

small scar of original adherence. The principal costals are prominent, and round the region of the base beset with small spines directed somewhat upwards. The upper portion of the costa is without spines. The primary and secondary septa are broad and exsert. Pali are absent, the columella is fascicular. The absence of pali, the form of the columella, and the nature of the base, associate this form with the *Ceratrotrochi*, as defined by Milne-Edwards.

The animal is of a dark madder colour on the region of the margin of the calicle between the exsert primary and secondary septa, and on the membrane investing the wall of the corallum from the margin down to the commencement of the spines. This dark colour is succeeded on the disc by a band of pale bluish within which there is again a zone of very dark madder colour round the mouth. The dark colouring-matter is interesting, as it gives an absorption spectrum of three distinct bands.

On Friday, July 11, we sounded in 2,025 fathoms, 376 miles to the west of Madeira, the bottom very well marked "globigerina ooze," and the bottom temperature $1^{\circ} 5' \text{C}$.

The weather for the last few days had been remarkably fine, with a pleasant light breeze. When we turned up on deck on the morning of the 16th, we were already at anchor in the beautiful bay of Funchal, and looking at the lovely garden-like island, full of anticipations of a week's ramble among the peaks and "carrals" and the summer "quintas" of our friends—anticipations which were doomed to be disappointed.

WYVILLE THOMSON

THE INTERNATIONAL METRIC COMMISSION AT PARIS

IN continuation of the notices of the proceedings of this Scientific Commission (see NATURE, vol. vii. p. 237), it may now be stated that the French Section have been engaged during the present year in the work of the Commission entrusted to them, and have continued their sittings up to the present time. It appears from the printed "Procès Verbaux" that their attention has been principally directed to the further investigations and experiments required for the melting and casting of the large mass of alloy of platinum and iridium, determined upon as the material of all the new standards, with the view of obtaining a homogeneous ingot of these two metals in the proper proportions. This preliminary work is now so far completed that the twelve members of the Commission elected as the Permanent Committee, have been summoned to meet at Paris on October 1, to consult upon the subject with the French Section, and more particularly to discuss and decide the following points:—

1. The date of the definitive of the melting platinum-iridium intended for the construction of the new International metric standards.

2. The question whether the *Mètres-a-bouts* requested by some countries shall be constructed from the metal of the same melting as the *Mètres-à-trails*.

3. Whether the kilograms shall be made from the metal of the same melting as the *Mètres-à-trails*.

As to the number of metric standards required to be constructed by the Commission, the greater number of the Governments represented at the Commission have already intimated their wishes to have in all 31 metres and 24 kilograms. Germany and Italy have not yet notified their decision. Austria and Switzerland have declined to reply until the question of the creation of an International Bureau is satisfactorily settled, and it is understood that the same course is being followed by Germany. Russia is favourable to the creation of the Bureau, but has not yet decided on the number of standards she will require.

In addition to the number of fifty delegates already appointed by twenty-nine Governments to take part in

the International Metric Commission, and whose names have been already announced, the Haytian Government has nominated M. Ch. Laforestie, Chargé d'Affaires of the Haytian Republic, and the Government of Brazil has nominated Prof. Such de Capanema as their respective delegates of the Commission. The French Government has also invited the Governments of Central America, Persia, China, and Japan to send delegates to take part in the proceedings of the Commission.

As it will be expedient to construct a number of spare copies of the new metric standards, it will probably be necessary to prepare for the construction of not less than fifty metres and nearly as many kilograms.

But difficulties must inevitably and at once arise at Paris from the course taken by the Governments of Germany, Austria, and Switzerland, as it tends materially to impede the attainment of the declared primary objects of the Commission to construct and furnish every Government interested with uniform metric standards, which are to be accurately verified, and of equal authority. After the expiration of four years from the date of the appointment of the Commission by the French Government, on September 2, 1869, and the passing of almost unanimous resolutions at a full meeting of the Commission in 1872, upon the mode of constructing the new standards, the time has now arrived when everything has been got ready for commencing the actual construction of the new standards. It can hardly be expected that this, the real work of the Commission, is to be stopped until the ulterior question of the creation of an International Metric Bureau is settled to the satisfaction of the three above-mentioned Governments. Nor does a further significant step which has been recently taken by the Austrian Government lead to much hope of a satisfactory solution of this question.

