

ANTHROPOLOGY

Study Aboriginal Carvings

Carvings by ancient aborigines have been found stretching along limestone ridges in the northwest of Australia. They were made several thousand years ago by the Kariera.

► ANCIENT ABORIGINAL carvings that stretch for miles along limestone ridges in the northwest of Australia have been examined by F. D. McCarthy of the Australian Museum.

The carvings run inland from Port Hedland, W. A., for eight miles. The carvings were made several thousand years ago by native people known as the Kariera.

The Kariera, once 800 strong, are now almost extinct. Only a few of them live in the Port Hedland district today. Some of their carvings have weathered away, but others are plainly visible for miles along the low limestone ridges beneath the spinifex.

Down through the millenia the Kariera recorded the world around them. They drew turtles, dugongs and sharks beyond the surf breakers, and inland the tracks of kangaroos and emus in the red dust.

They drew their sacred spirits on the limestone, one set extending in an unbroken line for three miles.

Mr. McCarthy, who spent two months visiting the area on behalf of the Wenner-Gren Foundation for Anthropological Research in New York, examined the rock carvings at Port Hedland, at another outcrop 70 miles inland and on Depuch Island, three miles off the coast.

The Port Hedland carvings were first discovered in 1911 but until Mr. McCarthy's visit they had never been studied in detail by an anthropologist.

Mr. McCarthy said the carvings were the most extensive on the Australian continent. On Depuch Island he examined a mass of broken rock inscribed with the name of HMS Beagle, the British survey ship which visited there in 1840 and in which Charles Darwin served as a naturalist during the voyage.

On the island he also examined ideographs left by Japanese pearl-ers and the older carvings left by the Ngaluma tribe of aborigines.

The carvings on the island depict battle scenes, hunting scenes and ritual scenes, and are almost like pictures.

Depuch Island was once the meeting place for tribesmen from all parts of the northwest. It is considered the oldest aboriginal meeting ground investigated by scientists, and is known to be several thousand years old.

Mr. McCarthy was able to find only one member of the Kariera tribe, an old man working at a manganese mine near Port Hedland. The old man was able to recount several tribal legends and to interpret some of the rock carvings.

Science News Letter, January 31, 1959

GENERAL SCIENCE

Asks Big Research Sums

The President's budget has been submitted to Congress for approval. More than four-fifths of the sums requested for research and development are for national security needs.

► THE FISCAL 1960 BUDGET submitted to Congress by President Eisenhower shows Government emphasis on research and development. Providing more research and development funds virtually across the board, the budget, if approved, should strengthen U.S. military and space programs.

Over four-fifths of the requested research and development sums will be directed toward national security needs. These sums will be spread chiefly among the Department of Defense, Atomic Energy Commission, National Aeronautics and Space Administration, Department of Health, Education and Welfare, Department of Agriculture and National Science Foundation, among other agencies.

The figures provide a look at the scientific future for these agencies. Department of Defense will be working on research, development and testing of missiles and related equipment. It will accelerate efforts to develop an effective antiballistic missile sys-

tem. Other Defense projects include perfecting a long-range detection and tracking method of submarines, and perfecting anti-submarine guided missiles. Work will continue toward developing an atom-powered airplane for the U.S. (Russia reportedly already has one.)

Atomic Energy Commission will use about 15% of the \$4,572,000,000 sum requested for research and development. Much of AEC's work will spill over in benefits to the civilian economy. In particular, AEC will intensively study nuclear radiation effects on living things, a critical problem right now facing the man-in-space program.

A stepped-up space program, to be administered by National Aeronautics and Space Administration, will more than offset slashes in the field of astronautics formerly administered by Department of Defense, an analysis of the budget showed.

NASA itself will be working on the

space aspects of meteorology and communications, but looks ahead toward placing "very heavy objects" in space—ultimately man. NASA also will work with AEC on developing an atom-powered rocket.

Health, Education and Welfare will spend more money in fiscal 1960 than in 1959 for studies and assistance leading to control of staphylococcal infections, air pollution, and radiological health, assuming Congressional endorsement of the budget requests.

Department of Agriculture will put 80% of its research money into the Agricultural Research Service, for research on animal husbandry, crop production, diseases and parasites, soil and water conservation and agricultural engineering. It will also strive to develop a better way to protect forests from the ravages of fire, insects and disease, and to find new uses for forest products.

The budget calls for greater support for promising proposals made to National Science Foundation. NSF is contributing to basic research by maintaining special facilities for scientific experimentation. These include radio and optical astronomy observatories, a solar research telescope, reactors for nuclear research, university computers and an oceanographic research ship.

Science News Letter, January 31, 1959

METALLURGY

Interior Scientists Make First "Moly" Casting

► FOR THE first time scientists have succeeded in casting molybdenum, termed a "major metallurgical breakthrough" by the Department of Interior.

Molybdenum melts at the extremely high temperature of 4,748 degrees Fahrenheit and until now could not be formed into a cast because the crucible used melted before the molybdenum.

Of the 96 natural elements, only carbon, tungsten, rhenium, osmium, and tantalum have higher melting temperatures than molybdenum. Iron and lead melt at 2,800 and 620 degrees Fahrenheit, respectively.

To form the casting, metallurgists at the Bureau of Mines laboratory at Albany, Ore., used a high-density electric arc under remote-control conditions in an inert atmosphere to melt a 30-pound charge of molybdenum in a water-cooled, copper-lined crucible.

The hot material was poured through a series of troughs into a rotating graphite cylinder that forced the metal into the walls of the rotating mold. There it consolidated, froze and produced a hollow cylinder four-and-a-half inches wide and eight inches long, which became the first molybdenum casting.

Bureau metallurgists are now seeking to improve the technique so that more intricate shapes can be created. This would enhance the development of missiles, rockets and satellites.

Since molybdenum has excellent strength at high temperatures, it is extremely useful in missile parts that have to withstand intense heat. As an alloying agent to increase the hardness and strength of steel, molybdenum already plays an important role in missile construction.

Science News Letter, January 31, 1959