

BIOLOGY-NUCLEAR PHYSICS

Life Goes on at Bikini

Seemingly ignoring the atomic-bomb explosions, animal reproduction is as usual, no monsters having been born. Neither plants nor animals show traces of experience.

► LIFE on the islands and reefs of Bikini, and in the lagoon where the wrecked ships lie, goes on practically as if no atom-bombs had ever been built. Slight amounts of radioactivity are detectable occasionally in fishes and other aquatic organisms, but there seem to be no large-scale differences in either the fixed animals on the reefs or in the swimming life in the water, declared Comdr. Roger Revelle, USNR, who led a four-ship expedition to the twice-blasted atoll last summer, before the meeting of the National Academy of Sciences.

The only difference found, aside from some outright destruction of a few coral patches, was a rather obscure one in some of the organisms: a higher activity of one of the respiratory enzymes, catalase. No monsters have been born or hatched, and animal reproduction goes on as usual. No land plants or animals showed any trace of their atomic experience.

Bikini seems perfectly ready to forget all about it.

Growth from Cell Center

► PINCHING nerve fibers demonstrates that growth activities in cells begin at their centers and proceed outwards, Dr. Paul Weiss of the University of Chicago told the meeting. Nerve fibers, no mat-

ter how long, are simply extensions of the cells to which they belong. When such a fiber is compressed, living substance piles up at the obstruction and makes a noticeable bulge. When the constriction is removed, the bulge moves on out towards the end of the fiber. Dr. Weiss suggested therefore that "the basic protoplasmic systems of the cell, particularly native proteins, cannot be synthesized in the cytoplasm, but must be supplied from a nuclear source."

Academicians Meet Panchito

► "PANCHITO", or Tepexpan Man, the 10,000- to 15,000-year-old skeleton found recently in Mexico, was five feet seven inches tall, Dr. Javier Romero of the Mexican National Museum and Dr. T. D. Stewart of the U. S. National Museum concluded as a result of their months of study on the now famous remains. Their computations, based on long-bone measurements, make this very early American somewhat taller than the average Mexican of today.

A restoration of Panchito's features, built over the carefully replaced bones of his nearly complete skull, shows him a typical Indian. He has a cranial capacity of 1540 cubic centimeters, which compares quite favorably with that of modern men.

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PSYCHOLOGY

Tap Electricity on Eye

► WHEN a flash of light enters your eye, it produces an electric response on the eye's retina itself.

How scientists worked out a means for tapping this electric current on the eye itself and measuring it was reported to the National Academy of Sciences by Dr. Lorrin A. Riggs, psychologist of Brown University. The record of the eye's electric potential, he told the scientists, can be used to measure the eye's visual sensitivity.

A silver disk, inserted in a contact lens, was used to hold one electrode in

close and constant contact with the cornea of the eye. The other electrode of the pair was located in another place on the head of the subject. A flash of light was found to cause a momentary increase in the potential of the eye electrode. The jumps in potential were then recorded in a photographic record.

Dr. Riggs is sure as a result of his experiments that the electrical response originates in the retina or sensitive layer of the eye itself, he told the meeting, although so far it is not known exactly what happens to produce it.

It is the eye's system of night vision that is responsible for the electrical response, Dr. Riggs found. As your eyes become more and more used to darkness, they get more sensitive until they are finally a thousand times as sensitive to light as is your daylight vision. This increase in sensitiveness, Dr. Riggs found, is accompanied by a parallel increase in electrical response.

This method of tapping the electric currents on the eye gives scientists for the first time a method of finding out what goes on in the eye itself uncomplicated by what happens in the brain's visual centers. It also gives a measure of what the eye can see without having to depend on what the person tested says he sees.

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