

PALEONTOLOGY

New Fossil Deposit Found

► A MASSIVE 2,000,000-year-old underwater "bone yard" has been discovered near Gainesville, Fla. The deposits constitute the greatest concentration of fossils ever found in Florida, believes Dr. Clayton E. Ray, University of Florida biologist.

Dr. Ray revealed the identification of a small, extinct, pronghorned antelope extracted from the deposit. "It is the first time that this antelope has been found east of central Texas," said Dr. Ray.

The identification follows the earlier fossil discovery of a giant flesh-eating bird the size of an ostrich from the same deposit recently identified by Dr. Pierce Brodkorb, University of Florida biologist. Dr. Ray feels that the bird and the antelope are the most exciting finds in Florida in the last 25 or 30 years.

Fossils identified in addition to the bird and antelope consist of evidences of an array of ancient giants including parts of a giant bison, two species of camel, an extinct horse, a giant land tortoise that would measure five feet in length, a mammoth, an extinct peccary, a mastodon, a tapir, a giant beaver the size of black bear, a 150-pound rodent; an extinct ground sloth the size of an elephant, and a glyptodont—a relative of the armadillo—that measures five feet in length.

Robert Allen, Jerry Hooker and Ben Waller, a local team of skin divers, discovered the immense deposit. The many fossil pockets vary in size; the largest measuring about 30 by 30 feet is six to eight inches deep below a layer of algae in the river bed.

To protect the discovery from careless amateurs, the location of the find has not been divulged.

The age of the deposits, revealed Dr. Ray, ranges from 10,000 to 2,000,000 years old, though some shark teeth were found as old as 25,000,000 years, along with remains of the modern beaver and the flat-tail muskrat. Although the beaver and the flat-tail muskrat are still living, said Dr. Ray, they are not living in this area. The flat-tail muskrat appears nowhere in Florida today. The beaver appears only in the panhandle region of Florida.

In explaining the theory of the deposits, Dr. Ray thinks it is the result of normal dying along the river bank. The bones are not more than 200 yards from where they washed into the river, he said.

The mass of material collected over a period of nine months has been donated to the Florida State Museum.

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METEOROLOGY

Weather Control Probe

► RESEARCH on ways to control the weather and climate through international cooperation was urged by the American Meteorological Society, Boston.

The international program should be started immediately, even though the outcome of man's attempt to control or modify the atmosphere is unknown.

The Society strongly supported the resolution unanimously adopted in the United Nations in December, 1961, calling for a cooperative effort to improve weather prediction and to explore the possibilities of weather control and climate modification.

"Tremendous economic and humanitarian advantages" will follow if a significant degree of control or modification turns out to be possible, the Society statement said. Basic research studies required to answer the question of whether or not weather control is possible are expected to lead to improved accuracy in weather prediction and a lengthening of the future time for which useful forecasts can be prepared.

Recent developments have indicated that limited control of weather and climate may be scientific possibilities. One of these developments is the demonstration that clouds can be modified artificially by seeding them with dry ice or silver iodide.

Another recent development is the demonstration that the physical laws governing atmospheric motions can be put in mathematical form suitable for processing on

high-speed electronic computers, thus forecasting the future state of the atmosphere.

Numerical weather prediction by computer gives promise that it will some day be possible to forecast with accuracy the short- and long-term effects of artificial interference with normal atmospheric processes. The ability to predict what would happen without modification attempts as well as what would happen if they are applied is "essential" to any rational trials of weather control.

Although neither of these developments has answered the question of whether or not man can control weather or modify climate, the Society called them "major steps" in the chain of research results leading to improved understanding of the processes that produce weather and climate.

The American Meteorological Society drew two conclusions from its analysis of the present state of weather control:

1. The potential importance of the problem warrants a substantial effort on weather research, including a significant increase in the scientific manpower concerned with basic and applied research in the atmospheric sciences in Government, university and private research laboratories.

2. The nature of the problem, its magnitude and the possible consequences of success in achieving any significant mastery of of the atmosphere are compelling reasons for a cooperative international effort.

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OCEANOGRAPHY

Presidential Yacht to Explore Indian Ocean

► PRESIDENT JOHN F. KENNEDY is taking a personal interest in an international oceanographic expedition, geared to help feed the hungry people of the world, by making available a Presidential yacht for duty as a sea-going research vessel.

The yacht WILLIAMSBURG will be converted into a biological research vessel for the International Indian Ocean Expedition. A \$500,000 contract was awarded by the National Science Foundation to the Woods Hole Oceanographic Institution to handle the conversion work for the Foundation.

"The International Indian Ocean Expedition is a significant step forward in scientific cooperation," Dr. Alan T. Waterman, NSF director, said in making the announcement. "It represents not only the cooperative efforts of many countries, but cooperation among scientists of widely varying disciplines."

More than 20 nations with an armada of at least 40 ships are banding together in this international effort to tap the potential food source for the millions of people living in countries bordering the Indian Ocean.

The former Presidential yacht, equipped with a multitude of scientific instruments, will begin its cruise in the Indian Ocean early next year. It will stay in the area for two years.

Scientists will use the vessel for biological research, collecting samples ranging from microscopic animals to large fish, ocean mammals and sea weeds, and for determining the migration and abundance of the creatures.

The Presidential yacht was used by former Presidents Truman and Eisenhower.

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TECHNOLOGY

Electronic Lock Studied For Nuclear Weapons

► WHILE THE ELECTRONIC lock on U.S. nuclear weapons that Congress is being asked to finance and authorize is understandably top secret, speculation is that it utilizes some kind of mechanism used in intricate and successful code machines that safeguard radio communications between Washington and U.S. embassies and armed forces throughout the world.

The procedure would be to transmit by radio nets the code information when it is desired to unlock the weapons for possible use. A variety of methods of constructing the locks could be used. One essential requirement would be a device that would "fail safe," that is, would not be unlocked if anything went wrong with the message or the order from headquarters to release the atom bombs. This is considered a necessary precaution.

The locking of atomic bombs assures the allies that atomic war will not be started by accidental or hot-headed launching of nuclear weapons.

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