The Austrian Government has officially declared that it accepts in principle the establishment of an International Metric Bureau upon the basis of the resolutions passed by the Commission, so far as relates to the objects and functions of this Bureau; and that it is quite disposed to take part in a Convention upon the subject, provided that all the other Governments represented at the Commission give their adherence. But it expressly reserves the right of making new propositions when the questions of the organisation, the seat, and the direction of the Bureau are discussed, as well as the right of definitively approving the Convention.

It proposes, at the same time, that in order to maintain the international character of the negotiation, the seat of the Conference shall be at Berne, where the International Telegraphic Conference is now held, or at Brussels, these two cities being equally upon neutral territory.

And that for facilitating the proceedings of the Conference, the Permanent Committee appointed by the Metric Commission, shall previously elaborate a project of Convention to be communicated to the several governments interested; and that the Conference be not convoked for completing the definitive Convention until the preliminary negotiations shall be sufficiently advanced to allow of a favourable result.

The invitation given by the French Government to the Austrian and other governments, was to take part in the creation of the International Metric Bureau based upon the five points proposed by the Commission, and it now appears that Austria objects to three out of these five points. And even as regards the other two points, Austria's adhesion is conditional upon the concurrence of all the other governments represented at the Commission. Up to the present time, however, the governments of five countries only have officially notified their concurrence, whilst those of twelve countries have formally declined to take any part in the establishment of the proposed International Metric Bureau. Under these circumstances, its creation at all seems very problematical, however desirable it may be in the interests of metrological science.

It is evident that the decision upon these new propositions must be left entirely to the governments interested. At any rate, the discussion of the Austrian propositions appear to be quite beyond the powers of either the French Section or the Permanent Committee, who are in no way authorised to re-open questions which, so far as the action of the Commission is concerned, have already been unanimously decided at the full meeting of the Commission. Meanwhile, the specific work of the Commission must be proceeded with, and the approaching meeting at Paris will enable the final decisions to be made, which alone are now required for beginning the construction of the new Standards.

H. W. CHISHOLM

NOTES

AN election will be held on Thursday, October 30, to two fellowships in connection with Merton College, Oxford. The examination for one of these fellowships will be in mathematics, for the other in physical science. The election to the physical science fellowship will be decided with respect to proficiency in physics, but candidates will have an opportunity of showing a knowledge of chemistry as supplementary to physics. The examination in both these subjects will be partly practical, partly by papers, and will be held in common with Magdalen College. A lectureship in physics, tenable for three years, in Trinity College, of 200*l.* per annum, will be offered to the Fellow to be elected. The examination for the two fellowships will commence on Tuesday, October 7, at 9 A.M., in the Merton College Hall. Candidates are required to call on the Warden on Tuesday, October 7, between 4 and 5 P.M.

THE Opening Address of this session of the St. Thomas Charterhouse Teachers' Science Classes will be delivered by Mr. F. C. Buckmaster on Saturday morning, the 20th inst., at 10.30. The chair will be taken by Sir J. Bennett, and a deputation from the Science Department of South Kensington will attend. Last year this undertaking met with signal success: above 200 teachers of primary schools availed themselves of the privileges offered by the institution. Many of the late students are now qualified to give instruction in elementary science. The movement is likely to do an immense amount of good in the way of making the teaching of elementary science common amongst the masses. During the recess about 250*l.* has been expended in fitting up a chemical laboratory and purchasing scientific apparatus; this, together with the engagement of an additional number of lecturers, it is thought will again secure a large number of students.

