

FUN

Science Jukebox

*The sun is a mass of incandescent gas
A giant nuclear furnace
Where hydrogen is built into helium
At a temperature of millions of degrees*

*Yo ho, it's hot, the sun is not
A place where we could live
But here on Earth there'd be no life
Without the light it gives*

That's a selection from "Why Does the Sun Shine," an educational ditty by Hy Zaret and Lou Singer, science's answer to Cole Porter. Although solar physics and other technical topics will never surpass romance and heartache as the favorite subjects of songwriters, they figure in a surprising number of compositions, as you'll learn at the entertaining site MASSIVE (Math And Science Song Information, Viewable Everywhere). The database from chemical engineer and occasional songwriter Greg Crowther of the University of Washington, Seattle, lists more than 1600 titles, from "The Song of the Tungara Frog" to "Carbon Is a Girl's Best Friend." Links whisk you to lyric sheets and audio snippets. Most composers and singers are obscure, but a few big names show up, including Monty Python and country singer Clint Black—who perform the same song (separately) about the immensity of the universe. For nonstop science tunes, you can also listen to MASSIVE radio.

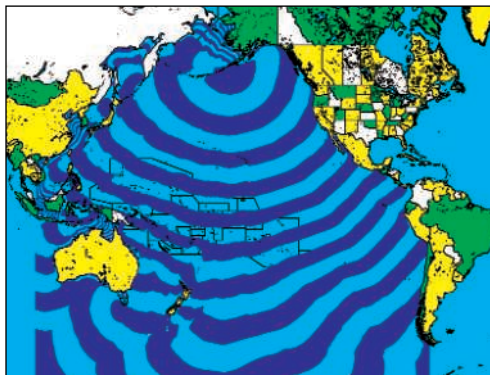
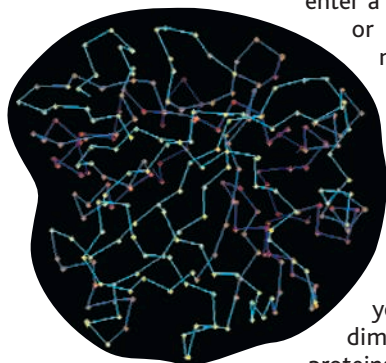
www.science-groove.org/MASSIVE

DATABASE

Protein Matchmaking

This collection of more than 50,000 protein structures provides a speedy way to contrast similar molecules. ProteinDBS lets you enter a Protein DataBank ID number or file of coordinates for a molecule such as carbonic anhydrase (left), which helps rid the body of carbon dioxide from metabolism. The search finds the 50 proteins most like your choice and allows you to make visual and statistical comparisons. For instance, you can superimpose three-dimensional portraits of two proteins or parse their sequences amino acid by amino acid. The site comes from computer scientist Chi-Ren Shyu of the University of Missouri, Columbia, and colleagues.

proteindbs.met.missouri.edu



RESOURCES

Waves of Destruction

On 1 April 1946, a strong earthquake hoisted the sea floor near the Aleutian Islands, unleashing 35-meter waves that rolled across the Pacific Ocean (left). The massive ripples were still 12 meters tall when they walloped Hawaii, killing 159 people. To learn more about the causes and

consequences of towering waves, visit the International Tsunami Information Center* in Honolulu, Hawaii. Tsunamis—which can result from earthquakes, volcanic eruptions, meteorite strikes, or other upheavals—arise worldwide but are most common in the Pacific because of its size and seismic activity. Along with data on recent events, check out vivid descriptions of tsunamis from the last 60 years and the gallery of devastation. For a quick overview that includes samples of nifty computer simulations, try this tsunami primer from the University of Washington.[†]

* www.prh.noaa.gov/itic

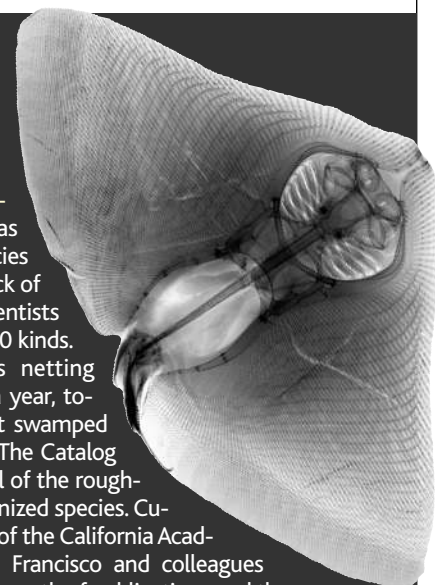
† www.geophys.washington.edu/tsunami/welcome.html

RESOURCES

All the Fish in the Sea

When pioneering taxonomist Carolus Linnaeus was cataloging all known species in the 1750s, keeping track of the fishes was easy; scientists had tallied only about 500 kinds. But with ichthyologists netting some 300 new species a year, today's researchers can get swamped without a guide such as The Catalog of Fishes, which covers all of the roughly 29,000 currently recognized species. Curator William Eschmeyer of the California Academy of Sciences in San Francisco and colleagues trawled nearly 250 years' worth of publications and threw back defunct and dubious species names, creating the first comprehensive compilation of fish taxonomy since Linnaeus. The site also links to other Cal Academy ichthyology resources, such as an image database stocked with photos and x-rays of most of the academy's more than 1600 type specimens (the original examples used to describe the species). Above, the ray *Pteroplatea rava* from Mexico.

www.calacademy.org/research/ichthyology/catalog/fishcatsearch.html



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