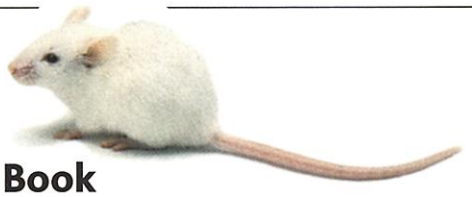
NETWATCH

edited by MITCH LESLIE



ONLINE TEXT

Mice by the Book

You don't need to scurry to a used bookstore to get your paws on *Mouse Genetics*, a reference by Lee Silver of Princeton University. A site from the Jackson Laboratory in Bar Harbor, Maine, provides the full text of this guide to using mice in genetic research, originally published in 1995 but now out of print.

Mice are a mainstay of genetics labs, and the book aims at an audience that ranges from students planning their first experiments to pros seeking answers to technical questions. Readers can bone up on topics such as selecting strains, record-keeping in breeding colonies, artificial insemination, the intricacies of genetic mapping, and creating transgenic animals. The Web version includes the original figures and tables, along with a few add-ons. For example, most references link to MEDLINE or the Jackson Laboratory's Mouse Genome Informatics database, which also offers backgrounders on genes mentioned in the text.

www.informatics.jax.org/silver

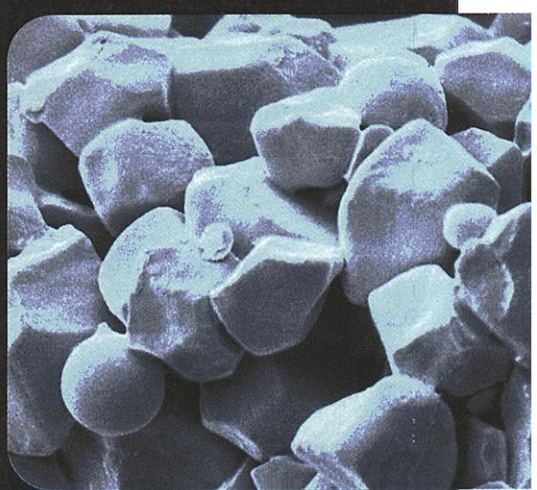
RESOURCES

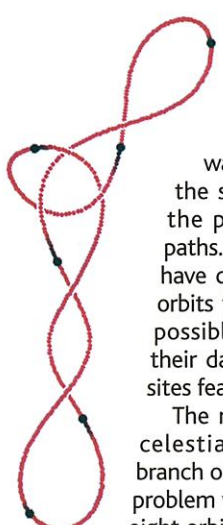
Food as You've Never Seen It

Chefs don't keep a microscope in the kitchen, but maybe they should. The microscopic characteristics of food contribute to attributes such as elasticity, firmness, and grittiness—and therefore to aesthetic appeal. Explore the fine structure of milk, yogurt, cheese, and other foods at this site created by Miloš Kaláb of the Southern Crop Protection and Food Research Centre in Guelph, Canada.

Kaláb has spent several decades probing various foods with electron microscopes, and here you'll find answers to questions such as why milk is opaque (it contains light-scattering particles of fat and protein) and how different manufacturing processes produce different kinds of cheese. Striking images appear in a gallery and scattered throughout the accounts. Highly magnified chocolate resembles wood shavings, for instance, whereas the starch from a grain of rice looks a bit like a pile of boulders (right). Guest experts have contributed more than a dozen backgrounders on topics such as how whipping keeps ice cream smooth. (It disperses air bubbles and ice crystals, thus making the mixture lighter and less lumpy.)

anka.livstek.lth.se:2080/microscopy/intro.htm





APPLETS

Planetary Ballet

What would the planets do without the sun's gravity? Most likely they'd wander off into space. But it's conceivable the solar system could stick together, with the planets traveling along nice, periodic paths. In the last 2 years, celestial theoreticians have come up with myriad possible planetary orbits for sunless systems. Get a feel for these possible paths, dubbed "choreographies" for their dancelike appearance, at this pair of Web sites featuring some nifty animations.

The new orbits represent a breakthrough in celestial mechanics, a notoriously difficult branch of mathematics. Experts first attacked the problem with the analysis of a three-body, figure-eight orbit (*Science*, 17 March 2000, p. 1911). Java applets created by Charlie McDowell of the University of California, Santa Cruz, animate the figure eight and various other orbits, with up to 99 planets waltzing through space.* More choreographies, plus a discussion of the underlying mathematics, are available at the What's New in Mathematics Web page of the American Mathematical Society.†

* **www.soe.ucsc.edu/~charlie/3body**

† **www.ams.org/new-in-math/cover/orbits1.html**

Send great Web site suggestions to netwatch@aaas.org

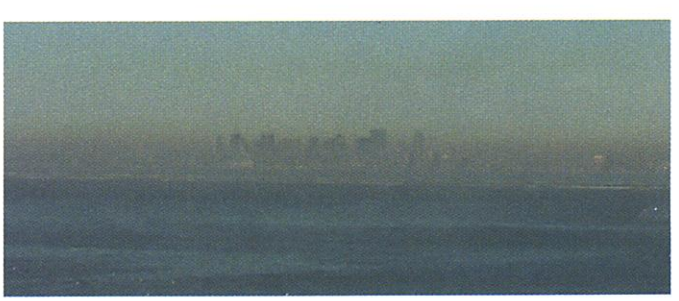
WEB CAMS

Having a Bad Air Day

Over the past decade, fine soot pollution known as $PM_{2.5}$ has become a major environmental health worry, sparking new federal regulations and a flurry of research on how these tiny particles can aggravate respiratory diseases and even kill. To help the public and researchers get a handle on this problem, Hazecam.net monitors real-time haze—part of which is made up of fine particles—at sites across the Northeastern United States.

Sponsored by eight state air-quality control divisions, the site's Web cams offer 15-minute snapshots of visibility at six urban and rural locations including Boston, New York City, and Mount Washington in New Hampshire. You can also get a historical perspective by perusing a gallery of good and bad air days, such as this murky shot of Boston from 8 March of this year. For each locale, Hazecam also displays real-time measurements of fine particles, ozone, and other pollutants.

www.hazecam.net



CREDITS: (CLOCKWISE FROM TOP) TACONIC FARMS; MILOŠ KALÁB, SOUTHERN CROP PROTECTION AND FOOD RESEARCH CENTRE; HAZECAM.NET