

GENERAL SCIENCE

Researches Assisted By National Research Council

INVESTIGATION of the speed and characteristics of eye movements as a sign of the adequacy of adaptive behavior in children and adults and a study of X-rays comprise two of the eleven widely varying problems of research, attack on which has been assisted by grants recently made by the National Research Council.

The study on reflex and voluntary eye movements is being conducted by Dr. Roland Travis, associate professor of psychology, Western Reserve University. The study of diffraction of X-rays by polar molecules subjected to high steady and alternating fields, is being conducted by Dr. Arthur A. Bless, associate professor of physics, University of Florida.

Other appropriations made by the Research Council's Committee on Grants-in-Aid were distributed among the following investigations:

An investigation of the width, intensity and structure of the modified line in the Compton effect. This is being studied at Stanford University by Dr. Perley A. Ross, professor of physics.

A criterion for the correlation of Devonian formations is being sought by E. M. Kindle, chief, division of paleontology, Geological Survey of Canada, Department of Mines, Ottawa.

A comparative study of glacial worn and river worn cobblestones, an attempt to find characteristic distinguishing markings, undertaken by Dr. Chester K. Wentworth, associate professor of geology, Washington University.

An investigation of the purine fraction of the nucleic acid molecule by Prof. L. R. Cerecedo of the University of California, a study of the antike-togenic value of various carbohydrates by Prof. Harry J. Deuel, Jr., of the University of Southern California, and a study of bird malaria by Prof. Reginald D. Manwell of Syracuse University and a pathological investigation by Prof. Ernest W. Goodpasture at Vanderbilt University.

Research on the endocrines of nutrition by Prof. F. E. Chidester of West Virginia University and a study of the effects of variation in environmental factors and in the technique of cell study on selected types of cells by Prof. James B. Lackey at Southwestern College complete the list of awards.

Science News Letter, November 22, 1930

ARCHAEOLOGY

Remains of Ancient Tribe Found in Western Mexico

People, Who Were Not Aztec, Made Elaborate Pottery Now Found By Party From University of California

THIRTY-TWO forgotten sites where Mexican Indians lived before the days of the Spanish conquest have been discovered for science by a field party led by Prof. C. O. Sauer of the University of California.

The ruins are on the west coast of Mexico, where the Spaniards broke in and interrupted a high type of Indian culture apparently in its full flower, in 1530. The leader of the Spanish expedition, Nuno de Guzman, was so impressed by the large towns and dense population that he called the region Greater Spain. The Spaniards noted particularly the elaborate feather head-dresses worn by the prominent inhabitants, the gold and silver ornaments. They observed that the large cities had fine markets and that there were high-

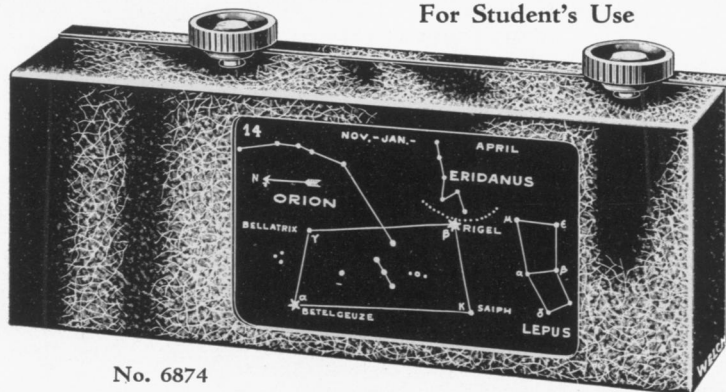
ways. Within ten years after their arrival the culture had utterly collapsed.

Prof. Sauer's party found mounds and terraced pyramids and a few house foundations. No finely carved stone buildings, like those of eastern Mexico, were reported. These Indians built mostly in perishable materials. Among the smaller objects from their time that have endured are elaborate pottery, two-edged obsidian knives, decorated pipes, and spindle whorls. The culture is named Aztatlan, after the old regional name. The people were not Aztec, but probably like the Toltec.

"The Aztatlan people were lowlanders, tillers of the soil, fishermen, and salt workers, at constant and bitter odds with the cannibalistic highlanders," Prof. Sauer explained.

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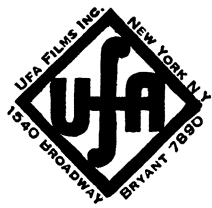
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All the larger ruins were on the edge of the flood plains or within the alluvium, he found. The rainfall would have been adequate for summer crops of corn, beans and squash without irrigation, and Prof. Sauer finds here evidence that opposes the prevailing view of how American agriculture started. The current theory is that it began in arid regions and with irrigation to make a crop possible, he stated.

Whether different stages of culture can be traced will not be known until the different levels of soil and the ruins can be thoroughly probed. Some of the finds, such as terra cotta figurines and crude stone gods carved out of boulders, suggest the archaic forms of Mexican art. These appear to have been the manufactures of a people older and with more primitive ways than the Indians found by the conquerors.

"The thirty-odd ruins that we visited are an unknown, but probably minor fraction of those that exist in the area," Professor Sauer stated.

Science News Letter, November 22, 1930

A new lubricant, planned especially for marine engines, gives off a warning odor when there is danger of overheating the bearings.

ORNITHOLOGY

Nature Ramblings

By FRANK THONE



Grosbeak

THERE is hardly a part of our country that is not blessed with one species or another of grosbeak. And when the rose-breasted grosbeak goes south to Mexico or Central America for the winter, we may be favored with a glimpse of a pine grosbeak from Canada, come south from too much snow.

Grosbeaks differ in color and pattern, but they are all beautiful. The pine grosbeak is red all over, except for his brown-and-white wings and brown tail; the rose-breasted grosbeak has red only on his upper breast, and has black-and-white wings, black back and head, and white underparts; the evening grosbeak is gay with yellow high-lights. And so on down the line. In shape, however, they are all very much alike: "average" sized birds, running about eight inches in length; and all bear the same family sign, a heavy, strong, blunt beak.

This beak marks the birds as seed-eaters and kin to the finches. The name "grosbeak," in fact, is a reference to it. This seed-eating habit is one thing that makes the birds able to get along in winter weather, when insects are scarce. It may be, too, that the gentle manners of the grosbeaks are due in part to their vegetarian habits. At any rate, it is edifying to watch the conduct of a grosbeak family during nesting season, or of a little flock of them when family cares are over and they are free to indulge in social pastimes. The only thing that ever sets two grosbeaks to fighting is the question of the favor of a lady; that settled, everything is peaceable again.

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