

ARCHAEOLOGY

Seek Man's Missing Links

► SOUTHERN ARABIA will be "combed" this winter for clues to missing links in the human history.

A team of U. S. scientists, led by Dr. Gus Van Beek, associate curator of old world archaeology at the Smithsonian Institution, will survey the fertile valley of Hadhramawt for town sites, cemeteries, quarries and irrigation remains of past ages.

Dr. Van Beek told SCIENCE SERVICE no evidence of man is known from the area between the old stone age, or about 50,000 years ago, and 500 B.C.

He said it is quite unlikely that the area had remained uninhabited all that time. His team will mark sites believed worthy of excavation and will also collect such artifacts as potsherds for dating the sites. If a site shows several periods of occupation, the expedition will make on the spot test excavations for further studies.

Dr. Van Beek said the survey, lasting from October, 1961, through March, 1962, will be of great value for later archaeological expeditions wanting to explore the valley further. If promising sites are found, the Smithsonian may send other expeditions to dig up their secrets.

South Arabia may have served as one of the corridors for the movement of humans, plants and animals between the Asian and African continents. One of the aims of the expedition will be to find clues to the extent of this role.

To this end, Dr. Henry W. Setzer, associate curator, of the Smithsonian division of mammals, will collect skin and bone specimens of animals now living in the Hadhramawt Valley.

These specimens will then be compared

to any animal remains of earlier times found there so changes in the structure and appearance of the animals can be studied. This collection will also be compared to similar animals now living in other parts of the world to see if a bull living in southern Arabia today is different from those living elsewhere.

An interesting puzzle for the expedition to solve will be the difference between the humped cattle now living in southern Arabia and that appearing on old sculpture found in the area.

The cattle portrayed on ancient sculpture have no hump on their back. It is not known when the humped cattle were imported to the area and it is not certain that even dated objects can be used as an exact guide.

Sometimes artists will continue to show animals of an earlier period, although these animals do not live in the country any more. The flat-necked bull could have become part of a stylistic convention kept long after the humped cattle had become common.

Southern Arabia, where salt mining is now the main industry, was once the greatest producer of two high priority items in the ancient world: frankincense and myrrh.

These gum resins were in great demand for use in medicine, and frankincense was used for making incense for the religious rites of nearly all the ancient civilizations, including those of Mesopotamia, Greece and Rome. Myrrh was chiefly desired for making cosmetics.

Unfortunately, archaeologists know less about the area from man-made objects found there than from Roman writers, Dr.

Van Beek said. Five ancient states are known to have existed around the southern tip of Arabia, of which Saba, or Sheba, is the most well-known from the biblical reference to the Queen of Sheba who visited Solomon with a huge caravan carrying spices (frankincense and myrrh), gold and precious stones.

This, if historically true, would mean that the area produced the sought after gum resins as early as the tenth century B.C., a theory supported by the find in Palestine in 1957 of a clay seal with a south Arabian inscription.

Two other experts will help the expedition prove that man was there in the new stone age and show what his life was like: Dr. Glen H. Cole, department of anthropology, University of Chicago, and Dr. Albert Jamme, W.F. (White Father, Society of Missionaries of Africa), research professor and script expert at Catholic University, Washington, D. C.

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INVENTION

The Three Millionth U.S. Patent Granted

► THE 3,000,000th patent issued by the U.S. Patent Office has been awarded.

Dr. Kenneth R. Eldredge, staff scientist at Stanford Research Institute, Menlo Park, Calif., won the patent for inventing a speedy electronic system for reading bank checks. United States Commissioner of Patents, David L. Ladd, made the presentation at a special ceremony in the Department of Commerce.

Commissioner Ladd hailed the event as another achievement in the long history of the patent system that has helped spur United States technological growth. The patent system gives "every person an equal opportunity to create something new and improving what already exists," the Commissioner stated.

The first U.S. patent ever granted dates back to 1790 for an improvement in the "making of Pot ash and Pearl ash by a new Apparatus and Process." However, the actual numbering of the patents did not begin until 1836 when a new law was passed revamping the "American" patent system.

Tucked away in the files of the Patent Office are many famous inventions that revolutionized the country's way of life and had a profound effect on the rest of the world. Eli Whitney's cotton gin (1794), McCormick's reaper (1834) and Morse's telegraph (1840) helped steer the United States in its earlier days toward the technological age.

The "Golden Age of Inventors," the late 1800's, soon followed. This was the time of Bell's telephone, Edison's light bulb and phonograph, and Marconi's wireless telegraph.

Today, more than 300 applications pour into the Patent Office each day, showing that Americans have not lost the inventive touch.

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MAKING PATENT HISTORY—The 3,000,000th patent is inspected by its inventor, Dr. Kenneth R. Eldredge (left), and Dr. Robert R. Johnson of General Electric's computer department, Phoenix, Ariz.