mens were small, and, if I remember correctly, the one left-handed individual was approximately three inches long. The specimen was made a part of the New York State Conservation Department collection and is presumably preserved at the New York State Museum at Albany, New York.

It is of interest to note that of the four recorded instances of reversal in this flounder, two specimens have been taken in Shinnecock Bay.

S. C. BISHOP

University of Rochester

The Coloration of Acid Earths Caused by Vitamin A

In some recent issues of *Science* there appeared an interesting discussion concerning the specificity and the history of the intense blue coloration given by vitamin A solutions on acid earths (A. Lowman, *Science*, 1945, **101**, 183; H. R. Kreider, 1945, **101**, 377; L. Zechmeister and A. Sandoval, 1945, **101**, 585; G. G. Mayer and H. Sobotka, 1945, **101**, 695; *cf.* P. Meunier, *C. R. Acad. Sci., Paris*, 1942, **215**, 470). It was pointed out by Mayer and Sobotka that the observation of this reaction goes back to the year 1939, when it was described by A. Emmerie and C. Engel (*Rec. trav. chim. Pays-Bas*, 1939, **58**, 283). Actually these investigators were not the first ones who observed the reaction mentioned. In 1927 K. Kobayashi and K. Yamamoto (*Chem. Zentralbl.*, 1928, **22**, 2397; *cf. Mem. Fac. Sci. Eng., Tokyo*, 1927, **4**, 23) reported that vitamin A-containing materials, like cod liver oil, give intense bluish or greenish reactions on Japanese clay, Florida earths, or fuller's earth if a benzene or carbon tetrachloride or carbon disulfide solution is applied. They also correctly attributed this reaction to the vitamin A content of the materials investigated.

HENRY M. ESPOY

Van Camp Laboratories
Terminal Island, California

Preservation of Biological Specimens With Clarite X

A large number of papers have appeared on the preservation of animals by methacrylate resins, but the methods used are difficult and expensive. Very few experiments seem to have been made using other plastics or resins. M. D. Wheatley (*Science*, 1941, **94**, 49–50) proposed coating specimens with a solution of isobutyl methacrylate in toluene.

The writer found solutions of *Clarite X* in xylene a satisfactory coating for small animals (spiders, nymphs of Hemiptera, small caterpillars). The specimens were pinned and placed in 95-per cent alcohol, then in absolute alcohol. After a short immersion in xylene they were placed in a solution of 30-per cent *Clarite X* crystals in xylene for about two hours and then left to dry. The resin left a clear coating on the animal. No evidence of excessive shrinkage was observed. The color was preserved better than in the case of specimens kept in alcohol. The specimens were brittle but not much more so than pinned insects. A small addition of paraffin to the resin solution might make the resin less brittle without changing its other properties.

Clarite X, described as a cycloparaffin, may be obtained from the Neville Company, Pittsburgh, Pennsylvania, to which the writer is indebted for supplying samples of the resin for the experiments.

HERBERT W. LEVI

University of Connecticut

Algae in the Carlsbad Caverns, New Mexico

About two years ago there began to appear in the Carlsbad Caverns, on the pale-grayish limestone wall of the corridor opposite the bottom of the elevator shaft, a slight spotted greenish cast, which in time spread and brightened to a lettuce or grass-green color, not very dissimilar in appearance from the copper carbonate, malachite. It is not copper, however, even though such a supposition is reasonable, for sporadic copper stains are common over a wide area of the Guadalupe Mountains. It is caused by algae, chlorophyl-bearing plants, growing 750 feet below the surface where none have ever been seen before. There are two algae, a green and a blue-green—one an extremely fine aggregate or cluster of bright green cells, the other a pale green, fibrous form. Their habits are such that even their genera can be determined only with difficulty.

The events which have led to the growth of these plants deep down in the cavern are unusual. By December 1931 the elevator shaft was completed through 750 feet of limestone to the floor of the Lunch Room, and elevator service was begun. The corridor leading to the elevator doors was hewn out of solid limestone which was then dry and remained so for more than a decade. Over the elevator doors there was installed an electric light which has been kept burning for about seven hours each day ever since. No change was noticed until sometime in 1943, when a greenish color was first observed to be forming as faint blotches on the rock wall, and this brought to attention the fact that the rock was becoming moist.

To understand this situation better, let us examine certain local events of 1941 which may suggest a cause for the appearance of the algae. In May of that year a torrential rain fell in the Guadalupe Mountains and the surrounding area, which flooded the Pecos River and those of its tributaries heading in the Guadalupe Mountains. On 20 September an even greater deluge fell. Such storms are the result of an enormous accumulation of great, bulbous, cumulo-nimbus clouds which extend from the very ground to altitudes of more than 25,000 feet. To one who has experienced such storms in the field it seems as if the whole column of 25,000 feet of moisture overhead has condensed at the same moment. The Carson Seep Ranger Station reported 17 inches of rain, most of which had fallen in a few hours. During this storm 21.25 inches of rain fell at the headwaters of Dark Canyon, by far the greatest on record in the climatological history of New Mexico.

Though the percentage of run-off on a rocky terrain such as the Guadalupe Mountains is high, these two exceptional rainfalls produced such a notable recharge of