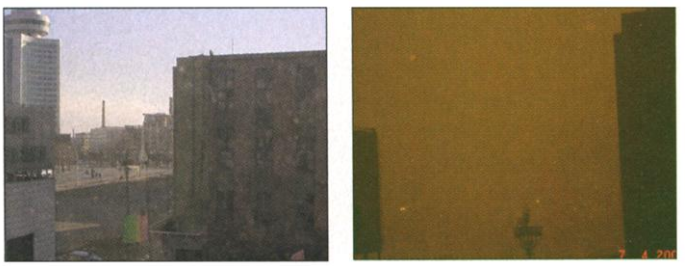
The Perfect Dust Storm

It's a sign of spring in Asia: Winds pour off the Siberian plateau, kick up dust from Mongolian and Chinese deserts, and loft it over the Pacific Ocean. The biggest such storm in 2 decades, replete with industrial chemicals, howled through in April, offering scientists a startling view of the global reach of pollutants.

Starting over the Gobi Desert, the storm spread rapidly over China, Korea, and Japan, its remnants reaching the west coast of North America within a week. The event coincided with Aerosol Characterization Experiment–Asia (ACE-Asia), a U.S.-led effort to study fine atmospheric particles, largely from China and Mongolia. Air-, land-, sea-, and space-based instruments produced the most detailed study yet of a dust storm and the aerosols it carries.



Chinese town before and after dust storm.

Early analysis, presented in San Francisco last week at a meeting of the American Geophysical Union, suggests that industrial soot from Asia polluted the dust to a surprising degree. Heavy particles dropped out of the clouds before they crossed the ocean, but dust particles coated with sulfuric acid, and fine aerosols such as mercury from space heaters and arsenic from smelters, traveled in the clouds for more than a week. The dust cloud was further polluted when sediments from a dried lake bed near Beijing whipped into the wind and triggered a secondary storm.

"This was one of the most remarkable dust events in my memory," says atmospheric chemist Joseph Prospero of the University of Miami in Florida. Harmful levels of pollutants persisted for thousands of kilometers, says atmospheric physicist Thomas Cahill of the University of California, Davis. Dust from Manchuria, he adds, this year produced "the highest level of arsenic we ever saw in Nevada."

INTEREST IN SCIENCE IN CHINA

	Men (%)	Women (%)
Agriculture	65	51
Pollution	56	49
Disaster prevention	45	39
Defense policy	44	24
Foreign policy	43	27
Science education	41	31
Scientific discoveries	40	27
New technologies	35	23
Economic policy	32	23
Medical discoveries	27	25
Space exploration	20	13
Nuclear power	17	11

Poll reflects the fact that China is still overwhelmingly rural.

Chinese Science Literacy

Scientific literacy in China is minimal, but it's climbing rapidly. A new nationwide survey finds that just 1.4% of the Chinese population is familiar with basic scientific concepts. That's pretty low compared with 17% in the United States—but it's seven times as high as in the last Chinese poll, in 1996. And public attitudes are increasingly favorable to scientists, who have replaced business leaders at the top of a list of most admired professions.

The survey of 5000 adults was carried out earlier this year by Li Daguang of the China Association for Science and Technology. University students topped the sample with a literacy rate of 11%, followed by 6% for professionals. Industrial workers and farmers brought up the rear, at 0.5% and 0.04%, respectively. The wealthier eastern regions of the country showed a literacy rate of 2.3%, compared with 0.6% in the undeveloped western region. Overall, men evinced considerably more interest in science than women.

Chinese citizens still make little use of libraries, museums, and zoos. Only 14% visit science or natural history museums, for example, compared with 30% in the United States. And only 1.6% of the sample uses the Internet to obtain scientific information. (The U.S. rate was 11% in 1999.) Li, who expressed dismay at the results, says he hopes they will spur government interest in increasing public exposure to science.

The Chinese survey is a modified version of one developed by Jon Miller, director of the Center for Biomedical Communications at Northwestern University in Evanston, Illinois.

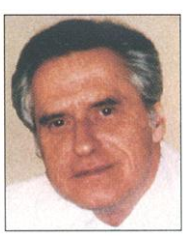
Japan Prize Boasts Firsts

The father of the World Wide Web and two developmental biologists have won the 2002 Japan Prize.

Tim Berners-Lee, 46, now at the Massachusetts Institute of Technology, will receive 50 million yen, about $416,000, for his contribution to the "advancement of civilization" by inventing the Web while at CERN, the European particle physics laboratory near Geneva. He's the youngest laureate in the 16-year history of the Japan Prize.

Berners-Lee

McLaren



Tarkowski

Anne McLaren, 74, of the Wellcome Trust and Cancer Research Campaign Institute, and Andrzej K. Tarkowski, 68, director of the Institute of Zoology at Warsaw University, will share another 50 million yen for their pioneering work in mammalian embryonic development. McLaren is the first woman to get the prize. Awards will be made at a ceremony in Tokyo in April.

Academic Life Tough on Family of Man

"[People with family responsibilities] are systematically disadvantaged by the way that jobs and work are structured within academic institutions. ... There, ironically, we face conditions that render the work of studying society largely incompatible with the work of maintaining and reproducing it. ... Certainly this is not unique to the academy, but is more broadly a condition of capitalist market relations as they've developed within patriarchal societies. ..."
—From recent statement, "Reproduction in (and of) the Profession of Anthropology," by members of the American Anthropological Association's Council on Anthropology and Reproduction.

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