3. Some of the colloidal Pt was put into the H_2O_2 solution. The colloid was very dilute and the rate of decomposition of the H_2O_2 appeared to be very slow. Nevertheless, tiny bubbles could be seen rising from all parts of the liquid. If, now, the Pt wire was inserted (no connection being made with the beaker of colloidal Pt), large bubbles formed on it, and this was so, no matter whether it was the arced or the unarced end or even the middle of the wire which was lowered into the liquid. The same effect was found using a second piece of Pt which had been previously shown to be inactive. A piece of Pd, a piece of glass tubing and the wood of a piece of lead pencil were also tried with identical results. The formation of bubbles was so vigorous that if the Pt, Pd, glass and wood had not been shown to be, in themselves, inactive, it would have been easy to have concluded that they were more active than the colloidal Pt or the arced end of the Pt wire. The effect was as though considerable of the O_2 resulting from the decomposition was dissolved in the H_2O_2 solution and came out of solution on the surface of the various substances mentioned above.

In view of the unexpected nature of Dr. Ditman's results as given in his article, and in view of the experiments outlined above, it is to be hoped that he may soon publish the results of a repetition of his work in which great precautions are taken to prevent contamination of the H_2O_2 with any agent tending to decompose it. Even light rays should be excluded from the apparatus, and the temperature should be kept low in order to avoid the production of O_2 which may dissolve in the water. In the meantime perhaps we should hold in abeyance any of his conclusions as to "electrical phenomena," "vibrations" and "resonance" of enzymes, zymogens and antitoxines.

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TERMITES IN BUILDINGS

IN 1894, Dr. C. L. Marlatt, of the Federal Bureau of Entomology, advocated the only effective preventive or remedy against termites or "white ants" in their attacks on buildings and material stored therein. This specific is "insulation" of all untreated woodwork from contact with the ground; it can be accomplished by the use of stone or concrete foundations and lower flooring or the use of foundation timbers impregnated with coal tar creosote. Practically all the termites which damage buildings in the United States are of subterranean habit and if they can be kept from reaching woodwork from the ground they can not survive in the building. Also if present in a building when all untreated wood is removed from contact with the ground, such as joists, wooden floors, sills, etc., even if the termites have penetrated to the third story of the building, they will die out. They have been cut off from their moisture supply in the ground, which is necessary for their life.

Recently the Bureau of Entomology has been advocating the modification of the building regulations of various cities so as to include a few simple rules to prevent attack by these insects. No floors, sills, beams, clapboard, etc., of untreated wood may be laid on or in the earth, and untreated beams must not be laid in concrete without at least one inch of concrete underneath and separating it from the earth. No lime mortar should be used in foundations or in cellar walls where they are in contact with the earth, since termites are able to penetrate lime mortar after some years' service. All brick work extending below the surface of the ground should be faced and capped with concrete at least one inch thick. These slight modifications of the building regulations of cities by city engineers would save much property, time and worry to householders.

The recommendation of the use of heat, steam, insecticides and fumigants against these subterranean termites is of no permanent value and is futile. If conditions in a building are unsuitable to termites they will leave; if they can be prevented from leaving or coming in again by shutting them off from the ground, nothing further need be done and indeed is only a waste of time and money.

Complete insulation of all untreated woodwork from the ground is the only effective method of preventing the ravages of termites in buildings in the United States.

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EDITORIAL SERVICE

A STATEMENT of the kind of service the editors of the *Physical Review* have been attempting to render authors and readers may be of interest and perhaps call forth suggestions for modification or extension.

SERVICE TO AUTHORS

A manuscript as soon as received is sent to a referee who is competent to criticize the article from a technical scientific standpoint. He is asked to note any possible errors, parts that are not clear, parts that might better be omitted or condensed, etc., and also to give suggestions looking toward the improvement of the article in form. Usually another editor goes through it carefully, particularly from the point of view of form, noting suggestions as to change of English in pencil on the margin. If the

article is acceptable but seems to need revision, it is returned to the author with the suggestions of the referee and of the editor. The nature of these suggestions is indicated by the following samples.

