

FIRST ORDINARY GENERAL MEETING.

THE First Meeting of the Session 1875-6 was held on Tuesday, December 14th, at the Pall Mall Restaurant.

In the unavoidable absence of his Grace the Duke of Manchester, the chair was taken by Major-General Sir CHARLES DAUBENEY, K.C.B.

Mr. F. YOUNG (Honorary Secretary) having read the minutes of the last Ordinary General Meeting, the same were confirmed. He also announced that since last meeting sixty-two new Fellows had been elected—twenty-nine resident and twenty-three non-resident, and read a long list of books which had been presented to the Institute.

Mr. F. YOUNG stated that it had been proposed by the Council to make a slight alteration in one of the rules of the Institute, so that the number of Vice-Presidents may be increased; and such intention had been notified in the usual way, by being put up in the rooms for one month before the first General Meeting. The alteration which was now submitted to the members for approval was as follows:—

“That instead of the words not exceeding ‘twelve’ in cap. 1 sec. 3 of the Rules, the words not exceeding ‘twenty’ be inserted.”

The resolution, having been put by the CHAIRMAN, was unanimously carried.

Mr. WILSON then read the following paper:—

ACCLIMATISATION.

To such of us, at all events, as have had any experience of Australia, it should not be necessary to say much in favour of the project of acclimatisation, for there, indeed, we are pretty nearly all acclimatised together. Having brushed aside—perhaps in a somewhat too peremptory manner—our dusky fellow-subjects, the original occupants of the soil, we have occupied their lands, with what success my hearers very well know. We have taken with us almost all—if not absolutely all—the useful and beautiful animals by which we have been accustomed to surround ourselves. And we have found, I think without a single exception, that they thrive at least equally well as in their old homes,—some of them certainly very much better than in the lands from which we brought them.

In ventilating the idea of acclimatisation, we have long felt the want of a new word more accurately defining our meaning. What

we seek to do is rather to *distribute* the good things of the earth than necessarily to acclimatise them. In what we have done we have discovered some wonderful facilities for adaptation to a new climate and a new set of surroundings; but, as a rule, our principal efforts should probably be directed to simpler forms of distribution—taking the good things of one country to some other country, or rather, to all other countries, in which all those good things might be advantageously introduced and established.

It seems a singular fact that in the complete furnishing of the earth, so much has been left for us to do. A bountiful Providence has showered upon mankind a profusion of good things, but whether from wanton disregard, from a lazy want of observation, or from whatever other cause, there seems to have been a singular negligence in the use of opportunities of distributing them. It seems as if the task had been left to us of conveying suitable things from one place to another, and we have been contented to perform this task in a very perfunctory and hap-hazard way.

We are assured by our scientific friends that animated nature presents us with, I think, about one hundred and forty thousand varieties; and of all this prodigious wealth of beauty and excellence of various forms, we have practically—at least so far as domestication is concerned—only availed ourselves of some thirty or forty! In fact, I think it would puzzle our friends to enumerate more than that number of things with which we have thoroughly identified ourselves.

Much has undoubtedly been done in the acclimatisation or distribution of useful things, but what has been done seems to be almost trivial in comparison with the possibilities; and I have long argued that what has been done, whether by private enterprise or by public effort, is a mere fraction in the work that we have to do. I hold that this is the proper interpretation of the original command to man: "Be fruitful and multiply, and replenish the earth, and subdue it; and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth." I consider that it is a waste of opportunity to have done so little, and that, having paved the way by opening up fresh countries by conquest or colonisation, the grand scheme of distribution should be elaborated scientifically, systematically, and exhaustively. I hold that we should never rest until every country on earth is duly furnished with every good thing which that country is capable of maintaining.

And here I wish to say explicitly that in the term "good" I refer to things not simply useful in a practical and economic or

mercantile sense, but good in the sense of adding in any way to the legitimate enjoyment of mankind.

Having helped to agitate this idea in many circles for many years, and in that process having been associated with many most excellent and philanthropic men, I have been struck with the difficulty of impregnating the minds even of such men with the *entirety* of this idea. One has a speciality of one kind—another is apt to have formed a very energetic opinion in some other direction; but I have rarely found any man capable of entertaining the idea of the exhaustive application of the process of distribution.

I have somewhere endeavoured to illustrate my meaning by remarking that with no wish to underrate the value of any contribution to any section of society, it has been my object to apply the adaptation of this principle literally to all, to fairly grapple with the grandest of such efforts, but never to rest in dealing even with the comparatively insignificant. I do not seek simply to furnish new articles of export or import to the merchant and manufacturer. I do not wish to limit ourselves to adding new forms of useful productions to the gardener or the agriculturalist. I do not ask you to stop at a desire to supply fresh forms of amusement to the sportsman. I wish to do all that can be done legitimately in all these directions. But, as I have stated elsewhere, my interpretation of the project of acclimatisation has a scope beyond all this, and which will never be adequately fulfilled till, including all the good things of the various sections of the community to which I have alluded, we have exhausted everything that a beneficent Creator has afforded. A prominent feature in our scheme is, by attention to even seeming trivialities, to lighten the path of the wayfarer and to furnish new pets to the child.

To those who have studied what can be done in this way, and have had some little opportunity of observing the wonderful effects of efforts to render the world more interesting and beautiful, it becomes a matter of the most pleasurable contemplation as to *how* interesting and *how* beautiful the world would become, if full justice were done to this scheme.

We have all felt in our trips by land or by water what interest was given to the day in putting up a few coveys of partridges; in the rousing of a hare, springing from her lair close under our feet; in a flight of flying fish; or in a sudden flitting across the landscape of a flock of bright-coloured paroquets.

There is no vast practical value in any of these things, but their passing across our fields of vision adds life, and colour, and

incident to our daily existence; and I want to see a great deal more of this. At present it seems as if the world were only partially furnished, as if, in point of fact, we were contented to drag on existence in a world ludicrously unfurnished, as compared with its capabilities. What should we think of Her Gracious Majesty, if we heard that she entertained her guests at her splendid palace at Windsor upon bare deal tables, and allowed them to sleep on the ground? How would our club-houses in Pall Mall and St. James's-street look if supplied only with the fittings of an ordinary barrack or national school? We have long since been told, in his own cheery way, by our noble President, how happily he passed the day of attaining his majority, riding over the wilds of North America in a pair of corduroy trousers, much split across the knees. But we should feel greatly surprised if he had carried such primitive doings into his maturer life, and startled his friends at the "Carlton," the House of Lords, or in the stately halls of Kimbolton, with any such apparition as he described. And yet this represents the condition with which we content ourselves in regions which, however delightful and however capable of beauty, would be infinitely more beautiful and infinitely more delightful, if adequately furnished with everything that Nature has so bountifully supplied.

I was riding, recently, through one of our English parks—exceedingly beautiful, umbrageous, and furnished with all that hydrangea, fern, and rhododendron could supply; but as I passed out at the gate, after a ride of something like three miles, I remarked to my companion that I thought we had not seen a single living thing!

Now let us fancy what a dreadful waste of opportunity is here represented. Without any great stretch of the imagination perhaps fifty things could be suggested which would have lent variety and animation to the scene—not necessarily expensive, not necessarily entailing any elaborate treatment or care—to render a ride through such regions one continuous round of enjoyment, instead of leaving upon the mind that dreary sense of solitude and of wasted opportunity.

In the remarks with which I am intending to trouble you, I wish to make it distinctly understood that in the project of acclimatisation according to my interpretation, is included the whole vegetable as well as animal kingdom, although those who know me best consider that having rather a craze in the latter department, I may not be very earnest in the former. On the contrary, no one can have formed a higher estimate than myself of our duty in

covering the earth with beautiful forms of vegetation, and adding to our useful products of the garden, the orchard, the farm, and the forest.

