NETWATCH
edited by MITCH LESLIE

EXHIBITS

Hooked on Classic Texts

They don't make books like this anymore. Every copy of J. E. Smith's illustrated botanical treatise from the 1790s boasted 18 hand-colored engravings, such as this scarlet *Euphorbia* flower (*Euphorbia punicea*, left). The scanners at the Missouri Botanical Garden in St. Louis have been humming since 1995, as librarians have digitized Smith's magnum opus and 10 other rare, luxurious botanical works from the 18th and 19th centuries. The fruit of the work is a bibliophile's delight that also offers French botanist Charles Lemaire's monograph on cacti—only 11 printed copies still exist—as well as the mammoth, six-volume synopsis of French plants *La flore et la pomone Francaises*, from the 1830s. The site also provides brief bios of the authors and lets you ramble through a gallery containing all 1400 or so illustrations from the books.

ridgwaydb.mobot.org/mobot/rarebooks/index.asp

LINKS

Find Your Way

Whether you want to learn how to interpret the Beaufort Wind Strength Scale or find out the world's population on any day since 1 January 1970, GeoExplorer's hundreds of links can guide you to just the right geography resource. The site was created by Gavin Richards, a former Somerset, U.K., geography teacher now working as a consultant. Geared for British students at the secondary school level and above, the informative portal ranges across physical and human geography, gathering links—rated and ranked for difficulty—on topics as diverse as economic development, glaciology, coastal conservation, and the basics of hydroelectric power. Browsing the 20 sites that cover plate tectonics, for example, you can choose from a U.S. Geological Survey primer on the causes of plate motion, multiple maps illustrating past continental positions, and a drift calculator that computes how fast your home or office is moving.

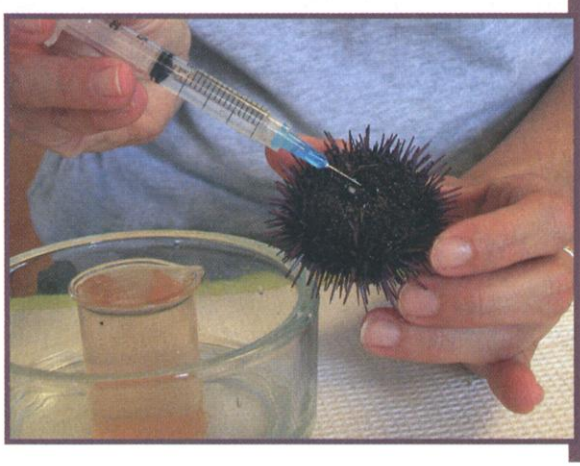
www.geoexplorer.co.uk

DATABASE

Genes That Make Us Wheeze

Like heart disease and diabetes, asthma springs from a conspiracy between genes and the environment. But pinning down the numerous genes that prime some people's airways to swell and slam shut has proven difficult. The Asthma Gene Database Web site serves up results from more than 800 studies that have tried to link particular genes to asthma or allergies. Matthias Wjst of the Institute for Epidemiology in Munich, Germany, oversees the site, which has been online for 5 years. With free registration, you can search individual chromosomes or the entire genome for genetic markers or particular mutations implicated in asthma or allergies. Find out the chromosomal location of each suspect bit of DNA and the abnormalities it may cause, as well as details of the study's methods. The site claims to include all papers published in the field and is updated weekly.

cooke.gsf.de/asthmagen/main.cfm



EDUCATION

When Gametes Collide

Spiky and rotund, an adult sea urchin looks more like a big, wet cocklebur than one of our close kin. Yet the early stages of development are very similar in humans and urchins, which makes these marine echinoderms excellent subjects for labs on embryology.

High school or college teachers who want to induct urchins into their courses can get plenty of wise guidance from this tutorial and lab manual hosted by Stanford University's Hopkins Marine Station. Started 5 years ago, the how-to explains the procedures for staging and observing sea urchin fertilization and early development. It describes, for example, how to stimulate the discharge of sperm and eggs with injections of potassium chloride (left), and how to house and feed the animals (if you can't obtain seaweed, they relish "urchin cookies" made from eggs, carrots, seawater, and agar). Projects include cookbook procedures and student-designed explorations, and seasoned teachers will appreciate this potential lifesaver: alternative experiments in case your best laid plans go awry. Adding pizzazz are animations that illustrate hard-to-visualize events, such as a sperm ramming through the gelatinous layer shielding the egg like an icebreaker plowing through frozen Arctic seas.

www.stanford.edu/group/Urchin/contents.html

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

CREDITS: (TOP TO BOTTOM) MISSOURI BOTANICAL GARDEN; STANFORD UNIVERSITY HOPKINS MARINE STATION