Reflections

The First Encyclopedia

Robert Silverberg

During the course of my working life as a writer, I depended in good measure on two sources of reference material, both of them called *The Encyclopedia Britannica.*

One of them was the Britannica's fourteenth edition, 1968 version—a replacement for one I had bought in 1956 and lost in a fire in my office. It runs to twenty-four fat volumes, 35 or 40 million words long, and it was a pretty good compendium of all human knowledge up to its time. When I needed, say, information about the main city of Zanzibar, as I did in 1973 for a story I was writing then, I walked fifteen feet to my Britannica shelf, took down the VIETNAM-ZVORKIN volume, and quickly found what I needed.

The other Britannica I have is the remarkable thirteenth edition, which is actually the eleventh edition of 1911 plus the three supplemental volumes of the 1922 twelfth edition and the three further supplements that were issued in 1926. So it has thirty-two volumes in all, massive ones that far exceed the scope of the later editions, and its unhurried essays, many of them of book length themselves, provided virtually complete coverage of everything that was known to our Victorian and Edwardian forefathers. So that when I needed information about the geographer Sir Henry Yule (1820-1889) for a story set in India that I was writing in 2008, I had merely to go to Volume 27-28 of the Thirteenth, TONAL-ZYMOT, and there it was.

These days, of course, I could spare myself even the short walk to the alcove where I keep my Britannicas, because atop my computer screen are two bookmarks, "Google" and "Wikipedia," and a couple of clicks will bring me whatever I want. Wikipedia is that extraordinary open-ended encyclopedia, which as of this morning has a staggering 54 million articles on it, and though it is a communal enterprise that often has erroneous information posted on it, its very communality sees to it that most such errors are quickly corrected. As for Google, its myriad links extend tentacles into everything, apparently, that anyone has ever written, and bring it all up in a fraction of a second. So I rarely go to my Britannicas any more.

I do have a third encyclopedia at hand, though—what may be the first one ever written. It's a couple of thousand years old, so it is no help in writing the Asimov-Heinlein-Clarke kind of science fiction that is based in real scientific fact. But for the more flamboyant stuff, of the sort, say, that Jack Vance was famous for, in which the imagination is given free play and the colorful and fantastically inventive are privileged over mere prosaic fact, this older book is of enormous value, because it's full of information that represented state-of-the-art scientific knowledge when it was written, but is, mostly, wildly fantastic today, providing the science fiction or fantasy writer with all sorts of delicious hints leading to wondrously romantic inventions.

I'm speaking of *Natural History,* that astonishing work of Pliny the Elder, which is apparently the world's first encyclopedia—six densely packed volumes, in the edition I have. My 14th edition *Britannica* had something like 1,500 contributors, whereas Pliny wrote his vast book all by himself—one of the most remarkable intellectual accomplishments in history.

He didn't know he was writing an encyclopedia, though, because that word wasn't coined until 1531, from the Greek "enkyklos," which carries the meaning of something that is circular or recurrent, and "paedia," meaning education, especially of children, so that the words taken together connote "complete knowledge"; but not until 1644 did

it take on its present meaning of a compendium of information, usually arranged alphabetically. Pliny, though, was born near Italy's Lake Como about 23 A.D., during the reign of the Emperor Tiberius, and died in 79 while observing the eruption of Mount Vesuvius that destroyed the city of Pompeii. A famous letter of his nephew, Pliny the Younger, indicates that his insatiable curiosity drew him too close to the eruption, and he died of smoke inhalation (though more recent scholarship has suggested that he was not close enough for that and probably died of a heart attack).

He was a prodigiously productive writer, whose works included a treatise on throwing the javelin written while he was serving as commander of a cavalry regiment, a twenty-volume account of the wars between Rome and Germany, and a lengthy history of Rome. But unquestionably his masterpiece was the thirty-seven volumes of the *Natural History,* which he completed in the year 77, during the reign of the Emperor Titus, to whom it is dedicated. It was intended to encompass all knowledge in the fields of botany, zoology, geology, mineralogy, and astronomy, but it ventures into all sorts of other areas: art, architecture, medicine, agriculture, and what we would call anthropology today. Supposedly Pliny would have a servant read aloud from some book in his vast library, and he would select information from it, supplementing it from his own extensive studies and previous books, that another servant would copy down. What has come down to us is essentially intact, one of the largest texts of the ancient world to survive into our era.

