

INAUGURAL ADDRESS

BY

HIS EXCELLENCY F. A. WELD, ESQ., C.M.G.,

President of the Society, at opening of Session of
1876.

GENTLEMEN,—I have willingly acceded to the request that I should open this session of the Royal Society with an address, because I wish to take an opportunity of testifying the interest I feel in the Society, not only as its President and as Governor of the colony, but also in my individual capacity; and although I do not pretend to any special scientific acquirements beyond those common to most educated men, and must confess to having forgotten much which I formerly knew, there are, perhaps, some topics upon which I may touch without rashness or unduly presuming upon your patience. It is, gentlemen, a matter of congratulation that the Australian colonies, though hardly yet more than emerging from their infancy, have shown a great and increasing interest in scientific research. It might have been expected that the struggles of early colonial life and the hurry of business would have so fully occupied men's minds, that a generation or two would have passed by before scientific matters could have claimed attention, either from the people or Governments (Governments being, as a rule, such as the people make them, and a reflex of the people's mind). Yet, in nothing, I think, would an intelligent visitor from Europe be more agreeably surprised than by seeing the scientific departments and their work, the societies or institutes, and the museums and libraries of most of the principal cities of these colonies—for my own part, I feel pleasure in thinking that the establishment of the Colonial Government Museum at Wellington, New Zealand, and the establishment of a scientific department, with Dr. Hector at its head, took place under my auspices as Premier, much being due to the exertions and active assistance of Mr. Mantell, son of the geologist, and himself well-known to the world of science; that the first geological survey of Western Australia and Mr. Forrest's geographical discoveries were made under my rule as Governor there; whilst as a private individual I was instrumental in forming

the Canterbury (New Zealand) Acclimatisation Society, and was its President when it obtained pecuniary assistance for your effort to acclimatise salmon and trout in these waters. I allude to these matters to show that I do not come to your meetings as a mere formal duty, but because I have in some degree been a fellow worker before I came amongst you. And, as after a long career as a colonist and politician, I look around at the growth and prosperity of this group of colonies, and feel a pardonable pride, as a labourer might on looking at an edifice in which he has placed a stone, that I too have contributed my mite to the work ; so when I assist at your meetings or visit your museum, when I go to neighbouring colonies and see what they have done and are doing for the promotion of science ; or when I receive such a work as the proceedings of the New Zealand Institute, containing varied and valuable information and papers from such men as Dr. Hector, Dr. Julius Von Haast, Captain Hutton, and others, it also seems a legitimate gratification to think that I have taken and am taking some little part, so far as in me lies, in extending the interest which is felt in scientific enquiries. And it is your Society, gentlemen, that here enables me to do so. And surely the advantage is very great to man that he should devote some part of his time and intelligence to studies which may be either profound and serious, if his time and capacity admit, or, if not, then of a lighter and more recreative nature ; but which, as I propose to point out before I sit down, may even then be productive of results not only to himself but to the cause of scientific knowledge. The advantage is great, because a search for truth even in the material order, and a spirit of enquiry in those things which are given us by God to enquire into and exercise our intellectual faculties upon, is in itself elevating, and tends to develop our mental powers. Some good men seem at times to entertain a latent fear that scientific studies have in themselves a tendency to weaken faith in absolute and divine truth, rather than to "Lead from Nature up to Nature's God ;" but truth in the abstract can be but one in essence ; and scientific truth when fully known must, therefore, be at one with it, however speculative theories exhumed or evolved in the search for scientific truth may for a time seem to point to a different conclusion. Natural science has advanced with gigantic strides within a century, the

progress of some of its branches, geology for instance, strong and rapid, has yet been not unlike, in one respect, to those chaotic revolutions which it contemplates and describes, where a peak rises and again sinks into seething lava, and is succeeded by another landmark, in its turn, too, to fall ; still a guiding hand and a design unseen pervade all and tend to an end, and for the aftertime I look forward confidently to triumphs of yet a higher order for true science than even those great material ones which have distinguished our age over all previously recorded in history ; but to attain this end, scientific studies, like others, must be followed in a right spirit, they must be given their proper place, and approached as Newton is said to have approached them, with that humble simplicity of mind which the poet Tennyson justly attributes to our greatest British warrior of modern times in the noble words,—

“ And as the greatest only are
In his simplicity sublime.”

