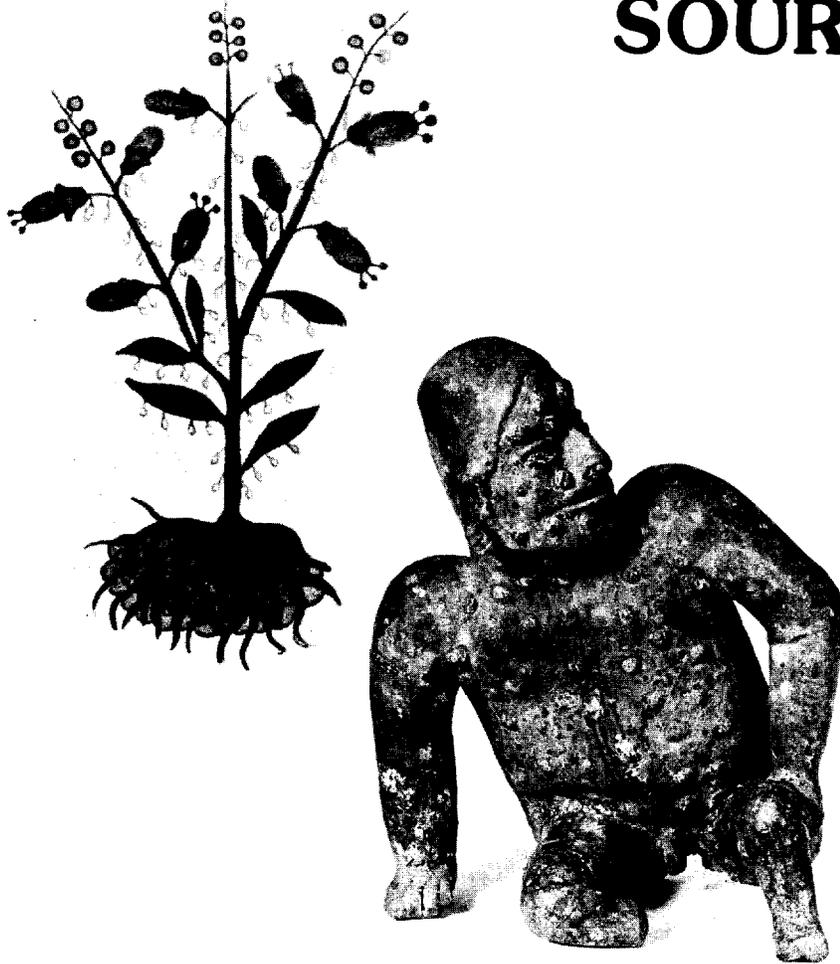


# **PRE-COLUMBIAN MEDICINE: HISTORICAL SOURCES**



**An exhibit at the  
NATIONAL LIBRARY of MEDICINE  
8600 Rockville Pike  
Bethesda, Maryland 20209**

**FEB. 2 - MAY 22, 1981**

Ceramic sculpture of hunchback  
Culture: Colima (Mexico)  
B.C. 200 - 250 A.D.



## **PRE-COLUMBIAN MEDICINE: HISTORICAL SOURCES**

The conquest of Tenochtitlan, the capital of the Aztec empire (today the site of Mexico City), by Hernan Cortes in 1521 marked the beginning of a rapid decline for the major centers of pre-Columbian civilization. These cultures were the last of many that had existed for centuries before Columbus arrived. Within a short period a great deal of the historical record of the indigenous cultures was destroyed. Traits and traditions that survived for a time were soon affected by acculturation with aspects of European society. Medicine as it was practiced in the pre-Columbian world, for the most part, disappeared.

Our knowledge of pre-Columbian medicine is derived primarily from study in four areas: ceramics, codices (manuscripts), and the fields of paleopathology and cultural anthropology, including early accounts of medicine practiced by the indigenous people. These sources have certain advantages and limitations for the study of ancient American medicine, but they are all we have to reconstruct the medicine practiced in a civilization that no longer exists.

