just as are the shore reefs of the neighbouring atoll of Diego Garcia; but the lagoon contains many knolls abundantly covered with living coral, and there is reason to think that living coral also occurs on the external slopes at Diego Garcia. Unlike Capt. Wharton, I do not consider the favourable conditions for coral growth on the external slopes to be connected with a better food supply, for this would be at variance with the existence of thriving coral patches within the lagoon, which, as I have seen at Diego Garcia, bear no relation to the lagoon mouths, through which food-bearing currents might be supposed to enter to the interior. Indeed, at the last-named atoll some of the most luxuriant coral patches are found at the south end of the lagoon, furthest away from the lagoon outlet. The favourable conditions are due, I believe, to the action of currents on coral growth. I noticed at Diego Garcia, and Dr. Hickson has made similar observations in the reefs near North Celebes, that corals do not thrive where they are subjected to the direct action of a strong current, nor do they grow in still water, where they are killed by the sand deposited upon them, but they flourish in places where a moderate current flows over them, not so strong as to dash them to pieces, but strong enough to prevent deposition of sand. Such conditions are found everywhere on the external slopes. At the side where a current impinges directly on a slope, the deeper parts of the current strike the slope first, and are in part thrown upwards over the sloping surface, thus moderating the direct force of the more superficial part of the same current. The main part of the current flows tangentially around the obstruction, and thus affords favourable conditions at the sides of the atoll or reef, and finally, on the side furthest from the current, the back-wash causes weak superficial currents which are also highly favourable to coral growth. Thus the coral grows to the greatest advantage around the periphery of a reef, and, as Capt. Wharton says, a ring-shaped reef is the result, and no theory of solution is required to explain the central depression.

Capt. Wharton states that live coral exists in abundance on the rim of the Tizard Reef. It is not clear whether this means on the external slopes and on the extreme edge of the reef, or on the flat upper surfaces of the reef itself. From what I have observed at Diego Garcia, it appears to me hardly probable that the latter can be the case. Coral debris, torn from the corals growing on the slopes, is always carried across those flat surfaces in such quantity as to destroy any living corals upon them. In some cases corals may grow there, but then there are other favourable conditions neutralizing the effect of the debris. I am hoping soon to publish a full account of my observations at Diego Garcia.

G. C. BOURNE.

Anatomical Department, Oxford, February 28.

Natural Science and the Woolwich Examinations.

IN accordance with Mr. Irving's recommendation, I have carefully considered the letter in the *Times* from the head master of Clifton College; but, with all due respect to his distinguished position, I find myself unable to accept his conclusions. Men of science will pardon me, if I ask them to examine facts, rather than to follow blindly even the highest authority.

The obligatory mathematics to be required from candidates for Woolwich are defined as follows in the official regulations, dated December 1887:—

"Algebra up to and including the binominal theorem; the theory and use of logarithms; Euclid, Books i. to iv. and vi.; plane trigonometry up to and including the solution triangles; mensuration; statics—the equilibrium of forces acting in one plane and of parallel forces, the centre of gravity, the mechanical powers; dynamics—uniform, uniformly accelerated, and uniform circular motion, falling bodies and projectiles *in vacuo*. (Analytical methods of solution will not be required.)

"N.B.—A thorough knowledge of each of the above branches of mathematics will be required."

This amount of mathematics is not beyond the reach of a fairly intelligent lad of seventeen who has been properly taught.

The inductive process which leads Mr. Irving to denounce so severely my supposed inappreciation of the value of experimental demonstration, laboratory training, and field work is hardly worthy of so eminent a teacher. Although there are good grounds for my opinion that chemistry, physics, and geology, are not good educational subjects for ordinary lads under sixteen, I am entirely consistent in the expression of my regret that the War Office should have thought it desirable to discourage these sciences. Your able article conclusively proves that these subjects cannot be hastily and superficially learned in such a way as to gain unmerited marks. There are youths with apt intelligences, quick eyes, and skilful fingers, who ought to be allowed the advantage of their scientific capacity in the Woolwich competition. But I am unable to see that Mr. Irving's suggestion would do justice to these. A candidate who offered optional mathematics, one language, and two sciences, would be placed at a great disadvantage with those offering optional mathematics, and three languages, both on account of the lower maximum, and also because, with the same relative proficiency, it is so much harder to score in mathematics and experimental sciences and geology than in languages. I therefore respectfully submit that all who have the interests of science at heart should urge that the maximum should be raised to 3000 marks, but I do not think it would be desirable to allow candidates to take more than one subject from Class II., as it would tend to the neglect of more important studies.

2 Powis Square. HENRY PALIN GURNEY.

International Tables.

I AM instructed by the Meteorological Council to request your insertion of the following notice:—

The International Meteorological Congress, which met at Rome in 1879, recommended that a series of international tables should be prepared and issued.

The work was ultimately intrusted to a Sub-Committee, consisting of Prof. Wild and Prof. Mascart.

The Sub-Committee has prepared a scheme of tables, which has met with a general acceptance among the heads of European meteorological organizations.

The tables will be in royal quarto, and will cover about 400 pages. The price of the work, to be published by Gauthier-Villars, will be 35 francs.

The Council are requested by the gentlemen who have prepared the tables to ascertain the probable demand for the work in this country, and I am therefore to request through your columns that any intending purchaser will send his name to me.

ROBERT H. SCOTT.

Meteorological Office, 116 Victoria Street, London, S.W., February 16.

PLAN OF TABLES.

CHAPTER I.

Section I. Length.

1.	French lines	to mm.	...	0—100 lines
2.	,,	,, English inches	...	,,
3.	French inches and lines	,, mm.	...	20—30 inches
4.	French lines	,, English inches	...	250—350 lines
5.	English inches	,, mm.	...	0—100 inches
6.	,,	,, ,,	...	17—32 ,, (in ·001 inch)
7.	mm.	,, English inches	...	0—100 mm.
8.	,,	,, ,,	...	440—800 ,,
9.	Russian half-lines	,, mm.		
10.	,, ,,	,, English inches		
11.	French feet	,, metres		
12.	,,	,, English feet		
13.	English feet	,, metres		
14.	Metres	,, English feet		
15.	Kilometres	,, English miles		
16.	English miles	,, kilometres		

Section II. Weight.

1.	Grains	to grammes
2.	Grammes	,, grains

Section III. Time and Angular Measure.

1.	Days of year	to decimals of year and to angles
2.	Hours	,, ,, ,,
3.	Minutes	,, ,, ,,
4.	Hours	,, decimals of day
5.	Minutes	,, ,, ,,
6.	Seconds	,, ,, ,,
7.	Minutes or seconds	,, decimal of the hour or minute
8.	Seconds	,, decimals of hour
9.	Longitude	,, time
10.	Time	,, longitude

CHAPTER II.—GEODETICAL.

1. Variation of gravity with latitude and altitude.
2. Degrees on the meridian.
3. ,, on circles of latitude.
4. Duration of sunshine.