NETWATCH
edited by ERICA GOLDMAN

IMAGES

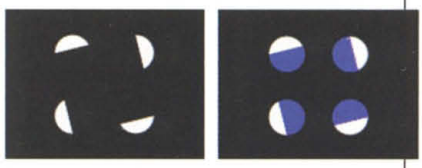
Insects, Insects, Everywhere

The Bugwood Network, a Web clearinghouse for information about forestry, entomology, forest health, and invasive species, has grown a new wing. Last month, it added its fourth image archive,* packed with more than 5400 insect images. The high-resolution digital pictures—such as that of the redheaded pine sawfly (above), a forest pest—are freely available for educational or nonprofit use. Each image includes taxonomic information, life history stage, and a description of whether the insect is native, invasive, or used for biological control. The insect archive joins existing forestry, invasive species, and agricultural image libraries. The Bugwood Network† is a collaborative effort between the University of Georgia, Athens, and government agencies such as the U.S. Department of Agriculture and the National Science Foundation (*Science*, 7 September 2001, p. 1735).

* www.insectimages.org
† www.bugwood.org

TUTORIAL

Is Seeing Believing?



To walk down a busy sidewalk without bumping into people left and right, your visual system has to correctly chart a flurry of motion. It is no easy proposition, according to a Web tutorial that uses a series of animations to illustrate the challenges that the visual system faces to interpret moving objects in a way that makes sense.

The site, created by Fauzia Mosca and Nicola Bruno at the University of Trieste, Italy, acquaints upper level students with the problems of motion perception and includes Web animations such as the breathing square (above) that reveal how the brain's motion sensors use information on time and space to overcome other limitations.

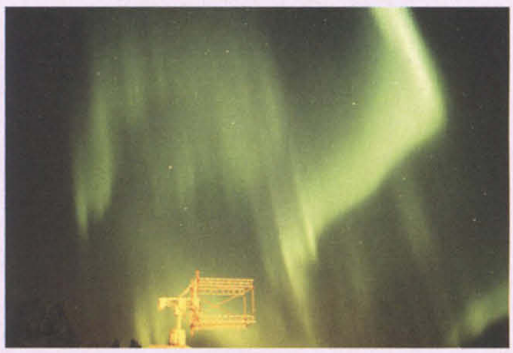
www.liv.ac.uk/~marcob/Trieste

EDUCATION

Illuminating the Northern Lights

In Norse mythology, the haunting lights of the Aurora Borealis symbolize a bridge that connects Earth to Åsgard, the home of the gods. In China, the aurora predicts forthcoming births; in Scandinavia it pays tribute to dead virgins. To find out more about how the aurora has captivated sky-gazers in northern climes and to learn about the science behind the show, check out the Web site Northern Lights.

Auroras occur when solar particles collide with atmospheric molecules, generating visible light (below). Northern Lights—developed as a joint venture between the Norwegian Space Centre in Oslo and Andøya Rocket Range in Andøy, Norway—delves into aurora science at a

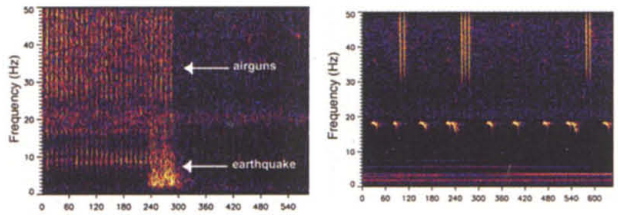


generally accessible level. A question-and-answer section encourages students to use the site for classroom projects, and a monthly photography contest targets those in pursuit of the aurora's artistic side. The photo-of-the-year winner gets a fully paid trip to Andøy during a northern lights festival in late February.

www.northern-lights.no

RESOURCES

Sea Sounds



Debate over how humanmade noise in the ocean affects marine mammals has made headlines, with the recent precedent-setting cancellation of a research cruise that was using sound to map the ocean floor and a court order blocking a new Navy sonar (*Science*, 8 November, p. 1155). For a closer look at ongoing studies that use and explore sound in the ocean, check out the National Oceanic and Atmospheric Administration's (NOAA's) Acoustic Monitoring Project Web site.*

The Acoustic Monitoring Project has performed continuous monitoring of ocean noise since 1991, using the Navy Sound Surveillance System and autonomous underwater hydrophones. Just plug in your desired latitude and longitude to receive hydrophone data from the East Pacific Rise, Mid-Atlantic Ridge, or North Pacific. The Web site also describes projects, ranging from those using sound to detect undersea earthquakes and monitor marine mammals to efforts to study the effects of noise on ocean life. The image shows a spectrogram of the sounds produced by a blue whale (right) compared to repeated noise from an air gun (left), fired in Nova Scotia but recorded more than 3500 kilometers away on the Mid-Atlantic Ridge. The site also includes a detailed underwater acoustics tutorial. A sister site,† developed as part of NOAA's Ocean Explorer program, offers a similar tutorial geared toward a more general audience.

* www.pmel.noaa.gov/vents/acoustics.html
† oceanexplorer.noaa.gov/explorations/sound01/sound01.html

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

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