

JUNE, 1875.

The monthly evening meeting of the Society was held on Tuesday, the 8th June. There was an unusually large number of the Fellows present. The chair was occupied by His Excellency the Governor, as President of the Society.

Messrs. W. J. J. Reynolds and F. S. Edgar, who had previously been nominated by the Council, were ballotted for and declared duly elected as Fellows of the Society.

The Hon. SECRETARY (Dr. Agnew) brought under notice the usual monthly returns, viz.:—

1. Visitors to Museum during May, 1,017.
2. Visitors to Gardens ditto, 2,349.
3. Plants and seeds sent from Gardens :—To Mons. A. Verschaffet, Ghent, Belgium, 12 tree ferns. To Dobroyd Nursery, Ashfield, Sydney, one package of plants. Packages of seeds were forwarded to Mr. C. F. Creswell ; Mr. B. E. Heyne, Adelaide ; Baron von Mueller ; the Department of Agriculture, Washington, United States ; the Royal Gardens, Kew, England ; Mr. W. Bull, London ; the Acclimatisation Society of Queensland ; Mr. C. Hollinsdale, Mr. Latham, and Colonel Crawford.
4. Plants and seeds received at Gardens :—From Baron F. von Mueller, seeds of *Vaccinium macrocarpum*, and *Rhus coriaria*. From the Department of Agriculture, Washington, four packets of seeds. From Colonel Crawford, four packets of seeds of coniferae from India. From Mr. E. B. Heyne, Adelaide, 200 packets seeds. From Mr. C. Hollinsdale, 21 packets seeds. From Mr. T. Johnston, seeds of five species of Palms. From Botanic Gardens, Christchurch, New Zealand, two cases of plants. Through detention in transit, all the latter had perished.

[His Excellency remarked he had recently received a number of plants, many of them of great value, from New Zealand. After reserving a few for the Gardens at Government House, he would be happy to present the remainder to the Society's Gardens.]

5. Time of leafing, flowering, and fruiting of a few standard plants in the Botanic Gardens.
6. Books and periodicals received.
7. Presentations to Museum and Library.

Meteorological Returns—

1. Hobart Town, from F. Abbott, Esq.—Table for May.
2. New Norfolk, from W. E. Shoobridge, Esq.—Ditto.
3. Mount Nelson, from Marine Board.—Ditto.
4. Sydney, N.S.W., from the Government Observatory, printed tables for December, 1874.—Results of observations made during the year 1873.

The presentations to the Museum and Library were as follows :—

1. From Mr. B. R. Dyer, Battery Point.—A Hooded Dottrell (*Egialites monacha*), shot at Sandy Bay.
2. From Mr. D. Chisholm.—Casts of Roots of Trees, from the Five-Mile Beach, Forcett.
3. From G. Bennett, Esq., M.D., F.Z.S., Sydney.—A specimen of a Curious Bird (*Didunculus strigirostris*), from the Samoan Islands. A specimen of the Frilled Lizard (*Chlamydosaurus Kingii*). Two specimens of the very beautiful Sponge, known as "Venus' Flower Basket" (*Euplectella aspergillum*), from the China Seas.

[This remarkable object, certainly one of the most beautiful in the whole range of Natural History, was examined with great interest by all present. The secretary mentioned that Dr. Bennett had informed

him a full description of the presentation would be forwarded in time for next meeting.]

4. From Master Stanfield, Clarence Plains.—A Black-cheeked Falcon (*Falco melanogenys*).
5. From Mr. J. Bailey, Blue Hills, Oatlands.—The cast skin of a Snake, very perfect.
6. From Captain Reynolds.—The tail of a species of Ray.
7. From Mr. Thomas Genge, Sandy Bay.—Nine Pheasants' Eggs.
8. From Dr. Wm. Walker.—A large specimen of Native Copper from New South Wales.
9. From Miss Wilson.—Specimen of "Copper Moss" from Swansea, Wales. A water-color view of Hobart Town, taken in 1820.
10. Water-color drawings by Mrs. C. Meredith of fossil shells from the North Coast, described in a paper lately read by the Rev. J. E. Tenison Woods.

[The Rev. J. E. T. Woods drew the special attention of the meeting to these drawings illustrative of his former paper. They were beautifully executed, and most accurate in drawing, and he was sure would receive, as they well deserved, the warmest thanks of the Society.]

The Rev. J. E. TENISON WOODS, F.G.S., etc., read a very able and interesting paper "On the Fossil Genus *Fenestella*." The paper was introduced by some preliminary remarks by the writer, and various portions of it were illustrated by observations bearing on the general subject of Fossil Polyzoa.

In connection with the discussion held at last evening meeting on the improvement of the Domain, the following letter from Mr. Abbott, the Superintendent of the Gardens, was read:—

"Royal Society's Gardens,
"8th June, 1875.

"The Council of the Royal Society.

"Gentlemen,—As it is probable the question of improvement of the domain will engage the attention of the Council at its next meeting, I have thought it advisable to forward a few remarks bearing on the subject.

