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DINING, DINING OUT/CULTURAL DESK

Must Be Something In the Water

By JULIA MOSKIN (NYT) 2372 words
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IN 1977 the American public saw its first television commercial for bottled water. Orson Welles crooned about a place in the south of France where "there is a spring, and its name is Perrier," and the response was feverish. American sales of Perrier went up more than 3,000 percent from 1976 to 1979.

"I remember thousands of us running in Perrier T-shirts in the 1979 marathon," said Johanna Raymond, a New Yorker. "Perrier was the coolest thing then. It was more than water."

Since Perrier's introduction, the American market for bottled water has grown from almost nothing into the world's largest. The Beverage Marketing Corporation, the industry's main research group, says that Americans spent more than $9 billion on bottled water in 2004 (the latest year for which complete figures are available) and that the product's rate of growth was almost 10 percent a year for the previous 10 years, something almost unheard of in food marketing. "There appears to be no limit," said Gary Hemphill, an analyst with the beverage marketing group, "to how thirsty Americans are."

Nor to the ways the bottlers sell water. The forests of France and the hills of Maine quickly evolved into Icelandic glaciers and Pacific aquifers, and for the 40 percent of bottled waters that are made from municipal tap water, bottlers tout arcane methods of distillation and filtration and add minerals to get a better, more "watery" taste. Now, the selling point is often not the water, but what's in it: the flavorings, the vitamins, the stimulants and other "enhancements" that are supposed to be an improvement on simple H2O.

From those first irresistible green bottles of Perrier, Americans have been positively cultish about water. "I could not get through the day without Poland Spring," said Mark Swigart, a pharmaceutical sales representative in the Boston area. "And sometimes for a special treat I'll spring for a bottle of Fiji or Volvic."

Industry analysts say consumers have embraced bottled water as a healthy alternative to soda, still the most popular beverage in the country. But when is water no longer water? In the nation's refrigerator cases, we rifle through bottles of vitamin water, energy water, fitness water and fruit water, all of them variations on water, flavoring, coloring and often sweetener.

For years Gatorade was alone in the field of "enhanced" waters, water with additives that

may have specific health benefits, including vitamins and minerals like electrolytes and salts. But no longer. In 2004 Pepsi sold $256 million worth of Propel Fitness Water, which it introduced in 2000. "I used to drink way too much soda, but now I drink five or six Propels a day, usually melon and kiwi-strawberry," said Jerry Fox, an environmental consultant in Girdwood, Alaska.

If it is artificially flavored with passion fruit, sweetened with Splenda and colored with yellow dye No. 5, is it still water? When I read the ingredients of a popular flavored water to Marion Nestle, a professor of nutrition at New York University, she said the beverage was technically indistinguishable from diet soda, except for the carbonation. "If it's sweetened, it might as well be soda, nutritionally speaking," she said. "It's not really water."

Nearly 200 new waters and "water beverages" were introduced last year, a virtual ocean infused with such diverse enhancements as the melt-offs of glaciers and icebergs, appetite suppressants, black truffles, caffeine, ginseng, vitamins, "superoxygen," cucumbers and even Sylvester Stallone. (Sly Pure Glacial Water, from the "10,000-year-old Carbon Glacier on the north face of Mount Rainier," will be released next month.) Zodiac's Bio-2 water claims to have changed the molecular structure of water in ways that increase an athlete's stamina. Icelandic Glacial is a "superpremium" water from a spring shielded from pollution "by an impenetrable barrier of lava rock." (The Food and Drug Administration does not regulate terms like "enhanced" and "flavored" or claims like "crystalline" and "vibrational." But water labeled spring, artesian or mineral must be bottled directly at the source.)

Jana Skinny Water says its product "helps curb appetite" with hydroxycitric acid, although it does not mention that all water has the same effect if you drink enough of it. In interviews with dozens of water drinkers, most of them said they chose bottled water for the convenience and the taste, not the supposed benefits.

"A bottle of fancy water is like a harmless little luxury," said April Ferrone, a real estate broker who lives outside Albany.