After glancing hastily at the remarkable successes lately achieved in India through the introduction of the tea-plant and the cinchona, and trying to estimate the future results of those valuable plants, let us look for a moment at what is being done in various parts of the earth by some of the native trees of Australia. We have, of course, all heard of the *Eucalyptus globulus*, and may notice the very frequent references to that wonderful tree which meet us constantly in the papers. Opinions are divided as to the merits associated by enthusiasts with this tree ; and men of high scientific attainments still challenge the authenticity of the reports of its more sanguine adherents. At the same time, it is worth while remembering the very important fact that, from some cause or another, where the gum-tree grows swamps appear to lose their deadly character. The astonishing power of this tree in the consumption of stagnant water has been tested by actual experiment by a scientific American, who calculates that a moderate-sized tree will drink up something like seventy gallons of water in twenty-four hours, giving out in return that peculiar aromatic odour which many people believe to be a specific against miasma.

I have always taken humbler ground in advocating the claims of this wonderful tree. It is adapted for a very large area of the more temperate regions of the earth. It is stated by Dr. Mueller to be the fastest-growing tree in the world ; and if it has no other merit, it has that very important one of being good fuel.

But trees have other uses than this. We have reason to believe that the welfare of many nations has been seriously compromised by the reckless destruction of their timber ; that the climate has been thereby modified, the rainfall influenced, and the whole order of the seasons greatly affected. We are accustomed to hear Spain referred to warningly in this respect ; and those of us who have travelled through that country must have been impressed with the parched and arid look of immense portions of its surface.

We may then glance at the wonderful results of the cultivation of the larch in Scotland. The larch is not indigenous to Scotland, and yet what wonderful effects have been produced by its diligent cultivation ! Hill-sides have been clothed, the landscape has been beautified, shelter has been given to varied crops and varied forms of stock ; and it would be difficult to enumerate the advantages that the introduction of this one beautiful tree has conferred upon our industrious and intelligent neighbours in the North. I was

lately speaking to a very competent authority about the condition of New Zealand, and was assured that unless attention were paid to the effective clothing of that country with some form of timber, before the native forests are destroyed, the results could not fail to be most disastrous. From the peculiar form of those islands, and their situation in latitudes liable to prodigiously high winds, the whole country would be so blown over by perpetually recurring tempests, that, without adequate tree protection, it would be impossible to do justice to their otherwise great opportunities.

It is only the student of trees who can heartily appreciate the value of this form of addition to our landscape; but, considering the illimitable variety available in form and colour, there seems something really sad in the small devotion of public attention to this department of the development of the resources of the different nations, particularly of the temperate zones.

It was with great pleasure that I lately came accidentally into contact with a gentleman at the head of the Forest Department of one of the Indian Presidencies, and found how thoroughly they were impressed with their necessities in this way, and what admirable steps they were taking to do justice to the occasion. I was, however, very grieved to learn from him that so little attention is devoted to forestry as a national object in England, that we had to send away our young men, preparing themselves for forest cultivation, to schools in Germany to fit them for future usefulness in such work. Is it not a little shocking that a country with the dependencies of Great Britain, with all their splendid varieties of soil and site and climate, should not recognise as thoroughly as any people the importance of this special branch of what we call acclimatisation?

I now wish to point to a particular feature of this great scheme, to which I want energetically to direct the attention of my hearers. The project being large, and the subjects to be dealt with being very various, it seems obvious that different forms of enterprise are not only permissible, but requisite. Some things may be fairly introduced by the individual, some things may be properly left to the enterprise of associations, some things rise to the dignity of national effort, and can only be properly dealt with by national resources. It is in this latter department that I think we shall find a lamentable deficiency. Statesmen and politicians are too absorbed, forsooth, in the details of their several routines to condescend to such forms of usefulness as these. Yet, allowing great scope to private enterprise and to co-operative association, there still seem some things so large that only national resources can

properly cope with them ; and it seems a pity that Governments, naturally humane and beneficent, should not spare some portion of their attention for such directions as these. In point of fact, it seems almost as if we were going backward. It would, I think, puzzle my hearers to quote any great national effort of this kind in recent years ; although we all know that in the romantic catastrophe of the *Bounty* resulting in the formation of one of the most interesting communities in the world, that of the Pitcairn Islanders, Captain Bligh was at the time of the mutiny engaged in a Queen's ship in conveying the bread-fruit tree from the South Sea Islands to the West Indies.

I shall not soon forget the circumstance of my broaching a proposition of a similar nature to the late Duke of Newcastle. In those days we were stumbling about in the preliminary stages of the experiment of conveying the salmon to Australia, a project in which our friend Mr. Youl has since been so brilliantly successful. I tried to convince his Grace that amongst the less employed of the vessels of the Royal Navy some one might be set apart for so interesting an experiment as this. It is something, in these matter-of-fact modern days, to be able to stagger an English Duke and Cabinet Minister ; and I shall not readily forget the expression with which the Duke asked me what I thought John Bright would say if he heard that the Queen's ships were being converted into herring-boats ? I need scarcely add that my very startling proposal received no acceptance ; although I must say, in justice to the Duke of Newcastle, that he always showed the most sympathetic feeling for the whole project of acclimatisation, and once encouraged us with the remark, that " it assumed almost a form of creation itself."

Here I would, by the way, render hearty homage to the ready reception of our overtures on the part of another Duke and Cabinet Minister, and especially as the concession then so frankly made is capable, I believe, of being utilised to a much greater extent than we are at all at present aware of. I went as one of a deputation, many years ago, to the Duke of Somerset, who was then the First Lord of the Admiralty, and endeavoured to interest him in our project, and to secure his co-operation through the vessels of Her Majesty's service. We were received in the most kindly and sympathetic manner, and there and then was issued an order, still existent, to all captains in the Navy to render to our cause every service in their power.

Of this very much greater use may be made than what at first may seem probable. In the process of distribution those things

seem most thoroughly adapted to a country which come from some other country corresponding in climate, latitude, &c. For instance, take the three countries of nearly corresponding latitudes—South America, South Africa, and Australia. We find them provided, in the one case, with the cassowary; in the second, with the ostrich; in the third, with the emu—three birds in many respects analogous, and leading to well-founded expectations that where any one of the three can live, all three can live equally well. But between countries of corresponding latitudes there is but little opportunity of traffic, as the productions of those countries so nearly correspond that there is not much opportunity of interchange, and consequently of inter-communication by ship. In such circumstances, it seems obvious that a little timely assistance rendered by unemployed vessels-of-war might greatly hasten on this replenishing of the earth, for which I am humbly pleading, and supply new forms of beauty and usefulness in directions to which it would be otherwise difficult to convey them.

I have often looked at the fine, roomy decks of those large ships, and thought of the more than motherly care bestowed by honest Jack upon anything in the nature of a pet confided to his charge, and have mourned over the small results from such splendid opportunities.

Let us take a case in point. I select the herring of our northern seas. Let us reflect, in the first place, upon the prodigious numbers in which it visits our coasts; the rich harvests it affords to some of the most manly and enterprising of our race; the opportunity it gives for the cultivation of the very best seamen in the world. That my hearers may form some adequate idea of the importance of this fish, both as an article of export and as one contributing to the food of the people, it may be stated that in the year 1874 no fewer than 2,047,599 barrels, containing on an average 700 fish each, were caught by boats owned by Great Britain and Ireland, and of this quantity more than a million barrels were exported. Then let us consider the ease with which this useful fish is preserved, and rendered capable of transmission to the very ends of the earth, and its astonishing savoriness when it gets there. Let us, last and not least, trace its power in rendering palatable food otherwise insipid. I ask you to accompany me to the Irish cabin, in which poverty and unsatisfied appetite are apt to take such sorrowful forms, and appreciate, as far as one can appreciate, the virtues of that highly-flavoured little fish, which is reported to add relish to the family dish, and even when reduced to its infinitesimal form, at once leads to the economising of the family resources,

and stimulates the imagination of the child, in constituting an ingredient of the meal known as "potatoes and point."

