Science & the Gardener

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Hamburgers and Houseplants

Marvel for a moment at the commonness of hamburgers and houseplants. Both the philodendron and the all-beef patty are now staples of American life. No one pulls the shades at night, not because modesty has been forgotten, but because shade pulling has become both impossible and unnecessary—so dense are the flowerpots on the windowsills, so thick are the leaves against the glass. Humidity is up, headroom is down. Trip over the potted palm beside the sofa and risk being throttled by verdant macrame on the way down. Plants threaten to take over all but the darkest corner of every room, and yet we go on accumulating new ones, an unusual maidenhair fern one week, a cute little peperomia the next.

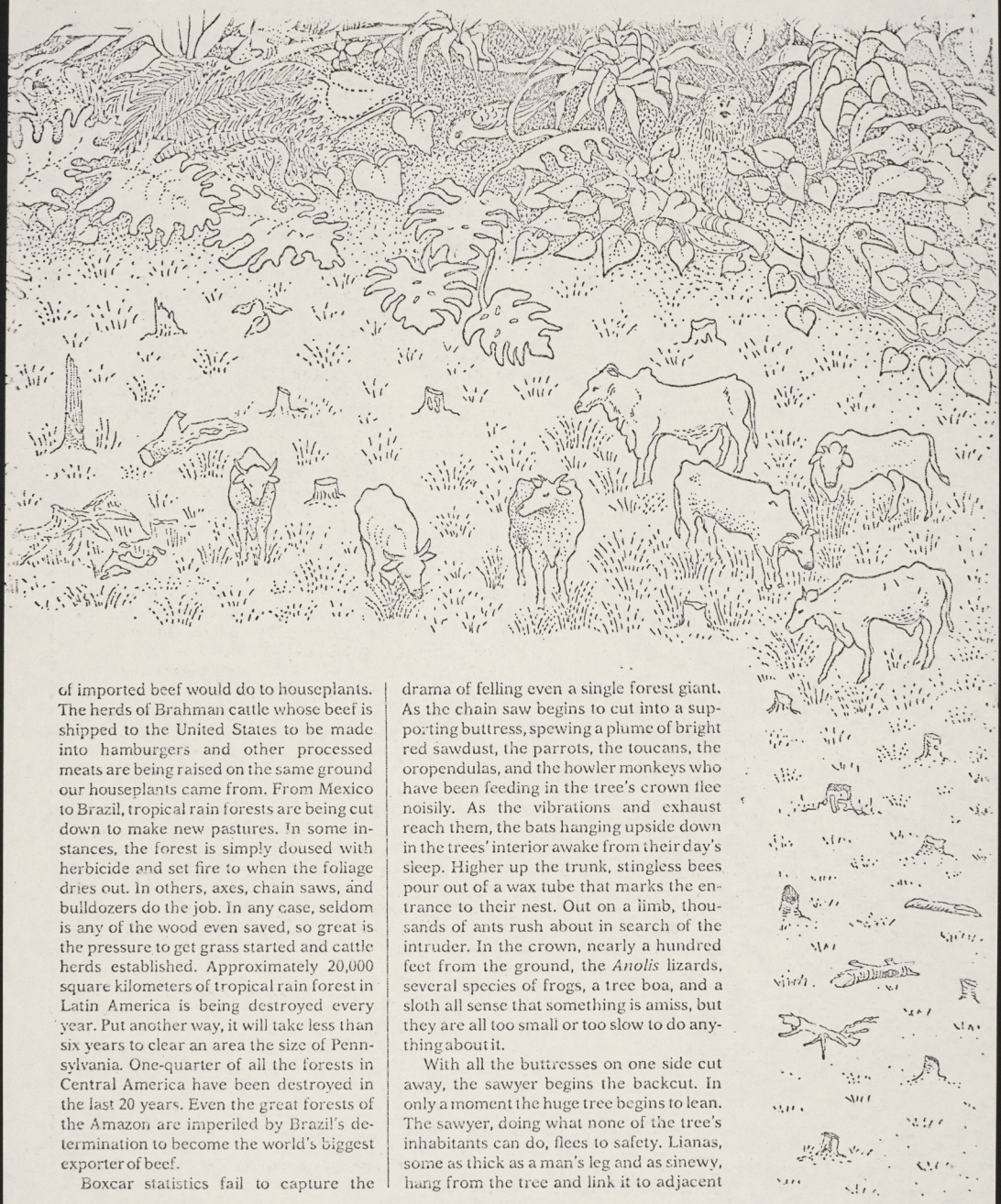
When we aren't buying houseplants, we are buying hamburgers. Millions of them. Blue-cheese burgers at business lunches, Big Macs with the kids. College students have an Elsie's Burger if they miss dinner, a triple cheeseburger at The Grill to get through the night. Once upon a time we ate tunafish sandwiches, peanut butter and jelly, cream cheese and olive. Now we eat hamburgers. We want them fast; we want them cheap. In return, we will tolerate jingles, billboards, and yellow arches.

