

ARCHAEOLOGY

Only One Building Standing In American Pompeii

Dr. Morley Makes First Detailed Report of Newly-Found Calakmul, Estimated to Be Fifteen Centuries Old

A VOLCANO wrecked Pompeii; tropical plants and trees with incredibly strong fingers pulled down the ancient American city of Calakmul.

In the first detailed report on the exploration of Calakmul, new Mayan city discovered in southern Yucatan, Dr. Sylvanus Morley of the Carnegie Institution of Washington tells of the complete ruin of a once mighty Indian metropolis.

In the entire city, the expedition found just one building standing, though on every side were great piles of fallen stone, bearing testimony to the former size and importance of Calakmul.

The architect and surveyor of the expedition John S. Bolles, made a surveyed map of the center of the city, where civic and religious buildings were clustered. This area is found to be one and one quarter miles long and half a mile wide. Beyond it, smaller mounds and pyramids extended into suburbs of unknown dimensions.

The expedition counted 103 stone monuments, the greatest number ever found in any Mayan city. Deciphering dates on forty-five of the stones, Dr. Morley established the period of Calakmul's grandeur. It was, he reports, a city of latter years of the Old Mayan Empire. According to one school of archaeologists the dates are translated into our calendar as the years 364 to 551 A.D. Another method of reading the dates gives a correlation more than two centuries later.

The explorers found an ancient quarry where the city builders went for stone. Two large blocks of stone, partially quarried out by long-forgotten workmen, may still be seen there.

In one court, the explorers came upon a flat outcrop of limestone, twenty-one feet by fifteen feet, on which Mayan sculptors had carved a scene of six prisoners, bound with ropes. To photograph this rock, the expedition staff erected a platform seventeen feet above the ground.

From the well-known Mayan city of

Chichen Itza in northern Yucatan, it is only about 125 miles to Calakmul by straight air-line. But the Carnegie expedition reached the site from Chichen Itza by a route three times that distance, traveling by train, sail boat, motor boat, platform cars drawn by mules, truck and finally journeying the last seven miles with a mule-train into the depths of the forest. The trip took nearly a week.

The Carnegie Institution believes that the most important result of the expedition may be the opening up of this no-man's-land between the Old and New Empires of the Mayan Indians. The reason for the downfall of the Old Mayan Empire is still one of the mysteries of ancient America.

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PHYSIOLOGY

Goldfish X-Rayed to Show Development of Pigment

FORTY-SEVEN little goldfish have been given X-ray tests to shed light on the little-understood subject of the cause of the formation of pigment-car-

rying cells in man and lower animals. In man, these pigment-carrying cells erupt in the skin, forming unsightly dark blue patches. Sometimes these patches are birth marks, sometimes they are acquired later, as the result of injuries or irritations.

Results of the goldfish experiments are reported to the *American Journal of Cancer* by Dr. George Milton Smith of the Yale University School of Medicine.

In order to X-ray only one side of the forty-seven lively fish, Dr. Smith anesthetized his small subjects. After five or six days of carefully regulated X-ray treatment, the exposed side of each fish began to erupt tiny cells carrying dark coloring matter. These made splotches of black under the transparent outer skin of the fish, and formed inter-lacing patches against the dark red bodies of the fish.

After the treatments, the dark patches remained for almost two weeks and then took from eleven days to about a month to disappear, leaving the fish in the same state as before the experiment—except for four subjects that were so acutely affected that they died, apparently from a secondary infection.

Why X-ray exposure causes goldfish to respond by mobilizing these dark, color-carrying cells in the skin, is not yet clear, Dr. Smith reports. There is, he suggests, some connection with repair and defense processes. The whole matter is important to physicians because of the possible connection of the formation of these pigment cells or melanophores with the development of pigmented tumors.

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ENTOMOLOGY

New Gypsy Moth Infestation Area Found in Pennsylvania

ENTOMOLOGISTS of the U. S. Department of Agriculture are preparing to cooperate with the Pennsylvania Department of Agriculture and the State Department of Forests and Waters in a campaign to wipe out a newly-discovered infestation of gypsy moth in the mountains near Pittston.

This insect, introduced originally from Europe, has for years been a pest in New England, and at one time threatened to wipe out some of the finest forest and park trees in that region. The present outbreak in Pennsylvania is

well outside its former known range, but is causing no alarm, for there are no tree nurseries in the area affected, so that there is no danger of its being unwittingly shipped out. The infested area so far surveyed is about four by eight miles in extent, and consists principally of cutover land. It is considered probable that further surveys will find the insect in an even larger area.

Although it will require great effort to exterminate the pest, economic entomologists know from past successes in similar campaigns that it can be done.

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