



FROM THE GULF OF MEXICO

This conch shell which the ancient Oklahoma Indian artists engraved with the figure of a dancing priest had traveled far.

the tomb the best equipment they were able to provide, for his future hunting and household needs.

The biggest mound included in the Oklahoma project was one on the Arkansas bottoms in Le Flore County. It is known as the Spiro Mound, or more pretentiously, as the Great Temple Mound of Oklahoma. It is really a compound structure, consisting of four connected mounds. In it the excavators found about 2,000 skeletons, and they estimate that several hundred more had been thrown away in fragments by pot-hunters who had previously partially vandalized the site.

This Spiro mound was not only the biggest, but it also yielded relics showing the most advanced civilization, and the most evidences for possible contact with the Maya culture.

The list of characteristic objects reads almost like a catalog of the Hopewell type artifacts from the famous mounds of far-away Ohio. It certainly shows that the builders of Spiro mound, like those of the Hopewell mounds, had trade contacts nearly as wide as the continent.

There is, for example, a great deal of copper, which most probably came from the Lake Superior region. This is worked up into ornaments, ax heads, richly wrought breast plates, sheathings over cedarwood ceremonial masks, spool-shaped ear-plugs resembling those found in Ohio.

There are also shells, including large conch shells, that could have come only from the Gulf of Mexico. Some of these are inscribed with patterns that look decidedly like those of Maya art, depicting men paddling a canoe, priests conducting a religious ceremony, etc. Shell was also used as inlay material in the wood-en ceremonial masks.

Serpent Designs

Maya-like patterns appear again in the pottery, which these Indians made well and in great quantity. One shallow bowl, especially, has a design of extended hands that look astonishingly like those on the sculptures of the Central American temples and monuments. Serpent designs, characteristic of both Maya and Hopewell cultures, appear in the Spiro pictures.

The Spiro mound builders knew the art of weaving. Fragments of mats made of reeds and rushes were found, and even more striking in their workmanship, cloths made of buffalo hair, rabbit fur, and the fibers of milkweed and linden bark. One sepulchre buried under the mound, apparently the last residence of a great chief or high priest, consisted of a crib of cedar logs, hung within with patterned and dyed cloth of buffalo hair and rabbit wool. For its day and place, it was a veritable redskin Tut-an-akh-Amen tomb.

Much of the burial furniture in the mounds was apparently made specially for funeral or votive purposes. The arrow heads frequently showed no signs of having been used at all. Many of the objects, also, were quite evidently intended for ceremonial use only: for example, one great flaked blade of chert, 28 inches long.

Among votive objects, perhaps the most puzzling, certainly the most disputed, are the so-called "eccentric flints." Most of these came from a single great cache, discovered some years ago by a halfbreed Indian named Mack Tus-singer, who made a very good thing, financially, out of selling them.

The "eccentric flints" are very skillfully flaked pieces with the general outline of arrow or dart points. But they could never have had any such practical use, or indeed any use at all, for their edges are incised and lobed in the most

intricate rococo shapes imaginable. They are almost snowflakes in stone. Similar patterns have been found in Central American flints, but nowhere else.

It has never been possible to authenticate these curious artifacts completely. Nevertheless, the report concludes, "they should not be casually dismissed as either fakes or freaks."

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AERONAUTICS

Treasure Island Site To Become Great Air Base

PARALLELING the development of the North Beach Airport at New York as a great combined land and sea air terminal, Treasure Island, in San Francisco Bay, site of the Golden Gate International Exposition of 1939, will probably become a terminal for domestic landlines as well as for Pan-American Airways' transpacific division, following the close of the World's Fair of the West.

Airline operators look with favorable interest upon the proposal to develop the man-made fair site into an airport because it will mean a single stop in the San Francisco Bay area in place of the two now made on most flights.

Domestic planes today stop both at Oakland, in the East Bay area, and at Mills Field, San Francisco. Cutting out one of the stops will mean 10 or 15 minutes less flying time.

In addition, the island is within a very few minutes of downtown San Francisco via the Bay Bridge. Mills Field is three-quarters of an hour from the Golden Gate city's hotel district.

The San Francisco Bay Bridge, which crosses the bay near one end of Treasure Island, is not a hazard in clear weather, in the operators' opinion, because of the fact that the prevailing wind parallels the bridge.

At times when instrument landings (which should be standard bad weather practice by the time the airport is ready) are required, the Oakland Airport will be used. This should be necessary at most 15 per cent. of the time, one airline official estimated.

Approval of such a move is, of course, up to the Civil Aeronautics Authority which, when the time comes, will have to pass upon the suitability of the port as a site. Unanimous support for the change is not expected, for sponsors of today's airports rarely welcome a change in location.

Pan-American Airways has already made arrangements to use Treasure

Island in place of its Alameda base from the time the fair opens. The twice-a-week clipper departures to New Zealand and the Philippines, a schedule expected to be in operation by that time, will provide the most prominent part of the Pan-American Airways exhibit.

