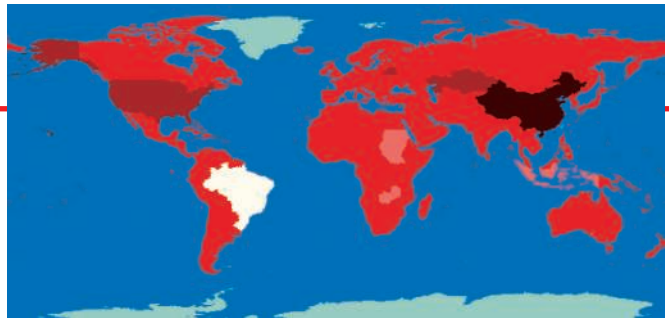
NetWatch

edited by Mitch Leslie



DATABASE

Planet Earth Checkup

Whether you're interested in the number of threatened plant species in various countries, changes in glacier mass, airborne lead levels, or the use of ozone-depleting compounds such as methyl bromide, check out the Global Data Portal from the U.N. Environment Programme. The site lets you download data on more than 450 economic and ecological variables or render them as a map, graph, or table. The chart above, for example, depicts the change in forest cover for different countries between 1990 and 2000, with Brazil showing the biggest loss and China recording gains. The figures collected here provide the underpinnings for the U.N.'s Global Environment Outlook, an occassional report on the biosphere's condition, and other summaries.

geodata.grid.unep.ch

LINKS

Math From the Ground Up

Researchers who specialize in the foundations of mathematics delve into deep topics such as set theory and proof theory to ensure that math rests on solid philosophical ground. For a comprehensive take on the subject, visit this site from Alexander Sakharov, a computer scientist and Web developer in Boston. Sakharov has arranged more than 50 links into chapters to create a virtual textbook, with writings from mathematicians, computer scientists, and other experts. The contributions—which include books, articles, and entries in references such as the *Stanford Encyclopedia of Philosophy*—probe topics like mathematical logic and axioms.

sakharov.net/foundation.html

RESOURCES

Taking the Sting Out of Bumblebee Taxonomy

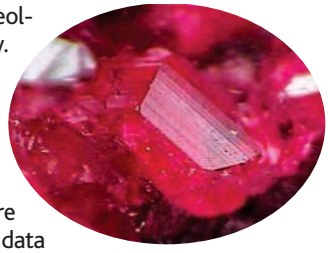
They may be as close to cuddly as insects can get, but bumblebees give taxonomists headaches because different species inhabiting the same area often look alike. For help navigating the group's treacherous taxonomy, make a beeline for this site from entomologist Paul Williams of the Natural History Museum in London. His checklist of world bumblebees—the first published since 1923—attempts to tidy up the nomenclatural mess. You can find out which types of bees live in North America and Europe or search the site by bioregions, such as eastern Asia. The checklists discuss valid and invalid names for each kind of bee. To aid identification, the entries also include photos of the male bees' genitalia, a key feature for differentiating species. Above, a male *Bombus asiaticus* prowls for a mate.

www.nhm.ac.uk/entomology/bombus/index.html

IMAGES

Mineral Mother Lode

These glittering crystals of roselite (below) owe their crimson hue to cobalt, which constitutes about 10% of their weight. Find out much more about roselite—from its chemical composition to the origin of its name—at Webmineral, an exhaustive database maintained by Houston, Texas–based geology consultant David Barthelmy. Since NetWatch's last visit (*Science*, 11 June 1999, p. 1731), this compendium of 4300 minerals has added photos for more than half the entries and Java applets that let you study each crystal's structure from multiple angles. You'll also find data such as the minerals' hardness rating, x-ray diffraction values, classification according to the Strunz and Dana systems, and other tidbits. For example, roselite isn't named for its ruddy color, but for Gustav Rose, a 19th century German mineralogist.



webmineral.com

DATABASE

All Together Now

To deduce a protein's function, researchers need to know everything from its structure and location in the cell to what molecules it interacts with. But this information resides in disparate databases that often use different terminology, and compiling it "can be a painful experience," says computer scientist Golan Yona of Cornell University. So Yona and his colleagues crafted Biozon, a database that merges the holdings of more than a dozen molecular biology collections, including SwissProt, KEGG, PDB, and BodyMap. The site lets you run searches that span different data types, such as finding 3D structures for all proteins that interact with the protein BRCA1, which is implicated in some breast cancers. The ability to compare results from different databases side by side also makes it easier to spot discrepancies.

biozon.org

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

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