But an increasing number of health and environmental activists are challenging the nutritional claims and also the harmlessness of the bottled-water business.

"First of all, water is water is water," said Dr. Nestle, author of the forthcoming "What to Eat" (North Point Press) and a frequent critic of food marketers. "Second, tap water in the developed world is not only cleaner than bottled water, but it has fluoride, which most bottled water does not.

"Mostly, you are paying for the convenience of the bottle," she added.

"More than any other product, the buying and selling of water is an industry based on nothing," said Menno Liauw, a Dutch advertising executive and a founder of the Neau

Foundation, which pokes fun at bottled water, but with a pointed purpose.

Neau, a nonprofit organization based in Amsterdam, has one goal (raising money for drinking-water projects in third world countries) and one product: an empty blue plastic bottle, for about $2, with a glossy logo and a flier inside explaining that profits are donated to the foundation's water projects. The buyer is expected to fill the bottle with tap water. "Two thousand liters of tap water cost less than one liter of Spa," a popular Dutch mineral water, Mr. Liauw said. Ethos Water, an American company that sponsors similar drinking-water projects, was bought by Starbucks in 2005; 5 cents for each bottle sold is donated to water charities.

This month the Earth Policy Institute, an environmental association based in Washington, published a research paper outlining the global issues raised by bottled water. "Water is very heavy, and moving large quantities of it, for example, 8,000 miles from Fiji to New York, takes considerable resources," said Janet Larsen, the institute's director of research. "Nearly a quarter of all bottled water around the world crosses national borders to get to its market. Bottled water is not a global environmental crisis in itself, but it is an issue of global equity and of human rights; we believe clean water is a basic human right."

In the United States, water politics have led some communities to resist incursions by the world's bottlers. A group called Michigan Citizens for Water Conservation has pursued a five-year lawsuit against Nestlé, the owner of Perrier, Poland Spring, Ice Mountain and other brands. When Nestlé was temporarily barred from pumping water from a spring on private land in Mecosta County, the city of Evart, Mich., stepped in and offered to sell Nestlé rights to some of its municipal well water, causing a public outcry. "This water belongs to the people of Michigan, who will end up paying for it again when it is put in a bottle," said Terry Swier, the group's president.

Other activists see the bottles as more problematic than the water. The plastic used for bottling water is food-safe PET, polyethylene terephthalate, which is itself madefrom crude oil. It was the invention of PET in the 1970's that made the portable water bottle possible. Now, according to the Container Recycling Institute, a California-based group, about 90 percent of PET bottles tossed out by Americans end up not in recycling centers but in landfills, at a rate of 30 million a day. "There is a huge amount of byproduct associated with bottled water," said Kellogg J. Schwab, associate professor at the Johns Hopkins University Center for Water and Health. PET is considered safe for the drinking public, and can be washed and reused, but nutrition activists have raised concerns about its long-term health risks. Dr. Schwab says that little is known about water stored in PET over long periods and at high temperatures.

Americans are just becoming aware that a bottle of water may have its own hidden costs. At Berkeley High School in the California Bay Area, bottled water was removed from the cafeteria six weeks ago and replaced by coolers filled with filtered tap water; students fill PET bottles or reusable Nalgene flasks, a badge of cool for young hipsters. Last month a Colorado company launched the first spring water bottled in a new kind of biodegradable plastic called PLA, which is made from corn. (PLA is used by Newman's Own in its food

packaging.) Bottles of Biota spring water are designed to break down at high temperatures when empty, making them not only biodegradable but compostable.

Gretchen Rubin, a writer in Manhattan, says that bottled water has gone from a pet peeve to a crusade for her. "I absolutely refuse to buy it and once shocked a group of parents when I wouldn't buy water for my daughter at the playground," she said. "Remember water fountains? This is America! Our water is drinkable!"

The Purity Factor

IS bottled water safer than tap water?

"There is no easy answer to that question," said Kellogg J. Schwab, a microbiologist and associate professor at the Johns Hopkins University Center for Water and Health.

