spondence" we find letters by Adm. R. C. Mayne on a possible communication between Skyring Water, Straits of Magellan, and Smyth's Channel, and by Capt. Alexanderson on the subject of some observations made during a recent voyage along the Loango Coast of West Africa. The maps given this month are of King William Land and the Estancia de San Jorge, Uruguay, with a small inset map of the whole republic.

As we announced last week, the Vienna Geographical Society has issued an appeal for subscriptions for an Austrian expedition, which Dr. Emil Holub has decided on undertaking. Dr. Holub intends crossing the whole length of Africa from south to north. He will start from the Cape of Good Hope and penetrate to the Zambesi, thence explore the Maruthemambunda territory, the watershed district between the Zambesi and the Congo, visit the lake sources of the Congo, and from there through Darfur he will try to reach Egypt. Dr. Holub expects the journey to extend over three years. The expenses, he reckons, will amount to about 50,000 florins, 5000 of which he can himself supply.

Lord Aberdare will preside at the first meeting of the Geographical Society next Monday evening, when Mr. Jos. Thomson, the Commander of the East African Expedition, who has lately returned from Zanzibar, will give an account of his journey to the Lukuga outlet of Lake Tanganyika, *viâ* the head of Lake Nyassa. Mr. Thomson's paper promises to be unusually interesting, as the country traversed by him was for the most part previously unexplored.

Another African traveller, Mr. James Stewart, C.E., has just returned to England from Livingstonia, Lake Nyassa. Mr. Stewart, it will be remembered, also crossed the unknown belt of country between Lakes Nyassa and Tanganyika by a different route, for the most part, from Mr. Thomson's, and arrived at the south end of the latter lake only a day or two after him.

In the November number of their *Chronicle* the London Missionary Society publish a full account of Dr. Southon's interview with Mirambo on the subject of the murder of Messrs. Carter and Cadenhead, and the main facts elicited by him appear to exonerate that chief from any direct share in the unfortunate occurrence. Mohammed, Capt. Carter's servant, succeeded in saving the journals of both Carter and Cadenhead, and all the most important manuscripts and letters of the former.

The Baptist Missionary Society hope to publish in the December number of their *Herald* an admirable map which they have just received from the Rev. T. J. Comber of their Congo Mission, who has been for some time stationed at San Salvador. It is stated to be very carefully drawn to scale, and to exhibit the many and important discoveries made by the missionaries in their various journeys towards Stanley Pool; it will also show the relative positions of the various towns to Banana, Mboma, San Salvador, Makuta, and other important centres.

The new *Bulletin* of the Antwerp Geographical Society contains papers by M. Bernardin on the Fiji Islands, their resources, progress, &c., and by Dr. L. Delgeur, vice-president of the Society, on cartography among the ancients.

We have received from Danzig an excellent little guide-book to that city, with special reference to the scientific and medicinal points of interest of the town and district, compiled from the recent meeting of the German Association. It is a model of its kind, and contains an admirable series of special maps.

Doctors Rohlfs and Stecker have left Suez for Massowah and Abyssinia.

In the *North American Review* are appearing M. Desiré Charnay's notes of his exploring work in Mexico. The November number contains the third instalment.

KEW GARDENS REPORT

From the just-issued "Report on the Progress and Condition of the Royal Gardens at Kew" for 1879 we take the following items:—