True, indeed, this is a mark of the greatest minds, but it is a quality not inherent to outward greatness or ability, and the humblest student may, and should, possess it, and possessing it will possess a philosopher's stone of untold value. It is, of course, given only to the few to climb the heights of science, but the many who, perhaps, chiefly as a relaxation from the toils of their every day life, recreate themselves and bask on the sunny slopes that lie at their feet ; even they, may not only gain knowledge and amuse their minds, but further, by careful examination of the natural objects around them, may collect facts which may furnish data for others of higher scientific attainments to collate, arrange, and draw conclusions from. In doing this, as I pointed out at one of our monthly meetings, care should be taken to preserve strict accuracy of detail, and to take heed not to be unconsciously led to square facts to preconceived theories, but to let them speak for themselves. There is great scope for this kind of work left in many branches of science, and in a comparatively newly settled country like this. I would especially refer to the provinces of geology, natural history, and botany. The Rev. Julian Tenison-Woods, at one of our meetings, when reading an interesting paper to us, made some observations on this point which impressed themselves on my mind, as no doubt on those of others. At my request he has lately

furnished me with information and facts which illustrate the view I have just laid down, and I shall now avail myself of them somewhat largely. To begin with geology. Though much has been done—and Australia can boast of many scientific geologists whose contributions to science deserve and have obtained the most honourable recognition—still very little is accurately known of the stratigraphical relation of our paleozoic, fossiliferous, carbonaceous, and metalliferous rocks; very few of their fossils have been described; no good catalogue, I am informed, has been made of those already described. European forms are present; it would be interesting to know how many, and which? The relation in point of time of our volcanic rocks to the strata in which they exist would be an important object of inquiry. Have we any certainly tertiary basalts? How many different periods do they represent? What are their chemical characters? And do those afford a permanent test for their identification in different localities? In the mineral kingdom, no catalogue of minerals has been attempted since that of Count Strezlecki, which does not pretend to be complete. Valuable catalogues have been made in neighbouring colonies, but Tasmania is altogether behind hand in this particular, and yet, as it is known that gems exist in Tasmania, and her mineral riches are unquestionably very great, this should be a peculiarly interesting object of study to Tasmanians, as it is well known that the occurrence of basalts, greenstones, syenites, and granites—rocks which are common here—must give rise to sapphires, opals, rubies, and possibly even diamonds. In natural history, good observations on the comparative osteology of all our described marsupials are much wanted. Year by year observations on their habits will become more difficult to make, and many of the most rare of our fauna will become very scarce, if not extinct, within the space of another generation. Some Tasmanian birds, such as the emu, have become already extinct in this island; the apterix and the great owl-like night parrot, are following, in New Zealand, the fate of the *Dinornis*. What an interesting relic of the past would be a memoir of the habits of the Dodo, had some early visitor to the Mauritius spent a few hours in noting and describing them. Observations on the nests, eggs, and migrations of our birds might be made by any clever boy with a taste for ornithology; any observations would

