## SCIENCE, TECHNOLOGY & ENVIRONMENT

## Environmental Racism?

"Environmental Injustice" by Christopher Boerner and Thomas Lambert, in *The Public Interest* (Winter 1995), 1112 16th St. N.W., Ste. 530, Washington, D.C. 20036.

Are poor blacks and other minorities—to add to all their other woes—made to bear more than their fair share of the burden of pollution? A disproportionate number of industrial and waste facilities are placed in their backyards, activists against "environmental racism" assert, and regulators often give owners carte blanche to pollute. In Washington, some liberal lawmakers have proposed banning construction of waste facilities in "environmentally disadvantaged" communities. Environmental Protection Agency Administrator Carol Browner has promised "[to] weave environmental justice concerns throughout all aspects of EPA policy and decision making."

All of this corrective action is more than a bit premature, contend Boerner and Lambert, Fellows at the Center for the Study of American Business at Washington University in St. Louis.

They find various methodological flaws in the major studies cited by those who see "environmental racism." The most frequently cited piece of research, published in 1987 by the United Church of Christ's Commission for Racial Justice, found that zip codes with one hazardous waste plant had about twice the concentration of nonwhite residents as those with none. But because zip code areas are often large, Boerner and Lambert point out, what statisticians call "aggregation errors" can affect the data. Very different results were obtained in "the most comprehensive analysis . . . to date," a study by the Social and Demographic Research Institute at the University of Massachusetts, Amherst.

The Massachusetts researchers looked at census tracts (which are smaller geographic units than zip code areas) and found no greater concentrations of minorities in neighborhoods with commercial waste facilities than in areas with none. "Indeed," Boerner and Lambert say, "in the 25 largest metropolitan areas studied, commercial hazardous-

waste facilities are slightly more likely to be in industrial neighborhoods with a lower percentage of minorities and a *higher* percentage of white working-class families."

Moreover, the authors contend, advocates of "environmental justice" ignore the economic benefits such facilities can bring. In Sumter County, Alabama, the all-black county commission has opposed state proposals to reduce the amount of waste accepted by a landfill that provides more than 400 jobs, a \$10 million payroll, and a guaranteed \$4.2 million in annual tax revenue.

The chief injustice involved in siting polluting facilities, the authors maintain, has nothing to do with race or income. The injustice is that while the public at large benefits from the facilities, only a relative few individuals bear the costs of playing host to them. The authors propose a new kind of "green" remedy for this injustice: compensation in hard cash (or other benefits) for all those affected.

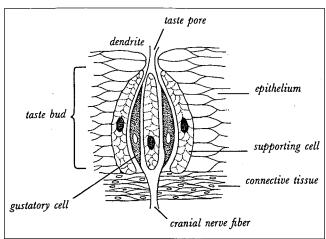
## The Science of Taste

"Accounting For Taste" by Thomas Levenson, in *The Sciences* (Jan.—Feb. 1995), New York Academy of Sciences, 2 E. 63rd St., New York, N.Y. 10021.

Everyone knows that some people savor their food while others seem indifferent to what they eat. What accounts for this difference in taste? Answer: the number of taste buds on one's tongue, reports Levenson, the author of *Measure for Measure: A Musical History of Science* (1994).

To measure differences in the ability to taste, Linda Bartoshuk, a professor in the Yale School of Medicine's Department of Surgery, asked volunteers to compare the strength of precisely graded "taste" solutions to sounds. Years of testing on hundreds of volunteers revealed wide variations: "A taste that seems as strong as a siren to a supertaster," she said, "will seem weak as a whisper to a nontaster."

Bartoshuk also counted the volunteers' taste buds, which, Levenson notes, are "the chemical receptors that detect the four basic tastes: sweet, salty, bitter, and sour." (Contrary to what most people learn in school, "all four tastes are de-



This (taste) bud's for you: Inside one of the body's sentinels.

tected all over the tongue . . . ; only the intensity varies.") She found a direct correlation between intensity of taste and the number of taste buds. About 20 percent of the volunteers had an unusually high number of taste buds and were extremely sensitive to sweet and sour tastes; another 20 percent had few taste buds and a dull sense of taste.

"The taste buds," writes Levenson, "can be understood as sentinels that stand at the body's gate, heralding helpful visitors and sounding alarms at signs of dangerous intruders. They frisk foods for signs of their basic intentions, then pass them along to the nose for further introductions. The flavors we find in chocolate, steak, or fine wine are largely olfactory labels. They are only fully sensed when specific chemicals flow through the retronasal passage at the back of the throat to the smell receptors in the nose. The taste buds themselves don't have time for long, complicated encounters, so they detect only [the] four basic flavors."

Bartoshuk found that women have a much sharper sense of taste than men do, Levenson says. More women are "supertasters," and the most sensitive of them are far more aware of sweet and bitter tastes than even highly sensitive men. Why should natural selection have made that so? Pregnant or nursing mothers, because they are eating for two, Bartoshuk pointed out, need an acute sense of taste to be able both to identify sources of calories and to avoid poisons.

## Bad Bonzo

"To Catch a Colobus" by Craig B. Stanford, in *Natural History* (Jan. 1995), American Museum of Natural History, Central Park West at 79th St., New York, N.Y. 10024.

From Tarzan's Cheetah and Ronald Reagan's co-star in *Bedtime* for *Bonzo* (1951) to the more recent simian thespian Willie, who stole scenes from Matthew Broderick in the 1987 movie *Project X*, chimpanzees have long been looked upon as lovable, if mischievous, creatures. Even in the wild, they seldom were seen hunting other animals and, in fact, until the 1960s, were thought to be strict vegetar-

ians. Alas, it turns out that the chimps have a secret life, one that may tarnish their Hollywood image.

"We now know," writes Berkeley anthropologist Stanford, "that a small but regular portion of the diet of wild chimps consists of the meat of such mammals as bush pigs, small antelopes, and a variety of monkey species." In Tanzania's Gombe National Park (where anthropologist Jane Goodall first saw chimps eating meat) and its Mahale Mountains, and in the Taï Mountains of the Ivory Coast, chimpanzees "all regularly hunt red colobus monkeys."

"Gombe chimps use meat not only for nutrition," Stanford observes. "They also share it with their allies and withhold it from their rivals. Meat is . . . a social, political, and even reproductive tool." Males often kill prey to offer to female chimps who are in heat.

Because Stanford has studied both hunters and hunted, his research can at times be "a bit heart wrenching," he notes. In October 1992, for example, a party of 33 chimps encountered his main study group of red colobus. "The result was devastating from the monkeys' viewpoint. During the hourlong hunt, seven were killed; three were caught and torn apart in front of me. Nearly four hours later, the hunters were still sharing and eating the meat they had caught,