WE understand that the bryological books and exceedingly rich and important collections and preparations of mosses left by the late Prof. Sullivant, whose death we recorded last week, are consigned to the Grey Herbarium of Harvard University, with a view to their preservation and long continued usefulness. The remainder of his botanical library, his choice microscopes, and other collections are bequeathed to the State Scientific and Agricultural College just established at Columbus.

THE *American Naturalist* for August records the death of four contributors to that journal, all more or less known as working naturalists:—Prof. John Lewis Russell, of Salem, one of the founders, and for many years president of the Essex County (Massachusetts) Natural History Society, which afterwards became part of the Essex Institute, an active worker in botany; Mr. George Gibbs, of New Haven, the distinguished American ethnologist and philologist, whose special work had been in the language and history of the North American Indians; Col. John W. Foster, president of the Chicago Academy of Science, a constant contributor of papers and memoirs on geological and

archæological subjects, and joint author with Prof. Whitney of the Government Report on the Mineral Lands of Lake Superior, published in 1850; and Prof. Henry James Clark, of Amherst, one of the most thorough histologists and best microscopists in the country, and a large contributor to Prof. Agassiz's volumes on the Natural History of the United States. Of these losses to science, Prof. Clark was under 50, and only Prof. Lewis over 60.

THE first meeting of the Agassiz Natural History Club, recently organised by the students of the Anderson School of Natural History on Penikese Island, was held on July 24, and showed signs of great energy and activity. Although the school had only been open a fortnight, lectures on surface geology, the embryology of vertebrates and articulates, on physiology, physical geography, on the microscope and its construction, with practical lessons on its use; free hand drawing on the blackboard, zoological and landscape drawing, and daily dredging excursions in the yacht *Sprite*, together with instructions in collecting and preserving animals, have been given. The amount of laboratory work done is stated to be most satisfactory. Large aquaria are being set up in the temporary laboratory.

THE Council of the Pharmaceutical Society are desirous of forming a complete herbarium of medical plants from every quarter of the globe, whether officinal or not. Mr. Holmes, the Curator of the Society's Museum, 17, Bloomsbury Square, will be glad to enter into communication with any foreign botanists and pharmacutists willing to co-operate in the work.

IN a telegram from St. Petersburg, September 11, it is stated that General Kaufmann reports that the Amoo Daria river is not navigable by steamboats. The scientific expedition sent out by General Kaufmann to explore the old bed of the Amoo Daria river as far as the lake of Lara Kamish, returned on July 23 to the camp at Kunurgentsch. The expedition explored the river to a distance of 450 versts, and succeeded in collecting much valuable information and scientific materials.

IN a telegram from St. John's, Newfoundland, of September 11, it is stated that the *Juniata* had arrived there and reported that the camp of the crew of the *Polaris* was discovered by the *Tigress* on August 14 at Littleton Island, where the ship was deserted. Manuscript records of the expedition up to a period of six weeks before the discovery were secured. The *Tigress* is still in search of the Buddington party, who are believed to be safe.

A PAPER in Petermann's *Mittheilungen* upon the driftwood found in Nova Zembla has at present a special interest in connection with the discovery of fragments of a similar character by the crew of the *Polaris* in Polaris and Newman Bays. The Nova Zembla specimens consisted mainly of willow of various thicknesses. There were also, however, pieces of beech nearly a foot in diameter, several species of pine, among these *P. sylvestris*, an *Abies*, &c. It is thought, that a large portion of this material must have been derived from the Peischora, Ob, and Yenesei rivers, and that none of it could have been derived from the current of the Gulf Stream.

THE past winter was very mild in the southern portion of Iceland, but quite severe in the northern. In the middle of January an eruption of the volcanoes in the great Yokul Mountains, in the south-east corner of the island, took place, which continued with unusual violence for about a week, and then suddenly ceased. Since then no fire has been noticed. Large quantities of ashes have fallen on different localities, but it is believed that the deep bed of snow protected the pasture lands from destruction. Volcanic eruptions took place at the same time in Chili.