



FOSSILS EXAMINED—Kenneth Allen (left) and John Blackburn, students at San Diego State College, examine the ancient elephant teeth found by Howard Blackburn in a river bottom near San Diego, Calif. The molars and skull are at least 15,000 years old.

PALEONTOLOGY

Fossil Elephant Remains

► PART of the teeth and skull of an elephant that lived in this area at least 15,000 years ago has been discovered near San Diego, Calif., by a 12-year-old boy.

The remains of the ancient mammoth were found in the Tia Juana River bottom by Howard Blackburn of Palm City. The animal's grave is situated just north of the Mexican border about two miles from the Pacific Ocean.

Shortly after the find, southern California scientists became interested. Two of the teeth have been identified as belonging to a Pleistocene southern mammoth by Dr. Bayard Brattstrom, a vertebrate paleontologist at California Institute of Technology.

Dr. Brattstrom said the mammoth was of the species *Archidisdodon imperator*. This species of elephant reached heights of 13½ feet at the shoulder. It roamed the southwestern states in late Pleistocene time.

E. Dean Milow, a geology instructor at San Diego State College, said the mammoth probably became stuck in the mud when he came to the stream to drink and died there.

There are indications the elephant was covered with stream sediments soon after it died. Mr. Milow explained that this happened because the height of the ocean was raised and streams began to deposit their loads instead of cutting down.

In recent time the relative height of the ocean lowered and downward cutting in the river bottom resumed. The elephant was then gradually uncovered by the stream.

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PHYSICS

Snowflakes Found In Unexpected Place

See Front Cover

► AS THEIR cooling contribution to the summer season, scientists at the New York University College of Engineering display metal "snowflakes" of a titanium metal alloy photographed through a research microscope that magnifies them 500 times. NYU research metallurgists have been experimenting for several years with means of improving titanium, a relatively new metal extremely valuable in aircraft and other industries because it is stronger than aluminum and because it is 40% lighter than steel. It also resists high temperatures and "rusting."

The photograph on the cover of this week's SCIENCE NEWS LETTER shows an alloy of titanium with nickel.

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HORTICULTURE

Grow Better Roses by Reducing Net Water Loss

► YOU CAN grow better roses if you minimize net water losses until your plants establish a good root system.

This is the advice of Dr. Harry C. Kohl Jr. and Dr. O. R. Lunt, floriculturists at the University of California at Los Angeles.

They recommend: 1. maintaining small top area compared to root area, in other words, severe pruning on top; 2. wind protection such as a burlap screen, cheesecloth box or nearby shrubbery; 3. adequate shade, which may be provided by the same devices (some sun is needed, of course); and 4. frequent and deep watering.

Field studies under a wide range of conditions indicated soil aeration is not a limiting factor in establishing bare-root roses.

Other rose studies now being conducted by Drs. Kohl and Lunt include evaluation of spray treatment with iron-containing solutions in combating chlorosis (a sort of iron deficiency plant "anemia") in rose bushes. Radioactive iron in the spray compounds is being traced to see how much the plant absorbs through its leaves.

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ICHTHYOLOGY

Hear Manatee Sounds For First Time

► THE NOISES made by the manatee, a ten-foot, porpoise-like sea mammal, have been recorded for the first time, Dr. Charles J. Fish of the Narragansett Marine Laboratory, Kingston, R. I., has reported.

The recordings, made on a recent expedition to Puerto Rico by Mrs. Marie P. Fish, a marine biologist with the Narragansett laboratory, will give scientists a chance to study the noise-making mechanism of the roly-poly swimmers.

The noise sounds like pieces of wet leather rubbing together. Neither Dr. nor Mrs. Fish know how the noise was produced, but both agree it was involuntary.

The marine biologists recorded the sounds and took colored movies of about 64 different kinds of sea creatures during their four-week expedition. Dr. Fish said the manatee recordings mean scientists now have a "fairly representative" collection of the sounds made by tropical sea mammals.

"It was just luck that we got the recordings at all," Dr. Fish said. "Some of the local people told us they had never seen a manatee in the region."

The scientists happened to see the manatee offshore one morning and immediately rowed out with their recording equipment, a hydrophone and magnacorders.

"We got so close we could see the barnacles on its tail," Dr. Fish said.

The purpose of the expedition, made for the Office of Naval Research, was to get sounds and pictures of life in turbid water.

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