SAMPLE SUGGESTIONS TO AUTHORS

That title be changed so as to be more precise.

That historical introduction be condensed and the results of others be discussed later in comparison with your own.

That description of method used be rewritten according to the following outline, so as to be at once clearer and briefer.

That order of presentation of results be changed. Paper should not be a history of your experiments but a presentation of your results in as clear a form as is possible. Most of section 4 might be omitted and section 5 combined with section 2.

That the mathematics on page 5 be greatly condensed. Most of it seems unnecessary, particularly Eqs. (4), (5) and (7).

Sentence on page 7, second paragraph, is not clear. The statement regarding D's results seems incorrect.

Fig. 1 seems unnecessary. Figs. 5 and 6 might be combined in one. The numbers and lettering on the figures are too small. Fig. 7 should be on blue coordinate paper, not black.

The tables are not in good shape for the printer. Please rearrange more compactly and combine Tables III and IV into a single table.

The editors reserve the right, of course, to refuse any article in whole or in part. Otherwise no attempt is made to dictate to the author. He is distinctly informed that all the suggestions are offered for his consideration to be accepted or not as he thinks best. If he prefers his original order of treatment, his own peculiarities of diction, he is at liberty to keep them. With very few exceptions, however, authors seem to be glad of the suggestions offered and modify the articles in accordance with the suggestions. It is evidently to their advantage that their results be presented clearly and in as readable a form as possible. The scientists who contribute most of the articles are inexperienced authors and moreover have lived with their work so intimately they are often poor judges of how effective their presentation is. To such the impartial suggestions of an expert scientific critic and an experienced reader are recognized to be of value and are thankfully received.

The editor also arranges for any relettering or redrawing of figures that may be advisable and sometimes rearranges parts of a plate to economize space or permit of greater enlargement.

Articles are usually referred to one of the associate editors, of which there are nine, but some have been sent to other physicists who are recognized to be authorities in the subjects involved. These who have refereed two or more articles include K. T. Compton, Saul Dushman, H. E. Ives, A. F. Kovarik, D. C. Miller, A. W. Smith, R. C. Tolman, J. H. Van Vleck and O. F. Zobel. To these and other referees the editors wish to express their appreciation of their generous service.

SERVICE TO READERS

We try to eliminate material that is not new or not reliable or worth publication. We try to insure that authors present their results as clearly and briefly and readably as possible, and that the printing and press-work are good. Each article is preceded by an *abstract,* prepared by the author and carefully revised by the editor, which gives a very complete summary of the subject-matter of the article and of the conclusions reached. These abstracts can be depended upon to be complete; therefore, as shown by a questionnaire (SCIENCE 56, 678, December 15, 1922), many read these abstracts instead of the articles, except in the case of articles which the abstracts show contain results of particular interest to them. An *analytic subject index* to each volume is also provided, which indexes not merely the titles of the articles but all the subject-matter of the abstracts. This index enables all the articles dealing with such a subject as "Photo-electric effect of thin films," or "Scattering of x-rays," to be found immediately.

Finally a word may be said as to some minor matters of editorial policy adopted because of their apparent advantage to readers. In the case of references, the author's name is always given first, so that the footnotes furnish a bibliography independent of the text. We also try to make the captions of figures complete so that any one glancing only at the figures can tell what each is about, except in the case of diagrams intimately associated with a mathematical discussion. The period following a symbol or abbreviation is always an interruption since it suggests the end of a sentence, so periods are eliminated after such symbols as °C, km, cm, mm, cc, ft, gm, kg, lb, kv, μf, but are retained after real abbreviations such as in., amp., sec. Plurals of symbols are indicated before but not after numerical values. *Percent* is not considered to be an abbreviation, and the anglicized expressions *in vacuum* and *abscissas* are preferred. Small letters are used in *a.c., d.c., e.m.f.* The plural of *e.m.f.* is written *e.m.fs.* By analogy with α-rays, β-rays, etc., *x-rays* is spelt with a

small *x*. Like *ampere, angstrom* is spelt with a small *a* and without diacritical mark, but the symbol is *A*. The spelling *disk* is adopted as being more English, and *diaphram* is advocated, and also the use of a hyphen between vowels in such words as *photo-electric*. However, the spellings *tho* and *thru* are considered too different from the accepted forms and too distracting to the reader. We make no claim to consistency; in fact this is foreign to the spirit of the English language. In each case we try to adopt the form which is simpler, clearer and less distracting to most readers; but we can not hope to suit every one. Many will think we go too far, while others will accuse us of being too conservative.