"As to the desirability of the work being undertaken, provided sufficient funds are forthcoming to carry it to a successful issue, there can be but little or no doubt. Having resided in the domain for a period of 24 years, and having during that time repeatedly traversed every part of it, the question of its improvement has frequently been present in my mind, and one time or another I have bestowed a good deal of thought on the matter.

"The removal of dead or dying trees, and surface stones, and the extraction of stumps, from the more prominent parts, are but preliminary operations, that would be necessary in any case, before any real improvement could be undertaken. There seems to be an impression that the sale of the timber would repay the cost of collecting and grubbing, but I consider this to be quite a mistake. The Society has had the privilege for many years of removing the fallen timber, and I have had an opportunity of estimating the actual cost, and labour, of collecting and carting it. This I have always considered to be equal to 12s. per ton, or about one third more than better wood could be bought for in bulk.

"Supposing a large quantity to be cut down at once, the cost of collecting would probably be lessened, and perhaps the sale of the timber might realise sufficient to pay for cutting and collecting, but not more than this; it would certainly not cover the expense of extracting the stumps.

"Mr. Sayce in his letter read at the last meeting of the Society,

speaks of the subsoil as being impervious, but this I cannot admit in the true sense of the word. To a certain extent it may be impenetrable to the roots of plants, but certainly not impervious to moisture. It is in fact just the reverse of this. Being composed of greenstone gravel, one of its great merits would be its efficient drainage, and, although not wishing to advocate planting in holes—for I agree with Mr. Sayce on this point—yet I would not hesitate to adopt this plan, to facilitate operations, in most parts of the Domain. This, however, should only be done where plants are ready for planting before the ground has been thoroughly prepared, and the intermediate spaces should be trenched as soon as possible afterwards.

“ Too little attention is often bestowed on the proper planting of trees; the prevailing desire appears to be immediate effect, and this is too frequently purchased at the expense of the after welfare of the plants themselves.

“ When entering on a work of this kind it should be remembered that it is not the present generation which will reap the full benefit of it—that will remain as a valuable and enduring legacy to future generations.

“ There is ample scope for improvement without doubt, and I hold a higher estimate of the capabilities of the soil itself than has been attributed to it. I believe it will be found that there are but few parts of the Domain where a depth of 3 feet could not be obtained by trenching, and even a greater depth on many of the lower parts, were it desirable. A free admixture of the greenstone gravel with the top soil would be beneficial to most plants, especially to coniferae, which appear to luxuriate in a soil composed of little else than this loosened greenstone.

“ If the surface soil was properly attended to this depth would be sufficient to enable most plants to grow to more or less perfection; but certainly not to that degree of perfection which trees attain to in their most favourable natural habitats, as this is rarely arrived at in artificial plantations.

“ Attention has been drawn to the stunted appearance of the trees at present in the Domain, and this has been taken as an indication that the soil was not capable of growing trees to perfection, but I do not think the reasons for this stunted appearance have been properly considered. In the first place there can be no doubt that between 20 and 30 years ago, many of the largest gum trees were cut down, some, I believe, for shipbuilding purposes; and, again, during the whole of this time the surface has been depastured by sheep and cattle, which has had the combined effect of consolidating the surface, and preventing any seedling trees from springing up to supply the place of those removed. The wattles again present a most unsightly and stunted appearance, and, being naturally short-lived trees, are evidently rapidly hastening to decay. This is partly due to the cause just mentioned, and partly to the fact that the lower branches have generally been browsed off when the trees were young. Again, the depasturing of cattle has not only consolidated the surface, but it has kept the grass close grazed, which may be considered as removing nature's mulching, the effect of which is that the rains, instead of soaking into the ground, rush precipitately to the water-courses, and thence to the sea, and what little does enter the soil is quickly dried up by the sun and wind. Here we have another cause for the stunted appearance of the remaining trees.

“ One of the greatest difficulties that would be met with, when the operations for planting were taken in hand, would be procuring plants of a suitable size. It would be useless to depend on these gardens for a supply; there is in reality no skilled labour available for this work. The most the Society could do would be to supply young plants from

time to time of any kind suitable, which would have to be grown in a nursery set apart for the purpose, or by some nurseryman who might undertake the work by contract. It would be essential to grow the plants to some size in the nursery before final planting, as they could be much more easily attended to, and the chance of loss would not be so great; besides which it would be necessary to have a reserve in case of accident.

“But after all the real question just now is not what to do nor how to do it; but where are the funds to come from to employ the necessary amount of labour?—for I am inclined to think the day has gone by when much could be accomplished by prison labour. The fact is the numerical prison strength is daily decreasing, and there is the greatest difficulty in keeping up the strength of the present gangs. Our own garden gang has not for some time been in a satisfactory state. Just at the time when additional strength was urgently required it has been numerically less than ever, and I fear much work pressing for attention will now have to be abandoned for the season. Any gang that might be supplied under present circumstances would make slow progress indeed. Nor am I inclined to think that much could be done permanently by public subscription. Although a few hundred pounds might be collected at first, which might be applied to clear away some of the stumps and stones and open up vistas, yet a much greater outlay would be necessary before planting operation could be undertaken. An expenditure of 30s. and perhaps more, would be required to prepare the ground for every tree planted with a view to ultimate success.