Some idea of the magnitude of the destruction caused by the hailstorm of August 3, 1879, may be obtained from the fact that the number of panes broken was 38,649, and the weight of broken glass eighteen tons. The plantations along the Grass Avenue skirting the river have all been greatly improved, very poor specimens removed and replaced by Holm oaks, which will eventually render the avenue practically an evergreen one. This portion of the grounds suffers greatly from the unconsumed smoke of the gas-works and manufactories at Brentford, which is not only most prejudicial to the plants, but so blackens the labels that they become illegible in a few years. Some interesting notes are given on the cultivation of the various kinds of india-rubber. According to Hecht, Levis, and Kahn's Report for 1879, Para rubber (*Hevea*) is still the largest source of supply. The total import into England during the year was 4651 tons. Liverpool received 25 tons of Ceará Scrap rubber and 900 tons of African (*Landolphia*), while London imported 350 tons from Assam (*Ficus elastica*), 250 tons from Borneo (*Willughbeia*), and 550 from Mozambique (*Landolphia*). Considerable attention has been paid at Kew during the past year to the examination of the African Landolphias and Malayan rubber-yielding Willughbeias, and the results will be given in the next report. Additional facts to those contained in the previous Report are given on the introduction of South American species into the Old World. From Singapore Mr. Murton reports:—"The plants of Hevea and Castilloa in the gardens are now large plants, but hitherto propagation from the strong growths they are making seems rather difficult, whereas they used to propagate freely from the weak wood produced while in pots.' Preparations are being made in Burma for the cultivation of Ceará Scrap (*Manihot glaziovii*), while Dr. King reports that the Ceará rubber promises to grow well in Calcutta; seeds have been distributed to various parts of India, and the plant seems to thrive well in Upper India. Singapore does not seem to suit Ceará Scrap, according to Mr. Murton, while at Zanzibar it yields seed most abundantly, but the seeds are slow to germinate. At Zanzibar the Pará rubber is a less quick grower than the Ceará and does not branch. At Mergui eight Para trees, the survivors of a batch of seedlings received from Dr. King in 1877, continue to do well in the office compound. At Calcutta, according to Dr. King, Para rubber continues to be as disappointing as ever; he believes it is useless to try it anywhere except in the south of Burma or the Andamans, and perhaps in Malabar. Mr. Jenman reports that the atmospheric conditions in Jamaica appear favourably adapted to the Para rubber. Equally important information is given as to the cultivation of mahogany in the Old World. On this the Report says: "This may now be regarded as an accepted success. The tree grows well in many parts of India and in Ceylon, and in the former there is a local demand for the wood. In this country new uses are found for it, one of the most recent being for the linings and panellings of railway carriages instead of teak, which is now exclusively used for ship building. It is not easy to see any valid arguments against the cultivation of a tree the timber of which is of admitted excellence for a variety of purposes and the growth of which is apparently attended with little difficulty. As late as 1876 the Government of Bengal was adverse to mahogany planting. This policy has now, however, been modified, and in his report for 1878-79 Dr. Brandis, the Inspector-General of Forests, reports: 'Of the exotic trees which are cultivated by way of experiment mahogany is the most important, and its success seems not improbable, though it is too early yet to form final conclusions upon the subject.' Mahogany is also cultivated as an experiment in Burma and the Chittagong district of Bengal. The tree is known to thrive well near Calcutta, and every effort should be made to cultivate it in those forest districts where climate and other circumstances are favourable." Experiments are being made in Queensland, and favourable reports come from Saharunpore and Singapore. Some curious notes are contained in the Report on Chestnut Flour: "We are indebted to Mr. D. E. Colnaghi, H.B.M.'s Consul at Florence, for specimens of the dried chestnuts, flours, and *necci* (the cakes made from them), which are so important an article of subsistence in the Apennines. The collection of the specimens for Kew was due to the kindness of Dr. L. Bacci of Castigliano, in the mountains of Pistoja. The fresh chestnuts are dried, or rather roasted, for three days and nights in a *seccatoio*, or drying room, on a latticed floor covering a chamber in which a fire is lighted. The husk is then easily removable, and the kernel is ready to be ground into flour, which is of a pinkish colour. This is mixed to the consistence of cream with water, and poured on fresh chestnut leaves to be baked into small circular cakes, *necci*, between heated stones. The collection having been divided between the museum of the Royal Gardens and the Food Collection, Bethnal Green, Prof. Church, who has charge of the latter, has obligingly furnished us with the following analysis of the flour:—

Moisture	14·0
Oil or fat	2·0
Proteids	8·5
Starch	29·2
Dextrin and soluble starch	22·9
Sugar	17·5
Cellulose, &c.	3·3
Ash	2·6
	100·0

The cakes were found to contain only 6·7 per cent. of proteids, with 3·4 per cent. of flour. The large amount of dextrin is due to the high temperature to which the chestnuts are subjected in the process of drying. Prof. Church thinks that chestnut-flour ought to be of easy digestibility, and a suitable children's food, considering that it contains over 40 per cent. of nutritious matters soluble in pure water. The Museum of the Royal Gardens is indebted to Mr. George Maw for a specimen of a product used, according to the Rev. Wentworth Webster, who procured it, as tea in the Basses Pyrenées in France, and on the Spanish side of the Pyrenées in Navarre. It was found to consist of the dried shoots of a species of *Lithospermum*, which was identified with probability as *L. officinale*." Mr. Noble advocates the cultivation of rye-straw (*Secale cereale*) as a paper material, not inferior to esparto. Mr. W. L. Booker, H.M.'s Consul at San Francisco, sent some specimens of a scented wood from the highlands of Mexico, known as Lin-a-Loa, and which has been identified with a wood already in the Kew Museum, and which appears to be yielded by a species of *Bursera*. Further material in the shape of dried specimens, with both fruit and flowers, is much to be desired for the purpose of ascertaining definitely the tree which produces it. The name Lin-a-Loa is clearly a corruption of Lign Aloës, which has been identified with *Aquilaria agallocha*, otherwise known as eaglewood (Kew Report, 1878, p. 36). This is however a tree confined to the Old World, and the Mexican one has no connection with it. The wood of the latter is imported into this country for manufacture into perfumery, a fragrant oil known as otto of linaloe being distilled from it. On the interesting Chinese timber-tree known as the Nan-mu-tree, and referred to in the Report for 1877, some information has been obtained from Mr. Baber:—"Two days' journey south-east of Chungking in Szechuen I found several specimens of about a foot in diameter, one of them having a straight branchless trunk of 100 feet in height, with the branches and foliage rising 25 feet above that; another had 70 feet of bare straight stem, and 90 feet of total altitude. Although the trunks are branchless, yet in many cases they send out shoots resembling saplings, which rise parallel with the trunk. The wood is white and close-grained, and I do not believe that the pillars at the Ming tombs near Peking are of this wood. They look more like true teak. I have seen some much larger trees than the above, some two feet and more in diameter, straight and of great altitude. They are used in Szechuen for bridge work." Eventually, through the instrumentality of Père Vincot, who resides at Chungking, flowering specimens were transmitted to the Kew Herbarium. From these a figure has been prepared, and they entirely confirm the previous identification of the tree by Prof. Oliver (from the leaves alone) as a near ally of *Phœbe pallida* (one of the laurel family). The genus *Phœbe* is now merged in *Persea*, and Prof. Oliver has described the Nan-mu under the name of *Persea nan-mu*, distinguishing it from *Persea* (*Phœbe*) *pallida* "chiefly in stature, in the form of the acumen of the leaves and the character of the indumentum." On a block of Pai-chai wood sent by Mr. W. M. Cooper, H.B.M.'s Consul at Ningpo, Mr. R. J. Scott reports:—"The most striking quality I have observed in this wood is its capacity for retaining water and the facility with which it surrenders it. This section, which represents one-tenth of the original piece, weighed 3 lbs. 4½ ozs. At the end of twenty-one days it had lost 1 lb. 6¾ ozs. in an unheated chamber. At the end of another fourteen days, in a much elevated temperature, it only lost ¼ oz. In its present state of reduced bulk its weight is 1 lb. 10 ozs. It is not at all likely to supersede box; but it may be fit for coarser work than that for which box is necessary." The principal researches conducted in the laboratory during the past year have been those of Mr. Marshall Ward, on the development of the embryo-sac, published in the *Journal* of the Linnean Society, vol. xvii. pp. 519–546; Prof. Church, continued investigation on albinism in leaves, published in the *Journal* of the Chemical Society, January, 1880. The laboratory has also been employed for the experimental demonstrations given to the *employés* of the Royal Gardens, and for the examination of the University of London for the degree of Doctor of Science in the subject of physiological botany.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE

OXFORD.—The examinations for the degree of Bachelor of Medicine will commence in the medical department of the Museum as follows:—

The First (Scientific) Examination) November 29.

The Second (Final) Examination, December 6.

Candidates for either of these examinations, and candidates for the certificate in Preventive Medicine and Public Health are requested to send in their names on or before November 15 to the Regius Professor of Medicine at the Museum.

The University of Oxford Commissioners have given notice that all new scholarships and exhibitions granted by the Colleges shall be subject to the provisions of any new statutes which may be made by the Commissioners in relation to the length of tenure and emoluments of such scholarships and exhibitions.

The University Commissioners at present sitting have forwarded to the Hebdomadal Council six proposed statutes which they contemplate making, subject to any representation which they may receive from the Council on the appointment and duties of University Professors and Readers. The proposed statutes include certain general regulations applicable to the whole Professoriate. Each Professor must reside six months in each year between October 1 and the ensuing July 1. Each Professor, besides his regular course of lectures, must give one public lecture every year. Each Professor must give private instruction to students in matters relevant to the subject of his lectures, and must examine the students who have attended his lectures at the end of each course.

The following are the particular regulations applicable to the Savilian Professor of Astronomy, the Professor of Experimental Philosophy, the Waynflete Professor of Chemistry, the Linacre Professor of Human and Comparative Anatomy, the Waynflete Professor of Physiology, and the Wykeham Professor of Physics. Section 7 relates to the three proposed new professorships.

(1) The Professor shall deliver one course of fourteen lectures at least in each of two out of the three University terms (Easter and Trinity Terms being counted as one); every course shall extend over seven weeks at least, and not fewer than two lectures shall be delivered in each week.

(2) He shall be ready to give the private instruction required by the General Regulations on two days in each week in which he lectures, and during one hour at least on each of such days.

(3) The laboratory under the charge of each Professor, and, in the case of the Savilian Professor of Astronomy, the University Observatory, shall be open for eight weeks in each term (Easter and Trinity Terms being counted as one), and at such other times, and for such hours, as the University may by statute determine.

Students shall be admitted to the University Observatory and to the laboratory under the charge of each Professor, upon such conditions as the University shall from time to time by statute determine, and upon the terms of paying such fees, not exceeding such amount as may be fixed by any statute of the University in force for the time being, as the Professor may from time to time require.

(4) Except for some grave reason to be approved by the Vice-Chancellor, the Professor shall, for seven weeks in each term (Easter and Trinity Terms being counted as one), and during some part of three days in each week, be ready to give instruction in the subjects of his Chair to such students as shall have been admitted to the laboratory under his charge (or, in the case of the Savilian Professor of Astronomy, to the University Observatory); and such instruction shall be given in the laboratory or observatory (as the case may be) or in some class-room connected therewith.

(5) The Professor shall also, at the close of each term, inform any college which may request him to do so as to the regularity of attendance and the proficiency of the students belonging to such college who have been admitted into the laboratory or observatory under his charge, and shall give like information, if requested, to the delegates of students not attached to any college or hall.

The Particular Regulations next following shall be applic-