RANDOM SAMPLES

edited by FAYE FLAM

Diet for a Small Pika

Some people complain about multiple trips to the grocery store, but that's nothing compared to the pika's shopping habit. Every summer this small rodent-like denizen of the Western U.S. mountains gathers 28 kilos of plants to store as winter food. This is roughly equivalent to a 130-pound person collecting 20,000 pounds of vegetation by making 5000 shopping trips, says pika watcher Denise Dearing, a graduate student at the University of Utah. That's a pile of rotten food if it all goes bad. To preserve it, Dearing thinks the pika uses a plant byproduct, phenol. She presented this work at last month's meeting of the Ecological Society of America.

Pikas work prodigiously during the summer, gathering enormous amounts of wildflowers and other plants into mounds known as haypiles that serve as winter storehouses. When Dearing examined the haypiles closely, she found that as much as 75% of some was made up of pieces of one particular plant, *Acomastylis rossii*, which, while edible, went nearly untouched in summer. She also noted that the haypiles had a concentration of phenolic compounds that was three times higher than that in the pikas' summer diet.

Dearing then made some experimental haypiles of her own and found a reason behind this pattern. Extracts from the *A. rossii* inhibited bacterial growth, and the haypiles with this plant retained significantly more biomass over time. That means the phenol in the *A. rossii* is probably acting as a preservative, keeping the pika's food stock fresh for the long, cold, mountain winter.

UNIVERSITY OF UTAH

Pika. Making haypiles while the sun shines.

High-Impact Researchers in Molecular Biology and Genetics, 1988-92

Rank	Name/Institution	Papers	Citations	Citations/ Paper
1.	S.L. McKnight*[1]/Carnegie Inst. Washington	20	3006	150.30
2.	R.M. Evans*/Salk Inst.	32	3822	119.44
3.	B.R. Franza/Cold Spring Harbor	21	2455	116.90
4.	T. Curran/Roche Inst. Molecular Biology	32	3626	113.31
5.	R. Tjian*/UC Berkeley	52	5344	102.77
6.	E. Harlow/Mass. General Hospital	27	2394	88.67
7.	T. Hunter/Salk Institute	50	4383	87.66
8.	H. Weintraub*/Fred Hutchinson Cancer Ctr.	42	3487	83.02
9.	D. Baltimore/Rockefeller University	87	6977	80.20
10.	M. Karin/UC San Diego	44	3502	70.59

*Howard Hughes Medical Institute investigator [1] now at Tularik Inc.

Source: ISI's Science Indicator's Database, 1988-1992

Molecular Biologists in Paper Popularity Contest

Who's the hottest molecular biologist/geneticist of them all? A new ranking has just come out, listing the top 25 researchers in the field, based on number of citations per paper (chart above shows the top 10). The survey is in the July/August newsletter of the Institute for Scientific Information(ISI) in Philadelphia, an organization that tracks scientific paper citations. The latest survey—ISI's most complete so far in this field—ranks investigators by citations per paper published from 1988 to 1992 in a group of 190 molecular biology journals as well as *Science*, *Nature*, and *Proceedings of the National Academy of Sciences*.

Magellan Chases Venus and Money

On 3 August operators at the Jet Propulsion Laboratory finished maneuvering the Magellan spacecraft through a delicate and perilous dance with Venus. In an effort to get the craft closer to the planet and circularize its highly elliptical orbit, they repeatedly dragged the orbiting Magellan through the planet's upper atmosphere to slow the spacecraft—tricky to do without incinerating it.

"We have truly removed the mystery from this technique," Magellan project manager Douglas Griffith told a press conference after the successful conclusion of the maneuver, which is called aerobraking. Only attempted a few times on a modest scale with Earth-orbiting satellites, aerobraking was the only way to lower the high point of Magellan's orbit from a lofty 8500 kilometers to 540 kilometers above the planet. The lower orbit opens up a new era of exploration for Magellan—the craft is now close enough for researchers to gauge the subtle effects of Venus' varying gravity field on Magellan as it moves from pole to pole. Such high-resolution gravity data will reveal the details of the planet's inner churnings, churnings which shape the planet's surface.

The next delicate dance step will be to keep the money coming in. Though at least another 8 months of productive science are planned, money for the space probe will run out at the end of October unless Congress comes to the rescue. Magellan has been on starvation rations since the Bush Administration cut off any new funding (*Science*, 19 March, p. 1696) and is only looking for $7.4 million to extend the $800 million, 3-year mission 8 months for the high-resolution gravity coverage. "We think we have gone where no planetary spacecraft has gone before," said Griffith. "This was truly done in the spirit of faster, better, cheaper."

EPA Deflates 'Green Competition'

Perhaps the most often-repeated bit of conventional wisdom in Washington these days is that U.S. companies must become more productive to compete in the world market. That theme is now starting to echo in the speeches of environmental advocates, such as World Resources Institute president Jonathan Lash, who argue that the United States must become more competitive to keep up with the "green race" to produce antipollution equipment for an environmentally conscious world. Germany and Japan, they say, are way ahead of the United States in the manufacturing and export of such "green machines." But a new Environmental Protection Agency (EPA) study* counters that claim.

Prominent writers and legislators have said that 70% of the pollution-control equipment used in the United States is now imported. But, according to the EPA, only 21% is imported. The study, conducted by staff economist Carl Pasurka, Jr., also counters claims that Germany leads the United States in green exports. Just the opposite: The value of U.S. antipollution exports was $362 million in 1991, and rising rapidly, while the figure for Germany stood at $63 million.

The EPA report does have some disappointing news, however. The U.S. trade surplus (exports minus imports) in environmental technology is only about $1 billion, just one-quarter of the amount estimated by other experts. So while the United States may not be the 96-pound weakling of environmental trade, it isn't a green giant either.

*"International Trade in Environmental Protection Equipment," U.S. Environmental Protection Agency report 230-R-93-006.