725 Reflections: Another Ancient Encyclopedia

By Robert Silverberg

Once upon a time long ago, before Wikipedia was the merest electronic spark, the Encyclopedia Britannica was the fount of all knowledge. I bought my first set of the Britannica in 1956, when I was setting out as a freelance writer and felt that I needed to know everything about everything in order to write a science fiction story. I lost that set twelve years later, in a fire in my house, and replaced it with the 1968 edition, which then was the last word in modern factuality, sixteen shiny volumes. Along the way I acquired two other editions of the Britannica—the remarkable Thirteenth Edition, published in 1926, which is actually the vast Eleventh Edition of 1911 plus the two supplemental volumes of the 1922 Twelfth Edition and the three further supplements issued four years later. So it is thirty-two massive volumes in all, which of course can no longer be considered the last word in modern factuality, but which in its day was an extraordinary source of information about the nineteenth century and all that had preceded it. And then, just for the fun of it, I bought a reproduced version of the 1753 first edition, quaint and remote.

But also I have reached back far beyond the existence of the Britannica to the earliest of encyclopedias of which we know, that of Pliny the Elder, about which I wrote in a column for the July 2021 issue. It is a couple of thousand years old, so it is no help in writing the Asimov-Heinlein-Clarke kind of science fiction that is based on real scientific fact. But for the more flamboyant stuff, in which the colorful and fantastic 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 writer with all sorts of delicious hints leading to wondrously romantic inventions.

This is "Natural History," that astonishing work that Pliny wrote in the first century A.D., six densely packed volumes intended to encompass all knowledge in the fields of botany, zoology, mineralogy, astronomy, and many other areas—art, architecture, medicine, agriculture, and even what we call anthropology today. Taken all in all, it contains the whole Roman world, everything known or at least believed in the time of the Emperor Titus, all filtered through the mind of one unusual man. As a source of entertainment and, in a way, of instruction, there is nothing quite like it.

Or almost nothing. For now I have found another ancient encyclopedia, considerably more ancient than the Britannica and, though not nearly as old as Pliny's, even vaster in scope. This is another one-man encyclopedia, the work of the fourteenth-century Egyptian bureaucrat Shihab-al-Din al-Nuwayri, which has recently been translated (in small part, at least) by Elias Muhanna of Brown University under the English title of *The Ultimate Ambition in the Art of Erudition.* In small part, I say, because al-Nuwayri's encyclopedia in its totality runs to some two million words, nine thousand pages. Dr. Muhanna has extracted from that colossus just enough to give us a taste of it in one 318-page Penguin paperback.

Nuwayri, who lived from 1279 to 1333, served as an official in the government of the Sultan al-Nasir of the Mamluk dynasty, which ruled Egypt, Syria, and surrounding territories for several hundred years with Cairo as its capital. He held various administrative posts, serving as manager of the sultan's properties in Syria, as the head of a diplomatic network, as the superintendent of army finances, and much else, before retiring in 1314 to begin work on the encyclopedia that would occupy his energies for the rest of his life. This was a golden age of Islamic culture, a time of great advances in astronomy, mathematics, medicine, and other scientific disciplines, as well as a period in which poetry and literature were flourishing, and al-Nurayi set out to assemble a book that brought together all the knowledge of his prodigious era.

He was working within a tradition of Islamic encyclopedias that went back five hundred years, to Ibn Quatauyba's *Quintessential Reports* of the ninth century, but he set out to exceed them all, composing a work of great length that embraced not only scientific knowledge but history, political tactics, the proper conduct of sexual relationships, and extensive poetic quotation. He did not, of course, produce the whole thing out of his own knowledge, but drew on the work of all the previous Arab encyclopedists and such works of the ancient Greek and Roman world that had survived and those of Persia and India (giving proper credit where due) to create a synthesis of human knowledge as it had come to be understood in that high point of Muslim civilization.

The book is divided into five sections of unequal length: the first on the heavens and the earth, the second on the human being, the third on animals, the fourth on plants, and the fifth—by far the largest, occupying some two thirds of the whole—dealing with history from the Creation until al-Numayr's own time. One can dip in almost anywhere and find delights, even though Dr. Muhanna has translated the merest fraction of the entire thing. (His edition includes a thirteen-page table of contents of the complete work, just to tantalize us with what we are missing—the chapter on the superstitious practices of the pre-Islamic Arabs, for example, or the one on what will happen when the trumpet sounds to announce the arrival of the Day of Judgment.) But there is plenty here to fascinate us even in this very much truncated edition.

