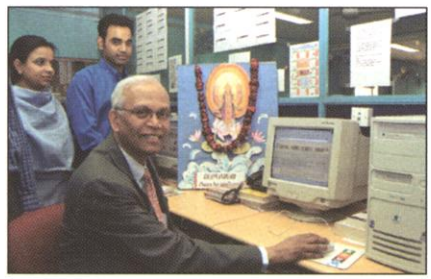
Thwarting Biopiracy

India is taking steps to safeguard its native medicines and foods by creating an easily searched database aimed at blocking patent poachers.

Protecting indigenous plants from proprietary exploitation has been a worry for Indians since the 1980s, when a U.S. firm won a series of patents for antifungal products from the neem tree, used for centuries in medicines and pesticides. Since then, Indian groups have hassled with U.S. interests over patents involving basmati rice and the use of turmeric powder for wound healing.

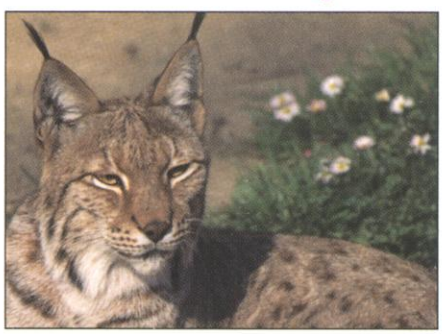
Last month, the Indian health ministry launched a Traditional Knowledge Digital Library (TKDL) that will make it easier for would-be patenters to check whether their target is already part of unpatentable "prior art." The library, initially available on DVD, is being assembled by a group including Ayurvedic medicine experts from the ministry's Department of Indian Systems of Medicine and Homeopathy. The group researched international patent databases and recommended that the government classify 4500 plants as "traditional knowledge resources." It also called for a Web site containing translations of 35,000 chants drawn from various ancient medical texts.



Mashelkar demonstrates his brainchild.

Raghunath Anant Mashelkar, director of the Council of Scientific and Industrial Research in New Delhi and the man behind the library, says the project should help India be the one to profit from commercial development of its traditional treatments. The work is now about one-third complete; the entire 140,000 pages, translated into six languages, should be available on the Internet this fall.

Spanish Lynx Alert



The recent deaths of four rare wild lynxes have become a wake-up call for languishing conservation efforts in Spain.

Last month Environment Minister Jaume Matas announced an emergency $6.8 million plan to save one of the world's most threatened feline species, the Iberian lynx. In the past 3 decades, the population in Spain and Portugal has dwindled from about 1000 to only a couple of hundred animals, who live in isolated groups in the southern national parks of Doñana and Sierra Morena. The main cause of the decline has been a scarcity of rabbits, the lynx's principal prey, owing to the spread of myxomatosis, a viral disease first introduced in Europe 60 years ago. Government biologists drafted a restoration plan in 1999, but it gathered dust until last month when the four lynxes died—two in road accidents—in a 2-week period.

At a 25 March press conference in Madrid, Matas said that the plan will be implemented immediately. The government will take steps to increase rabbit populations, protect scrubland refuges, and reunite isolated habitats by removing barriers such as roads. Francisco Palomares, a lynx expert at the Doñana Biological Station, says biologists also will take a new lynx census, and a lynx gene bank will be set up at the zoo in Jerez, which will also start a captive breeding program. But right now, says Palomares, "the important thing is reintroducing rabbits."

Late Arrival Scientists at the Pacific Northwest National Laboratory (PNNL) in Richland, Washington, last week celebrated the arrival of a new magnetic resonance spectrometer—6 years late.

The $7 million machine—one of the world's most powerful—was ordered in 1993, to be delivered in 1996. But then came multiple delays. The U.K. firm that built the mighty magnet at its core had to invent new technology, for instance, to handle the 27 megajoules of energy that course through 240 kilometers of superconducting wire. And the 16-ton machine couldn't handle the tilt of an airplane takeoff, so it had to be ferried through the Panama Canal and trucked inland from Tacoma.

The spectrometer is to be installed as the centerpiece of PNNL's new Environmental Molecular Sciences Laboratory. With its extra-wide (65-mm) bore, it will be used for a variety of studies including DNA damage and protein structure. It's to begin collecting data in June and is scheduled to open to users nationwide by fall.

Maine Hosts Solar System

The Northern Maine Museum of Science couldn't afford its own planetarium, so it's participating in something bigger: an outdoor scale model of the solar system stretching for 64 kilometers along rural Route 1.

Project coordinator Kevin McCartney, a geologist at the University of Maine, Presque Isle, was inspired when he realized that the distance from the nearest interstate exit to his university was the same in miles, 40, as the sun-Pluto distance in astronomical units. Soon the Maine Solar System Model was born.

Jupiter being hoisted up in Maine woods.

Local citizens have been flocking to the project, says McCartney. High school students have been welding and painting planets, and lawyers are working pro bono to arrange dollar-a-year leases on potato farmers' plots.

The museum, part of the university, is headquarters for a 15-meter-diameter section of the sun. Nine planets, made of steel and fiberglass, will be put along the two-lane highway. Jupiter, 1.5 meters in diameter, was hung last summer, and Pluto, about 2.5 cm, resides 64 kilometers from the sun, its moon Charon a mere 0.9 cm in diameter. At this scale—1:93,000,000—an 11-km-per-hour trot up the road represents the speed of light, and the nearest star would be just beyond our moon's actual orbit. The project (see www.umpi.maine.edu/info/nmms/solar) should be complete sometime this summer.

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