We all know how common houseplants and hamburgers are. Few of us realize what they have in common. Houseplants are being treated as appliances. A fully furnished apartment comes with an air conditioner, a microwave oven, and a parlor palm. You can buy these all at K-Mart, and this gives the impression that, like other appliances, the indoor greenery originated in Chicago, Detroit, or West Bend. It did not. The Christmas cactus came from Brazil; the anthurium, from Colombia; the flaming sword, from French Guiana. Plant after plant is the descendant of some specimen collected by a plant hunter in tropical South America—*Aphelandra, Billbergia, Codonanthe, Dieffenbachia,* even a partial list would run through the alphabet and back.

Anyone who stops to think about the cultural requirements of our houseplants might deduce their tropical origin. Few would suspect it about hamburgers. On the menu there is always a picture of a Black Angus or Hereford steer, belly deep in western grass. Hamburgers are an American product all right, but not necessarily a North American one. The beef in the next hamburger you eat may well have come from Latin America.

In 1978, when the price of beef increased 35 percent in five months, the U.S. government decided to increase the amount of imported beef. Imported beef is much cheaper than beef grown in the United States. The 1978 wholesale price of beef imported from Central America was $1.47 per kilogram, compared to $3.30 for grass-fed beef grown in the United States. Although the amount of imported beef came to less than 1 percent of the total beef eaten in this country, government economists calculated that the imports would cut five cents off the price of every hamburger.

The government economists did not mention what increasing our consumption



of imported beef would do to houseplants. The herds of Brahman cattle whose beef is shipped to the United States to be made into hamburgers and other processed meats are being raised on the same ground our houseplants came from. From Mexico to Brazil, tropical rain forests are being cut down to make new pastures. In some instances, the forest is simply doused with herbicide and set fire to when the foliage dries out. In others, axes, chain saws, and bulldozers do the job. In any case, seldom is any of the wood even saved, so great is the pressure to get grass started and cattle herds established. Approximately 20,000 square kilometers of tropical rain forest in Latin America is being destroyed every year. Put another way, it will take less than six years to clear an area the size of Pennsylvania. One-quarter of all the forests in Central America have been destroyed in the last 20 years. Even the great forests of the Amazon are imperiled by Brazil's determination to become the world's biggest exporter of beef.

Boxcar statistics fail to capture the drama of felling even a single forest giant. As the chain saw begins to cut into a supporting buttress, spewing a plume of bright red sawdust, the parrots, the toucans, the oropendulas, and the howler monkeys who have been feeding in the tree's crown flee noisily. As the vibrations and exhaust reach them, the bats hanging upside down in the trees' interior awake from their day's sleep. Higher up the trunk, stingless bees pour out of a wax tube that marks the entrance to their nest. Out on a limb, thousands of ants rush about in search of the intruder. In the crown, nearly a hundred feet from the ground, the *Anolis* lizards, several species of frogs, a tree boa, and a sloth all sense that something is amiss, but they are all too small or too slow to do anything about it.