We have already, I understand, in the Southern Hemisphere, a very excellent fish nearly related to the herring—I mean the pilchard, which sometimes shows itself in shoals upon our coasts in Australia, and of which I have recently heard very favourable reports when found along the shores of South Africa. The existence of so nearly related a congener would seem to point to the obvious suitability of the vast southern oceans for the herring; and I ask my hearers to imagine the service rendered to mankind by the transmission of such a fish to seas of such expanse. It does not seem as if the transmission of the herring to the south should be a matter of any serious difficulty. It would not require to be nursed during long months with the paternal care lavished by Mr. Youl upon his favourite salmon. It seems as if all that would be necessary would be to secure the ova in a fertile condition in these temperate seas, and convey it as rapidly as possible into seas of corresponding latitude in the southern hemisphere. Set Mr. Frank Buckland a job like this, and within a few weeks the thing would be done, and we might leave it to the herring itself to indicate its arrival on all our coasts in its own peculiar way, and in its characteristic wealth of numbers.

If it be argued that there is anything *infra dig.* in the employment of ships provided for the noble game of war in offices comparatively so insignificant as the conveyance of the spawn of fish, I think it would be well for us occasionally to remodel our estimate of the relative value of the victories of war as compared with the less pretentious victories of peace. To the practical mind, influenced fairly, if not extravagantly, by conceptions of utilitarianism, there is something exceedingly horrifying in the waste apparent in the simple preparation for possible wars. We go on board one of the splendid vessels constituting, for instance, our Channel Fleet, and we see expensiveness of the most pronounced type meeting us at every step. Thousands of the finest fellows in the world are idling away their time, and pining for more active and more intelligent employment. We may, unhappily, want them some day for the final purpose for which they are engaged; but that day *may* never come, and meantime it seems to me a form of waste amounting to absolute sinfulness to lose any opportunity of utilising such tremendous forms of usefulness. The men themselves would be very much better occupied by some simple form of employment, and they would feel prouder and more contented in their several spheres if they were impressed with the idea that they were doing

something of a useful character. These ships, during the winter months, are many of them ordered off to milder climates for the sake of the health of the crews. They go to Madeira, Lisbon, Oporto, or wherever else it may be. It seems to me that they might still go to a mild climate, and be employed in the meantime. They should, of course, be kept within reach of recall. For, if the worst came to the worst, even Prince Bismarck, in his most ferocious mood, will never be able to eat us up in a week; and, in any case, vessels might be better employed in such work in pleasant, sunny seas, than in running one another down in an Irish fog.

We ought, I think, as a nation, to do a great deal more than we do in such directions. It might save us from imputations very unpleasant, and not unattended with formidable danger. In recent years, for instance, we have shown our hatred of war and its horrors to such an extent that we are apt to be charged by our Continental neighbours with having lost our grand old heroic spirit—with having become tainted with a low mercenary sentiment, and with having sunk into liability to pusillanimous terrors. This is a very bad character to have, and the fact of such a suspicion existing may lead some day to such insult or line of policy upon the part of other powerful States as may result in a terrible retribution. Would it not be better to be able to say to such Powers, "We do not believe in wars. We see the folly of such prodigious expenditure in preparation for such murderous business. We think we can employ the flower of our youth better than in dressing them in special array, and reserving them for the murder of their fellow-creatures. We do this because we have become convinced of the mischiefs and horrors of war—not from cowardice, not from having lost that warlike spirit, of which we have shown some signs in times past, not even from motives of a narrow economy. The same sums which you waste in so objectionable a manner we spend in exploration, in colonisation, in the interchange of all kinds of valuable commodities, and in covering the earth with all manner of good things. If you ask us what we are doing with the flower of our manhood, we point to the Northern and Southern Poles, to the least known regions of the sources of the Nile, to the centre of Australian deserts, to the heights of the Rocky Mountains and the Himalayas. As the principal explorers, colonisers, merchants, and acclimatisers of the earth, we find an ample and an adequate mode of expenditure. And we ask you whether it is not better so to employ our more energetic spirits than in condemning them to the barracks and the parade-ground: so to employ our money than in wasting it in gunpowder and pipe-clay."

Let us take another case, adapted apparently for national effort—the transference from South Africa to Australia of some of that prodigious wealth of animal life in which the former so abounds. In Australia there is no indigenous deer or antelope. In South Africa there are such varieties of animal life that their enumeration would be tedious. How interesting to introduce amongst our Australian colonies some of those beautiful types. But South Africa, like Australia, produces wheat, and wool, and wine, the orange, the fig, and the olive. And the very similarity of products, which seem to indicate ease of adaptation in a new thing, arrests intercommunication and prevents traffic. A Queen's ship or two, in their passages round the Cape, might render services which, not so offered, might never otherwise be available.

And now for a glance at our fresh-water fishes. Has it ever occurred to my hearers to calculate the awful waste of space and opportunity in the still waters of this country? While we have the lordly salmon sailing up and down our rivers, we can, perhaps, have little to urge as to the occupation of our running waters. Of course, much more scope should be given him by sweeping away the little, miserable obstructions by which one landholder tries to steal a march upon another in securing more than his fair share of the salmon as they pass to and fro. Still, at all events, the rivers are tolerably provided with very beautiful fish. But what can we say of our ponds, canals, and some of our smaller lakes? We can say carp, and tench, and roach, and pike. Is there no better fish in all the world for such purposes than these? It is urged that with proper attention in the preparation even they may be made eatable; but I demur altogether to the recognition of a fish which is greatly dependent on its cooking for becoming palatable food. A fish, like every other animal, should have some decided excellence in itself; and I have every reason to believe that there are plenty of better fishes in the world which might easily be introduced and cultivated in our still fresh waters to very much better effect than our little bony and muddy friends that I have enumerated. We once succeeded in sending home living specimens of the Murray cod of Australia, which does very well there in our waterholes, stagnant during several months at a time, and which might be found to suit the English climate. I am far from saying that this is the most suitable of all fish; on the contrary, I should think that there must be many others much more suitable. I believe there are several kinds of fish in the North American waters which might easily be introduced. And I have seen the sterlet in the tanks of the Brighton Aquarium, which I

have also seen swimming in the tanks of the markets in North Germany, and which is reported to be a very manageable and palatable fish.

If we once get a good fish, we ought then to utilise our still waters much more thoroughly than we do, combining perhaps with that utilisation the forms of amusement which seem to be so popular. A pond should be treated like a poultry-yard—furnished with a certain quantity of its special occupants, and these duly supplied with some sort of food, causing them to pass rapidly to a useful and edible stage, and constituting the water, like the land, an available addition to our resources in the way of food supply. What can be done in that way may be judged of by a statement made to me by the late Mr. Fennell, that one of the proprietors on the Tay had let his fishing for something like six thousand a year; but by mismanagement the tenants had rendered the thing unprofitable, and had to give up the arrangement. On this the proprietor took the matter into his own hands, placed it under proper supervision, cleared a profit of twelve thousand a year, paying him a better rental per acre, Mr. Fennell assured me, than any dry land he had in the county.

Let us imagine, then, the enormous space devoted to ponds, minor lakes, canals, &c., over the United Kingdom, now almost useless; and let us try to estimate what that area would produce in circumstances of proper scientific and systematic cultivation.

Thus far I have instanced those things the treatment of which I consider either suited to national effort or to the action of associations. When we come to minor matters with which individuals are in the highest degree competent to deal, I wish, after some little experience in such matters, to give my hearers a hint which, if accepted, may be a source of very great happiness to them.

While surrounded more or less continuously by such beautiful things as those whose cause I am pleading, the mere happiness of such surrounding is dependent to a great extent upon the association of idea. The same thing will supply a very varying amount of enjoyment to different individuals. One person may have an extreme appreciation of colour, of beauty of form, of special elements of movement, of excellence of song, or of some other quality in an object. And thus it is that one person walks through the country or lounges in a garden absorbed in some consideration miles away from the objects by which he is surrounded, while another plunges with an ecstasy beyond expression into every little detail of which alone the educated and sympathetic nature is capable. But imagine the pleasure of appreciation of a particular

form of beauty, of whatever kind, to one who has done something to introduce that particular form of beauty into new regions, and to bring it under the notice of other appreciative eyes and ears. I wish to make this distinctly understood, and I would take an illustration which occurs to me very frequently in my country walks.

