AUGUST, 1893.

There was a large attendance of the Fellows of the Royal Society on August 15th, and many ladies were also present, to welcome the new President, His Excellency Viscount Gormanston, K.C.M.G., on the occasion of his taking the chair for the first time at one of the monthly evening meetings. The President, who was accompanied by his Private Secretary (Mr. J. F. Alexander Rawlinson), was received by the Council, and on taking his seat,

Mr. JAMES BARNARD said :—"Your Excellency,—I have the pleasing duty as senior Vice-President, on behalf of the Council and Fellows of the Royal Society of Tasmania, to present an address of congratulation to Your Excellency upon receiving the appointment of Governor of Tasmania as Her Majesty's representative. And I have also to tender a hearty welcome to Your Excellency upon your presence here this evening, and upon your assuming the chair of the Royal Society as its official president. From your Excellency's wide experience, gathered in various spheres of official life in the service of the Crown, the hope is entertained that, after the example of many of your distinguished predecessors, your Excellency may be inclined to communicate to the Society, at its monthly evening meetings, the fruits of your observation and remarks in other and different climes as to be eventually embodied in the printed transactions of the Royal Society." (Applause.)

The SECRETARY (Mr. A. Morton) read the address :—

To His Excellency the Right Honourable VISCOUNT GORMANSTON, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief in and over the colony of Tasmania and its dependencies. May it please Your Excellency.—We, the Council and Fellows of the Royal Society of Tasmania, desire to offer our loyal congratulations to Your Excellency on assuming the Government of Tasmania as representative of Her Most Gracious Majesty. In 1844 Her Majesty signified her consent to become patron of the Society; and by one of its fundamental rules and constitution, the Governor for the time being is the President. We believe that it will interest Your Excellency to learn that the Royal Society of Tasmania, founded by eminent pioneers of scientific research, was the first to be enrolled under royal patronage; that it has passed its jubilee; and that its printed transactions comprise numerous volumes of valuable scientific information. Many of Your Excellency's predecessors have taken a warm personal interest in this Society, as shown by their presence at its sessional meetings, and by their contributing to its transactions, and we cherish the hope that it will prove agreeable to Your Excellency to take an active interest in the proceedings of the Society. We trust that health and happiness to yourself, Lady Gormanston, and family will attend the whole period of your administration of the government of this colony. We remain Your Excellency's very obedient servants—(Signed) James Barnard, Vice-president; W. L. Dobson, Vice-president; J. W. Agnew, Vice-president; T. Stephens, Vice-president. A. G. Webster, C. T. Belstead, R. M. Johnston, Russell Young, C. H. Grant, Nicholas J. Brown, J. B. Walker, W. V. Legge, members of the Council. Alexander Morton, Secretary. Hobart, August 15, 1893.

The PRESIDENT said: Mr. Barnard, ladies, and gentlemen—I thank you most sincerely for the very cordial welcome you have given me here as representative of Her Majesty and as Governor of this colony. I have heard, previous to arriving in this colony, a great deal of the transactions of the Royal Society of Tasmania, and of the great good that has been conferred on the colony by it from my predecessor and friend, Sir Robert Hamilton—(applause)—your late President. I feel highly honoured by being permitted to occupy the presidential chair of the Royal Society of Tasmania which, as your Vice-president has just told me, devolves on the Governor of this colony. And I can assure you that during my tenure of that office I will do all in my power to promote the interests of the Royal Society, feeling sure that by so

doing I shall be promoting the best interests of this country and the happiness of its inhabitants. (Applause.) I have only further to say that I feel deeply thankful for your kind reference to Lady Gormanston, and I regret that she is not present here, and to myself and family. (Applause.)

CORRESPONDENCE.

Apologies for absence were received from the following members of the Council:—Hon. N. J. Brown, M.H.A.; Colonel W. V. Legge, R.A.; and Mr. J. B. Walker.

PROPOSED CONIFERÆ PLANTATIONS.

