

IMPORTANT DISCOVERIES MADE BY SOUTHWEST EXPEDITION

Discoveries of extraordinary interest, especially because there still remains much mystery as to their origin, are being made at the Lowry Ruin near Ackmen, Colorado, by the Field Museum Archaeological Expedition to the Southwest, according to reports received from its leader, Dr. Paul S. Martin, Assistant Curator of North American Archaeology.

Dr. Martin writes: "It would seem now as if this ruin is quite out of place geographically, since it is undoubtedly the work of Chaco Canyon people who lived hundreds of miles south and east of this spot, in what is now New Mexico. The pottery types found at this ruin are unlike anything here in the neighborhood, and belong also to the Chaco types. The other day we found in a small passageway a cache of seventeen pieces of pottery, most of them complete.

"A test trench through the great kiva has just been finished. The walls, floors, and other remains are highly interesting, although very puzzling. Despite the heat and drought the work has been pushed ahead."

Among noteworthy discoveries is a sacred spring which had been timbered and cribbed with cedar logs in prehistoric times. This seems to have served as a sort of sanctuary, for in the water at the bottom were found offerings of ten pieces of pottery and more than forty wooden prayer-sticks very similar to those used at present by the Hopi. These offerings had been perfectly preserved by the water.

So interesting have the excavations proved that Dr. Alfred V. Kidder of the Carnegie Institution of Washington, noted authority on Southwest archaeology, who recently came to the camp for a visit of only a few hours, remained instead for several days.

The expedition is in its second season of operations. It is financed from funds provided by Julius Rosenwald and the late Augusta N. Rosenwald.

THE SCORPION FISH

BY ALFRED C. WEED
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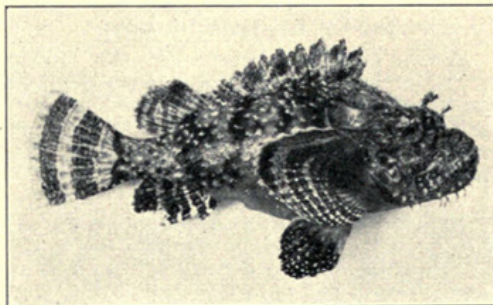
One of the most interesting fishes found in the crevices of coral reefs is the scorpion fish. It is not easily seen because the brilliant and varying colors of its body and fins harmonize so completely with its surroundings. As long as it remains quiet it will be mistaken for a piece of the mass of rocks.

When the fish moves, however, the great pectoral (arm) fins are turned over and show a bold pattern of black spotted with white. Outside of this is a series of broad bands of red, yellow, purple or something equally striking. The ventral (leg) fins with their bold markings of red, black and white are brought up parallel with the pectorals and combine with them to produce an effect as striking as the wings of the most brilliant butterflies. As the fish comes to rest these brilliant parts are turned out of sight or are hidden under the body so that it appears to be simply a mass of rock of a more or less neutral color.

The apparently neutral color of the scorpion fish is formed by an exquisite blending of an infinite variety of colors. Reds, greens, yellows, oranges, purples, blacks and whites, blended, or scattered in clean-cut spots make up a pattern that is in appearance a hit-or-miss mixture. Nevertheless, it is a definite, though complex, pattern. There is a reason for each tiny spot and for every broad shading. The color pattern of the scorpion fish is not at all constant. It is hardly ever the

same, even for a few seconds. A tiny patch of apple green on the shoulder may flow out to cover half the side and then disappear altogether. An orange spot on the side of the head may be only a tiny dot or it may cover half the face. It may remain constant for hours or it may come and go as rapidly as the fish breathes. While one watches, the whole color tone of the fish may change from black and white to russet brown, green, golden or creamy.

Whether or not the general color changes or remains constant there is always a flow of colors over the entire body. This is the one constant thing about the fish. One may watch a group of scorpion fishes in an aquarium for hours without seeing two that show



Scorpion Fish

Reproduction prepared at Field Museum for exhibition in the near future.

the same pattern or without seeing any one show the same pattern twice.