In the year 1858 I sent out to Melbourne, under the care of a kind and attentive friend, a consignment of the common song thrush of England. They were turned out in the neighbourhood of Melbourne, soon bred, and freely scattered over a considerable area, and when I was last in the colony I noticed them in the gardens around Melbourne fluttering about the bushes, and singing as cheerfully as in their native land. Since that day the song of the thrush has been productive of a degree of pleasure to my ears very difficult to describe; for admiring, as one must admire, the wonderful richness and beauty of its note, I always feel that in having done something to introduce to new observers that admirable quality of song, the song itself reaches my ears with very greatly enhanced agreeableness. Indeed, I often think that nobody in the world hears the thrush sing with the pleasure that I hear it. And I say to any one who may feel inclined to challenge this statement, "Go and try the experiment."

Is it too much to hope that out of the large number of men who have attained such brilliant success in the splendid dependencies of the Empire, it should become a sort of fashion for each one to take up some one or two obviously suitable additions to the country with which he has been specially identified, and never rest until he has made it his own? Is it not a sort of duty that we owe to the countries which have done so well by us? Such service would be a graceful tribute, and free us from imputations which I am afraid many of us deserve; in showing a disposition on our part to regard success of a very remarkable degree more as a result of the magnificent opportunities which have been afforded us, than as proceeding from any transcendent merits of our own.

There are small things and inexpensive coming within the scope of our scheme as well as the more pretentious things to which I have alluded. For instance, by a recent ship I sent out to Melbourne a consignment of the common glow-worm, having twice before succeeded in landing them in the colony apparently quite healthy, and lighting their beautiful little lamps as cheerfully as in an English lane. One might be asked, "Why send out such trivial things as glow-worms?" But I have all along endeavoured to vindicate the claims of the comparatively trivial.

Let us fancy what an addition might be made to our beautiful summer evenings in Australia by a few things like these! The young people of those lands, like the young people of other lands, will fall in love with one another, and will indulge in their evening rambles; and, as in other lands, probably they will occasionally fall a little short of topics for conversation. What debt of gratitude would they, so circumstanced, not owe to anyone who should provide them with such materials as the light of the glow-worm and the song of the nightingale?

Another hint—trivial, but suggestive. At my own place I have a sheet of water, with a small island in the centre, covered with rhododendrons, magnolias, and some larger trees. In the course of last summer it occurred to me, as a happy inspiration, that this little island had worn sufficiently long its comparatively untenanted look, and that I ought to take steps for its occupation. I consequently placed on it a couple of the little monkeys which our kind friend, Mr. Jamrach, so readily supplies at so moderate a price. And the success has been so pronounced as to elevate the whole thing into a distinct discovery. I really do not know when I have seen anything more enjoyable than the darting about over the upper branches of the trees of these playful and beautiful little creatures. They have, of course, to be taken in for shelter during the winter months; but during summer they have retained their health perfectly, and have seemed to be as happy as the day was long. Having myself seen the wild monkey in Ceylon, and also watched the little party which has long delighted the inhabitants of the Rock of Gibraltar, I knew pretty well the amusement that these little things would afford in a semi-wild condition; but I had no idea, until I had the opportunity of watching leisurely the doings of these little creatures, of the great enjoyment derivable from their wonderful playfulness, gracefulness, and agility. Indeed, I have often found myself led to think that our good friend Mr. Darwin, when he walked off with our tails, has also, perhaps, been guilty of depriving us at the same time of many of our most engaging and attractive qualities.

The peopling of the little island with such interesting inhabitants has also had another good effect; for their fame has spread rather widely through the neighbourhood, and the young people are promised by affectionate parents that if they will but keep quiet and behave prettily for a certain length of time they shall be brought down the first fine day to see me and my monkeys. And, in thus being able to hold out an incentive to youthful virtue, it is a pleasure to feel that there still lingers in one's path some forms

of usefulness ; and, rapidly waning as one's opportunities may be in larger matters, it is a great comfort to find oneself fit to be thus classed with Mrs. Winslow's Soothing Syrup, and other much-prized narcotics, as a "real blessing to mothers."

There is a deeper value in all this than at first sight appears to be the case. In devoting one's attention to matters like these, little by little grows up the unspeakable love for all these things. It is singular to notice how rapidly and inevitably that love grows ; and in varying and enhancing the attractions of a country life to our young people, we lead their thoughts into healthier channels than they are apt sometimes to find, and do more than we can well calculate in diverting their ideas from the frivolities and dissipations of the town.

And to the grown man not less than to the child are hints like these capable of useful application. How many of us do we see impressed with too great earnestness in a special pursuit, and that pursuit running more immediately in the direction of money ! Over and over again have I pleaded seriously with most estimable men so situated, and have begged of them, almost on my knees, to consider whether some modification of life would not be advantageous to them and all belonging to them. "You are rich enough," I have said, "too rich probably ; for, when you are no longer here, the money which you are so anxious to store up will probably make your sons idle and hand over your daughters to the fortune-hunter. Modify your efforts in that way—accept the relaxation of a little holiday-making, pleasantly applied, and keep yourselves alive as the advisers of your sons and daughters during the more critical phases of their careers, instead of hurrying through the counting-house to the grave, leaving behind you overloaded coffers, which will work more harm than good even to those you love the best."

It is sad to one of country tastes to notice most intelligent people habitually rushing into the narrow courts and alleys of this murky city, spending the long hours of every week-day in gloomy, half-lit offices, and burying themselves in what I call the rabbit-warrens and rat-holes of E.C., when they might beneficially afford a certain percentage of their time for purer air, and for identification with things which they would find more delightful than they can believe, if they would but take the trouble to become intimate with them.

We must now turn to a very serious department of this scheme. I allude to the possible mischiefs which may be done by the introduction, by accident or mistake, of something which may turn out to be objectionable ; and this is a matter which deserves very grave consideration, as any mistake is calculated greatly to add to the

influence of that very large section of mankind who sneer at all this kind of enterprise. Any fool can sneer. In fact, as far as my observation goes, the more complete the fool the more perfect he is apt to be in this very mischievous accomplishment. This is an animal which there is no necessity to acclimatise or distribute. He is able to take good care of himself. You find him in every land, making himself perfectly at home, and indicating powers of reproduction which leave far behind even the rabbit, the rat, or the house-fly. Poor patient labourers in the cause which I am advocating have been, and are even now, seriously encumbered by the sneers of those who, doing little or nothing for the world themselves, try to compensate for their apathy and uselessness by seeking to disparage the work of others.

Meantime, grave mistakes may easily be made, and we must always be on our guard against the accidental introduction, probably through the agency of some lurking parasite or seed of noxious weed, of something which may perhaps creep in amongst more eligible associates. It has always been held that we owe the Bathurst Burr, which for a long time gave such trouble to our settlers in New South Wales, to seeds introduced originally in the manes and tails of horses from Valparaiso. We know what the thistle has done for us in Australia, and remember the aggressive yellow "Capeweed," which is establishing itself in many parts of the colonies. We have, of course, heard of the misdeeds of the sparrow and the rabbit; and while we are certain to introduce incidentally such things as the house-fly and the bug, and our faithful companion the Norway rat, and other troublesome camp followers which hang on the track of civilised man, we ought to be always on our guard to minimise these evils as far as possible.

