

more productive agriculture—better cultivation techniques, better seeds, more specialization. What, specifically, were these advances? Fogel doesn't say. His overwhelming focus on scholarly research on diets also makes his comments on the Third World an elaboration of the obvious (in effect: lots of people are still hungry), with little in the way of recommendations for what could be done. Fogel is always illuminating and, in his omissions, often frustrating.

—ROBERT J. SAMUELSON

OBSESSIVE GENIUS:

The Inner World of Marie Curie.

By Barbara Goldsmith. Norton. 320 pp. \$23.95

Marie Curie's family donated her workbooks, diaries, journals, and other papers to the Bibliothèque Nationale in Paris at the end of the 20th century. In what may have been a cataloging first, the library initially had to sort the collection into three groups based on level of radioactivity.

Barbara Goldsmith's new biography uses these literally and figuratively hot resources (and others) to take a fresh look at the past century's most famous woman scientist. Goldsmith, the author of *Little Gloria . . . Happy At Last* (1980) and other books, portrays Marie Curie (1867–1934) as a blend of brilliance, resolve, passion (for work and at least three men), recurring depression, obsession (this is not the first biography of Curie to include that trait in its title), achievement, and pragmatism.

Most scientists make only incremental contributions to the corpus of scientific knowledge. Curie's accomplishments were numerous, monumental, and, like the elements she discovered, radiant. She won two Nobel Prizes—one in 1903 with her husband, Pierre, and another colleague, and a second, solo prize in 1911—and her scientific heirs, her daughter and son-in-law, won their own Nobel in 1935.

Of course, Curie couldn't have foreseen that the papers documenting her life would intimidate archivists many decades after her death. Her discoveries were anti-ecclesiastical. In 1898, she found something entirely new under the sun, the highly radioactive element radium. The mysterious, invisible, silent substance did, though, share one im-

portant property with the sun itself: It emitted energetic rays (hence the name Curie gave it) that could activate and burn living cells. Although Curie called radium "my child," it was an ungrateful offspring, contaminating not just her papers but her body—she died at 67 of radiation poisoning.

Curie understood that radium, like the sun, could have both therapeutic and destructive uses. Her interest resided exclusively in the salubrious applications. For example, she designed mobile x-ray units during World War I, when other chemists and physicists were adapting the new chemical elements to novel weaponry. Curie and her daughter drove "Les Petites Curies" to hospitals at the front, x-rayed wounded soldiers, and made calculations to help surgeons locate shrapnel and bullets in tissue.

Curie plumbed the unseen and the unknown. Outside the laboratory, she frequented séances in hopes of communicating with Pierre, who had been knocked down, crushed, and killed in 1906 by a horse and dray. Inside the laboratory, her ghostly lures were radium and another of her discoveries, polonium (named for Poland, her homeland). Curie extracted both elements from pitchblende—a dark, complex mineral—by fractionation, a tedious separation process. Pitchblende could be a symbol for Curie's dark and complex life: Embedded in both were elements of extraordinary bril-



Marie Curie, c. 1900

liance and intensity. Disjunctions between the ethereal world of the spiritualist and the data-bound world of the scientist seem not to have troubled Curie. Or perhaps her brain simply fractionated them.

What did plague and sometimes hinder her were relentless prejudices—against women in the world of science, against women generally in the wider society, against immigrants,

against people battling depression. Goldsmith's account of the persistent injustices Curie encountered has a contemporary ring. Today as then, social and political factors block women from fully participating in certain areas of science. How sad that these senseless barriers to human betterment and equity seem as enduring as the sun.

—RUTH LEVY GUYER

CONTEMPORARY AFFAIRS

THE HEART OF THE WORLD:

A Journey to the Last Secret Place.

By Ian Baker. Penguin. 511 pp. \$27.95

When I was in Tibet in 1993, there were rumors of an expedition to the Tsangpo Gorge in the southeastern part of the country—the deepest gorge on earth, and a place that had been closed to Westerners since the 19th century. It seemed unlikely that the expedition would succeed, given the restrictions on travel and the rumored dangers of the area. How thrilling, then, to read, in Ian Baker's *The Heart of the World*, a vividly rendered account of that expedition and the several that followed.

Baker, a longtime resident of Kathmandu and a student of Tibetan Buddhism, first became interested in the Tsangpo Gorge through inquiries into *beyul*, sacred hidden lands whose full meaning can be grasped only through spiritual preparedness. The Tsangpo Gorge lies in the heart of an area known as *beyul Pemako*, or “Hidden-Land Arrayed like a Lotus.” Unlike most of arid Tibet, Pemako's terrain ranges from snow-covered peaks to steamy, orchid-filled forests. Tibetans, Baker writes, consider it “the most dangerous as well as the greatest of all the hidden lands.”

Early in his quest, Baker is told by a Tibetan lama, “In Pemako, don't try to avoid suffering, but accept whatever comes.” And suffering does seem to be the norm. In the course of his eight journeys to Pemako, Baker encounters local women rumored to have a penchant for poisoning travelers, Chinese authorities ordering several-day detours for no clear reason, and porters demanding higher and higher wages. But none

of these hardships compares to the weather—“a veritable hell of nearly incessant rain”—which itself pales in comparison with the leeches: “They burrowed through our gaiters and the strips of green canvas that the porters had wrapped around their calves and ankles in an attempt to seal them out. It wasn't until the end of the day, when we took off our sodden and blood-filled boots, that we could see their handiwork.”

Baker's book, though, is neither a catalog of suffering nor a simple travelogue. More than anything, it is an introduction to the precepts of Tibetan Buddhism, especially Vajrayana, or Tantric Buddhism—the path through which enlightenment can be attained in a single lifetime. And while Baker focuses more on his own spiritual journey than on the characters he encounters, some of them prove memorable. A Tibetan lama, good natured to the point of absurdity, accompanies Baker's group for part of the journey and seems to bring with him the only breaks from the rain. Baker's close friend Hamid is a kind of spiritual Lothario who manages to encounter attractive and willing partners in even the most dire and unlikely circumstances.

But ultimately it is the landscape that emerges as the strongest character. Baker's treks to the Tsangpo Gorge are for him both physical quests and spiritual quests, and his descriptions of the landscape are charged with meaning on both the physical and spiritual levels. In the artfully rendered, detailed descriptions of a leech-infested, rain-drenched, breathtakingly beautiful world, the book comes most to life.

—JOHANNA STOBROCK