“Although it is desirable that this work should be undertaken with as little delay as possible, especially as the appearance of the Domain will become year by year more uninviting if left to its present fate, yet I think great caution is necessary before entering upon a work of this description until the ways and means have been duly considered. I have always thought the undertaking should be a national one, for unless this is the case it will never be adequately supported. I think it very desirable that sites should be found for numerous test plantations, which would ultimately be of national importance, while they would add to its interest as a place of resort. The garden contains numerous plants that can never attain their full development in their present sites, because there is not sufficient space to do justice to them all; if these are not propagated and planted under circumstances more favourable to their growth, many of them will stand a chance of being destroyed altogether in a few years.

“I am, gentlemen,

“Your obedient servant,

“F. ABBOTT, JUN.,

“Superintendent.”

The SECRETARY reported that, with the exception of Mr. Stephens, absent on duty, the Members of the Domain Committee appointed at last meeting had had an interview with the Hon. the Colonial Secretary, and the Hon. the Minister of Lands and Works, and had explained the views of the society as to the proposed improvements, and the material assistance required to carry them out. These views were entertained by the Ministers present with the greatest cordiality, and were very carefully discussed during a prolonged interview. The only difficulty in fact was the want of labour. Mr. Moore mentioned that at present he was most anxious to complete the new cricket ground as soon as possible, having promised to do so. To finish this work, he thought it would be also advisable to make a carriage drive all round the fence, and perhaps open out vistas looking towards Government House, and down the harbour. These works would absorb almost, if

not all, the available labour for some time to come ; still, as the object of the deputation was certainly a very important one, he would make every effort to meet their views by getting together as much labour as possible, and placing it at their disposal.

HIS EXCELLENCY, after referring in complimentary terms to Mr. Abbott's letter, observed that he was thoroughly convinced of the necessity of a very carefully considered plan being laid down before any practical action was taken. The Domain was most beautiful in itself and also possessed great capabilities of improvement, but when developing these capabilities great care should be taken at the same time to preserve generally the natural features of the locality. Were he about to undertake such a work himself he would in the first instance spend weeks in walking over and over every portion of the ground so as to become thoroughly acquainted with its every feature. By this means all its latent capabilities would be discovered. The greatest caution should be exercised in the after proceedings, especially in removing old, and planting new trees, etc. If one ugly tree were rashly removed it might only uncover another still more ugly, or if a rock were taken away something worse might appear and require removal in turn, and thus we might go on improving everything off the face of the ground till nothing was left. Without going into very extensive plantations, excellent effects could be obtained by planting the best and most ornamental trees in those localities which were most suitable. The natural formation of the ground would assist them in choosing what and where to plant. For instance, in hollows, where masses of foliage would naturally occur, there they ought to plant. In this manner other natural indications should guide them in forming their plans. For his own part, as he (His Excellency) had always taken a very great interest in matters of this kind he would at all times be most willing to give his personal assistance to any well-considered action which might be taken to improve the Domain. (Applause.)

MR. GRANT was glad to find that the views he had given expression to at a previous meeting, on the economical improvement of the Domain, were likely to find favour. Without going to the expense of trenching on a large scale, a very great deal could be done by carefully selecting proper spots and planting suitable trees here and there, and as the general formation of the ground was favourable for easy drainage, this could be carried on in a gradual and progressive manner at little comparative expense.

THE BISHOP OF TASMANIA observed that any one undertaking a work of this kind should possess the practical knowledge of the horticulturist, with the taste of the landscape gardener. Good results could be obtained only by the combination of both. His Lordship gave an instance of a locality well known to himself in England, which, in its unimproved state, was rude and uninviting, and greatly inferior in its capabilities to the Domain, yet, under such skilled management as he had alluded to, was converted, at comparatively small expense, into one of the most attractive public resorts with which he was acquainted. He congratulated the meeting on the fact that the restoration to health of the learned author of the paper they had had the pleasure of listening to had been the means of laying them under a fresh obligation to him. The paper was one of great interest, and this interest was much enhanced by the running commentary with which it was accompanied. Its full value, however, could only be realised by a careful study of it when printed, which he hoped it would soon be, in their "Transactions." He was about to propose that the cordial thanks of the Society were due to the Rev. Julian Woods, but before doing so he would take the opportunity of alluding to the exquisite drawings by Mrs. Meredith,

which had been brought under their notice. Every one must be struck by their beauty, but their great merit was, that with so much artistic finish, they possessed all that scientific accuracy without which they would have been comparatively valueless in connection with the paper they were designed to illustrate. The vote then proposed by the Bishop to the Rev. Julian Woods was carried by acclamation.

Mr. M. ALLPORT cordially agreed with all that had been said in praise of Mrs. Meredith's admirable and valuable drawings. It gave him great pleasure to move that the best thanks of the Society were due to Mrs. Meredith for her very valuable contribution.

This having been carried, thanks were also voted to the donors of presentations, with special reference to the very valuable and interesting contributions both of specimens and books from Dr. George Bennett, F.Z.S., of Sydney. The proceedings then terminated.