But in dealing with great work we must not be deterred by craven fear of possible danger. Are we not to have the vine because of the *Phylloxera vastatrix*? Are we to forego the potato because some vigilant eye has detected the American beetle? The very nature of civilisation involves many such troubles, and we must deal with them in an intelligent spirit, seeking out the best mode of coping with a particular trouble, and opposing its progress with a stern hand. We hear of certain wealthy gentlemen in Victoria who have been committed to the expenditure of thousands a year in endeavours to keep down the rabbit. I recollect seeing a paragraph in the *Field* newspaper many years ago, intimating that the natural enemy of the rabbit was the black polecat, and that the introduction of a few specimens of that animal would save all those thousands a year. And, perhaps, when so

modifying natural action as we do by the prosecution of our special form of enterprise, we ought to accustom ourselves to look to natural modes of checking nuisances rather than to artificial modes. Nature has a wonderful faculty for balancing the various forms of animated life with which she has to deal. If a bird becomes too numerous, a special hawk appears to have been sent to keep it in check; and so throughout the piece.

The sparrows, which are apt to do so much mischief in the gardens in neighbourhoods to which they have been recently introduced and in which they most congregate, should have been dealt with in a very resolute way long before they attained such a position. A sparrow which comes over the garden-wall in the early summer after the young peas or ripening fruit, should be shot *in flagrante delicto*. When he has once tasted these delicacies he is perfectly certain to come back, and very soon will bring his father and mother, brothers and sisters, wife and little ones. He takes some time to make the discovery, but, having made it, he becomes a very inveterate character indeed. We unfeathered bipeds, alas! have no monopoly of criminality. Amongst sparrows and wild animals generally there is the convict character, easily discernible, and just as pronounced as amongst ourselves; and the convict must be dealt with as we ought to deal with our own convicts—in a very uncompromising manner indeed. A false sentimentalism amongst them, as amongst ourselves, may gradually convert an ordinary well-doer into a very objectionable character. Crime in pea-stealing, as crime in watch-stealing and bank-breaking, should be nipped in the bud.

Wild animals are a great deal more amenable to a form of education than is generally supposed. I say this advisedly, as I have had many illustrations of it in my own case. On one occasion I rented a very excellent vineyard, in the fruit of which I was greatly interested. At the bottom of an adjacent paddock was the slaughterhouse of the neighbouring village, haunted, as such places usually are, by the carrion crow of the colony. As my grapes began to ripen, my men told me that they were so attacked by the crows, that unless something were done I should not have a single grape. I gave them a gun or two, and told them when they shot crows to hang them up by the heels; and I rigged up in the vineyard a few scarecrows of more than usually ferocious aspect. My success in thus checking the attack at its outset was a matter of profound surprise, and has impressed me ever since. After a few days, not a crow ever came into that vineyard. I used to see them sailing up and down along the outside of the fences, glancing towards my

grapes with a disdainful eye, and describing me one to another, in as plain language as a crow could use, as a very bloodthirsty and disreputable person, with whom no properly-constituted carrion-crow would be justified in holding any communication whatever.

It is all very well to laugh at this remark, but those of us who have mixed, as all of us should seek to mix, with what are sometimes playfully termed "dumb animals," will soon get to learn their language quite as well as we understand the language of each other; and in many instances it will be found a much more agreeable language than what has been somewhere quaintly described as the cackle of the daws of parliaments, or the shrieks of the kites of officialdom.

Perhaps amongst the legitimate functions of acclimatisation may be enumerated Eradication. In setting about so serious a task as that of remodelling the arrangements of Nature herself, we ought, I think, to assert our right to destroy some things for the purpose of smoothing the path of more valuable things. Many of my hearers will recollect the terrible ravages of the wild-dog in Australia, and the serious expense and anxiety consequent upon his once almost ubiquitous existence there. We have stood upon very little ceremony with this rapacious rascal; and over hundreds of miles of country where he once roamed, not a single specimen is now ever seen. Our Indian fellow-subjects ought long since to have taken example by what we have done in Australia with the wild dog, in coping with that dreadful character, the tiger. It was a most shocking thing to hear in the discussion upon the paper read by Lord Napier of Ettrick to the Society of Arts, that the wild beasts of India are calculated to destroy annually something like ten thousand of our fellow-subjects; ravaging whole districts, condemning large and fertile tracts to sterility, and horrifying us with the knowledge that individual animals have been known to have destroyed one or two hundred of our fellow-creatures. It was a shocking thing, when the discussion recently occupied the columns of the daily press, to find any man coming forward to justify the preservation of the tiger, on the plea that without his existence India would be so intolerably dull, that the more active spirits amongst the military and officials would not consent to accept service there. It is surely a dreadful thing when "sport," as it is called, is purchased at such a price as this.

Eradication may appear a singular form of acclimatisation, but it is not the less necessary to clear a way for the introduction of a good thing by the removal of something not so good. And in

venturing upon so serious a business as that modification of natural resources with which it seems to have been a part of the designs of Providence that we should be charged, one must be prepared to deal resolutely with an injurious thing, whenever its mischievousness becomes apparent. And we should deal with it not only resolutely, but with intelligence. I think there is great opportunity for reducing to a sort of science the process of dealing with objectionable things. We neglect this too much, and, consequently, are not only subjected to endless annoyances, but the very process which I am advocating is objected to by timorous men on the ground that, in attempting to introduce a good thing you may be unconsciously introducing something very seriously objectionable.

Man ought to be more confident in his superior intelligence, and should be prepared to use that intelligence in keeping the upper hand of such forms of even serious annoyance. To the sparrow which comes over the wall, at least as promptly as to the Emperor who audaciously strides across the boundary of international rights, one should always be prepared to say—"My friend, I am essentially a man of peace. But it is as well that it should be always understood, with the utmost distinctness, that I do not intend to stand any nonsense of whatever kind." For want of this resolution, and the knowledge of the necessity of its exercise, with what annoyances are we not constantly met. We know so well the fussy and incompetent house-mistress, helpless in presence of the minor troubles with which every establishment is apt to be beset. What can we think of the competency of a poor creature, who babbles of flies, and gnats, and ants, and who considers that black-bettles and mice are the necessary accompaniments of cheese and jam? We know the ignorant and cowardly gardener, who quails before the cricket, the woodlouse, the aphis, and the red-spider; and the farmer, who despairs of his root crops because the turnip-beetle flies forward open-mouthed and barks at him as he enters the paddock. We ought to accustom ourselves to deal peremptorily and effectually with all such things. A man has more sense than a sparrow, an aphis, or a turnip-beetle; and a woman, if she is good for anything, has more sense than a mouse or a cockroach! And it is the duty of people to keep such things in proper subjection.

In a recent paper I saw a notice that the wolves in France numbered, with their whelps, each spring about two thousand, and that each, preying upon live stock to the extent of £40 a year, cost the farmers many times that amount in the necessity of folding something like twenty millions of sheep! We know what this means by our experience of Australia, where, as I have said, the dingo has,

under the beneficent influence of strychnine, been very extensively annihilated. A large settler there told me that, in a country once very subject to their ravages, he has now never seen a single specimen for more than fifteen years.

In all that I have said I wish to let it be distinctly understood that I have dealt with the subject in the capacity of a lover of nature—in no sense as a sportsman. I wish to see the earth filled up with all manner of good things, to be utilised in their several ways; but I have small sympathy with the man so quaintly described by the French critic as rising in the morning and saying: "What a fine day! Let us go out and kill something!"—I cannot understand the pleasure of inflicting death. It seems to me that the logic of the thing would point rather in the way of increasing life, to enjoy the fineness of the morning, than in signalling the pleasant weather by an act of destruction.

No one, I am certain, can enjoy his walks in the country more than I have done, although I never saw a fox-hunt, or a hare coursed, or shot a game bird, in my life. Even in this country, addicted to sport as it is, I cannot help expressing the belief that worthy paterfamilias, with an affectionate wife and loving children dependent upon him, may be better employed than in breaking his neck over our fences. And it seems singular that a man cannot enjoy the pleasures of a ramble in the country without seeking for something to kill; without encumbering himself with a piece of complicated ironmongery, weighing from six to nine pounds, troublesome even when quiescent, and in action noisy, ill-smelling, and liable to serious accident to oneself or friend.

I now have, in approaching the conclusion of my paper, to address a few words of friendly remonstrance to a class to which I think this remonstrance should not have been required. I allude to our scientific men; and I say, with some sadness, that it appears to me that, with a few most honourable exceptions, our scientific friends have not devoted their attention, and have not given the assistance to this cause, which the world has a right to have expected from them.