There have been several modern translations of the *Natural History,* but the one I have, which served English-speaking readers well for a century and a half, is the one by John Bostock and H.T. Riley, published in 1857 by H.G. Bohn. I have often dipped into its thousands of pages, and always have come away with some rewarding discovery, some amazing nugget of what passed for science in the early days of the Roman Empire and which to us is the most fanciful kind of fantasy. It is the Rome of superbly engineered aqueducts and roads that survive until this day, of such architectural marvels as the Pantheon and the Colosseum, of a magnificently organized military force that conquered most of the known world, and yet—and yet—the things that they believed—

For instance, Book Seven tells us of a country called Aharimon, the feet of whose inhabitants "are turned backward relatively to their legs; they possess wonderful velocity," of a race in India "who have the heads of dogs," and of "another race of men, who are known as Monocoli, who have only one leg, but are able to leap with surprising agility." Not far away are the Sciapods, with huge feet that they hold in the air to protect themselves from the heat of the Sun, and a tribe to the west "who are without necks, and have eyes in their shoulders," and so on for quite a catalog of wonders. ("At the very extremity of India, on the eastern side of the river Ganges, there is the nation of the Ashoni, a people who have no mouths. . . . These people subsist only by breathing and by the odors which they inhale through the nostrils. They support upon neither meat nor drink; when they go upon a long journey, they only carry with them various odoriferous roots and flowers, and wild apples, that they will not be without something to smell at. . . .") The same seventh book provides information on "The misfortunes of Augustus," "Persons who have come to life again after being laid out for burial," "The greatest length of life" (a king of the island of the Lutmii, according to Xenophon, lived six hundred years), "Instances of acuteness of sight" (Cicero is quoted about "a man who could distinguish objects at a distance of one hundred thirty-five miles," and ever so much more. Book Seven has sixty chapters in all—and it is only one of thirty-seven books.

Not all of them deal with the bizarre and fantastic, of course. Book Eighteen speaks entirely of the cultivation of grain, Nineteen of flax and various garden plants, Twenty of the medicinal properties of plants. (Twenty-seven remedies derived from onions

alone, eighty-seven from cabbage, forty-three from radishes.) In the thirty-seventh book, which discusses the natural history of stones, we learn of the method of cutting marble into slabs, the construction of labyrinths and obelisks, the mode of making glass, and so on for seventy chapters. There are catalogs of insects and trees and fishes. There are essays on sapphire, topaz, emerald, and (in the same section) coal. It would be a mistake to think that Pliny's great book is simply a compilation of nonsensical beliefs. Much of it is down-to-earth practical information, invaluable in its own day and still not contemptible now.

Nevertheless, he is writing in the world of two thousand years ago, essentially in a pre-scientific age, and so the great book is full of what can only be called curiosa today. There is an abundance of medical information, for example, nearly all of which makes us pleased not to have to take our ills and aches to the Roman versions of our own medical plans. Hundreds of pages are devoted to describing medications derived from plants and animals, none of which have any medical value whatever; but at least they were attempts to make use of real substances to create real remedies, whereas Book Twenty-Eight, "Remedies Derived from Living Creatures," veers into the realm of sheer magic, giving us a striking view of a dark and credulous age that thought of itself, as do we today, as being at the pinnacle of scientific understanding. What are we to make of the cure for poisoning: "a whetstone upon which iron tools have been frequently sharpened, if put beneath the pillow of a person sinking under the effects of the poison, will make him give evidence and declare what poison has been administered. . . . To get rid of warts, some lie in a footpath with the face upwards, when the moon is twenty days old at least, and after fixing their gaze upon it, extend their arms above the head, and rub themselves with anything within their reach. . . . In cases where bread has stuck in the throat, the best plan is to take some of the same bread, and insert it in both ears. . . ."

Wonder upon wonder, marvel upon wonder! I could go on quoting for many pages. Indeed, I could quote all six volumes of densely packed pages. The thing is irresistible. There is, in fact, the whole Roman world contained in it, everything that was known or at least believed in the time of the Emperor Titus, all filtered through the mind of one extraordinary man. I would not use it as a medical handbook or as a guide to the geography of far-off places; but as a source of entertainment and, in a way, of instruction, there is nothing quite to compare to it.