Ceramic sculpture of mother and infant  
Culture: Mochia (Peru)  
c. 800 A.D.



## Medical Sculpture

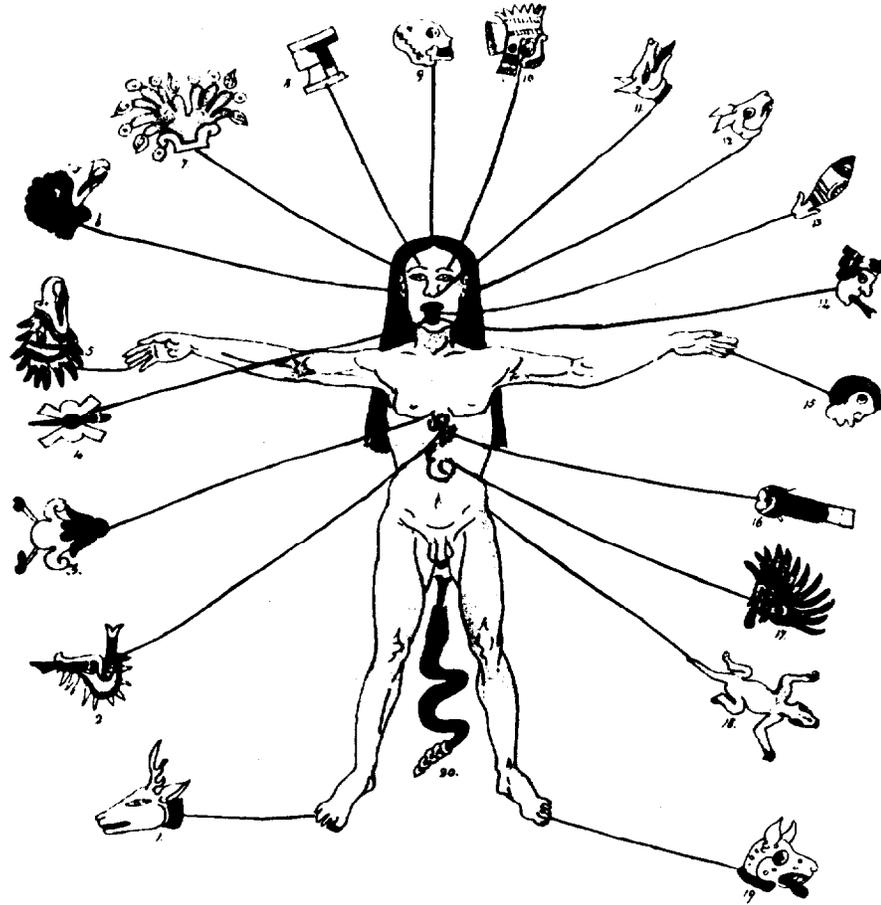


Ceramic sculpture of pregnant female  
Culture: Nayarit (Mexico)  
B.C. 200 - 250 A.D.

A large number of pre-Columbian artifacts of medical interest have been preserved, many of them in the form of ceramic sculptures. As with other remains of early cultures, we cannot always be certain why they were created or, in the case of funerary art, why they were buried.

While the physical deformities in these early sculptures can be recognized, the specific causes cannot be identified. Man and disease are in a constant state of change within their environment. Symptoms of disease can change and the virulence of a disease can vary. Some diseases that are present today did not exist in the past and some that existed in the ancient world may have long since disappeared. A complete and accurate diagnosis, therefore, cannot be made solely by the interpretation of pathologic signs recreated in clay more than 1000 years ago.

## Codices



Medical astrology, in the Lord Kingsborough Codex (1562-1563).  
Illustration from *Los codices de Mexico*  
(Instituto Nacional de Antropología e Historia, Mexico, 1979.)

The destruction by the Spanish of an incalculable number of native American codices was an immense historical loss. In an attempt to rectify the situation the Spanish had Indians produce new codices dealing with a wide selection of historical and cultural subjects. They could not replace those that were destroyed, however, because the subjects were now presented from a new point of view: 16th century European, rather than native American.

