

THE PALM HOUSE

furnishes shelter and warmth for Palms, Plantains or Bananas, and Arborescent Ferns. Some of the palms are 30 feet in height, and all have great leaves forming stately tops. The great fan palms, the Mauritius fan palm, and the cabbage palms, are among the finest specimens. The plantains also have a great expansion of leaf, some of the leaves being ten feet long by four wide. Banana plants, the growth of two years, support bunches of fruit of twenty and thirty pounds weight. Except in the form of the fruit, the banana in no wise differs in appearance from the plantain. The Screw Pine or Buttress Tree is to be seen in this house. Its leaves are arranged about the stem in a beautiful spiral like an Archimedian screw, and their form is not unlike that of the pine apple plant. This tree is also remarkable in having the thickest part of the stem uppermost, which, crowned as it is with large masses of heavy leaves, presents a problem as to how it can support itself even in a moderate storm. The solution of the problem is simple and interesting. Aerial roots protrude from the stem, incline towards the earth, and there fix themselves partly in a vertical, and partly in a horizontal position. Thus the tree is buttressed or propped up. The specimens which I saw have never flowered; but in India the delicious perfume of its flowers is said to pervade the air for a mile around.—Here too are the reedy bamboo, the palm-like vegetable ivory, and beautiful cycadeaceous plants, with palmy leaves, cone-like fruit, and wood with concentric circles like the fir. Of these latter plants one species, needle-leaved, looking half fern, half palm, shoots up vigorously from its huge pot.—This plant, as well as the tribe to which it belongs—included in which is the sago plant of Japan—is very interesting both botanically and geologically; botanically in consequence of forming a link intermediate with ferns and pines; geologically, from similar plants being found fossilized in England in the oolitic formation, thus shewing that in the far past these strange plants flourished in the British Islands, though now almost wholly confined to the Southern hemisphere. The arborescent ferns in this house are mostly young plants. The stem of a fine plant of the *Cyathea serrata* is upwards of 20 feet in height, and the fronds of another species, *schiediana*, are from 10 to 12 feet in length. Other large-leaved plants as the *Streitzia augusta* from South Africa and the plant which bears so great a resemblance to it *arbre du voyageur* of the French, are at hand for inspection. The leaves of this latter plant, where they overlap each other, hold water, which is always fresh. When these leafy basins are pierced with a spear or other sharp instrument, the water gushes out and supplies the thirsty traveller with a cooling drink.

THE CAMELLIA HOUSE

is set apart for Camellias, Azaleas, and Rhododendrons, during the colder months. February and March are the months to see it in its glory. During the summer and autumn, when the camellias are removed, it is filled with the hardier sorts of palms and other plants remarkable for their foliage.

In addition to the houses which I have named, there are ample double-roofed pit houses used for young stock of seedlings, and plants for bedding out. All the houses are abundantly supplied with water raised from the river Tolka by hydraulic pressure. The heating is effected chiefly by steam.

THE ORNAMENTAL FLOWER GROUNDS.

It is refreshing to breathe the open air after inhaling the warm humid atmosphere of the conservatories. Immediately in front of the beautiful residence of Dr. Moore and extending along side and beyond the line of hothouses is a broad belt of Ornamental Flower-ground, laid out in beds on grass, interspersed with single specimens of rare and ornamental shrubs and trees. The beds are filled with a great variety of showy annuals and other half hardy plants. Among the ornamental shrubs and trees, are the New Zealand Flax; the *Drims vintari*, which yields the Winter's bark of the pharmacopoeias; the Babylonian Willow, of mournful memory to the captive Jews; and other interesting trees from North America, Patagonia, and China. Among the ornamental grasses are the *arundo donax* the gigantic reed of the South of Europe, in the pampas grass of South Brazil. The latter was first raised in Europe in these gardens. The rockery with its pretty plants, and the fountain and small aquarium add greatly to the beauty of this ornamental division.

THE DEPARTMENT OF HARDY HERBACEOUS PLANTS.

is carefully arranged. The plants are grouped in natural orders or according to the natural system of classification. The scientific

designation of each with the English, also, as far as can be given, is written on large wooden labels. These are placed at the end of each order and ranged along the margin of the walk in such a manner as to render it impossible for the student to pass from one order to another by mistake. The arrangement of British plants on the opposite side of the walk is after the method of M. De Candolle. The different natural orders are contained in separate beds formed on the grass, with names placed at the end of each bed. Adjoining these native plants are such medicinal plants of modern pharmacopoeias as will flourish in the open air. The method of arrangement is the same as that of the British plants.