A very fine specimen of scorpion fish was recently presented to the Museum by Captain R. J. Walters of the Miami (Florida) Aquarium. From this specimen A. G. Rueckert of the taxidermy staff of the Museum has prepared a reproduction in celluloid that will soon be placed on exhibition.

3,000 Plants Determined

There have been returned to Europe recently more than 3,000 specimens of South American and other plants, submitted to Field Museum for study and determination. They came from the great herbaria of London, Paris, Stockholm, Geneva, and Berlin. They belong to the Rubiaceae or coffee family, and were identified by Associate Curator Paul C. Standley, who is engaged in monographic work upon the group. Many of the specimens represented species previously unknown to science, which will be described in the botanical publications of the Museum.

Nebraska Fossils Collected

Thirty-eight specimens of fossil mammals, two of fossil turtles, and six skeletons of modern mammals were collected by the recent paleontological expedition to Nebraska led by Associate Curator Elmer S. Riggs. Among these were several very desirable as additions to the Museum's previous collections. Mr. Riggs was accompanied by Assistant Bryan Patterson, James Quinn, and Sven Dorf. The expedition was financed by the Marshall Field Fund.

Articles on Roosevelt Expedition

In the *Gardeners' Chronicle* of London, the leading horticultural magazine of the world, there appeared lately a long series of illustrated articles by F. Kingdon Ward, entitled "The Roosevelt Expedition in French Indo-China." Mr. Ward was for some time attached as botanist to that expedition of Field Museum, and a collection of plants that he obtained is now in the Museum Herbarium.

RADIUM-BEARING MINERALS ON EXHIBITION

An exhibit illustrating a quick method of testing minerals for radium as well as showing the relative radioactivity of different mineral species was recently installed in the hall of minerals (Hall 34) by Curator of Geology Oliver C. Farrington.

The test for radium was made by placing a small metallic object, such as a flat key, upon an unexposed photographic plate and laying the specimen to be tested upon the metallic object. The whole was kept in a dark place for twenty-four to forty-eight hours and the plate then developed. If the rock or mineral contained radium, the rays from the radium produced an image of the metallic object on the plate, this image being brought out through developing the plate by the usual photographic methods.

All the principal minerals which are used as commercial sources of radium are included in the exhibit. Of these, the most important are those from the Belgian Congo, Africa. These are so rich that at the present time they have superseded all other sources of radium. Two specimens of pitchblende, the mineral from which radium was first extracted, are shown: one from Bohemia, this being the ore which was used by Dr. and Mme Curie in their discovery of radium, the other from Colorado. Carnotite from Colorado, which was the chief source of radium until the discovery of the African ores, is also included in the series.

Other minerals on exhibition showing noticeable radioactivity are chiefly the rare earth minerals, samarskite, aeschynite, euxenite and fergusonite. These minerals are found in the United States chiefly in North Carolina and Texas. The greater richness of the African ores is shown by the fact that for them an exposure of only twenty-four hours was required to produce sharp images, while for most other minerals an exposure of two days to a week was necessary.

All these minerals owe their radioactivity chiefly to the uranium they contain. This element, as is well known, slowly disintegrates to form radium. As the element thorium decomposes to give off rays similar to those from radium, two thorium-bearing minerals, monazite and thorite, are included in the series. They are relatively less radioactive than the uranium-bearing minerals. That glass is relatively impervious to these rays was shown experimentally by the fact that the monazite sand used, when contained in a glass vial gave no effect, but when placed directly on the metal produced a sharp image.

The exposures and prints for the series were made in the Museum's Division of Roentgenology by Miss Anna Reginalda Bolan, Roentgenologist.

AUTUMN LECTURE COURSE

Field Museum's fifty-sixth free lecture course will begin on **Saturday, October 3**, when Dr. Thomas S. Arbutnot, head of the Medical School of the University of Pittsburgh, will speak in the James Simpson Theatre of the Museum. The title of his lecture is "An African Hunting Trip." It will be illustrated with both motion pictures and stereopticon slides, and will begin at 3 P.M.

Eight other lectures on science and travel will be given in this course on successive Saturday afternoons at the same hour. Details of the subjects and speakers will appear in later issues of **FIELD MUSEUM NEWS**. No tickets are necessary for admission to the lectures in this course.



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