

of a central position for the Institute, have considered the various possible sites, and have, as far as has been within their power, obtained estimates of their cost.

To carry out the several objects which the committee have indicated, a large space is necessary. The committee have been unable to find any such suitable site in the central parts of London, except at a cost which, looking at the probable amount of subscriptions, would, after the purchase of the ground, leave a sum wholly inadequate for the erection and maintenance of the buildings, and for carrying out the objects of the Institute.

The site of about five acres recently secured for the New Admiralty and War Offices is valued at 820,000*l.*, or rather over 160,000*l.* per acre. That now vacant in Charles Street, opposite the India Office, is less than an acre, and would cost at least 125,000*l.*; probably another acre might be secured by private contract, so that the value of a limited site in this position would not be less than 250,000*l.* It has been suggested that a single acre not far from Charing Cross might be obtained for 224,000*l.* Two and a half acres on the Thames Embankment have been offered for 400,000*l.*; and it is stated that six acres might be procured from Christ's Hospital at 600,000*l.* Another good central position has been suggested, consisting of two and a half acres, which has been valued at 668,000*l.*

It is, of course, probable that these sites might be obtained at somewhat less than the prices asked, but, allowing for this, it is obvious that the purchase of any adequate area would involve the expenditure of a quarter to half a million.

The committee have therefore been forced to abandon the hope of obtaining a central site within the limits allowed by any probable subscription.

The attention of the committee was then drawn to the property at South Kensington belonging to the Commissioners for the Exhibition of 1851. This property was bought out of the profits of that Exhibition, with the express object of offering sites for any large public buildings which might be required for the promotion of science and art.

Under these circumstances, the committee submit to your Royal Highness that the Imperial Institute may well establish a claim for the grant of a site of sufficient magnitude on property bought and reserved for public institutions of this character.

Though sensible of the objections that may be urged against the situation at South Kensington, the committee think that the advantage must be obvious of obtaining a sufficient site virtually free of cost, so that the whole of the subscriptions may be devoted to providing a building for and establishing and maintaining the Institute.

The committee, while guided in the recommendation of a site by the considerations they have indicated, think it right to add that there are some incidental advantages connected with that at South Kensington.

In that locality are combined the City and Guilds Technical College, the Royal College of Music, and the Government Museums and Schools of Science and Art, which ought to be in immediate proximity to an Imperial Institute of the character which we have described.

The technical character of the collections and exhibitions of the Imperial Institute has a natural connection with the collections of science and art in the Government Museums.

E. General Observations.—An Imperial Institute for the United Kingdom, the Colonies, and India, would fail in its chief object if it did not constantly keep in view that it ought to be a centre for diffusing and extending knowledge in relation to the industrial resources and commerce of the Empire.

The necessity for technical education is now fully appreciated, because the competition of industry has become, in a great measure, a competition of trained intelligence. The committee, however, do not recommend that the Imperial Institute should aspire to be a college for technical education. Many of the large towns in Great Britain have recently established colleges or schools of science and art. The Imperial Institute might serve to promote technical education in these, and to unite them with colleges of larger resources which have been founded or formed branches for the purpose in the metropolis. It is too much to hope that an active co-operation of this character between the provincial centres and London could be at once undertaken by the Imperial Institute. But the committee bear in mind that, in their last report, the Commissioners of 1851 have indicated an intention to assist in carrying out such a scheme. If the Commissioners would contribute three or four thousand

pounds annually, it would be possible to establish scholarships which might enable promising candidates of the working classes to attend the local institutions, and even, when it was desired, to complete their technical education in colleges of the metropolis. In addition to this aid, the Imperial Institute might be able, in other ways, to promote the foundation of scholarships both in connection with the colonies and provincial centres, in the hope of still further extending these benefits to the working classes.

In conclusion, the committee submit that an Imperial Institute such as they have sketched in broad outline would form a fitting memorial of the coming year, when Her Majesty the Sovereign of this Empire will celebrate the jubilee of her happy reign. It would be an emblem of the unity of the Empire, embracing as it does all parts of the Queen's dominions, and tending to promote that closer union between them which has become more and more desired. It would exhibit the vast area, the varied resources, and the marvellous growth, during Her Majesty's reign, of the British Empire. It would unite in a single representative act the whole of her people; and, since both the purpose and the effect of the Institute will be to advance the industrial and commercial resources of every part of the Empire, the committee entertain a confident hope that Her Majesty's subjects, without distinction of class or race, will rejoice to take part in offering this tribute of love and loyalty. —HERSCHELL (Chairman), CARNARVON, REVELSTOKE, ROTHSCHILD, G. J. GOSCHEN, LYON PLAYFAIR, HENRY JAMES, HENRY T. HOLLAND, H. H. FOWLER, C. T. RITCHIE, FRED. LEIGHTON (President of the Royal Academy), ASHLEY EDEN, OWEN T. BURNE, REGINALD HANSON (Lord Mayor), J. PATTISON CURRIE (Governor of the Bank of England), JOHN STAPLES, FREDERICK ABEL (Vice-President of the Society of Arts), J. H. TRITON (Chairman of the London Chamber of Commerce), NEVILLE LUBBOCK, HENRY BROADHURST.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE

CAMBRIDGE.—At the annual election to scholarships and exhibitions in St. John's College, for candidates who have not yet commenced residence, the following awards were made:—

Foundation Scholarships: (8*ol.*) to A. Vaughan, University College School, and H. Reeves, Surrey County School; (5*ol.*) to O. W. Owen, Liverpool Institute (all for Mathematics); (6*ol.*) to J. T. Hewitt, South Kensington School of Science, for Chemistry.

Minor Scholarships: (5*ol.*) to G. T. Bennett, University College School, and W. J. Dobbs, Wolverhampton School, for Mathematics, and to R. A. Lehfeldt, for Physics.

Exhibitions to J. J. Alexander, Queen's College, Belfast, for Mathematics, and to F. F. Blackman, St. Bartholomew's Hospital, for Physiology and Botany.

SCIENTIFIC SERIALS

THE articles in the *Journal of Botany* for November and December are mostly descriptive. Mr. H. N. Ridley concludes his description of the Monocotyledonous plants collected in New Guinea by Mr. Forbes, including a number of new species; Mr. J. G. Baker, his synopsis of the Rhizocarpeæ, with a monograph of *Pitularia*; and Dr. Trimen, his valuable account of the flora of Ceylon and its relations to the climate of the island.—Mr. J. G. Baker describes some new species of Liliaceæ from the Cape of Good Hope.—The other original papers refer to the distribution of British plants.

Nuovo Giornale Botanico Italiano for October.—G. Venturi describes several species of moss new to the Italian flora, or rare or critical species.—L. Macchiati, on the extra-floral nectaries of the Amygdaleæ, describes nectariferous glands on the leaf-stalk of *Persica vulgaris*, *Cerasus vulgaris*, *Prunus domestica*, and *Amygdalus communis*. These agree in function with the extra-floral nectaries in other European plants, in serving as a protection against the attacks of caterpillars; while in the case of natives of Tropical America, their purpose is invariably to protect against the attacks of the ant *Oecodoma*, by attracting other ants, enemies to this species. The author records a diurnal periodicity in the amount of nectar exuded from the glands, which reaches its maximum early in the morning, its minimum in the afternoon.—B. Scortechini describes several