

arrangement of contacts is maintained as the number of contacts becomes increased from 8.4 to 14.17, with additional pressure.

Lewis<sup>2</sup> has shown that the cells of the elder pith have an average of fourteen facets, and he emphasizes the orthic tetrakaidecahedron as a possible fundamental shape in such tissues. None of the orthic tetrakaidecahedra of Lord Kelvin, with eight hexagonal and six square faces, were found among the lead balls examined; however, when all the spaces between the shot were eliminated, the average number of contacts was very near fourteen. A less regular tetrakaidecahedron was formed, having in addition to hexagonal and square faces a relatively large number of pentagonal sides. This shows that the regular arrangement of spheres necessary to form the orthic tetrakaidecahedron of Lord Kelvin on compression was not present when the shot were merely poured into the cylinder. It also helps to explain the occurrence of pentagonal faces in the cells of elder pith found by Lewis.

That contact and pressure must be of marked importance in the determination of the number of faces occurring on parenchymatous cells seems obvious from the above experiments. It is further highly probable that the occurrence of intercellular air spaces in parenchymatous and other tissues is correlated with contact and pressure relationships. On the basis of contact and pressure alone, fewer contacts between adjacent cells would be expected in tissues with abundant air spaces.

J. W. MARVIN

COLUMBIA UNIVERSITY

#### HABITAT OF OPHIOSAURUS VENTRALIS

Two specimens of *Ophiosaurus ventralis* were discovered in Cumberland County and one specimen in Buckingham County, Va., in September, 1937. The first two specimens had been killed on the highway by automobiles; the third one was captured and is now in the possession of the farmer who found it in Buckingham County. The distance from the most eastward to the most westward of these finds was about twenty miles. These counties are in Piedmont Virginia, about seventy-five miles north of the North Carolina line and 150 miles west of the Chesapeake Bay.

Since Ditmars places the Northern limit of this reptile in the eastern part of the United States as North Carolina, and Jordan as "to Virginia," it seems that these are the first recorded specimens for this section of the country.

W. A. BRUMFIELD

SOUTHSIDE HEALTH DISTRICT  
FARMVILLE, VA.

<sup>2</sup> F. T. Lewis, *Proc. Am. Acad. Arts and Sci.*, 58: 537-552, 1923.

#### FRESH-WATER MEDUSAE IN VIRGINIA

FOURTEEN miles south of Lynchburg, in Crystal Lake on the James Wamble estate, gonosomes appeared in large numbers about August 5, and have been observed there at frequent intervals to the present (September 29). Vertical migrations of the medusae have been noted, showing no observed correlation with temperature, sunlight, wind or time of day. Sometimes the top meter of water over the greater part of the pond showed jellyfish actively swimming about. As many as 70 fair- to large-sized specimens have been counted in each cubic meter of water on such occasions. On other days, few medusae were seen except in the wake of the boat or where the water had been stirred to some depth by means of a paddle. A few triradiate and quinquerradiate specimens were collected. The average catch (quadriradiate) measured considerably larger than fresh-water medusae hitherto reported, some reaching a diameter of 22 mm. Otherwise the descriptions given for *Craspedacusta sowerbyi* (Potts) fit well enough. The reflexed, upstretched, long tentacles seem highly characteristic of even small specimens. All appear to be females. Parts of the lake where the depth is greater than two meters are well populated with medusae; between one and two meters they are less common, and in less than one meter of water they are rare. The water temperature at present is about 24° C. The water has a high organic content, and the bottom where shallower than two meters is densely covered with Utricularia. A green Stentor and a Spirostoma were very conspicuous protozoans occurring there in great numbers. The pond is created by an earthen dam which restrains a very small stream, and has been in existence some ten years. The pond was stocked with fingerling bream and black bass two years ago. Eels have been caught there, although the emptying stream is very small and quite shallow. The plant growth was largely cleared out last year. A search for hydroids was unsuccessful.

J. I. HAMAKER

L. J. MILNE

RANDOLPH-MACON WOMEN'S COLLEGE

#### SCIENCE AND DEMOCRACY

HAVING read the quotations from the New York Times in SCIENCE of Friday, October 22, entitled "Science and Democracy," I could not help but follow the urge to write my views on the subject.

I certainly admit with the author that freedom of thought and expression is in peril. In the totalitarian states the ruling dictators are going to see that this condition continues. But, I do not believe