The following notes were read on the proposed planting of coniferæ in Tasmania:—

By Baron FERD. VON MUELLER, F.R.S., K.C.M.G.:—"With much pleasure, dear Mr. Morton, I respond to the request of the Royal Society of Tasmania, as moved by your distinguished Fellow, Mr. R. M. Johnston, and supported by the Hon. N. J. Brown, that I should, along with our able friend, Mr. Abbott, give my opinion on the advisability of growing the *Pinus silvestris* on a commercial and industrial scale in Tasmania. Your island is undoubtedly particularly well fitted on account of its generally cool climate for the rearing of this pine, as compared to most other regions of Australia. Moreover, in your lowlands the growth will be of more celerity than in Britain, and the same remark applies, of course, to the larch and other trees mentioned at the Royal Society's last meeting. But, as besides the red deal, also the timber of the European white deal (from *Pinus pirla*) is much imported here, that species, as well as the leading lumber pines of North America, would deserve attention for forestral purposes in Tasmania also, thus particularly *Pinus strobus*, *P. douglasii*, *P. lamber tiana*; nor should the vast timber pines of the Himalayas be lost sight of, such for instance as the *Pinus deodara* and *P. excelsa*. Several other species of prominent timber value are mentioned in my work on 'Select plants for industrial culture and naturalisation, with notes as to their respective properties.' *Pinus insignis* has never been recommended by me for any value for its wood, but in wild climes is unsurpassed for its quickness of growth, it towering now in Melbourne already over high buildings, after I reared this splendid pine first of all in Australia for extensive distribution already in the fiftieth year of this century, its importance for shelter and sanitary purposes having since then also been recognised. When pine plantations are to be formed for future profitable timber fields, several considerations press on attention at the outset. 1. To adopt precautionary arrangements for the safety of the trees against bush fires, therefore localities not too dry but intersected also by water-courses. 2. To choose only land which by inaccessibility or sterility cannot become readily arable. 3. To have the means of removing the timber finally at easy carriage, which may be partly by floating the wood down streams. In a discourse which I delivered 25 years ago on 'Forest culture in relation to industrial pursuits' (of which I send you already a Californian reprint), I have alluded to many other subjects concerning intended tree plantations for timber, so that I here now perhaps only need add the suggestions, that official applications be made to the Governments of Canada and British India for adequate supplies of pine seeds of the requisite kinds. The extreme scantiness of coniferaceans in the native vegetation of Australia renders also the New Zealand kauri all the more eligible from their respective territories."

By Mr. F. ABBOTT:—"I entertain no doubt but that favourable sites exist in the colony suitable for the extended cultivation or growth of the

various species of coniferæ, which for the most part furnish the deals of commerce, and that eventually great benefit would accrue to the colony from the undertaking. But before entering upon a work of this description it would be essentially necessary that some proper organisation should be formed for the purpose of carrying successfully the work in hand. To be of any commercial value large tracts of land would have to be operated upon, which would entail proper forest conservancy, not alone for the selection of the most suitable species for the various soils and districts, but also for the due protection of the plants in their early stages from fire, browsing of animals, and other dangers, and later on provision would have to be made for systematic thinning of the species and general arrangement. In all forest culture the benefits to be derived are indefinitely deferred, and on this account private individuals seldom enter on the work to any extent, and it therefore becomes essential that the initiatory steps should be by the Government as a national undertaking. As a rule the larger kind of coniferæ, grown for timber purposes, do not thrive on the lowlands, but always remain stunted and of little commercial value, but at an elevation of about 1,000ft. the growth would be much more satisfactory, and good results would be obtained. *Pinus silvestris* would probably require a higher altitude, as it is always of stunted growth on the lowlands or plains. The larch also would thrive at a higher altitude, as frequently on the plains it dies out during drought. The Soltara, *Dammaris australis*, would require a moist situation for successful culture ; it is generally stunted in growth when fully exposed on the lowlands. In the event of any effort being made to start the forest culture of soft-wooded trees, the following should be given a trial, as they are all valuable, and for the most part of large growth, and would be likely to give good results on suitable soils. *Abies excelsa*, the Norway spruce, white deal or Baltic fir of commerce, good, lofty, of fast growth and hardy. *Abies menziesii*, good timber tree. *Abies douglasii*, the red fir, a good large tree producing good spars. *Sequoia sempervirens*, the redwood, large, of quick growth, suitable for wet ground. *Pinus strobus*, the white pine, said to be of quicker growth than the larch, good. *Pinus resinoser*, Canada, red pine, said to be one of the best timbers. *Pinus silvestris*, the Scotch pine, also Russian and Baltic pine, good on suitable soils. *Pinus austiaca*, good for moist ground. The following should also find a place in forest culture, being of good commercial value :—The black walnut, *Juglans nigia*, good for cabinet work. The American hickory, the ash, and elm, for coachbuilders' work, and also the white poplar, and Cork oak. *Pinus insignis* appears generally to be held in bad repute by many, but, according to the report of the Woods and Forests Conservancy of South Australia for 1891, this tree has been unfairly condemned. Trees of 10 years' growth, grown on poor sandy soil, were cut up, and various articles manufactured from the timber—tables, ladders, and fences—all of which have been thoroughly tested, and compare advantageously with articles manufactured from imported deals. The timber takes a good polish, and requires less dressing with the plane than other deals, and is very tough and not liable to split on exposure. The difficulty of splitting this timber is said to be the reason why it has been unfairly condemned. As *Pinus insignis* is one of our fastest growing trees—not over-particular as to soil and situation, and becomes of commercial value in less time than any other species, I would consider it indispensable for extended planting where a quick return would be a consideration."

By Mr. A. HARLEY :—" I quite agree with Mr. Grant *re* introduction of larch, but not to the exclusion of the other trees mentioned. Scotch fir might also be included ; it makes splendid boat-boards, and I have it from reliable authority that larch trees 16 years after being planted out have been cut into staves for herring barrels. The bark of the larch is also used for tanning purposes. The price was not exaggerated."

Colonel LEGGE contributed some appropriate and suggestive remarks on the subject.