THE ARBORETUM

affords an excellent opportunity of observing effects produced by grouping together the different species of trees and shrubs. The plants are classified after the system of Linnaeus. Among the more noteworthy trees in these fine groups are the Olive, the cedar of Lebanon, the cork tree, a young *Wellingtonia Californica* (the huge cypress we have all read about); and the plane tree. The groups of ashes and cypresses are very beautiful.

THE NATURAL AQUARIUM AND PLEASURE GROUND.

are strips of Eden. The beautiful winding sheet of water bears on its placid surface thousands of water lilies. Various kinds of aquatic plants grow along the margin of the little lake. Fine groups of the different species of Cat's-tail of a rank growth, are at the lower end of the Aquarium. The grounds on both sides of the water are occupied with various sorts of ornamental shrubs and trees, among which is a splendid tree of the copper coloured beech. A Willow garden occupies the low-lying ground. The foliage of this garden is very light in colour and shimmers in the sun like silver. The collection of willows is extensive. They are cultivated for the purpose of shewing specimens and supplying cuttings to those interested in willow culture for economic purposes. Near by are two massive lines of yew trees, between which is "Addison's walk," said to have been the essayist's favorite when he was Secretary to the Marquis of Wharton. Rare shrubs find shelter on the south side of the rows of yew.

THE HORTICULTURAL AND AGRICULTURAL DIVISIONS

exhibit selections of the more important plants for field cultivation, and small quantities of numerous varieties of the different vegetables raised for culinary purposes. Experiments with different kinds of manures on various crops are also tried here. The fruit tree division is occupied with hardy sorts, including pears, apples, plums, and cherries, all of which are true to their names, and many of them profitable varieties for cultivation in Ireland. Fruit growers on application, can obtain grafts, and any assistance necessary to correct the nomenclature of their hardy fruits; as well as ascertain the merits of the different varieties. A general collection of exotic grasses is arranged in natural sections. The kinds best suited for agriculture are separated from the general collection, and cultivated in compartments. Between the two, a portion of ground is devoted to the hardy plants used in arts and manufactures, beginning with those useful for their fibre, and followed by those yielding oils and dyeing materials. Each section is marked by a board and the plants are separately labelled. A large portion of ground is set apart for culinary plants, which are cultivated in square divisions, and arranged so that notes can be readily taken of any experiment made on their culture, and the methods of rotative cropping exhibited. This part of the Gardens terminates with a selection of the different sorts of pot-herbs.

THE MUSEUM.

Having given this hurried and very imperfect sketch of the several departments of the Gardens, the Museum claims a few words. The iron house which is temporarily used for this purpose is unsuited for a Museum but it has afforded accommodation for a good beginning. There are specimens of preserved fruits, a good series of fibres and samples of cloth, and many parcels of the inner barks of trees, with paper, and ropes, and garments made from them. There is a fine collection of cones and seed-vessels, barks for medicine and for dyeing, sections of woods, of diseased trees, of grafted trees, shewing the internal effects of grafting, and numerous other specimens of interest. The Museum is intended ultimately for the exhibition of all vegetable products in their raw state, especially of those useful in domestic economy, medicine, and the Arts.

It is also proposed to have a department for specimens of diseased trees, to illustrate something of the pathology of plants.

THE TRAINING DEPARTMENT.

A most important department, is the training of young men in this great establishment, who annually go forth to different parts of the country diffusing much of the information they acquire while here. There are two classes of young men receiving regular and practical instruction, under the supervision of the curator of the Gardens. The first class consists of those who are already acquainted with the practical parts of horticulture and are admitted to this establishment for the purpose of studying practical botany, along with the management of plants and pleasure-grounds. These students are lodged in the Gardens and remain two years. During the first year they are employed in the conservatories and the second in the outside grounds. They are admitted in the order of their application. The second class consists of regular apprentices, who also lodge in the gardens. Both classes have the advantages of a good library and reading room.

It would be difficult to over-estimate the influence of these Gardens as a great and popular instrumentality for the diffusion of knowledge, and the cultivation of taste; and they are wisely maintained by the British Government as one of the educational establishments of the land. Dr. Moore assured me that the extent and natural beauty of the ground and variety of objects embraced are not to be found combined in any other Botanical Gardens in Europe. The gates of this magnificent school are open free to all classes of the people, and the annual enrolment of those who seek instruction and pleasure within, reaches the high number of 250,000.

Very sincerely yours,
T. H. RAND.

