The defendants were convicted of 8 felonies and 5 misdemeanors, most of which dealt with customs-form violations in transferring money into and out of the United States (not declaring cash or travelers checks). The following fall, the 6 felony convictions against Farrar and BHIGR were thrown out by the judge. In January 1996, Neal Larson received two years probation and a $1000 fine. Peter Larson was fined $5000 and sentenced to two years in prison plus two years of supervised release. Of the paperwork filled out when he entered prison the next month, he recalls: "Under 'reason for incarceration,' the guard put 'failure to fill out forms.'" He was released to home confinement after serving 18 months.

Meanwhile, the Eighth Circuit Court ruled that Sue was land held in trust by the United States for Williams. The Interior Department then decided that Sue would be sold to the highest bidder—domestic or foreign, private collector or museum. Williams put Sue up for auction through Sotheby's in New York City. The tale of the October 1997 auction is well dramatized by Fiffer. The intricacies of the acquisition of Sue by the Field Museum make interesting reading: the inspection of Sue by preparator, scientist, and administrator; the involvement of McDonald's and Disney; the recruitment of a veteran of the auction business to do the bidding; and the bidding by telephone from a room screened from the view of bidders on the floor.

With the exception of Williams, and possibly the Field Museum, everyone else involved in the Sue affair lost. Probably it was paleontology that suffered the greatest loss; at $8.36 million for a single fossil, a worry in the profession is that land owners will now charge researchers for access to land. One is forced to agree with the conclusions drawn by dinosaur paleontologist Robert Bakker in the book's forward: elitism has developed among some professional paleontologists about who should be allowed to collect fossils; there was resentment and envy among some professionals that the "perfect" fossil was not in their hands; the crazy tangle of lawsuits crippled the study of the skeleton for years; and millions of taxpayer dollars were squandered on unnecessary court cases.

Fiffer has produced a marvelous book full of ironies. Anyone interested in dinosaurs, paleontology, fossils, or fossil collecting should read this lively saga.

NOTA BENE: CHEMISTRY

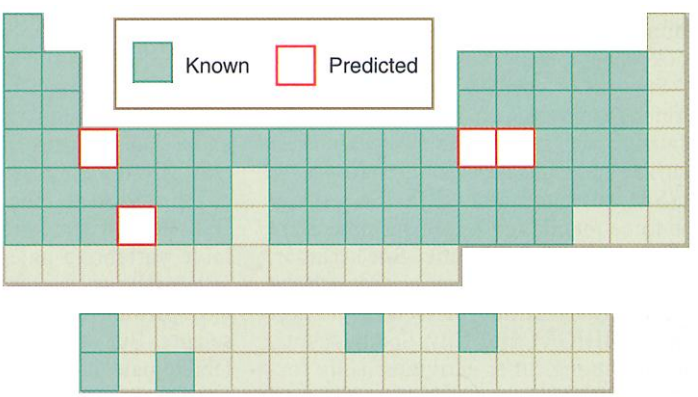
Organizing the Elements

In 1869, the Russian Dmitri Mendeleyev was puzzling over how the chemical elements might be organized according to their properties. Forty years earlier, Doebereiner had recognized that some elements, such as the halogens, formed triads with similar properties. During the 1860s, Alexandre-Emile Beguyér de Chancourtois and John Newlands had independently recognized that the properties of the elements tended to repeat themselves with increasing weight. But it took Mendeleyev's theoretical insight to create the arrangement of the elements that closely resembles the periodic table we use today. Mendeleyev was bold enough to leave gaps where no known element fit into the pattern and to suggest that the atomic weights of some elements had been calculated incorrectly. Initially, his reliance on as-yet undiscovered elements was heavily criticized. Then, in 1874 a new element (gallium) was discovered that exactly fit the weight and properties predicted by Mendeleyev. Discoveries of other missing elements and corrected atomic weights provided further confirmation. Mendeleyev's creation of a periodic table was a turning point for chemistry: After a long history of experimental advances that lacked a consistent theoretical framework, the field matured into an exact science.

Mendeleyev's Dream
The Quest for the Elements
by Paul Strathern
Hamish Hamilton, London, 2000. 320 pp. £12.99. ISBN 0-241-14065-X.

Mendeleyev claimed that the periodic table came to him in a dream. In *Mendeleyev's Dream: The Quest for the Elements*, novelist and writer Paul Strathern takes this story as the starting point to sketch the history of chemistry from its beginnings in Greece and the Arabic world to the confirmation of Mendeleyev's arrangement. Strathern is at his best when describing particular scientists and their times. One such case is Paracelsus, who in the early 16th century applied a highly scientific approach to medicine. Paracelsus viewed life as a series of chemical processes; illnesses were the sign of a chemical imbalance or malfunction. At a time when orthodox medicine was based on the theory of the "four humors" (blood, phlegm, choler, and melancholy), this scientific approach was revolutionary and not always popular.

Strathern's account of Paracelsus' life is entertaining and informative, but here and elsewhere his view seems too heavily influenced by what we know today. For example, he heavily criticizes Paracelsus and others for their continuing belief in alchemy and their searches for the philosopher's stone that turns base metals into gold. But at a time when chemists did not know that elements could not be converted into other elements by chemical means—indeed, did not even know what an element was—the possibility of converting one metal into another would not haved seemed unreasonable. I cannot agree with such statements as "Alchemy achieved a great deal for chemistry ... though its wizardry is now seen as laughable." On the contrary, it seems extraordinary how much the early alchemists and chemists achieved, and I do not consider them laughable at all.



Mendeleyev's Dream contains a wealth of information and anecdotes, and it is an entertaining read. Strathern shows how many of the chemical concepts that we take for granted, such as chemical notation and the definition of elements and molecules, emerged from centuries of experimentation and debate. At times, the writing is overly colloquial and the author loses the thread of his story because he tries to pack too much into the book. But overall, Strathern's account should be accessible and interesting to many, scientists and nonscientists alike.

—JULIA UPPENBRINK