Such successes as have been achieved have been worked out by the more ordinary practical men of the world; and the blunders that have been made, the expenses that have been uselessly incurred, the time that has been lost, and the want of perfectness in the elaboration of the whole scheme, I believe, is in some sort attributable to the want of sympathy with us in quarters in which, I think, we have had the best title to look for it. One would unwillingly say anything to hurt the feelings of men, earnest enough in their

careers, and favouring the world with invention, discovery, and good effort of various kinds. But in such work as I have endeavoured to depict here, it is a sorrowful spectacle to contemplate (if there be any justice in the suspicion which I throw out) that Science shows a disposition to stand with folded hands—with a sort of incredulous smile upon her intelligent face, and conveying to us more earnest spirits a kind of misgiving that she really does not wish us to succeed. Why this should be, I am utterly at a loss to conceive. My interpretation of Science is that one of its special uses is to render its learning and discovery *practically* useful to the busy world. And I think that scientific man is false to the great cause which he represents, who is content to arrange, guard, and survey his wonderful collections, without being constantly impressed with the wish to utilise each several thing to the utmost extent of which it is capable.

One sometimes is driven to wonder whether the only explanation of such laxity as I seem to see, may be found in the misgiving that on a future day—thanks to the enterprise of such as are doing so much to modify the surface of the earth—they will be driven to the necessity of re-writing their catalogues, and remodelling their musty old cabinets. But it is sad to think of such knowledge, stored up in abundance in so many varied quarters, and not as practically available as it seems that it might be and should be made.

I know what severe things may be said of me in speaking thus plainly of a section of society for which we all feel so great a respect and affection. I throw out the hint, however, in the most friendly spirit—in sorrow, not in anger—and I only beg of them, however indignant they may be with me, to occasionally ask themselves whether they have really endeavoured to popularise their favourite science to the utmost extent of which they conceive it capable.

In this brief review of the arguments for and against this scheme of acclimatisation, I have said that I have rarely met a man readily appreciative and receptive of the entire scheme, and that, amongst many reasons for justifying neglect, it is not very common to find a good one. One such man I found, and one such reason; and with a reference to them I will conclude my paper. My friend had himself done “yeoman’s service” in the good cause, and had a heart for further effort as expansive as the cause itself. We had been one day discussing its varying phases, when he somewhat startled me with the most formidable objection I have yet heard to it: “Why, if the world ever became as varied and interesting, and bright and beautiful, as this project seeks to make it, we should none of us ever wish to go to Heaven.”

DISCUSSION.

Mr. TOMKINSON said his friend Mr. Wilson would be glad to know that glow-worms had existed to his knowledge in South Australia for some time. Rabbits, also, were so plentiful there that it had been found necessary to pass an Act of Parliament to eradicate them; and on one estate above 13,000 rabbits had been killed in four months. With regard to the suggestion that the polecat was the natural enemy of the rabbit, he might mention that a friend of his in Australia had tried the experiment of placing cats with their litters into the wombat holes where rabbits bred, but without success. The kittens and the rabbits fraternised with each other as a happy family. They had the natural wild cat, a very destructive creature, which, however, preferred sucking the blood of domestic fowls.

Mr. J. B. BROWN thought they were greatly indebted to Mr. Wilson for his excellent paper, so full of truly valuable suggestions. He hoped the members of the Institute would be especially guarded on this occasion against taking narrow or contracted views of this important and interesting subject, as it well deserves to be treated in the like sympathetic spirit, and on the broad and liberal basis, Mr. Wilson has himself treated it. He trusted that members would direct their earnest attention to the practical question of how Mr. Wilson's wishes—which might well be the wishes of everyone who had listened to him—could be carried out, and how some grand scheme could be brought into immediate use, in which scientific men, as well as our intelligent Colonial officials, and both our merchant and Queen's ships could largely and gracefully assist. He was sure the noble Lord, who now so worthily occupies the post of Colonial Secretary—and of whose Colonial administration they all had, irrespective of party, reason to be proud—would give all the assistance in his power to promote any such beneficent scheme, and he hoped the subject would in the discussion to-night be grasped with that grasp and in that spirit to which it was so eminently and worthily entitled.

Mr. KERRY-NICHOLLS considered the subject of acclimatisation formed an important link in the great chain which they hoped would long bind the interests of the Colony to those of the mother country. The paper referred to what should be done, but they might also glance at what had already been accomplished. In the Australian Colonies an inestimable benefit had been conferred by acclimatisation in various ways. They all knew that the Continent of

Australia possessed a fauna and flora peculiar to itself, both of which were ill-adapted to the requirements of a white population ; and some might remember that when Captain Cook first discovered that country, the largest indigenous animal was the kangaroo. But what a change had been brought about since then by a careful system of acclimatisation ! Australia could now boast a large white population, owning, according to the latest statistics—he would give the figures in round numbers—1,000,000 horses, 5,000,000 horned cattle, and 48,000,000 sheep. Nor were these animals of an inferior class : the cattle were remarkable for their good points, the sheep for the excellent quality of their wool, while the breed of horses would, all things considered, compare favourably with that of this country. As a further result of acclimatisation, South Australia, one of the youngest Colonies of the group, now exported annually about 200,000 tons of bread-stuffs, while her vineyards produced large quantities of excellent wine. In Victoria and New South Wales the benefits of acclimatisation might be seen in many ways, and notably in the introduction of European grasses into the vast pastoral districts, and which were rapidly taking the place of the less nutritious native grasses. In Queensland—which afforded, perhaps, one of the finest fields in the world for acclimatisation—the sugar cane had been introduced with very beneficial results in the alluvial districts bordering the principal rivers. He believed that if the coffee-tree were introduced into the northern territory it would be found to flourish remarkably well, and if the swamp lands in the vicinity of the Gulf of Carpentaria were brought under cultivation, rice might be advantageously grown. Mention had been made in the paper before the meeting of the *Eucalyptus globulus*, the medicinal properties of which were being widely recognised. He might state that this tree had been introduced into various countries of late. He had seen the tree growing in Hong Kong, in various cities of Japan, in San Francisco, in Southern California, in Northern California, and in New York. He was not aware whether it had been introduced into this country, and would like to know whether it was capable of being cultivated here. It had been introduced into Italy, and had also been cultivated with great success in India. He might, perhaps, be excused for reading the following remarks upon the tree from the Acclimatisation Society of Paris :—

“ THE EUCALYPTUS GLOBULUS.—The experiment of planting this tree in the unhealthy Campagna of Rome with the object of destroying the influence of the miasmatic exhalations from the ground has been tried for several years, particularly in the locality of the Monastery of St. Paul Trois

Fontaines, where a priest named Gildas has had the plants under cultivation. In some communications addressed to the Société d'Acclimatation de Paris, M. Gildas states that the trees have thriven, and that he believes they have given indications of their power in arresting disease, though as yet they are not sufficiently numerous to produce much effect. The most important statement made by him, however, is that a decoction made from the leaves of the tree possesses valuable properties in cases of fever, and that many persons have been cured of that disease by drinking the 'elixir,' which is also a preventive of fever. A similar preparation of the leaves in the form of a powder is also made, which has the advantage of keeping good longer than the decoction. The merits of the discovery will be placed under the notice of the medical profession, and a more reliable report will probably soon be made."

With regard to the power this class of tree possessed of destroying the injurious influence of miasma and thereby averting disease, it was his belief that the wonderful absence of epidemic diseases in Australia arose principally from the wide distribution of this peculiar growth or family of trees, which extended from one end of the Continent to the other. In fact, comparatively speaking, there was hardly a square foot of land in Australia without its gum-tree. Its only fault was that it afforded but little shade in a hot climate, through its leaves being small and hanging perpendicularly.

