As the reviewer referred to, I warmly welcome the remarks of Dr. J. W. Evans on the tendency to modify Greek forms, sometimes beyond recognition, when they are introduced into scientific terminology. I went to some trouble in looking up Gilbert's "epeirogeny," which Sir A. Geikie of course spells correctly in his "Textbook of Geology." I have long clung to "deinosaur," and American authors should bear in mind that the use of an i for ei complicates pronunciation when the terms are handed on to other nations.

The chief offender, however, was Charles Lyell, who knew that he was doing wrong when he wrote his footnote on p. 53 of the third volume of the "Principles of Geology" in 1833. He justified his "Miocene" and "Pliocene" by the use of "encenia" and "icosahedron"; but the result has been the absurd American term "Cenozoic," which, if it means anything, should remind us of the emptiness of life.

The frequent use of the prefix "epi" makes one anxious to preserve "epeirogeny." I wish that we could mark the first e with a stroke to keep it long, and this remark applies also to "Tethys." But in the face of "Epirus," and "Pisistratus," and "Phidias" it is difficult to be logical. May we not attempt, however, as Dr. Evans suggests, to keep our newly invented scientific terminology from degenerating like our common speech?

GRENVILLE A. J. COLE.

On the Significance of "Rings" on the Shells of Cardium and other Molluscs.

IN NATURE of February 3, p. 146, I referred to experiments on determining the rate of growth of a fixed population of marked cockles (*Cardium edule*). In this experiment the box which was fixed in the bed of the River Yealm and contained the cockles was visited monthly, and sometimes at intervals of only a fortnight, for the purpose of measuring the increment in growth since the previous visit. This method of work resulted in an interesting observation on the formation of rings on the shells of the growing cockles. It was found that in the young cockles, *i.e.* up to about 16 mms. in length, dark rings were formed monthly or fortnightly in a majority of cases, on the shells at the size they were when last measured, but that no similar formation of rings could be detected in the larger and generally older shells. On the other hand, both small and large cockles showed distinct rings after the winter period.

In young cockles, growing in length at the rate of one millimetre or more a week, a cessation of shell-growth for a few days as a result of being taken out of their habitat and handled is enough to produce a distinct ring, but older cockles which increase *in length* a very small amount in even a month show no external sign of a small period of cessation in growth. Thus rings on the shells of cockles are undoubtedly due to periods of cessation of shell-growth, and the length of the period necessary to produce an effect depends directly upon the size of the cockle.

In this connexion it is interesting to read the history of cockles picked up haphazard. Some shells I picked up on the shifting sands of the bar at Padstow showed numerous rings close together, and there is no doubt that these rings can be interpreted as periods of cessation of shell-growth probably separated by only a few weeks, and due to the cockles being embedded deep in the shifting sand after rough weather. On the other hand, cockles picked up in protected situations show mostly those rings which can be interpreted as winter rings, but often also near the umbo, tiny rings which may mean the occurrence of a disturbance for only a few days while the individual was young. Similar winter rings have been found by experiment in Crepidula and in many cases in Patella, but Patella may not show winter rings in some situations at Plymouth after a mild winter.

In fishes the indications of periods of growth and of cessation of growth are very important, and in view of the observations mentioned above it would be interesting to know whether the otoliths and scales of *young* fishes, which show distinct rings (apparently produced in winter and summer), would reflect the effects of short periods of an analogous disturbance in the same way as the shell of the cockle.

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June 19.

A Crystallisation Phenomenon.

THE attached photograph (Fig. 1, natural size) is of interest, as it illustrates a phenomenon which does not appear to have been recorded.

For certain experiments it was necessary to purify some samples of salicylic acid, and recrystallisation from hot water was resorted to. The work was carried out in a litre conical flask, and a layer of crystals was formed at the surface of the solution on cooling. Below this layer many crystals were seen to be suspended by threads, and as the photograph shows, one thread would grow several crystals at different depths in the liquid.

In a bright light, reflection may occasionally be

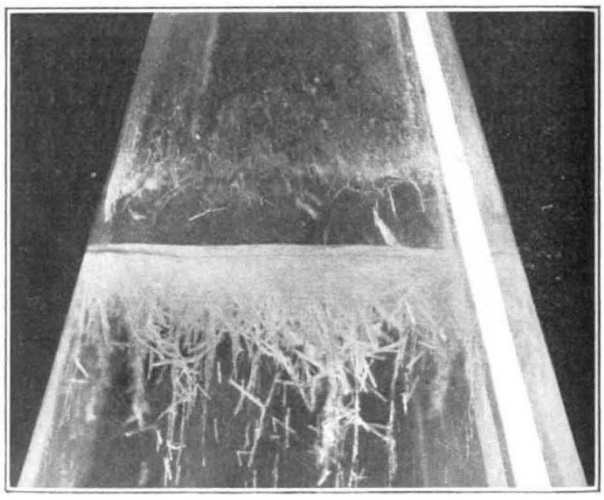

FIG. 1.

observed from some threads, but generally they are too small to be seen with the naked eye. They are elastic in the sense that, if the vessel is gently swung, the crystals oscillate at the end of their threads, which sometimes form flexible loops instead of hanging vertically. The threads are quite stable, as the suspension remains for months at a time. On one occasion the crystal layer was formed on a small grid of glass fibres and the solution syphoned out; the crystals were left hanging, but the threads could not be distinguished.

I am indebted to Mr. Sowerby of this College for the photograph.

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June 8.