of Sycons. Occasionally they were obtained in this way in fair quantity. It was therefore thought probable that a more careful examination of a number of these sponges would be interesting in determining whether this habitat is a usual one. Accordingly twenty specimens of *Sycon coronatum*, varying in length from about 2 to 4 cm., were examined. The contents of the gastral cavities of these specimens were squeezed on to a slide and a careful search for Amœbæ made.

Of the twenty specimens thus examined one or more Amœbæ were found in all except three. Usually about three or four specimens were obtained from each sponge; only one Amœba, however, was found in a few of the squeezings, but from one sponge nineteen of these animals were counted, and doubtless not all those present were seen. It is therefore evident that these sponges are a common habitat of marine Amœbæ, whence these lowly animals may be obtained fairly easily.

There is no likelihood that this habitat is an exclusive one; doubtless Amœbæ occur in a great many other situations in the sea, from which, however, they can only be obtained with some difficulty.

The Amœbæ obtained from the sponges were rather small. Specimens when measured in one common phase were found to be about 80 μ long and 40 μ broad, being, however, in this phase almost uniform in breadth, and having only slightly rounded ends, but when creeping such specimens stretch out to a length of more than 90 μ. The animals move quickly, progressing often in a straight line and flowing with a motion somewhat like that of planarians; at other times thick, blunt, and—at first—hyaline pseudopodia may be extruded from one or more parts of the body. So far as has been observed, the animals appear to have a definite posterior end. The protoplasm is highly and coarsely granular, except at the periphery, and in some specimens ingested diatoms and other inclusions were to be seen. The contractile vacuole has not been made out definitely, but a stainable vesicle of constant size visible through a high power of a microscope in the anterior region of the living animal appears undoubtedly to be the nucleus. The absence of an easily visible nucleus and nucleolus makes it easy to distinguish the Amœbæ from the more or less amœboid forms of some sponge cells, which, moreover, are mostly spherical, and do not show anything like the active movement of the Amœbæ.

In their general characters these Amœbæ resemble the species described by Gruber (*Zeits. für Wiss. Zool.*, vol. xli., 1885, Leipzig, "Studien über Amöben," p. 219) as *Amoeba crystalligera*, but further investigations are necessary to establish their identity with that species.

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A Remarkable Meteor on November 24.

LAST night, November 24, at 8.47 p.m., a very remarkable meteor was seen in the northern sky. It moved slowly in an east to west direction, describing a straight path of about 10° in length, which made a small angle (of some 20°) with the horizon, the eastern end being the lower, and remained visible for four or five seconds.

It presented a comet-like appearance, having a bright nucleus surrounded by a less intensely luminous envelope, which streamed out behind, forming a kind of double tail. Conspicuous blue (or green) flares were visible in the "tail," but the appearance lasted such a short time that I am unable to state exactly how they were distributed. It vanished as suddenly and as silently as it had flashed out.

The northern sky being overcast at the time, it was, of course, impossible to lay down its track relatively to the stars, but its position was referred to some tree-tops, which were silhouetted against the sky, and from observations made next morning I am able to state that the middle point of the apparent track was situated at an altitude of about 17° above the horizon, and at about 7° or 8° east of the north point.

Although seen through clouds which were sufficient to obscure all stars in its neighbourhood, including the conspicuous constellation of Ursa Major, the meteor appeared far more luminous than the planet Venus even at its brightest. In fact, with one exception, it was the brightest meteor I have ever seen. The one exception was the splendid daylight meteor of February 8, 1894, which appeared in full sunshine within a few minutes of noon, but was still bright enough to attract the attention of thousands of people at various places over an extended tract of country, from London to Whitby, and from Chelmsford, in Essex, to Ballinasloe, in the west of Ireland.

ARTHUR A. RAMBAUT.

Radcliffe Observatory, Oxford, November 25.

Darwinism 100 Years Ago.

IN reference to Dr. Gadow's interesting quotation from Tiedemann (NATURE, November 13), may I remind your readers that the principle of sexual selection was clearly enunciated by Erasmus Darwin in his "Zoonomia," first published in 1794? I quote from an edition of 1800. "A great want of one part of the animal world has consisted in the desire of the exclusive possession of the females; and these have acquired weapons to combat each other for this purpose. . . . So the horns of the stag are sharp to offend his adversary, but are branched for the purpose of parrying or receiving the thrusts of horns similar to his own, and have therefore been formed for the purpose of combating other stags for the exclusive possession of the females; who are observed, like the ladies in the times of chivalry, to attend the car of the victor. . . . The final cause of this contest amongst the males seems to be that the strongest and most active animal should propagate the species, which should thence become improved."

ARTHUR DENDY.

University of London, King's College, November 19.

Intra-atomic Charge.

IN a previous letter to NATURE (July 20, 1911, p. 78) the hypothesis was proposed that the atomic weight being equal to about twice the intra-atomic charge, "to each possible intra-atomic charge corresponds a possible element," or that (*Phys. Zeitschr.*, xiv., 1912, p. 39), "if all elements be arranged in order of increasing atomic weights, the number of each element in that series must be equal to its intra-atomic charge."

Charges being known only very roughly (probably correct to 20 per cent.), and the number of the last element Ur in the series not being equal even approximately to half its atomic weight, either the number of elements in Mendeléeff's system is not correct (that was supposed to be the case in the first letter), or the intra-atomic charge for the elements at the end of the series is much smaller than that deduced from experiment (about 100 for Au).

Now, according to Rutherford, the ratio of the scattering of α particles per atom divided by the square of the charge must be constant. Geiger and Marsden (*Phil. Mag.*, xxv., pp. 617 and 618, notes