Mr. MICHIE said that from various experiments he had made on the gum-tree in Australia, he was satisfied that nothing could exceed their efficacy in converting swamps into dry land. The medicinal properties of the tree also appeared, by respectable scientific authority, to be pretty well established on both sides of the world. He, as well as Mr. Wilson, felt considerable reliance and confidence in the wisdom with which Providence had distributed the infinitely various plants and animals throughout the globe, and he (Mr. Michie) therefore thought they should be extremely careful how they proceeded when undertaking to improve on the operations of nature, inasmuch as lamentable mistakes had already been made in connection with this subject. Sir Arthur Helps, in one of his most interesting works, had shown that in a particular district in the South American Continent the rabbit had taken possession of the land, and had nearly extinguished every other form of life; and it was a curious fact that something like the same result had come about in portions of Australia. Mr. Wilson, in his enthusiasm, was disposed to make light of these consequences, and appeared to forget unfortunate people who suffered from them. It might fairly be doubted whether the redoubtable polecat or any other distinguished exterminator would be found competent to put down the rabbit. He knew of an instance where the rabbit had

taken possession of a paddock of 6,000 acres, and its owner had agreed to give a person, who considered himself accomplished in suppressing this form of nuisance, £1 per acre for the destruction of these animals. The task was undertaken, the work supposed to be completed, the £6,000 paid, but shortly afterwards in that extensive paddock rabbits abounded as before. Fortunately, perhaps, for the perplexed proprietor, the country was shortly afterwards visited by a flood, which did the work better than the professed rabbit extinguisher. He considered it was a mistake to introduce a prolific creature like this into a sparsely-populated country, for the American and Australian experience alike showed it must become an almost impracticable nuisance. Again, what had been the result of the feat of that patriotic Scotchman who had, it was said, introduced the thistle into Australia? Victorian legislators, again, had been driven to vote large sums of the public money to put down this particular form of the Scotchman's enthusiasm. In the Kilmore, and some other districts, you could not travel many miles without finding large tracts of this thistle—a plant, be it remembered, not of the modest character and proportions of the poet's "symbol dear," but a gigantic fellow, two-thirds the height of that room; for everything, animal or vegetable, grew larger in that part of the world than in this. It was, therefore, quite futile to think that the thistle would ever be extinguished in that country, and our Scotchman had thus become as immortal as his own work. He had listened with some astonishment to Mr. Wilson's statement about the thrush, and he was disposed to attribute this also to his enthusiasm; and he could not help thinking that when Mr. Wilson came out, as he had stated, to East St. Kilda, and had, as he supposed, listened with such charmed ear to the note of the thrush—being in that respect so much more fortunate than himself (Mr. Michie), who had lived there upwards of eighteen years, and had never heard the thrush once—he must, in fact, have been listening to the chirruping of his (Mr. Michie's) sparrows, which Mr. Wilson's ardent imagination had converted into the mellifluous notes of the thrush. The sparrow within two years of his introduction had established himself as the same little impudent, dominating, irrepressible fellow with whom they were all so familiar in their own streets. When he first came to question the alleged virtues of the sparrow, he was told he was prejudiced against him, and that if he lost his fruit he should consider the compensation he received. He was anxious to be reasonable, and he patiently awaited the promised compensation. He was told to bear in mind the number of insects which

were got rid of by the sparrows. He had done so, and made a study of the subject. He had frequently collected all sorts of insects to test the sparrow appetite, and had drawn the sparrows to the prepared feast; but with what result? Why, they turned up their noses, he was going to say, but certainly they turned away their beaks with contempt, but whenever his fruit was ripening, they were, to use a common expression, "all there." It should, therefore, be always kept in view that, as a condition precedent to trying any experiment in what was called acclimatisation, a careful and discriminating regard should be had to all the conditions surrounding the work, and a sort of debtor and creditor account, as it were, should be made; and not until they felt assured that the proposed experiment was of a character which would really carry with it a balance of good to the country proposed to be benefited, should the work be carried out. He had tried to obtain some satisfactory information as to the success of the introduction of salmon into Australia, but regretted that he had not been successful. He had heard of one salmon having been actually caught, but the evidence even on this point seemed to be obscure and unsatisfactory. Whether the hitherto uncertain fruits of this unquestionably valuable experiment of Mr. Youl's—to whom their respect should not be measured merely by results—was to be referred to one cause or another—difficulty of obtaining appropriate food, or the presence of too many predacious fish in the southern hemisphere—could be only matter of speculation as yet, but at any rate they could all congratulate themselves as well as Mr. Youl, that the trout, a fish scarcely inferior to the salmon, was now well established in Australia and Tasmanian waters. In conclusion, he desired to express the gratification with which he had listened to many passages of Mr. Wilson's carefully-prepared paper, although he had not been able to go with him in every particular towards which he had invited their concurrence.

Mr. STRANGWAYS did not quite agree with Mr. Wilson in some respects. In South Australia a thrush was known as a thrush, but in Victoria it appeared from Mr. Michie's remarks that it was known as something else. With reference to the Scotch thistle in South Australia, he wished to make two remarks: first, that the plant never came from Scotland, and was not a thistle at all; and in the second place, it was not introduced by a Scotchman but by an Irishman. This man had some seeds sent to him, and not knowing what they were he distributed them amongst his friends, who planted them, and up came the wild artichoke, which was now called the Scotch thistle. He had shot a few rabbits in England

and in Australia, and if Mr. Michie could get him a contract to clear an estate of rabbits, in any part of the world, at £1 per acre, he should be very glad to undertake the work. No doubt rabbits had become, in some parts of Australia, a considerable nuisance, but it was owing to the fact that no one took the trouble of looking after them; some landowners had made them a nuisance to themselves and their neighbours, and now the neighbours in South Australia were to be rated to have them destroyed. As to the acclimatisation of animals, he agreed with what Mr. Wilson had said, although it must be remembered there was scarcely an animal of any description in Australia that was not the result of acclimatisation. The whole of the people there, as well as in this country, were acclimatised. He had no faith in voting large sums of public money for works of acclimatisation, as it invariably led to jobbery: the best way for its being properly done was by being looked after by the people who subscribed the money. As to using ships of war for sending fish out to the Colonies, he did not agree with Mr. Wilson; and he should be very sorry if it went forth to the world that the opinion of the Colonial Institute was that England should incur the serious risk of disarming, for he maintained the best way to preserve peace was to always be prepared for war.

Mr. WILSON said he had not mentioned anything about disarming in his paper.

Mr. STRANGWAYS said that Mr. Wilson had alluded to his experience of the carrion-crow of Australia, and that he thought he was a very cunning sort of bird; but if that gentleman had let that crow alone, no doubt he would have found out that the vegetable diet did not agree with him, and would soon have returned to its ordinary food. The *Eucalyptus globulus* was the blue-gum of Tasmania, and was an exceedingly valuable wood for many purposes; but as to its medicinal properties, he had very lately read that some chemists, having made a careful examination of it, had been unable to find any alkaloids from which its medicinal value was supposed to be derived. It would be very strange if it should turn out that the tree had such a remarkable value, for no one living in Australia knew that they had such a valuable thing close to them. He believed that its real service was that of an evaporating pump. He knew several instances in South Australia where, after the gum-trees had been destroyed, springs of water had appeared where there was no spring before. The gum was a tap-rooted tree, and being an evergreen would draw a large quantity of moisture from the soil, and as the soil dried, miasma would cease to be produced.