Of approximately 500 codices relating to ancient Mexico that are extant, only 16 were produced before the Conquest. The vast ma-

ajority, therefore, cannot be considered authentically reflective of pre-Columbian culture. Nevertheless, they are rich sources of valid information relating to a wide variety of pre-Columbian subjects.

The codex of greatest significance for the history of medicine is the Badianus manuscript of 1552 -- the first herbal produced in America. The Florentine Codex, produced between 1578 and 1580, includes some interesting medical data. Other manuscripts containing information relating to medicine are the codices Magliabechiano (1566) and Mendoza (1541-42).

## Badianus Codex



Medical plants described and illustrated in the Badianus Codex (1552),  
the first American herbal.

Illustration from Emily Walcott Emmart,  
*The Badianus Manuscript* (Baltimore, The Johns Hopkins Press, 1940).

The oldest source of information on the medical herbs of pre-Columbian America is the work composed by Martin de la Cruz in 1552 in Nahuatl -- the language of the Aztecs -- and translated into Latin by Joannes Badianus. Both de la Cruz and Badianus were Indians who had been trained at the Colegio de Santa Cruz de Tlateloco (a district of Mexico City); the school was run by Franciscans to educate young Aztecs and teach them Christianity.

The use of plants for medical purposes was highly developed among the Aztecs and their predecessors. The Spanish were astonished at the size and variety of the Mexican botanical

gardens. Cortes, in a letter to King Charles I describing the market district of Tenochtitlan, mentions a street of "herb sellers where there are all manner of roots and medicinal plants that are found in the land. There are houses as it were of apothecaries where they sell medicines made from these herbs both for drinking and for use as ointments and salves."

The Badianus manuscript deals with the plant materia medica of the Aztecs and gives the treatment for various maladies. It illustrates and describes 204 medicinal herbs ranging from small rock plants to large trees, from aquatic to desert and tropical to alpine forms.

# Human Paleopathology

As long as there has been human life, there have been injury and disease. Paleopathology is the study of abnormalities in human tissues which have been preserved from ancient times. While a knowledge of anatomy and pathology is fundamental to the efforts of the paleopathologist, an understanding of the archeology of the society being studied is also essential if his work is to have proper historical perspective.

Of all the geo-cultural regions of pre-Columbian America, none surpasses ancient Peru as an area favorable for the study of paleopathology. Not only did the inhabitants master the art of embalming, but the climate was conducive to the preservation of burial remains. From ancient Peru, as well as from parts of North America, there is considerable paleopathological evidence showing aspects of pre-Columbian medicine, as well as the presence of disease.



Three Peruvian skulls showing healed trephine openings surrounded by areas of scarring. Illustration from T.D. Stewart, "Significance of osteitis in ancient Peruvian trephining", *Bulletin of the History of Medicine* 30 (1956).

"Birth of a child,"  
Huichol Indian art;  
copied with permission of the  
Fine Arts Museums of San Francisco.