Municipal water is regulated by the Environmental Protection Agency, with frequent testing performed by the agency and local authorities (almost 500,000 samples of New York City's water are tested each year). The Food and Drug Administration monitors the labeling of bottled water, but the bottlers are responsible for testing. Few problems have been reported from either kind of water in recent years, according to the Centers for Disease Control and Prevention.

The New York Times submitted six bottled waters (a mix of domestic and imported, natural and purified) and one sample of New York City tap water for analysis at Associated Analytical Laboratories in New York, to get a sense of what is in them. Minerals like magnesium, calcium and even arsenic in trace amounts are expected in water, and nothing out of the ordinary turned up in our chemical analysis.

But the samples were also subjected to bacteriological examination. Six came back with results well within the parameters defined by the E.P.A., labeled "good sanitary quality; bacteriologically fit for human consumption." But one bottled spring water showed much higher levels of unspecified bacteria and was labeled "substandard for drinking water." (Because only one bottle was tested, the brand is not being named.)

"This water still falls within E.P.A. guidelines for potability" said Stuart C. Lerner, the director of the laboratory. "But it's not a good thing." The likelihood, Mr. Lerner said, is that a small amount of bacteria was present in the water before it was bottled, then increased during storage at warm temperatures. "It's unusual," he added, "but not unheard of."

This result, Dr. Schwab said, illustrates that "natural" waters are not necessarily cleaner. "I choose whichever water has been treated as much as possible," Dr. Schwab said. "Reverse osmosis, UV, chlorine, deionization -- it all tastes good to me." JULIA MOSKIN

Which Water Is Tastiest?

ONE afternoon, several members of the Times Dining staff and one ringer, the chef Bill Yosses, gathered to answer one of the great questions of our time: Does bottled water really taste better than tap? New York tap water has fierce fans around the country. But some bottled waters inspire profound passions, too.

In a blind tasting, we sampled nine still waters: New York tap; Biota, a new Colorado spring water in a biodegradable bottle; Poland Spring from Maine; Aquafina, a purified water from Pepsi that is the country's best seller; Dasani, the Coca-Cola Company's "purified and flavor-enhanced water"; Saratoga, a natural mineral water from upstate New York; Smartwater, "vapor-distilled and electrolyte-enhanced"; Fiji, artesian water from the South Pacific (artesian water comes from a deep underground source, such as an aquifer, that has no contact with surface air); and Penta, an "ultrapremium" water purified "by using the energy created by cavitation (the explosion and implosion of an air bubble in liquid)," supposedly leading to a higher boiling point and lower viscosity.

We found that we were able to distinguish among two main types of water.

Natural spring, mineral and artesian waters have more mineral content, a velvety feel across the tongue and a slightly flatter flavor. This was not to everyone's taste, though one reporter described the group as "runner's waters" for their smooth drinkability.

The other clearly identifiable group was purified waters, including tap water, with qualities that ranged from a very pleasant crispness to an unpleasant metallic tang or even an afterburn in the throat.

Many waters in both categories were described as "plastic-y." None was universally disliked, and one was the clear winner of the tasting: Dasani.

It was described as "sweet but fresh," and other mostly adoring adjectives. Jim Shepherd, Dasani's group director of research and development, says that Coca-Cola tested Dasani in hundreds of focus groups until it hit on a markedly crisp quality, achieved by adding magnesium sulfate, potassium chloride and sodium chloride to purified municipal water.

"North Americans love this crispness," he said. "In Europe the flavor profile is completely different." Calcium carbonate is what gives European mineral waters its characteristic chalky flavor and smooth feel, but it was quickly rejected by American tasters.

"You might think that pure H2O would taste the best," Mr. Shepherd said. "But it tastes flat. All wrong. Water is not supposed to be that pure." JULIA MOSKIN

Photos (Photo by Tony Cenicola/The New York Times)(pg. F1); (Photo by Tony Cenicola/The New York Times)(pg. F2)