

ARCHAEOLOGY

Iraq Study Stopped

► THE KILLING OF KING FEISAL II and the fall of his Government in Iraq interrupted study of the causes for the fall of the Sumer Government in the same area thousands of years ago.

An important cause of the ancient fall of Government was traced to farming methods, Prof. Thorkild Jacobsen of the Oriental Institute, University of Chicago, working in cooperation with the Directorate General of Antiquities of Iraq under the Feisal Government, reported.

Over-irrigation led to the depositing of mineral salts on the soil to such an extent that crop yields were reduced sharply.

From carbonized remains of grain and grain imprints in bricks used for buildings, the archaeologists learned that the principal crops were wheat and barley. As the land became more salty, Sumerian farmers had to switch from wheat to the hardier barley. But later as more and more salt was deposited, barley crops also dropped off.

At the peak of production, the best Sumerian fields yielded more wheat per acre than the best Canadian fields today.

But by the time wheat disappeared completely in southern Iraq because of salting, the center of civilization shifted to the north, where Babylon began to emerge under Hammurabi.

As part of their study, Prof. Jacobsen and his party excavated parts of two cities in the area and an ancient irrigation canal, the Naharwan. On the Naharwan canal the expedition found a weir, a type of dam, used in early Moslem times to raise the water level for irrigation. Dating from the early 8th century, the weir raised the waters in front of it about nine feet, furnishing water for 11 branch canals. It contained a spillway, two flanking abutments, two frontal guide banks and two water regulators. There were sluices at the heads of each branch canal so that the amount of water to be used for irrigation could be regulated exactly.

The study was undertaken to guide Feisal's Iraqi Government before it embarked on an extensive land reclamation project.

Science News Letter, August 9, 1958

MEDICINE

Fight Against Crippleers

► THE SAME huge resources that have waged the successful battle against the child crippler, poliomyelitis, are being turned toward another group of crippling diseases, which affect adults as well as children.

The announcement by the National Foundation for Infantile Paralysis that the public donations given to the March of Dimes (about \$35,400,000) will go to the fight against arthritis and rheumatic diseases as well as other diseases, lends hope that these age-old cripplers are on their last legs.

Added to the funds of the National Institute of Arthritic and Metabolic Diseases, about \$3,500,000, and the Arthritis and Rheumatism Foundation, about \$500,000, there is expected to be a tremendous increase in research against these diseases.

Arthritis and rheumatism have plagued mankind since time immemorial, and little has been done until recently, with one important exception, to treat its aggravating, painful symptoms.

Formerly, arthritis, which has at least 30 different forms, was one of those human afflictions for which doctors could do little more than try to make the patient comfortable and hope for the best.

Only in the case of gout has there been a useful drug for the relief of pain and other symptoms. That drug, colchicine, has been in use for about 400 years.

The discovery of cortisone within the past decade has set the wheels of research rolling in high gear against all kinds of arthritis and rheumatism. No longer are physicians shrugging their shoulders hopelessly.

Nearly 12,000,000 Americans are afflicted

with these diseases. Of the victims, about 218,000 are completely disabled, 1,500,000 are disabled part of the time, and the remainder are subjected to chronic or recurring pains.

The worst of the arthritic and rheumatic diseases is known as rheumatoid arthritis and affects the joints, making the simplest movements unbearably painful. As with the other types, the cause is unknown.

Osteoarthritis is referred to as a degenerative disease. It attacks mostly older people and, according to some authorities, nobody can escape it if he lives long enough. Similar to, and more common than rheumatoid arthritis, osteoarthritis is the less damaging of the two.

Another group of arthritic diseases is that affecting the soft tissues, such as muscles, nerves, and ligaments. They go under the familiar names of bursitis, neuritis, sciatica, and lumbago.

Many of the arthritic diseases last a lifetime and generally are not fatal. There is, however, a kind of related grouping known as collagen disorders which attack and destroy the connective tissues (such as tendons and cartilage) and often kill the victim.

The effects of arthritis and rheumatism are more than painful to the sufferers. The diseases often cause impoverishment to the victim and his family. His treatment may be expensive and he may not be able to work.

It is estimated that the diseases cause the loss of about 150,000,000 work days each year, and the loss of more than \$500,000,000 during the same period.

As more funds and more research are

poured into the fight against the cripplers, the hope grows that more may be learned about the diseases and better treatments may be found or made.

Science News Letter, August 9, 1958

● RADIO

Saturday, August 16, 1958, 1:30-1:45 p.m., EDT

"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Mr. Bart Spano, chairman, Civil Aeronautics Jet Planning Group, will discuss "The Jet Transport Era."

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