



## EDUCATION

### Bodies in Motion

From Kepler's planetary laws to standing waves, this collection of animations puts concepts from beginning physics and astronomy into motion. Creator Michael Gallis, a physics professor at Pennsylvania State University in Schuylkill, has gathered more than 100 brief movies in categories such as mechanics, electricity and magnetism, and optics. Students can stretch a cylinder to discover how to calculate Young's modulus of elasticity or follow the moon's orbit to learn why eclipses are so rare. Above, interference between two waves that reflect off the walls of a container spawns this rippling pattern.

[phys23p.sl.psu.edu/phys\\_anim/Phys\\_anim.htm](http://phys23p.sl.psu.edu/phys_anim/Phys_anim.htm)

## TOOLS

### Where the Fossils Are

Mammal diversity hit its zenith during the Miocene epoch, when horses, camels, rhinos, saber-toothed cats, and a wealth of other furry creatures roamed North America. Researchers who want to tease out patterns in mammal evolution and distribution can dig into The Miocene Mammal Mapping Project from the University of California, Berkeley. The site enables users to pinpoint mammal fossil localities from the Miocene and late Oligocene epochs, between 30 million and 5 million years ago. The database, a 5-year project that was completed last month, houses information on more than 3400 sites in the western United States gleaned from the literature and unpublished records. Users can map fossil finds by categories that include formation, species, and age. Clicking on a locality summons data such as the site's time range, environment type, and mammal groups.

[www.ucmp.berkeley.edu/miomap/index.html](http://www.ucmp.berkeley.edu/miomap/index.html)

## IMAGES

### Slip Sliding Away

Glaciers the world over are dwindling because of global warming and other factors, but one place where you'll see ice expanding is



this gallery from the National Snow and Ice Data Center in Boulder, Colorado. The collection recently tripled in size and now showcases more than 3000 photos of U.S. and Canadian glaciers, snapped between 1883 and 1995. Shots such as this 1931 picture of Alaska's Columbia glacier (left), which has retreated some 15 kilometers in the last 25 years, can provide a historical baseline for studies of climate change

and ice dynamics. Visitors can download images or order free high-resolution photos through the site.

[nsidc.org/data/glacier\\_photo](http://nsidc.org/data/glacier_photo)

## DATABASES

### The Other Hepatitis

First identified in 1989, the hepatitis C virus lurks in about 4 million U.S. residents. The insidious pathogen can destroy the liver or provoke cancer; it's responsible for about 50% of liver tumors. This site from Los Alamos National Laboratory in New Mexico offers two databases for researchers interested in the virus. One database lets you troll more than 30,000 full and partial genome sequences from samples collected around the world. You can search by viral subtype, geographic location, route of infection, or other variables. Tools help you build evolutionary trees based on your own sequences and perform other analyses. The site's immunology database lists viral segments that trigger a response from T cells and describes antibodies that latch onto the virus.

[hcv.lanl.gov/content/hcv-db/index](http://hcv.lanl.gov/content/hcv-db/index)



## RESOURCES

### Underwater Invasion

Like more than 7 million people, droves of invasive organisms find the San Francisco Bay area congenial. More than 175 alien species have settled in the bay's waters, making it one of the world's hot spots for aquatic invaders. Meet many of these troublemakers at a new guide from the San Francisco Estuary Institute in Oakland.

The guide aims to help researchers and the general public identify and monitor invasive species. You can consult detailed profiles on new colonists such as the star sea squirt (*Botryllus schlosseri*; above), a European native, and the parasitic flatworm *Austrobilharzia variglandis* from the northern Atlantic Ocean. The pesky worm can incite a rash called swimmer's itch in people who contact it. "This is one of the first cases where we can document that an introduced species is negatively impacting public health" in the Bay Area, says site creator Andrew Cohen. He hopes to enlarge the guide to incorporate all the invasive species that have taken up residence along the West Coast.

[www.exoticguide.org](http://www.exoticguide.org)

Send site suggestions to [netwatch@aaas.org](mailto:netwatch@aaas.org). Archive: [www.sciencemag.org/netwatch](http://www.sciencemag.org/netwatch)