By Mr. A. O. GREEN, who, in some valuable remarks on "Useful coniferæ for Tasmanian planting," said we had in this colony four very useful and valuable varieties of indigenous pine timber trees :—*Sacrydium franklinii*, Huon pine, a timber of the first rank for all purposes, either wet or dry; habitat, moist alluvial flats. *Arthrotaxi cuprusoides*, King William pine, a magnificent wood for panelling and all joiners' work; found from the Don to Port Davey on ridges. *Frenela ventinati*, Oyster Bay pine, a very strong, durable wood, suitable for masts, telegraph poles, and framing; found on the East Coast on poor gravelly soils. *Phyllocladus rhomboidalis*, celery-top pine, another very strong wood remarkable for the small amount of its shrinkage, fit for floor boards and framing of all kinds. With the exception of the Huon pine, all these timbers might be said to be unknown in the workshops of the island, although of the very best quality for their several purposes. All come readily from seed, or might be transplanted when young, and would flourish upon most soils if not holding stagnant water. Thus a very useful work might be done in systematically planting our own very valuable indigenous trees in more accessible localities than those in which they were now found, and in preserving the natural thickets of young trees from destruction by fire or by the trampling of cattle. Besides these, however, it would be most advantageous to the colony to grow other classes of coniferæ, the timbers of which now had to be imported. The most useful were :—*Pinus silvestris*, Scotch fir; *Pinus laricio*, Corsican pine; *Larix europæa*, the larch; *Pinus cembra*; *Pinus pinaster*, the cluster pine. These would all grow upon any soil except pure clay. Mr. Green concluded an exceptionally able paper by urging the desirability of securing the co-operation of the various Government departments in the planting of coniferæ.

A lengthy discussion followed, in which Hon. C. H. Grant, M.L.C.; Messrs. Russell Young, A. Mault, R. M. Johnston, and Fincham took part.

The PRESIDENT said that when he undertook the presidential chair he did not expect to have to often open his lips in such a learned and scientific Society, for he saw from some of its transactions that they dealt with astronomy, and he honestly confessed that he knew very little about such things. (Laughter.) But by a curious coincidence the subject the Society was now considering was one that he had taken for many years the greatest pleasure and delight in during all his travels, and they had been pretty extensive. (Applause.) In Japan they looked upon him as a kind of harmless lunatic because he always went about with a tape, and whenever he came to a big tree wanted to measure it. (Laughter.) He gave the Society a lengthy description of personal experience and observation in conifer growing. In summarising his views he said it appeared to him that while considering the propriety of introducing new trees, it would be a greater advantage to the colony to preserve its own timber, and the attention of all parties should be to propagate the excellent timber the colony now possessed and increase its productiveness. (Applause.)

WOLFRAM AND NICKEL.

Mr. Adolphus Oppenheimer communicated some notes on the minerals wolfram and nickel, and in his remarks said : A great revolution in the demand, supply and value of nickel was wrought by the discovery of nickeliferous ores in New Caledonia. The price came down to 4s. per lb. and even less, but many other uses were found for it. The New Caledonian ores average from 8 to 12 per cent., much being lower. A further revolution took place by the discovery of an enormous deposit

at Sudbury, Ontario, Canada, and the price now stands at 1s. 9d. per lb. But very large quantities of nickel are now required to make the nickel steel used for armour plates in war ships, and for other war material." With regard to the Tasmanian nickel, found near the Heazlewood River, Mr. Oppenheimer said :—"A bulk sample, which has been assayed for me by Mr. Frederick Danvers-Power, of Melbourne, gave the astonishingly rich result of 35·1 per cent. of nickel. The nickeliferous belt appears to have a north to south strike, and can be traced for a distance of about two miles ; the width of the belt, so far as can be seen, is from 600ft. to 1,000ft. wide. The mount is of serpentine rock formation, about 700ft. high, and on the northward side of the Heazlewood River. It is surprising to me that, although this deposit of nickel ore has been known to exist for some years past, nobody before me ever recognised its value. Indeed, I am informed that some of the local geologists mistook the sulphide of nickel for mispickel, which it somewhat resembles in appearance, and one so-called authority went so far as to assure me that the very best nickel ore that could be found at Heazlewood did not contain more than 7 per cent. of nickel. That the nickel contents in the ore by far exceed the 7 per cent. so much mentioned to me as 'the very best,' is proved beyond doubt by the bulk assay, which gave the astonishing result of a little over 35 per cent. of nickel ! I believe when this mine is opened up large ore bodies averaging 20 per cent. of nickel will be obtained, and it is certain that this mine will prove in the near future to be of immense value. As I believe I have been the first to recognise the value of the ore and of the deposit, and also intend to work it and be the first exporter of nickel ore from Tasmania, I think that I have not overstepped the bounds of vanity, if such there be, in naming the mount on which it is found, 'Mount Oppenheimer,' after my wife."

Hon. P. O. Fysh, M.L.C., proposed a vote of thanks to the President for taking the chair.

The President, in acknowledging the compliment, said it would always be a pleasurable duty to preside over the Society's meetings. At the same time they were not to expect him to speak on all occasions. He made it a rule never to speak on subjects he knew nothing about, and they would find that he could maintain a dignified silence. (Laughter and applause.)

A vote of thanks to the authors of the various papers concluded the proceedings.