be worthy of record, and a well-arranged series would be of uncommon interest. In regard to fish—many Tasmanian fishes must be new to science—I myself, as one unlearned, was struck by the beautiful paintings of strange Tasmanian fish, which Mrs. Meredith with a kindness equal to her talent, painted for the Philadelphia Exhibition. Looking on their quaint and sometimes grotesque forms, one could not but hope that the mine of inquiry they indicated might be worked by some of our young Tasmanians, and that they, and other yet perhaps unnoted species, as well as our commoner sorts, might be compared with other Australian fish, and those of more distant regions. Indeed some of the quaint ones to which I have alluded, reminded me forcibly of the strange forms of life that I have wondered at amongst the sea weed of the Sargasso sea floating out into the Gulf Stream in the Atlantic. The anatomy of fishes is also a field in which very much remains to be done. In the Mollusca proper I am told that everything has to be done amongst the Pteropods. The Gasteropods offer a wide field for investigation in accurate determination of species, in details of anatomy, in dependence of form and colour of shells on sex, from absence of any facts regarding which I learn that many male and female of the same species have been regarded as different; observations are required on the lingual ribbon, to which the Rev. Julian Woods has already, at a meeting last year, directed our attention, and which is a matter of great value for the determination of species. I might here give a long list of families of which little or nothing is known; for instance, our Polyzoa, several new forms of which have been observed by the distinguished correspondent of your Society to whom I have just made reference. We have also many new and interesting forms of Crustacea on which the light of science has scarcely been thrown. Of the Echinodermata several orders remain untouched. Then—to come to the science of Botany; a science which leads to the contemplation of such exceedingly beautiful objects, and organisations of such wonderful interest and delicacy, that the devotion of its votaries to their favourite pursuit can be no matter of wonder. Much has been done in Australia by many eminent men in regard to Botany. I need only allude to the labours of Baron von Müller, of Victoria, as one instance, and Tasmania in this branch has been distinguished by the researches of Mr. Ronald Gunn

and the late Mr. William Archer—but it would be a mistake to suppose that their efforts, not to go back to those of Robert Brown, Sir Joseph Banks, Solander, Cunningham, Labillardiere, Hooker, Bidwell, and others—have exhausted the field; on the contrary no country affords a more favourable opening for further researches, and it would be well if students would satisfy themselves that such is the case, and even should the gleaners' toil fail in discovering many new species in Tasmania, yet our knowledge of the habits of actually discovered plants is but limited. Little is known about the fertilisation of Tasmanian plants. I need not remind you of the curious contrivances by which the fertilisation of the ovary of some plants is contrived, and especial interest attaches to orders such as Orchideæ, Protaceæ, and Filices, which exist abundantly in this colony. Dr. Bentham, the distinguished President of the Linnæan society, especially commends to the attention of Australian botanists the fertilisation of the ovary of Goodenoviæ. Again, how little is known of the medicinal and economic uses of our plants. Baron von Müller and Dr. Schomburgk, of Adelaide, have devoted much attention to that point in Australia. Observations on the structure of plants in their various parts, and the action of their juices, must also be a fascinating pursuit. I remember, years ago, being much pleased with a collection of wax models, showing the leaf and stem anatomy of plants and their cellular structure, in the museum of Florence in Italy. It has ever since seemed to me to be a most interesting object of study. The preceding remarks will, I trust, have illustrated the view I have proposed to you, and have shown that it is in the power of many of us to add our mite towards the solution of many very important scientific problems. It would, moreover, be easy to show how the habit of close observation of nature adds to our pleasure and refines our minds. Not a living creature, not a leaf, not a shell, but may be studied with profit and pleasure—"the lilies of the field, how they grow!" There is a charm about the mere love of simple nature that seems like an electric fluid to pervade and purify the spirit of its devotees, and to open itself in their writings—such is the charm that runs through the essays of Waterton and his Wanderings and Autobiography, that breathes in the works of White, of Selborne, and of old Izaak Walton, a