Dr. HOOKER, of Kew, said that Mr. Wilson had assumed that

the Government and scientific men had done nothing for the acclimatisation of plants abroad ; but when he made that statement, he could hardly have remembered what his fellow-colonist, Dr. Mueller, had done by his labours and writings ; he surely must have forgotten Allan Cunningham in New South Wales and Walter Hill in Queensland ; and he could not have visited India or the West Indian Colonies, where for fifty years scientific men under the Government had been exerting their influence in introducing useful plants. It might be true that only thirty to forty different kinds of animals—though he should have thought that there very many more—had been acclimatised, but certainly one hundred times that number of useful and ornamental plants had been dispersed over the globe by scientific men. Mr. Wilson had mentioned the bread-fruit, but had forgotten that it was introduced in the West Indies by Government, and through the exertions of a scientific man (Sir J. Banks). He had said that it would be difficult to instance a case of the Government having introduced a plant, forgetting that the cinchona—which was already returning thousands of pounds to the Indian Treasury—was introduced by the Government, and wholly through the agency of scientific men. At present the Government was actively engaged in introducing Liberian coffee into all parts of the world. Mr. Wilson had objected to the word “acclimatisation,” but suggested no other : would he object to one to which scientific men could help him, viz. “naturalisation,” a word which covered everything meant by acclimatisation, and was equally practical, scientific, and more harmonious ? He had listened with great attention to Mr. Wilson’s paper, but there were many difficulties in the way of acclimatisation which had been overlooked. It was true, science had not done everything, and practice had often failed, and there were many things had been, and more which could only be, introduced by heavy scientific labour. One difficulty was, that no one ever knew exactly whether such and such a climate was suited to such and such a plant. For instance, the *Eucalyptus globulus*, the most southernly of Australian gums, would not grow in the neighbourhood of London, and yet another kind of gum-tree withstood many winters at Kew, though it came from the hottest part of South Australia. Dean Herbert used to say : “Plants do not grow where they like, but they grow where other plants will let them ;” and this he believed was a perfectly true saying, and one worthy of the careful consideration of all acclimatisers of plants.

Mr. YouL said, with reference to the salmon experiment at the British Museum, three fish might be seen, sent home from Tasmania

by Mr. Morton Allport, one of the Salmon Commissioners, to Dr. Gunther, for his opinion upon them. He pronounced two to be brown trout, and the other a salmon trout, the latter having in its stomach several undigested sardines, a fish never found except in salt water—a proof, therefore, that this fish had only just returned from the sea. Mr. Morton Allport has made the natural history of fish his study for many years, and he disagrees with Dr. Gunther, and declares his conviction that the fish is a true salmon, and not a salmon trout—a grilse, in fact, just returned from the sea. Several fish of a similar character have been caught in the Derwent, and, after careful examination, judged to be the grilse of the true salmon. It seems almost incredible that, as at least 6,000 salmon smolts have been liberated from the breeding-ponds of the Plenty, and only 150 salmon-trout smolts, that they should be continually catching the latter, and not one of the former. He had received many letters from residents and non-residents of Hobart Town, telling him that they were certain that the salmon are naturalised in the Derwent; and they have seen many hundreds of young fish, and some big salmon. With reference to the *Eucalyptus globulus*, the blue-gum of the Colonies, to which reference had been made, he did not believe it indigenous anywhere except in Tasmania, and there it was only found growing on the northern side of the island. It was the leaves of this tree which had been found so beneficial in medicine; and it is possible that the leaves of the other *Eucalypti* spread over Australia had not this quality. Dr. Mueller is reported, some two years ago, to have discovered it growing some 100 miles from Melbourne. One word with regard to the interesting paper read by Mr. Wilson: no one could with greater propriety have prepared such a paper, for he had for many years, and to a great extent, practised what he has preached.

Mrs. Lewis, as working in the same cause with Mr. Wilson, begged to say that the various speakers who had more or less ably spoken, had lost sight of the wider and larger bearing of the paper. The question was not what was to be done with the overwhelming Scotch thistle, with the impudent sparrow, with the too prolific rabbit, or anything of that kind, but how far human endeavours could increase the value of life by enriching those regions into which perhaps their erratic tendencies led them. There had never been a nation since man lived on the face of the globe so colonising as the British islanders, for in the first record given to them, long before the remarkable men came from Marseilles, there was this little passage left by the Carthaginian explorers: "The Britishers exist in large numbers, and are commercially inclined." Those first

Britishers then went, and could go no further, than the shores of the Baltic, but from those shores they had gone to every place, and taken something with them to enhance its value. The principle they had to decide that night was the appropriation or assimilation of various vegetables and various animals, and whether they would increase the value of the lands to which particularly English people go. Surely there could not be a doubt about it. There was no lady or gentleman present who would like to leave and return back to Australia simply with the kangaroo; and there was no honest person present who could say that he quarrelled with Mr. Wilson's principle. She spoke first for his principle, and secondly for the beautiful and ideal shape in which he had clothed it; and no man had a right to disclothe it. Mr. Wilson wished to impress upon them that there was a great ideal in really introducing whatever nature and God had given in one land into another, as far as climate would allow. She went further than Mr. Wilson, and would say they wanted assimilation in England. There were things that would allow larger numbers to live well and to be happy; and it was a first principle—and all the Australian colonisation showed nothing more clearly than—that every man and woman, according to their ability to gain their livelihood, had a right to make life as happy and enjoyable as possible. It was on these broad grounds that Mr. Wilson brought forward his paper. He had clothed his opinion in an ideal shape, and the Colonial Institute had a right to recognise the leading feature of the idea, that the mother country should try by all its power, by Government or by private endeavour, to make the lands which England colonised as happy and as comfortable as possible. (30)

Dr. ORD thought no one having listened to the paper could have failed to see two things: first, very lofty thought, and second, keen and incisive intelligence. Most of the discussion of the evening seemed to have consisted in fault-finding, but wherever great things had to be done much more might be accomplished by seeing the good than by dreading the bad. When facing difficulty, men were either weak or strong. It was the strong men who knew how to take the good out of things and how to crush the bad, and that was exactly what Mr. Wilson had been steadily enforcing. They had reason to thank themselves for acclimatisation, for he did not know what they would have done in England if some sturdy adventurers—some Hawkins, or Drake, or Raleigh—had not in Queen Elizabeth's time brought over from the West two weeds of the night-shade family, the potato and tobacco. The potato was spoken of as a "restorative" in the writings of that period,

although, perhaps, now it might not be considered as such; and from botanical books of that time it might be seen that grasses were collected from all manner of places for the sake of certain salts contained in them. The meaning of all this was, that the diet of the people was deficient in a kind of material absolutely necessary to health, for the prevention of scurvy and allied diseases, which were then, owing to bad diet, frightfully destructive. These things are hardly heard of now, and beyond all doubt the potato has had a predominant share in sweeping them away. A little bit of acclimatisation effected by a rough sailor has thus produced a widespread and permanent benefit to mankind in Europe, and such considerations might remind the Society (as had been suggested by the preceding speaker) that there was work to be done at home as well as in the Colonies.

Mr. WILSON, in reply, said if Dr. Hooker had not left he should have reminded him of a passage in the paper where he said, speaking about scientific men, "with some most honourable exceptions," and amongst those exceptions Dr. Hooker and his father would occupy a very prominent position. Mr. Michie was an excellent man, but his path had fallen in stony places, and if he got confused between a sparrow and a thrush they must have every consideration for him. He (Mr. Wilson) had certainly not mistaken the twittering of the sparrow for the song of the thrush, as suggested by Mr. Michie. He had referred in his paper to some persons who were so occupied with other subjects that they wandered amongst beautiful things without appreciating them. He knew such men by the dozen, and from the bottom of his heart he pitied them.

The CHAIRMAN said they were indebted to other countries for a very large proportion of the vegetables now naturalised in this country, and this was one result of people travelling about and bringing home with them the products of the various countries they had visited, and he thought it was only natural when people resided in Colonies such as Australia that they should try and grow everything they could for their comfort and gratification. The lady who had addressed them had very properly called them to order by bringing them back to the real question before them, and he would not spoil anything she had said so well by attempting to repeat it. He would merely say that he thought Mr. Wilson had endeavoured to show that it was not only the absolute necessities of life which he proposed to naturalise (for that he thought was a better word than acclimatise), but that they should also, as far as possible, endeavour to produce those things which rendered

nature beautiful as well as useful. In conclusion he begged to propose a vote of thanks to Mr. Wilson for his very able and lucid address.

The resolution was carried unanimously.

The HON. SECRETARY announced that the next meeting would be held on the 18th of January, at which General Bisset would read a paper on South Africa.