This service to authors and readers requires much careful work, but we hope it is worth the time and effort expended.

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FEBRUARY 1, 1925

THE FRESH-WATER SPONGE, SPONGILLA LACUSTRIS LINN., IN MASSACHUSETTS

DURING the late summer of 1924 there was found in the Sudbury River, near the village of Concord, Massachusetts, great masses of the fresh-water sponge, Spongilla, growing from a muddy bottom. The occurrence of such large masses of fresh-water sponges is not common, and since this species has not been described from Massachusetts, it seemed desirable to record it.

As one looked into the water the whole river bottom appeared to be covered with many green stalagmitic growths. Upon closer examination, these growths proved to be sponges, averaging about 15 cm in height, the largest reaching a height of about 30 cm. The sponges showed profuse branches of varying diameter tapering at the distal ends. The branching could almost be described as dichotomous. The average diameter of the main stalk was about 8 mm, varying from 3 mm in the shortest specimens to 12 mm in the longest ones. Each stalk was fixed to some river weed, particularly to the fresh-water eel grass, Vallisneria spiralis L., of which there was an abundance. The intense green color of the sponges was found to be caused by the presence of large numbers of green algae living epizoically. By far the greater number of these algae belong to the Protococcales, although there were many diatoms.

The river bottom is extremely muddy, making it impossible to collect the sponges by wading. The current has a low velocity so that the water is clear. The depth of the river at mid-channel varies from 2.5 to 3 meters in the spring, to about 1 meter in late summer. The animals near the banks at this latter season may be bent over horizontally parallel with the surface of the river, while in some cases the water may have receded sufficiently to expose entire colonies.

From the manner of growth and of branching, from the size and appearance of the skeletal and dermal spicules, the species was tentatively identified as Spongilla lacustris Linn. Measurement of 100 skeletal spicules, including all lengths, showed an average length of 0.300 mm (a slightly larger figure than that reported by Potts[1]) and an average diameter of 0.012 mm; while the dermal spicules, exhibiting much less variation, showed an average length of 0.047 mm and an average diameter of 0.0029 mm. The mode for length of skeletal spicule was 0.315 mm, the maximum and minimum lengths being 0.355 mm and 0.285 mm, respectively. It is also to be noted that instead of the swiftly running water habitat, usually reported for this species, these specimens were attached to a deep mud bottom in a slowly moving stream and were supported by water plants.

The approximate location of this habitat is an area of about 280 square meters extending along the bottom of the Sudbury River nearly half way between Nashawtic (Echo) Bridge and the railroad bridge of the Boston and Maine, Southern Division, at Concord, Massachusetts.

Although search was made from August up to the middle of December (long after several severe frosts, and once after the river had been frozen over), no gemmules have been found, preventing a positive identification of the species. Professor Frank Smith, however, who has examined formaldehyde specimens, reports the same tentative identification as given above.

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A NATURAL SEISMOGRAPH

A FEW days before the earthquake of February 28th there was rain over the snow-covered fields of Gaspé. This froze into a hard crust. The morning after the earth tremor this crust over the snow fields was found to be cracked in long parallel lines running N.W. to S.E., a little E. This observation is reported to me by Mr. F. J. Richmond, of Gaspé, a close observer, who adds that when snow settles nat-

[1] Edw. Potts. Contributions towards a synopsis of the American forms of fresh-water sponges with descriptions of those named by other authors and from all parts of the world. *Proc. Acad. Nat. Sci.*, Philadelphia, 1887.