Book one, on the heavens, tells us some cosmological facts that differ fairly significantly from our modern concepts. We learn that God—as our translator speaks of "Allah"—created an enormous jewel, which He gazed on with such intensity that it began to foam and smoke, and out of the foam He created the heavens, seven of them, which contained the stars and the planets--seven planets, Saturn, Jupiter, Mars, the Sun, Venus, Mercury, and the Moon. (The telescope had yet to be invented and Neptune, Uranus, and Pluto were still unknown.) Then came the creation of the Earth, beneath the lowest of the seven heavens, and, afterward, the creation of mankind, which al-Humayr does not discuss until very much later in his book. It is a fine story, and so are the discussions of thunder

and lightning, snow and hail, the rainbow, and other meteorological phenomena. We, in our twenty-first-century smugness, like to think we know better, though his ideas about rainbows being caused by refracted starlight have, at least, some scientific flavor.

We go on to learn that Baghdad is "Paradise on Earth," something that is not exactly the case today, and, in the second section, on the human being, of the temptations presented to men by women—though al-Numayr follows that immediately by a series of erotic poems, some about men, some about women. (He is not afraid to contradict himself within a single chapter, though, whenever he does, he adds the careful conclusion, "God knows best.") Wine is prohibited—it muddles the mind—but singing and listening to music are or are not forbidden, depending on which section of the Koran one reads. Al-Numayr is inconclusive here. And there is much on the responsibilities of the monarch and his advisors, a topic unsurprising coming from an experienced bureaucrat like al-Numayr.

Unsurprising, too, is that in his third section, on animals, the Egyptian al-Numayr would provide accurate descriptions of the camel and the horse, though he is less reliable when it comes to such beasts as the manticore, a creature the size and shape of a lion, but with a human face and a tail that ends in a stinger like that of a scorpion. The hyena, we hear, is given to digging up graves to eat the bodies of the dead. The giraffe is a kind of conglomerate animal, with the neck of a camel, the horns of a gazelle, the teeth of a cow, and so forth. The water buffalo flees from mosquitoes but has no fear of lions or crocodiles. And certain snakes the size of camels have wings and can occasionally be seen soaring high overhead.

From book four, about plants, we learn the value of opium in curing migraines and earaches, and that eggplants produce red spots on the face, halitosis, and cancer, none of which have befallen me in my own experience of eating them. And after prosaic discussions of cabbage, onions, walnuts, and peaches, al-Numayr launches into a surprising section on aphrodisiacs, describing how to enhance one's virility with such things as arugula seed, narcissus oil, Chinese cinnamon, and beeswax. Women are offered various sexual remedies, too, including one that involves the scorched skin of a jackal and the powdered hoof of a donkey, and another that furthers pregnancy by giving her elephant urine to drink. (Al-Numayr suggests not telling her what it is, which sounds like a good idea.)

Lastly is the huge chapter on history, most of which Dr, Muhanna omits, giving us just the first section—Adam and Eve—and the last, an account of the Mamluk sultans whose servant he was. Those of us who know the story of Eden only through the Judaeo-Christian version will be startled by the much stranger Islamic tale. God creates Adam from dust and Eve from one of his ribs, yes, but they begin life adorned with sumptuous clothing and rich jewels. The serpent, which the Bible calls "more subtle than any beast of the field," is in fact innocent in the al-Numayr retelling of Eve's temptation with the apple: it is Satan who slips into Paradise, takes up a place between the fangs of the serpent, and speaks to Eve in the serpent's guise. After Eve and Adam partake of the forbidden apple, they are stripped of their fine clothing and sent forth from Eden clad only in fig leaves. Adam lands in India and Eve in Arabia, but they make their way toward one another, arriving finally in Mecca, and begin to bring the first children into the world. As for that multiplication of the human species after the expulsion from Paradise, al-Numayr offers the surprising information that Eve would bear not only Cain and Abel (and their sisters, unmentioned in the Bible), but, later, one hundred sets of male and female twins, who would fill the world with their progeny,

Delightful stuff. What, though, is the value of reading a medieval Islamic encyclopedia? Surely not to get formulas for aphrodisiacs or to learn about the structure of the Solar System. But such a work provides a sharp picture of the totality of knowledge as of one particular point in time, a point in time at which its scholars—-like those of Babylon, Greece, Rome, and early China–-believed that they understood all that there was to be known. As we move along down the ages, we constantly discover that many of our beliefs need to be revised, a sobering and instructive thought. We ourselves are quite proud of all that science has revealed since the beginning of modern times three or four hundred years ago; but I do wonder how our descendants, eight hundred years from now, might feel when they read one of our encyclopedias. Will they praise us benighted medieval people for having managed to learn so much with the poor tools at our disposal? Or will they smile condescendingly at the revelation of how little we actually knew about the Universe? m