## LETTERS TO THE EDITOR.

### Impregnation in the turkey.

WHEN I was a boy, my father used to send me to some of the neighbors with our turkey-hen, and we left her there with the cock a day or so. Either this, or we would borrow a cock for a day or so, and turn him with our hen. This was not only for one year, but our custom; as we never wintered a turkey-cock, and we did raise turkeys by this process. There was no possibility of the turkey-cock getting with our hen after the contact mentioned above. I did not know that this fact was still unknown to people. What is still a question that I should like settled by experiment is, whether the spermatozoids are retained somewhere in the oviduct until the eggs reach a certain stage of development, or whether they at once impregnate the eggs. W. MANN.

Potsdam, N.Y., July 5.

[We give place to the foregoing extract from Mr. Mann's letter, referring to Mr. Shepard's communication in No. 20, p. 576, on the same subject. There are probably many species of birds in which one connection with the male suffices to impregnate a whole batch of eggs. That the turkey, like the common hen, is one of these, is a fact which hardly requires further confirmation. There can be little question that the spermatozoids are retained in the oviduct, as in other animals, and the eggs impregnated as they successively mature.]

### Macloskie's Elementary botany.

The review with which you favor my Elementary botany catechises me as to whether I am sure that the seeds of Lepidium emit mucilaginous threads. Permit me to answer that I am sure, having made the experiment a dozen times. Violets, besides the orders cited by the reviewer, prove that the statement as to cymose flowers being actinomorphic requires modification. I sympathize with the objection to the terms 'exotest' and 'endotest;' but the terms 'primine' and 'secundine' are bewildering to authors as well as students, and give priority to the part which is in most cases a result of secondary differentiation; 'tegmen' is obsolete, and the whole subject of the development and structure of the seed-wall requires revision: hence the provisional use of terms which, though hybrid, are easily understood, and not likely to mislead the young. G. MACLOSKIE.

July 10, 1883.

[We conjecture that Professor Macloskie had mixed in his mind, or at least in his statement, two different cases, — one, that in which the wall of the surface-cells of the seed-coat, changed into a substance which swells into mucilage upon wetting, contains a spiral thread, as in Collomia; the other, in which there is no contained thread. According to our observations, the seeds of Lepidium belong to the latter: hence the 'catechism,' which was intended to call attention to a possible oversight. We have to-day verified our observation upon seeds of Lepidium ruderale. Perhaps Professor Macloskie will kindly indicate the species in which he found the threads. — REVIEWER.]

### Primitive streak of vertebrates.

Dr. Strahl of Marburg has had the kindness to write to me concerning the abstract of his researches (SCIENCE, i. **521**). A part of his letter contains an explanation which I shall be glad to have published in justice to Dr. Strahl. Translated, the passage is as follows: —

"As regards the esteemed remark at the close of the abstract, — that I have declared erroneous Balfour's comparison between the primitive streak and neurenteric canal on one side, and the blastopore of Amphia and fishes on the other, — the remark may be due to a misunderstanding. So far as known to me from his descriptions, Balfour placed the neurenteric canal at the anterior end of the primitve streak. But, as I have shown in my paper, the neurenteric canal originally lies in the middle of the primitive streak. The object of my demonstration is to show that the premises from which Balfour starts do not agree with the observations: this, I believe, was accomplished. This would also decide the second point made by you, — that my argumentation against Balfour was defective."

I am much indebted to Dr. Strahl for his letter, and I think others will value his short statement of his position. CHARLES SEDGWICK MINOT.

### In an Indian grave.

In an Indian grave in Santa Barbara county, Cal., the writer found a beautiful specimen of doubly terminated limpid quartz, with a cavity half an inch long containing water or some other fluid. It was about four feet below the surface, and had been carefully deposited with many other stone implements, and was doubtless highly prized by its aboriginal owner. STEPHEN BOWERS.

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## WARD'S DYNAMIC SOCIOLOGY.

II.

IT is proposed to show the relation of Mr. Ward's publication to current thought.

The law is composed of the rules of conduct which organized society endeavors to enforce. The law, therefore, represents the quantity and quality of regulation, or, in other words, of government, which the people of the state in their corporate capacity deem necessary for their welfare. With respect to the amount and kind of government (i.e., of regulation, i.e., of law) which the best interests of society require, there is a very wide divergence of opinion between the chief publicists of civilized nations and the people themselves as they are represented by law-making bodies. The publicists tell us we are governed too much; but the people are demanding more government, and, in obedience to this demand, law-making bodies are rapidly extending the scope of law. The careful observer of the progress of government, who is at the same time a careful reader of opinion presented in the larger body of works on state craft, in the more carefully prepared dissertations on this subject appearing in the great reviews, and in many of the best editorials of the daily press, is astonished at the extreme conflict between opinion and practice.

There are two classes of law-making bodies, — courts and legislatures. The growth of law through the courts is almost unrecognized by the people at large; yet its development