A million healing words flow from compendium

ISFAHAN, Persia, March 1023—Faced with a particularly puzzling or difficult case, royal physicians and hospital surgeons have traditionally turned to the wandering bachelor healer, Abu Ali ibn Sina. In the future, consulting this renowned medical scientist will no longer require trekking throughout Persia. Doctors can instead let their fingers do the walking through Ibn Sina's new *Canon of Medicine*, an encyclopedic compendium of medical wisdom.

"It's like having an entire medical school in a book," observes physician Abu Raihan Muhammad al-Biruni, reached at his home in Ghazna, Uzbekistan. "For many of us, medicine is not a full-time job," he points out. "If, as I do, you spend at least as much time immersed in astronomy, mathematics, and geology," he says, "Ibn Sina's new canon can prove a lifesaver—literally."

Ibn Sina, himself a part-time philosopher, mathematician, astronomer, jurist, and theologian, explains, "I sat up nights writing this five-volume work over much of the past 11 years in the hope that it might give me my life back." As his reputation has grown over the past few decades, colleagues have increasingly been dropping by unannounced to discuss a case or sending him problem patients without warning. None has ever been turned away, he says.

With the encyclopedia now published, Ibn Sina says, "I hope clinicians can find the help they need within their hospital—or certainly within their caliphate."

"The reason we refer to Ibn Sina as the 'Prince of Physicians,'" observes Omar al-Haqqi, chief physician at Bukhara Medical College, "is not because he is necessarily the best clinician or experimentalist of all time. His real achievement—the one for which he will be remembered through the ages—is his unerring ability to systematize a library of medicine into a few volumes that are at once logical and useful."

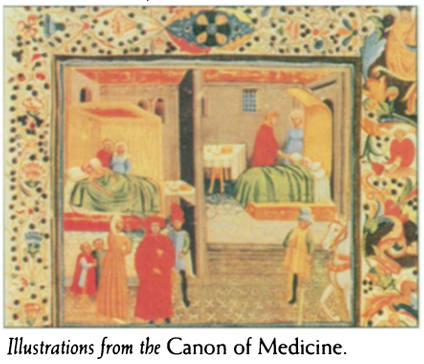
The new encyclopedia covers traditional medical science, such as the known diseases of organs, their symptoms, and their cures. The book catalogs the uses and efficacy of some 760 drugs. Its 1 million words also describe many new observations, theories, and techniques. The book thereby advances the medicine inherited from the Greeks, Ibn Sina asserts.

For instance, the canon takes the radical view that when physicians are presented with a new, potentially therapeutic agent, they should resist using it until the substance has been tested in animals.

Also, Ibn Sina identifies a new and potentially deadly condition, meningitis, and reports that tuberculosis is contagious. Moreover, he offers the novel observation that many diseases spread in epidemic fashion via diseased soil and water.

The encyclopedia offers up the first detailed descriptions of the eye, including the cornea, iris, retina, aqueous humor, and optic nerve. Ibn Sina also puts forward a new theory developed by optics specialist Ibn al-Haytham. It holds that what we see is not due to rays emanating from our eyes. Instead, al-Haytham's data make a compelling case that we see because rays of light bounce off objects and then enter our eyes.

The canon considers the role of emotions in health, noting that music can benefit patients and that love sickness can masquerade as more organic ailments.



Illustrations from the Canon of Medicine.

Between treating patients, Ibn Sina takes time for poetry.

In a sense, Ibn Sina has been working on these volumes since his late teens when, as a reward for his medical prowess, he was given unfettered access to the royal library of Nuh ibn Mansur, the king of Bukhara. "It was at this time that I not only developed a real love of books but also realized their power to take the wisdom and observation of a few and translate it to the many," Ibn Sina recalls.

"My colleague has now done just that," says Ibn al-Haytham. "Between the covers of Ibn Sina's canon is a bazaar of medical insights. It offers one-stop shopping for healers of any experience level." —*J. Raloff*

Messy pilgrims blamed for puzzling fossils

PARIS, 1746. Monsieur de Voltaire this week offered a startling new theory to explain the origin of fossils, a problem that has vexed philosophers since Aristotle. In an Italian essay, the French writer proposes that fossilized bones found today in the mountains represent picnic remains left by passing pilgrims and crusaders centuries ago.

"Rotten fish were thrown away by a traveler and were petrified thereafter," says Voltaire.

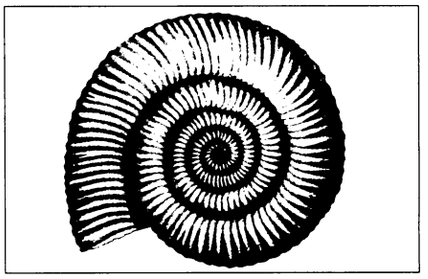
The pilgrim-picnic-petrifaction hypothesis clashes with the standard prayer-book explanation that fossils are a reflection of God's powers. The Royal Office of the Fourth Estate and Public Information put out a release saying, "Monsieur de Voltaire is clever indeed, but we are not amused by his musings. If he persists, he will find himself once again ensconced in a Bastille cell, this time without his linen handkerchiefs."

Leading scientists also have weighed in on the new theory. Georges-Louis Leclerc, Comte de Buffon, called Voltaire a buffoon. "The fossils present in the Alps are not the tastiest varieties of fish and would make a poor lunch," says Buffon.

Researchers remain divided over how patterns resembling shells, shark's teeth, and other living objects made their way inside rock strata near the tops of mountains. Near the end of the last century, the English physician Martin Lister concluded that fossils are inorganic structures that grow within rocks and coincidentally bear a resemblance to living marine creatures.

Although fossil shells look superficially like living mollusks, scrutiny reveals that they are not identical to any known today. "Our English Quarry-shells were not cast in any Animal mold, whose species or race is yet to be found in being at this day," he said in a letter published in the PHILOSOPHICAL TRANSACTIONS.

Early this century, Swiss physician Johann Scheuchzer argued that fossil fish, plants, and other forms are the remains of once-living species, lofted into the mountains by the biblical flood.



A spiral fossil, 2 feet across.

There are hints of unpublished data on fossil origins compiled in the early 16th century by the master painter Leonardo da Vinci (SN: 4/23/1504). A copy of his long-hidden manuscript was recently purchased by Lord Leicester in England. According to gossip, in this Codex Leicester, Leonardo argued that the flood did not transport fossils, but rather that Earth itself is capable of moving upward. Fossils once at the bottom of the sea would then rise up to the mountains.

Contemporary researchers, however, are unwilling to comment on this theory because the manuscript is not available for peer review. Lord Leicester says simply, "For a painter, the man had horrible penmanship."

Some predict the manuscript will only come to public light when, centuries in the future, a man controlling the gates to unfathomable wealth buys it and brings the word of Leonardo to the marketplace. —*R. de Monastersky*