Mississippi Valley, no sponge remains have been observed elsewhere.

The Oneota near Springfield Corners is a medium to thick bedded dolomite, having a gray or flesh color and carrying a few lenses and thin beds of chert. The sample yielding the spicules is from a pure, non-cherty bed, the insoluble residue consisting of a minute quantity of very fine sand, silt and sponge spicules.

Under the microscope the spicules are seen to be composed of amorphous silica, with considerable amounts of crystalline silica. In form they are uniaxial needles, sharpened at each end, and show no evidence of having been fused in the organism. The longest one observed measures 0.41 mm in length and 0.02 mm in diameter. Axial canals in the spicules can not be plainly seen, but there is a suggestion that they were present in life. It is believed, therefore, that the spicules are to be classified as Silicispongia, order Monactinellida Zittel.

The fauna of the Oneota is a meager one, and nearly all the forms found have been in the chert nodules. These sponge spicules may be the first sponge remains reported from the Oneota formation, as the writer has found no mention of them in the available literature describing these rocks. It is stated by Zittel[1] and Berry[2] that Monactinellid spicules are known from rocks as old as Silurian. No mention is made of their occurrence below the Silurian. If the writer's identification is correct, the spicules from southern Wisconsin may be the oldest Monactinellid spicules thus far discovered.

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THE WATER CONTENT OF MEDUSAE

DR. GORTNER'S faith[1] in a marine jelly-fish which is more than 99 per cent. water obviously can not be "flatly contradicted," but there are plenty of data which show his belief to be unfounded in the case of the commoner genera, and which justify skepticism.

In my paper I did not present new data because there was nothing to add to the old; but Dr. Gortner must have observed that the calculation of the "bound water" results in Table 3 necessitated routine determinations of total water. The total solid of *Cyanea* varied from 4.7 to 5.9 per cent., and that of *Aurelia* was always within the range given by Krukenberg. With Gortner's statement that the fraction of *organic* matter may be less than 1 per cent. I have no quarrel; indeed I once crudely estimated it by keeping a dead *Cyanea* in running tap water for 3 days and then drying it. The dry weight was 0.9 per cent. of the wet weight. The effect of the salts is clearly shown, also, by comparing the dry weight data of Krukenberg, whose jelly-fish came from the Gulf of Trieste, with those of Moebius, from the dilute sea water of Kiel Bay. The mean values for *Aurelia* were 4.88 and 2.08 per cent., respectively.

HEIDELBERG J. B. BATEMAN

QUOTATIONS

MEDICAL PATENTS

CEREMONIOUS opening of the new laboratories of an important drug manufacturing company is not an occasion on which we expect to hear plain speaking of the kind in which Sir Henry H. Dale indulged at Rahway, on the danger of being too practical in medical research, and of keeping a too eager eye on profits to be derived from the patenting of medical discoveries. The laboratories in question will undoubtedly develop many a useful remedy which will become the subject of a patent monopoly. Sir Henry spoke with authority. Once upon a time he was the director of just such a laboratory. Does not his own career argue against his contention that the pursuit of the practical is incompatible with the pursuit of pure science? He owes his present position of director of Great Britain's National Institute of Medical Research to the distinguished work that he managed to do as a chemist employed by a drug company whose patents are probably its most valuable assets.

There certainly has been no worshiping of false gods in the laboratories of the great German and American industrial organizations. Such Nobel Prize winners as Langmuir, Bosch and Bergius won their laurels as the employees of wealthy corporations. Indeed, certain kinds of research can apparently be conducted most effectively only with the financial aid and equipment of an industrial laboratory. If we want to learn anything about low-pressure chemistry, we must go to the General Electric Company; the best information on speech and hearing is likely to be obtained from the Bell Telephone Laboratories; the Eastman Kodak Laboratories are the recognized authorities on photochemistry. The larger and more liberal corporations have learned to leave their research staffs alone. Even pure science can not help making discoveries that yield a profit when exploited with the aid of patents.

Yet physicians as a class will endorse Sir Henry's warning. Deep down in all of us there is a repug-

[1] Karl A. von Zittel, "Text-Book of Paleontology," Eastman translation, p. 51, Macmillan Company, 1927.

[2] E. W. Berry, "Paleontology," p. 29, McGraw-Hill Company, 1929.

[1] SCIENCE, March 17, 1933.