EDUCATION

Visualizing Acoustics

Why does a wooden baseball bat make a rich, satisfying “whack” when you hit the ball, while an aluminum bat gives off a wimpy “plink”? According to Acoustics and Vibration Animations, the solid wooden bat emits a range of frequencies of equal intensity, while the aluminum bat behaves like a hollow cylinder, its spectrum dominated by two high frequencies. Physics professor Dan Russell of Kettering University in Flint, Michigan, has loaded this site with easy-to-follow movies and illustrations that drive home basic concepts in acoustics and optics such as the Doppler effect, wave interference, and Fourier analysis. In the stills above, you’re not looking at some rock star’s abused instrument but the vibration of an electric guitar tapped with a small hammer, a student project included on the site.

www.kettering.edu/~drussell/Demos.html

TOOLS

Slime Searcher

If you work on the slime mold Dictyostelium, check out this new Web portal for searching the roughly 8000 genes of this slithering soil-dweller and popular model for cell biology. Compiled from the three Dictyostelium sequencing centers by the San Diego Supercomputer Center, the annotated database allows you to search for proteins by name and to hunt for genes by attributes such as length and position. You can also export the results into the center’s Biology WorkBench for further analysis.

dictyworkbench.sdsc.edu

RESOURCES

Beetlemania

Worshipped by the ancient Egyptians, treasured by modern collectors, and cursed by greenskeepers, scarabs account for about 10% of the world’s 350,000 beetle species. Although a few kinds of scarabs feast on lawns or crops, according to curator Mary Liz Jameson of the University of Nebraska State Museum in Lincoln, the majority are pollinators or part of “our unseen garbage patrol” that mulches dead animals and dung. Taxonomists and others interested in this widespread and diverse group should make a sweep through the museum’s Scarab Central site. The highlight is an illustrated guide to 23 New World scarab families and subfamilies that offers detailed physical descriptions and information on taxonomy, distribution, ecology, and larval forms. There’s also an identification key, a glossary, and a directory of scarab researchers with brief biographies.

www-museum.unl.edu/research/entomology/index.htm

Ha Ha, Fooled You

You’ve probably heard of Piltdown Man, the 500,000-year-old human ancestor with an ape-like jaw and a big brain that was unearthed in 1912. But what about the boy cloned in the 1970s in a millionaire’s secret tropical lab? These are among scores of scams, swindles, and pranks briefly described in the online Museum of Hoaxes. Alex Boese, a graduate student in science studies at the University of California, San Diego, has loaded this site with phony Internet start-ups—as well as various scientific deceptions. Although some of the hoaxes were amusing stunts, others misled for decades or centuries before being exposed. Only in 1953 did radioactive dating discredit Piltdown Man, for instance, which turned out to be the skull of a more recent human coupled with the jaw of an orangutan.

www.museumofhoaxes.com

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