access to both the printer and the software that runs it, he says, it conceivably could infiltrate the Iraqi computer system. Ridiculous, counters computer security expert Robert Courtney. "It seems like such a dumb thing to do," he says, adding that with that type of opportunity, why not crash the whole mainframe rather than fiddle with windows on a screen?

The NSA refuses to comment on the story—which may in itself be a stratagem. Even if it's apocryphal, the tale may keep potential enemies worrying.

Recession Proof

No matter how sick the global economy is, drug sales are staying healthy. Pharmaceutical sales of the top 15 drug firms increased between 6.4% and 29.4% from 1989 to 1990, according to Scrip's Pharmaceutical Company League Tables 1991. Sale-o-rama honors go to Merck & Co., which topped the charts for a second straight year with sales of $6.37 billion. The biggest gainer, Swiss giant Hoffmann-La Roche, posted a 29.4% increase. LaRoche's breadwinners included the antibacterial Rocephin (ceftriaxone) and Versed (midazolam), a sedative that, in a high-dose form, has been blamed by the health advocacy group Public Citizen for at least 20 deaths from 1985 to 1987. Eli Lilly also made hefty strides, boosting its sales 26.1% thanks in part to the antidepressant Prozac (fluoxetine). Prozac seems to have weathered charges that it can conjure suicidal thoughts in depressed people.

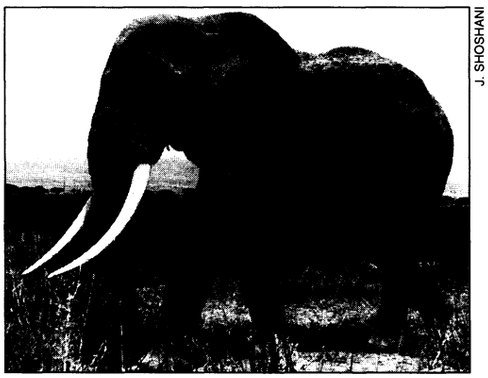
PHARMACEUTICAL FIRMS WITH THE MOST SALES, 1990

(1989 rankings in parentheses)

	Company (home base)	Pharmaceutical sales ($ billions)	% increase over 1989
1.	(1) Merck & Co. (U.S.)	6.37	17.8
2.	(2) Glaxo (UK)	6.06	16.3
3.	(3) Bristol-Meyers Squibb (U.S.)	5.26	18.4
4.	(5) Hoechst-Roussel (Germany)	4.99	18.8
5.	(4) Bayer (Germany)	4.96	16.9
6.	(7) Ciba-Geigy (Switzerland)	4.58	21.3
7.	(8) SmithKline Beecham (UK/U.S.)	4.24	15.6
8.	(9) Sandoz (Switzerland)	4.09	18.0
9.	(12) Eli Lilly & Co. (U.S.)	3.70	26.1
10.	(10) American Home Products (U.S.)	3.46	6.4
11.	(16) Hoffmann-La Roche (Switzerland)	3.46	29.4
12.	(17) Johnson & Johnson (U.S.)	3.30	24.5
13.	(15) Pfizer (U.S.)	3.23	20.4
14.	(13) Abbott Laboratories (U.S.)	3.16	13.5
15.	(14) Warner-Lambert (U.S.)	3.08	14.4

SOURCE: PHARMACEUTICAL MANUFACTURERS ASSOCIATION

Revival for Ivory Poaching?



J. SHOSHANI

Elephant in Kenya's Amboseli National Park.

Conservationists worldwide are worried that political pressure from six South African nations will cause African elephants once again to fall victim to the world ivory trade. Next March, the Convention on International Trade in Endangered Species (CITES) will consider proposals from southern Africa to loosen trade restrictions imposed in 1989 following a decade of heavy elephant poaching.

Norman Orenstein, ornithologist and lawyer with the International Wildlife Coalition in Toronto, says that during the '80s, when limited trade was permitted, the elephant population fell by about 50%. By the end of the decade, close to 80% of all legal trade was, in fact, in ivory from poached animals. But after the 1989 ban, the international ivory trade "in effect collapsed," says Orenstein.

Now, say conservationists, downgrading the elephants to Appendix II in CITES would effectively reopen that trade. South African countries are claiming that poaching can be controlled with the aid of a new method of isotope analysis, wherein certain types of carbon and nitrogen isotopes can reveal the nature of an elephant's diet and thus help indicate the geographical source of the ivory. Scientists who developed the technique, including N.J. van der Merwe of Harvard and the University of Cape Town, claim that it offers a potential means of determining whether a piece of ivory has been imported by poachers or gained legally, from elephants killed in culling operations in game parks. But even they say the method isn't ready for use. And science is no match for wiley poachers: "As long as there is such a thing as legal ivory, poachers can launder it," says Orenstein.

The conservationists warn that a lot of people are gearing up in anticipation of a change in the elephants' status. Five South African countries have created a cartel, the Southern African Center for Ivory Marketing. Poaching is up again, and "poachers and smugglers are already hoarding elephant tusks in anticipation," says Jeheskel Shoshani, an evolutionary biologist with the Elephant Interest Group in Bloomfield Hills, Michigan. The South African nations are now lobbying heavily in the United States, which supported the 1989 ban but has not yet taken an official position on the proposed change.

Science Role Model

Universities concerned about declining undergraduate enrollments in science might take note of a new program at the University of Arizona, where research biologists have put their grant money where their mouths are. As part of the university's Undergraduate Biology Research Program, more than 140 faculty members are using program funds to pay undergraduates to work in their labs. To get the funds, faculty participants must agree to pony up half the salaries ($5.40 an hour to start), cover the cost of supplies, and work closely with the students. The latter is the critical point because the idea is to involve the students in real research, not washing test tubes, at a crucial point in their college life—during the summer between their freshman and sophomore years. "Last summer we had 91 working full time," says Sam Ward, a molecular biologist. "The jobs are among the most attractive on campus," he adds. Faculty contributions are being supplemented with money from the National Science Foundation and the Howard Hughes Medical Institute, which is funding the program to the tune of $1.5 million for 5 years.

Although the program is officially only 3 years old, university officials are already reporting preliminary successes: students have been coauthors on more than two dozen journal articles and there has been a big increase in the number of participants who are deciding to make science a career. Says one satisfied student, Rebecca Page, a senior who has been working with *drosophila* genetics, "I had never taken a genetics course, and I think I got more out of working in a lab, even though it was narrowly focused, than I would have in a class."