With all the buttresses on one side cut away, the sawyer begins the backcut. In only a moment the huge tree begins to lean. The sawyer, doing what none of the tree's inhabitants can do, flees to safety. Lianas, some as thick as a man's leg and as sinewy, hang from the tree and link it to adjacent

Illustrations by Iris Van Rynbach



smaller ones. For a moment it seems as though they might keep it from falling. But the tree's crown has too many epiphytes growing in it, too much moss, too many ferns, orchids, and bromeliads. The very luxuriance of the tree's canopy will speed its death. Lianas drawn tight snap the lesser trunks. The great tree, joined by its neighbors, crashes to the ground. It does not even bounce. When a tornado hits a cathedral, it is a tragedy. When such a tree falls, no one mourns. Whether its inhabitants are killed by the impact, or by desiccation, or incinerated in the fires that will shortly sweep through is unimportant.

Who knows what new medicines are being consumed by the flames, what oils, resins, dyes, spices, and insecticides; what unique genetic material that might someday be used for breeding; what plants might someday grace our homes? Five out of six tropical organisms have never been identified, but that is not important.

What is important is cows. Slow, stupid, introduced beasts who know nothing of the grandeur that once occupied the ground on which they stand. It takes four years for them to reach full size; then they are slaughtered and their carcasses are reduced to hamburgers.

In less than a decade, the soil is too poor to grow grass, heavy rains have washed out the nutrients, erosion has scarred the land. Even heavy applications of fertilizer will not restore it. Scrub growth on which the cattle will not feed takes over. This is no problem. The rancher simply moves on to another piece of primary rain forest and starts again.

What can we do? Obviously, we can cut down on the amount of beef we eat. During World War I, the hamburger was renamed the Liberty Burger. Let's rename it once more. Call it a "rain forest burger" and eat fewer of them.

While we are changing our eating habits, we can also support the preservation of tropical forests directly. There is an urgent need to set aside large tracts of forest, to guard them against disturbance, to buy time while we study them and educate ourselves.

The responsibility for this conservation ultimately rests with the Latin American governments themselves. Fortunately, many are realizing that cutting down forests to raise beef is a sort of reverse alchemy, turning gold into silver. A host of international agencies such as the World Wildlife Fund in Washington, D.C., now recognize that to save species, both plant and animal, from extinction, their habitats must be preserved. They are collecting private contributions, using the money to help Latin American governments buy land for preservation.

A leading example is Costa Rica, a country with an unusually stable democracy situated between Panama and Nicaragua. Since 1969, Costa Rica has set aside 3.75 percent of its total land mass in national parks. The United States, by comparison, has less than 1 percent in national parks. To be sure, Costa Rica has cut down its share of rain forest to raise cattle and exported its share of beef, but the country is also blessed with the leadership of singularly farsighted individuals, both private citizens and government officials, who recognize that the rain forests will someday be worth more than any cattle pasture.

Unfortunately, the benefits to Costa Rica are in the future. The costs are in the present. While foreign organizations contributed $163,000 in 1975 to help Costa Rica establish Corcovado Park, a 290-square-kilometer preserve in the last undisturbed section of lowland rain forest in Central America, the Costa Rican people contributed two million dollars—approximately one dollar for every man, woman, and child. And these are not people who can afford to eat hamburgers every day.

There is something we can do to hasten the return on Costa Rica's investment. It is very simple. Many of us take midwinter vacations. Will it be to the beaches of some Caribbean island or to the rain forests of Costa Rica? Our homes are filled with plants of the forest, but how many of us have ever seen *Dieffenbachia* in bloom or frogs depositing their tadpoles in the tanks of bromeliads? There are no orchid bees to pollinate the ones on our windowsills. To see our houseplants in their native habitat is to vastly enlarge our understanding and enjoyment of them. Visitors cannot help but return the wealthier, at the same time having helped to convince the country that conservation pays.

For years, we have been unwittingly feeding on tropical rain forests, consuming them bite by bite. It is time we put our money where our mouths are.

This is the text of a speech presented at a luncheon hosted by the Philadelphia Inquirer *on April 29, 1981.*