GEOLOGY

Bahamas May Have Been Part of American Continent

NEW evidence that the Bahama Islands had a continental connection in past geologic times was reported by a joint Harvard and Yale expedition which has recently returned from a voyage to nearly 40 West Indian islands which have hitherto been extremely inaccessible and several of which have never before been visited by naturalists. The chief evidence lies in the discovery of mammalian remains in caves used as dwelling places by prehistoric man on islands where as yet no evidence has been found that mammals existed.

People living under almost primitive conditions were found inhabiting small islands off the coast of Haiti and San Domingo. But little is known concerning these communities which have been rarely visited. The fauna found in this region was not as sparse and depauperate as has been generally supposed.

The cruise was made this spring on the yacht *Utowana*, by Dr. Thomas Barbour, professor of zoology at Harvard and director of its zoological museum. He was accompanied by Mrs. Barbour, Mr. and Mrs. J. C. Greenway of the museum staff, and Froelich Rainey of the Peabody Museum of Yale University, who served as archaealogist to the party. The expedition was financed by the two universities and was aided by the loan of the yacht by Allison V. Armour.

A colony of small guinea-pig-like rodents was re-discovered and several excellent specimens of this animal were captured. Several snakes, lizards and many land shells, all evidently completely unknown species, were also collected.

Very large collections were also obtained of reptiles and of insects of various orders. A number of new and significant species have already been found and more discoveries are expected. Various types of wild cotton growing on several of the islands were also collected by Mrs. Barbour, and seed of many plants were also gathered. Botanical specimens of several new types are likewise included.

A number of scientific reports covering the expedition more completely are now being prepared by the members of the party.

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ENGINEERING

Hybrid Trolley Car-Bus Uses Either Current or Gasoline

RAISING a trolley pole to an overhead wire is a new feature in bus transportation which makes the "trackless trolley" a hybrid resembling even more closely the nearly archaic "car" of Toonerville fame.

Years ago, when buses in competition with street cars were an innovation, the motor bus was a radical departure from rail traction. Now that they have become modernized, the newest ideas seem to have been reclaimed from the past.

After motor buses became an accepted means for inter-urban travel, the direct engine drive was superseded by gas-electric installations, which, because of greater power and ease of handling, permitted the use of larger and more luxurious buses. The latest developments cause a modern bus to resemble once more the old-time trolley car when it comes to a steep hill. A pole from the roof accepts overhead power to supplement the gas-electric power plant.

Trolley car companies on the verge of bankruptcy from bus competition are highly in favor of this scheme, it is reported, since it allows them to find a profitable use for at least a part of their equipment.

The advantages to the commuter are also apparent. The trolley bus is quiet and smooth. It can travel at greater speed than a trolley car and has a much greater acceleration. On the other hand its path is not limited to a metal track and passengers no longer find it necessary to endanger their lives by stepping out to the middle of a crowded thoroughfare. The trolley bus can easily sweep in to the curb and pick them up in safety.

Martin Schreiber, manager of Public Service Coordinated Transport in Newark, N. J., reports a successful trial of the "All Service Vehicle." The bus was connected electrically to overhead wires at the foot of a long steep hill up the Hudson River palisades. With engine shut off the heavy vehicle proceeded up the grade, passing nearly all the cars on the road. At the top a button was pressed, the trolley pole came down automatically, and the bus resumed its gas-electric drive without a moment's delay.

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ARCHAEOLOGY

Science Links Living Indians And Mystery Ruins

MYSTERY that surrounds the abandoned ruins of Casa Grande and Indian villages scattered in the Gila Valley of Arizona was lightened by a discovery announced by Arthur Woodward of the Los Angeles Museum.

Speaking before the American Association for the Advancement of Science, Mr. Woodward told of conclusions reached from examination of burials of the Indians who built the remarkable Arizona ruins. Some of the funeral customs are revealed as very much like customs still followed by Yuma, Mohave, and other Indian tribes of the Colorado basin and the hills of southern California. It is believed that the customs have survived, and are evidence linking the ancient people historically with the present.

Hohokam Indians, as the ancient and unknown people have been named, had no less than three forms of cremation burial in the course of their history. These funeral customs changed and became simpler as their beliefs changed, Mr. Woodward infers. The second type was the one which somehow spread to California and has survived. In this type of funeral the bulk of the bones were buried in large jars, and the offerings were fewer, and inferior to the elaborate provisions thought needful in their earlier age.

The discoveries which provide evidence of customs of the Hohokams were made near Coolidge, Arizona, by the Van Bergen-Los Angeles Museum expedition.

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