project's 24 sites in the United States and Antarctica. LTER locales range from tundra on Alaska's North Slope to kelp forests off the California coast to tall grass prairie in Kansas (right, a satellite view of the Sevilleta LTER site, which straddles the Rio Grande in central New Mexico). The diversity in climate and terrain matches the diversity of available data sets—everything from the feeding habits of anole lizards in Puerto Rico to soil composition in Colorado grassland. Most of the data collections are open, but some require permission from the researcher.

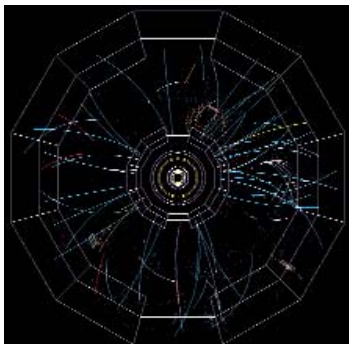


LTERnet.edu

EDUCATION

Go Nuclear

Experts and nuclear neophytes alike can sharpen their knowledge of radioactivity and the radioactive elements with this pair of sites. A good starting point is The Living Textbook of Nuclear Chemistry,* a collection of tutorials, papers, and other material hosted by Oregon State University, Corvallis. Visitors can study two texts on nuclear chemistry or download more than a dozen lab protocols, from dating uranium-containing minerals to using germanium radiation detectors. If you want to dig deeper, audio lectures explore advanced topics such as the synthesis of superheavy elements—the behemoths at the end of the periodic table, which scientists make by crashing smaller atoms into bulky elements like plutonium. For history buffs, 13 video clips look at developments in the field. For instance, Nobel laureate Glenn Seaborg recalls his group's discovery of plutonium in 1941 at the University of California, Berkeley, and the difficulties in isolating heavier elements.



If you can't remember the difference between parity and pair production, consult this glossary† of more than 50 nuclear science terms from Lawrence Berkeley National Laboratory in California. Animations depicting processes such as alpha decay and hydrogen burning help etch the definitions in your mind.

* livingtextbook.oregonstate.edu
† ie.lbl.gov/education/glossary/glossaryf.htm

EDUCATION

Bio Teacher's Assistant

Need a snazzy animation of gene regulation in bacteria to liven up a microbiology lecture? Looking for a lab on plant structure to replace the one you've used for the last 17 years? Check out the offerings at BiosciEdNet, which links to more than 1000 biological science teaching resources for high school, college, and grad school classes. The library of annotated links, sponsored by the American Association for the Advancement of Science, *Science*'s publisher, provides more than 150 lab exercises. Another standout is the wealth of animations, images, and videos that can help students visualize difficult concepts. Browsing or searching the listings requires free registration, as do some of the linked sites.

www.biosciednet.org/portal

Send site suggestions to netwatch@aaas.org. Archive: www.sciencemag.org/netwatch

CREDITS: (TOP TO BOTTOM) HEATHER ALLEY; BROOKHAVEN NATIONAL LABORATORY; JOYCE FRANCIS/STATE OF ARIZONA

RESOURCES: Making Ecological Research Last

Science **301** (5631), 285.
DOI: 10.1126/science.301.5631.285b