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PSYCHOLOGY

Dogs Show Wide Differences In Problem-Solving Abilities

DOGS DISPLAY marked individual differences in "I.Q.," no less than their two-legged lords and masters, Dr. E. G. Sarris of the Institute for Environmental Research in Hamburg, Germany, has found. Tested by their abilities to solve problems connected with the getting of a coveted piece of meat, their mental abilities ranged all the way from very bright to plain, doggone dumb.

Dr. Sarris started with eight dogs of assorted sexes, breeds, and ages. At first he gave them an easy problem, of getting the meat when they were separated from it by a serpentine fence constituting a simple maze. All the dogs could solve that one, though some of them made hard work of it while the cleverer individuals went through it very quickly.

Then he increased the difficulties, imposing such brain-puzzlers as getting the meat out from under a can loaded on top with bricks, hauling it over a wall on the end of a string, moving small carts and boxes that would enable them to reach it when it was hung too high for direct approach, etc.

At each step-up in difficulty, some of the animals found the problem too hard and gave it up. Finally, Dr. Sarris was working with his two brightest dogs, a male named Argos and a female named Niki. They could think their way through all the problems he posed them. Of course, Dr. Sarris was careful to devise situations in terms of dog mentality, rather than of human minds.

The Hamburg zoologist believes that practical uses of some importance can be derived from his study. His results, he holds, cast considerable doubt on the universally accepted idea that certain breeds of dog are best for particular working purposes, like herding or hunting. Of far greater importance, he believes, is a dog-by-dog examination for individual differences in learning capacity, based on individual variations in temperament and intelligence.

The climbing fern can climb about three feet.

PHARMACY

Medicine-Making, Research Now March Side By Side

Dedication of Two New Laboratories for Squibb and Abbott Gives Promise of New Aid in Fight on Disease

A NEW trend in the world of drugs, destined to aid man's search for health is signalized by the dedication, within a few days of each other, of new medical research laboratories of two large drug manufacturing firms.

On Oct. 7 the Abbott Laboratories celebrated their fiftieth anniversary by opening a new research laboratory building at North Chicago, Ill. On Oct. 11, E. R. Squibb and Son dedicated the new laboratory building of the Squibb Institute for Medical Research at New Brunswick, N. J.

Medicine-makers such as these are no longer confining themselves solely to the manufacture of drugs. In addition they are undertaking important programs of research on medical matters. Large groups of scientists—doctors, physiologists, chemists and bacteriologists as well as pharmacologists—are delving into problems of disease, seeking causes as well as possible cures. Even on the strictly medicine-making side, the idea is not just to make a new remedy, but to find better and better medicines and even, perhaps, to find ways of preventing illness.

Asks for Freedom

GIVE the scientists on your staff freedom to solve the riddles of science, regardless of possible practical applications, and provide for cooperation between practising physicians and laboratory investigators.

This sums up the advice given by leading scientists, including two Nobel Prize winners, to the new Squibb Institute for Medical Research.

Such advice is likely to be followed, it appears from the statement of Dr. John F. Anderson, vice-president of E. R. Squibb and Sons, the pharmaceutical manufacturing firm which has founded the Institute.

"Problems for investigation," he said, "will be chosen by those working in the Institute because of their working in the tific interest, just as is the practice in universities or other institutions of re-

search. Squibb has realized that it is such unimpeded research which has given to the world a large part of the fundamental discoveries which have so favorably affected modern life."

Every day, in thousands of hospitals the world over, blood is examined for anemia or for malaria germs or for many other conditions by methods developed by the German scientist, Paul Ehrlich. Ehrlich, however, did not sit down at his laboratory bench and decide to find a stain or dye that would show anemic blood cells clearly under the microscope. As Dr. Abraham Flexner, director of the Institute of Higher Studies of Princeton University, recalled at the dedication, Ehrlich's highly practical contributions resulted because at medical school he was allowed to "fool around" with dyes and microscopes, just to satisfy his own curiosity.

When and if the results of research in pure science have practical possibilities, the laboratory scientists must turn to clinical investigators, the physicians who do their research at the bedside.

"For the cure and prevention of disease and the relief of pain the final test is on man himself," Dr. George R. Minot, professor of medicine, Harvard University, and discoverer of the liver cure for pernicious anemia, said. A clinical investigative unit needs to be a part of or associated with an institute for medical research. "I am delighted to learn that clinical facilities with a small ward for the observation of patients in connection with various problems being studied by the research staff are being planned."

Dr. Minot's studies of anemia, for which he shared a Nobel Prize award, resulted from such a combination of clinical or bedside and laboratory research.

Dr. Russell M. Wilder of the Mayo Foundation cited the Thorndike Memorial Laboratory of the Boston City Hospital, of which Dr. Minot is director, and the Rockefeller Hospital in New York as desirable examples of institutions where such combined research can be carried on with life-saving results.