name, like the motto on the fishing house he immortalised, "Piscatoribus Sacrum." These are books which I should like to see often in the hands of boys in the colonies. I am sure that they exercised a beneficial influence on my boyhood at home and my early life in the colonies. How often I remember, wandering as a boy, fly-rod in hand, along some Dorsetshire or Devonshire stream, and whilst tempting the trout from rippling fall or shady pool; with what pleasure one watched the quaint waterhen, and caught the rapid flash of the glancing kingfisher. How one followed, gun in hand, the jay and magpie from orchard to covert; and waited by hedge-row or fern brake for the rabbits at sundown. How interested the boy's mind became in every natural object around, till the heavy winged white owl came out and the night closed in. And, later in life, exploring up among the snow sprinkled ranges of the Kaikoras in New Zealand, how often have I lain awake to watch the bold, not to say insolent familiarities of the Weka or Wood-hen, pecking round the embers of the fire, and not unfrequently abstracting precious articles placed by what served as your pillow for greater security, such as soap, or comb, or pipe, dear to the bushman, "ca sola voluptas," I will not add "solamenque mali." In-correctible birds! I have known them (undismayed by stick or stone) to return at once and follow up such petty larcenies by a combined and determined attempt to drag a waterproof from the prostrate form of a sleeping fellow traveller. We have most of us some such memories to amuse us, and the habit clings through life. I still delight in the parrots and flycatchers and magpies about the Government House grounds; and take pleasure in seeing the fat, lazy tench basking under the willows, and the stout, pousy perch come bristling up amongst them full of a fussy self-importance that is quite a caricature on poor humanity; perhaps we might draw morals even from fish had we an *Æsop* amongst us, but at all events I believe that we should generally be happier—possibly even better—did we learn to enjoy and take lessons from the simple contemplation of nature as we see it in our every day life, or in those country excursions from which, happily, few in these colonies are debarred. Your society, and the efforts of those interested in acclimatisation, have done much to promote this, and you have laid the foundation for more by the Library, the Botanical Gardens, and the Museum. I cannot but refer

here to the success which has now admittedly crowned the efforts of the commissioners of your Society in the introduction of salmon, of trout, and of other fish into this hemisphere. The experiment reflects the highest credit on this colony, on the public-spirited gentlemen who were the promoters, and on those who assisted and supported their efforts. To all connected with this undertaking, the gratitude of future generations of Tasmanians, and indeed of all Australasians, is due. If the name of the man who introduced the cherry into ancient Rome and Italy has been preserved, how much more worthily may those be remembered who have introduced into the southern hemisphere fish, not only destined to become hereafter a product of great commercial value, but I trust, moreover, to encourage that love of field sports and country pursuits which has so deeply coloured English life, and, in my opinion, produce such happy results on the national character. To turn to another point, there is your botanical garden, which may favourably compare, whether for beauty of site or the trees and shrubs it contains, with those of much larger and more wealthy communities. What you want in connection with it is an extensive nursery ground, not to compete with professional gardeners, but to grow things they cannot or do not supply, and to raise a large quantity of young trees for the Domain. I must for a moment digress to say, that beautiful as it is from situation, it is positively painful to go through the Domain. Almost a year ago, at your request, I marked some trees as a beginning to get rid of rubbish, and open out views. From want of means these trees I think are not all cut down yet; if so, very recently; and there are fifty times as many dead, dying, unsightly, and obstructive trees that ought to be removed, and, moreover, simultaneously a beginning of planting should be made. I must express a hope that some effort will be made, whether in the way of private subscription or public grant it is not for me to suggest, but I will only repeat my promise of affording such aid as may be desired and be in my power to give, in whatever may be undertaken to preserve and improve the naturally beautiful recreation ground of the people of this city—a people who by their orderly and cheerful demeanour, the healthy, neat, and pretty appearance of the women and children last regatta day, when many thousands picniced in the Domain—fully proved themselves worthy of anything that can be done for them in improving the

