

the average annual rainfall being, as before stated, about 35 inches.

These figures have, in themselves, as General Strachey truly observes, no physical signification, but they show that there is a very pronounced harmonic element, with a period of eleven years, underlying the observed quantities, and that in some of its most salient features it seems to be recurrent. Physical considerations only come in when, and in so far as, its features can be correlated with those of the solar variations; a point already noticed in my former paper, and on which I need say nothing further. But of course it is the supposed connexion of the two classes of phenomena that constitutes the chief interest of the subject under discussion.

HENRY F. BLANFORD.

Folkestone, July 25.

The Progress of the Scottish Universities.

YOUR issue of July 14 (p. 252) set forth in vivid graph the rap'd increase in size of the Scottish Universities. But as we must not forget that in progress, advance of type or improvement in quality is more important than increase of quantity, it behoves us to test the qualitative change of the Scottish Universities, and to make sure that they are not of the nature of malignant tumours—rapidly-growing masses with tissues of an embryonic type.

The test is not hard to find in the case of organisms with a unctio so definite as the Universities. Increased efficiency

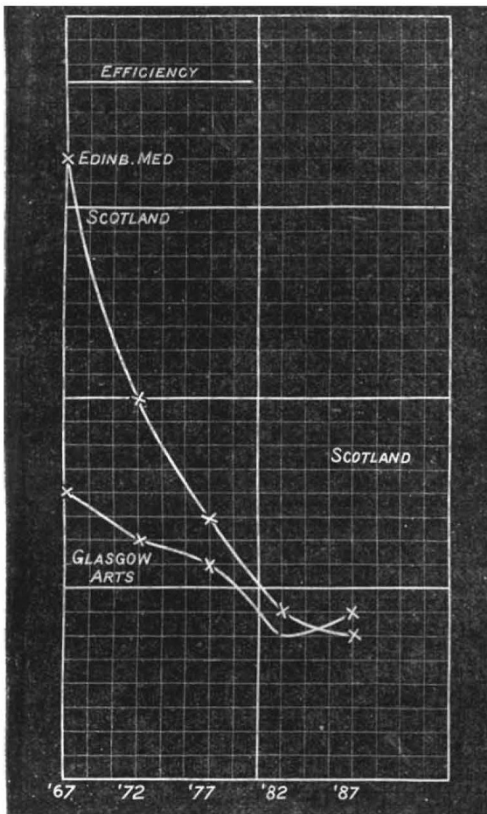


FIG. 1.—Efficiency.

and decreased cost must be the tests, and the results are startling, as shown by the accompanying graphs of the official returns.

The first shows the efficiency in the Arts Faculty in Glasgow, the Medical Faculty in Edinburgh, and for two points the whole of Scotland as tested by the fraction $\frac{\text{Professors}}{\text{Students}}$.

The second shows the quantity, in seconds, of Professor of Anatomy which the students can have for £1 in Edinburgh.

The result is an entire reversal of the usual optimistic picture of progress by growth in quantity, and as I am both hopeful and

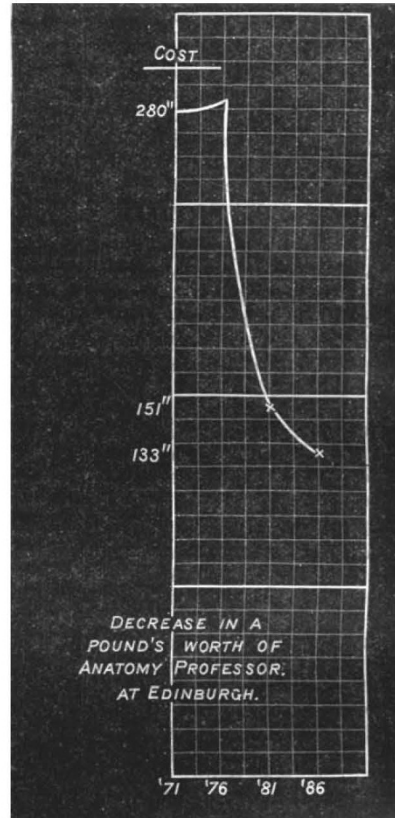


FIG. 2.—Cost.

anxious for the advance in quality of the Universities in which I have spent many years, I hope you will allow me to call attention to its urgency.

M. A. ET MEDICUS.

Floating Eggs.

THE floating eggs which a correspondent in NATURE of July 14 (p. 245) describes and refers to *Orthogoriscus*, are apparently those of the angler or frog-fish (*Lophius piscatorius*), which are known to naturalists. They are laid, as Agassiz states (Proc. Amer. Acad. Arts and Sci., vol. xvii. part iii. p. 280), "embedded in an immense ribbon-shaped band, from 2 to 3 feet broad, and from 25 to 30 feet long." The ova of *Orthogoriscus* do not appear to have been yet obtained, and Mr. Green's description accords essentially with the features presented by the eggs of *Lophius*, though no colour is mentioned, whereas the eggs of the frog-fish are of a light violet-gray tint, and when the dark pigment develops in the young embryos the band assumes a blackish hue resembling crape. Examples, I may add, have been obtained on the west coast of Scotland; but, though *Lophius* is extremely abundant at St. Andrews, and on the east coast generally, the ova have not been procured here, as yet.

EDWARD E. PRINCE.

St. Andrews Marine Laboratory, Scotland, July 16.

Expression of the Emotions.

IN reading the very interesting letter of "J. M. H." (NATURE, July 14, p. 244), I was much struck with the similarity of purpose and singularity of expression in the robin and in a cat of mine, of which can equally be said, it "invented a note by which it called me to feed it. It was quite peculiar—hushed, short, and muttered, as it were." This note is also used on other occasions,