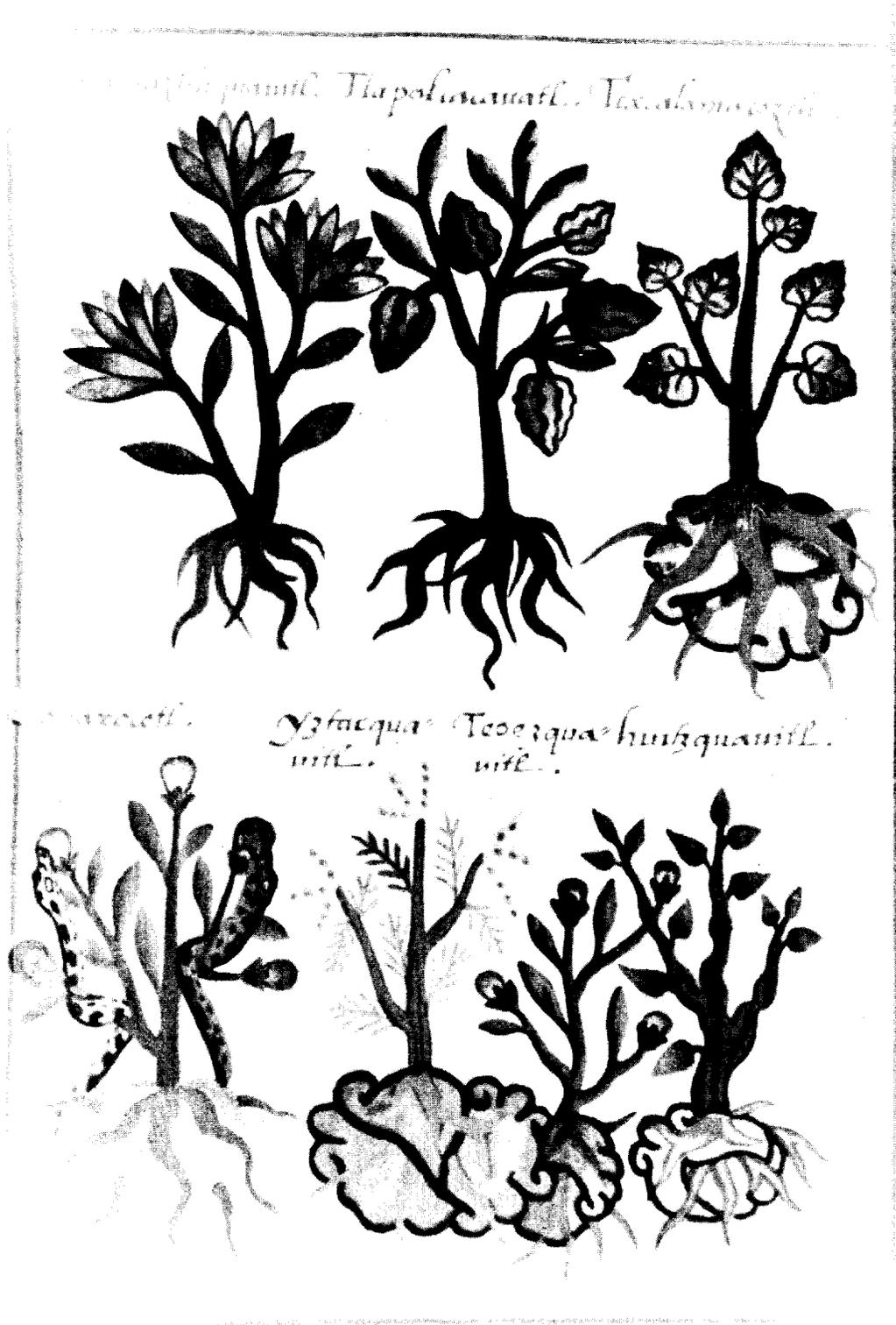
Huichol Indian shaman praying (Mexico).  
Photo by Kal Muller, from *Art of the Huichol Indians*,  
Catalog of the Fine Arts Museums of San Francisco  
(New York, Harry N. Abrams, 1978).

## Shamanism

The practice of medicine cannot be separated from the culture in which it exists. The study of cultural anthropology can therefore at times provide an insight into the medicine of the past.

Shamanism is the art of the medicine man, or curer, and probably represents the earliest method of healing. The shaman's efficacy derives from his access to supernatural power, and his therapeutics is always in harmony with his society's concepts of health and disease. Shamans are usually regarded as powerful individuals who possess an understanding of supernatural, psychological, and physical processes.

Shamanism persists in numerous contemporary American Indian cultures, as well as in other areas of the world. In what ways and how precisely these practices reflect the actions of former societies depends on a host of historical and sociological factors, notably the extent of a particular community's isolation from external influences over a period of time.



Medical plants described and illustrated in the Badianus Codex (1552),  
the first American herbal.  
Illustration from Emily Walcott Emmart,  
*The Badianus Manuscript* (Baltimore, The Johns Hopkins Press, 1940).