Queen's Domain and their's. But to return to the Gardens. Whilst I am on the subject pray permit me to record a remonstrance against the proposal to lower or pull down the stone wall against which so many beautiful creepers grow, and which is such a shelter to the beds that lie below it; and border what is now a charming winter walk. I own that from the entrance side it is at present unsightly but my principle is reform where practicable, not destruction; and I say with Mr. D'Israeli "Level up!" make a broad terrace-walk along the wall level or nearly level with its top, on the entrance side; and put a stone balustrade or even a few stone vases or similar ornaments along its top. From this terrace you would command a magnificent view over the gardens, the Government house grounds, and the expanse of river with the surrounding mountains. It would be a great feature if not the great feature of your Gardens, unique in these colonies, and unsurpassed anywhere. The terrace should be broad, the side towards the entrance should be either faced with stone or grassed with turf—make the terrace, if you like, in a concave form to leave an oval space for the carriages below, gravel your terrace, but run a ribbon bed along it, and place beds, filled with masses of colour such as geraniums afford, in the expanding angles—your sweep should be continued round the opposite side of the second or inner entrance, which should be just above and near the cottage. Such is my idea, perhaps it may be found worthy of consideration before a final decision is arrived at. I have only one further remark to make regarding the Garden. Its weak point is a lack of grassy plots and lawns, owing, I understand, to the difficulty of getting a grass that will stand both our drier summers and our colder winters, as the Indian couch used in warmer colonies will not stand frost. I have written to Dr. Hooker, of the Kew Royal Gardens, about a plant which was introduced into England some years ago as a substitute for lawn grass, and which, I think, would answer admirably and need no mowing. Dr. Hooker informs me that he is sending out a case of Cork oaks, which will be of much value to this colony. I would also suggest that duplicates of such pines, taxads, cypresses, and other trees, as, not having room, must soon either be cut down or spoil one another, should be planted not less than eighty feet apart, in the new portion of the grounds. I may be forgiven if I further observe that in Franklin

Square one or two beautiful and valuable trees which might become an ornament to the city, and last for generations, if allowed to develop themselves, will shortly be ruined for want of room, unless others less valuable are removed. Let me also, before I conclude, put in a plea for the preservation of the ferns and forests which are fast disappearing from the sides of Mount Wellington. With them will disappear one of the attractions which make your city such a favourite with visitors; the sides of Mount Wellington ought to be preserved to future generations as a noble public forest and park, not allowed to become a dreary hideous wilderness. Acres of bastard gums are cut down, and, as I am informed, for the sake of their seed, which is sold as blue gum seed, and a shameful injury is thus inflicted upon those purchasing and using the seed, and upon honest seedsmen, and the credit of the colony. It now only remains for me to say that the retrospect of the year must, on the whole, be satisfactory to our associates. The attendance at meetings of the Society has, I understand, been above the average of former years, and certainly papers of much interest have been read, whilst several new associates have been enrolled, and donations of value have been made to the Museum and Library. One scientific botanist, Mr. William Archer, has passed from amongst us. Owing to the shortness of my residence in this colony, I had not the pleasure of his personal acquaintance, but his acquirements and industry are well known, and he was highly respected as a colonist of old and high standing. It is to be hoped that his collection will be secured for your Society and the colony, in accordance with the recommendation of Dr. Hooker. Last year Tasmania was honoured by a visit from the American scientific expedition sent out to observe the transit of Venus; since then no event of special scientific moment has come immediately before us. But we, in a colony once ruled by Sir John Franklin, who lost his life in the service of science and of his country in the Arctic regions, sitting, as we do, almost under the shadow of his statue, cannot but turn in spirit to those polar seas, where, at the further extremity of the globe, British seamen, keeping up the traditional spirit of our race, are braving waves and icy wildernesses in the cause of science, and for the honour of our flag. All our good wishes go with them, and we may believe that even they are cheered

amidst perils and hardships and (more difficult for them, and such as they, to bear) perhaps long periods of forced inaction, by the thought that wherever the sea rolls, from west to east, from their frozen north even unto our, from them, remotest south—there are English-speaking men—aye, and others too, for science binds men of different nations together—to look upon their devotion with pride, and to whom the news of their safety and success would be a triumph and a subject of heartfelt thanksgiving. May such be the result. With these remarks, gentlemen, I will now take the chair, which, as your President, I hope to fill on many future occasions.