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OCEANOGRAPHY

Submerged Island Found

A SUBMERGED ISLAND in the Arctic Ocean has been charted by scientists from Columbia University.

The "island," about 500 miles north of the tip of Siberia, rises approximately 8,100 feet above the ocean bed. Its top, 900 feet below the surface of the ice, is about 14,000 square miles in area and resembles some of the great table lands in western United States.

The formation is in the same area in which the atomic submarine Nautilus reported encountering a "submerged mountain range uncharted and unknown" on its underwater crossing of the North Pole last year.

Four scientists from Columbia's Lamont Geological Observatory reported discovery of the "island" on their return from a summer spent on the drifting ice station Alpha II, established last May at a point 300 miles north of Point Barrow, Alaska. They mapped the ocean floor continuously as the ice on which the station is located drifted.

When the submerged island was reached, "the ocean bottom suddenly leaped from 9,000 to 900 feet in a little more than one day's time, or about four and a half miles of drift."

Underwater photographs show abundant marine life on top of the island, including sponges, a species of cold water shrimp, sea anemones and small fish. Pictures of the surrounding ocean bed showed very little life.

Specimens taken by trawls along the top of the formation included eight-inch starfish; four-inch bristled flat worms; a strange two-inch tadpole-like creature, resembling a teardrop, and with large blue eyes; and a new species of a small mosquito-like creature with a long antenna.

Numerous fossils of clams and snails estimated to have been dead 10,000 years or more were also found. No live specimens were encountered, however.

Science News Letter, November 28, 1959

ASTRONAUTICS

Parakeet for Space

A PARAKEET could well become the ideal passenger in future space flight tests.

Wishing they had some animal that could talk, scientists at the School of Aviation Medicine at Brooks Air Force Base, Tex., are preparing for the next animal-in-space flight.

"If only they could talk, we would be able to learn much more about what goes on during space flight," James Dickey, an electronics engineer at the School, said. He, along with other scientists, is presently working on the package or bio-pack, that will carry the next monkey beyond the atmosphere. It is a 130-pound biological package that will fit any type of missile, and is the payload for the next United States animal shot.

The next monkey to follow the now-famous female monkey, Baker, is a cinnamon colored two-year-old Rhesus male. His tail has been bobbed to reduce the amount of weight as much as possible, the scientists, huddled around the animal, explained.

The package itself is built to accommodate a six- to eight-pound Rhesus. Scientists hope to be able to study the effects of space flight on both the body and mind of the animal. If the flight is short, 15 or 20 minutes, the monkey will pull a lever throughout the entire trip. If, however, the trip is longer, the monkey will pull the lever for perhaps five minutes every hour.

Thus, scientists will know if the animal is capable of thinking and performing physical motions during periods of weightlessness and extreme gravity forces. The monkey will lie on its back during the flight. From this position, he will be able to see a red light overhead. When the light blinks, the monkey is conditioned to

pull a lever. Failure to do so results in a slight electronic reminder.

Cameras mounted inside the package will be trained upon the monkey during his entire trip. Special equipment aboard will record any motion sickness the animal might suffer by recording his eye movements which would, in that event, be snapping back and forth.

Science News Letter, November 28, 1959

TECHNOLOGY

Catalysts Help Turn Graphite Into Diamonds

THE LABORATORY secret of turning graphite into tiny man-made diamonds is use of metals as chemical "persuaders" or catalysts.

Small amounts of chromium, manganese, iron, cobalt, nickel, ruthenium, rhodium, palladium, osmium, iridium, platinum or tantalum were found to foster fast growth of one-tenth-carat industrial diamonds, but these metals do not enter into the chemical reaction that occurs at high temperatures and pressures.

General Electric research scientists said the process has been covered by a Government secrecy order until recently. Pressures of 800,000 to 1,800,000 pounds per square inch and temperatures of 2,200 to 4,400 degrees Fahrenheit have been used to make diamonds synthetically. At low temperatures, most diamonds produced are cube-shaped. Eight-sided crystals predominate at high temperatures. Also at low temperatures, the diamond color is black, grading through dark green, light green, yellow and white as temperature climbs.

Science News Letter, November 28, 1959