Dublin, August, 1870.

For the Christian Messenger.

OUR FOREIGN MISSION.

Mr. Editor.—It will be doubtless to gratifying to the friends of this Mission to know, that provision has recently been made for the re-employment of two more native preachers. As it is desirable to make a remittance to Burmah soon, especially in order that these may again employ their posts of usefulness without any avoidable delay, contributors to the Mission, in any of its departments, who have not lately forwarded their contributions, are respectfully requested to do it as speedily as may be in their power.

Yours fraternally,
C. TUPPER, Sec'y.

Aylesford, Sep. 30, 1870.

P. S.—It will be remembered that I stated, after my return from Convention, that there was a discrepancy between my accounts of the sums acknowledged as received from Women's Missionary Aid Societies and the amount in hand. It has been ascertained that this arose, not from the loss of money, but from an oversight in crediting one of the Societies with \$24.00, when the sum forwarded was only 14.50, as their letter now in my possession shews.

It is my intention to publish a statement of sums recently received so soon as information relative to the objects for which certain sums are designed, shall have been received.

C. T.

Christian Messenger.

HALIFAX, OCTOBER 5, 1870.

THE N. S. WESTERN ASSOCIATION

so auspiciously begun, as noticed in our last, was equally pleasant and satisfactory in its subsequent meetings.

CLEMENTS

comprises a large district of country of several miles in extent on the eastern side of the Annapolis Basin. Clements-port is at the mouth of Moose River, and contains a number of handsome residences and churches. For several miles up the river it is called Clementsvalle. All along the river and its branches are fine farms with comfortable surroundings. The country being a series of undulations great variety is given to the scenery. The sides of many of the hills being covered with hard-wood trees presented in their foliage an exquisite combination of autumnal tints, the various shades of green, red and yellow, in many places gave a richness and beauty to the landscape peculiar to this season of the year and to this climate.

THE POTTER FAMILY

comprise a large portion of the population of this district. Branches of the family are found all along the road from Annapolis Royal to Hillsburg, but they centre at Clementsvalle, almost every house belonging to one of that name. In company with James E. Potter, Esq., who kindly brought us on to Annapolis, we counted upwards of thirty families. Besides these there are many other families in which the wife's name was Potter.

Although the ministers of the Association were engaged on the Lord's Day, in preaching in so many places at a distance, yet at Clementsvalle, where the Association was held, large congregations assembled at each of the three services. In the morning the preaching was by Rev. Dr. Tupper, in the afternoon by Rev. John Rowe, and in the evening by Rev. Dr. Sawyer.

The distance of the dwelling-houses from each other was unfavourable to large numbers attending the early morning meetings, but this did not prevent them from being held. Each morning at 3 past 6, prayer arose from quite a number of earnest worshippers, and blessings were received, we doubt not, in answer thereto.

Letters were sent from 59 out of 60 churches. They shewed that a total of 213 persons had been received by baptism; an average of about 3½ per church, and less than 2 per cent on the whole membership. Taking the whole totals under "Increase," viz. By baptism 213, By Letter 69, and Restored 11; and then those under "Decrease," we find that there have been 115 Deaths, 58 Excluded and 165 Dismissed, and we have an actual loss of 45. These totals we know do not in reality shew the correct state of the case, but they make the nearest approach that can be obtained under existing circumstances and arrangements.

In consideration of this small number of additions, and the general want of prosperity in the churches, it was proposed that a season of special prayer to God for the outpouring of his Spirit should be held. This was readily adopted and 9, 30 a. m., on Tuesday appointed for the purpose.

On Monday morning the

INTRODUCTORY SERMON

was preached by Rev. R. D. Porter from 1 Cor. i. 22, 24. The subject was, "Christ crucified the highest manifestation and embodiment of the wisdom of God." In the development of this theme the preacher adopted two leading divisions:

1. Christ exhibited himself as the wisdom of God in his character of a reformer. The reformation was to be a thorough one, reaching to the hearts of those to be reformed, and to the foundation of society and of their being.

2. In giving to his reformation an external and visible organization, such as he has in his church, Christ has exhibited divine wisdom. It was an exceedingly well-timed and appropriate discourse for the occasion, and well deserved the commendation it received. A resolution requesting its preparation for publication in the *Christian Messenger* was unanimously adopted.

After the sermon the report of the Home Mission Board was presented.

Rev. Isaiah Wallace shewed the great importance of Home operations and the great obligations which he was laid to the cause of Missions. He gave some interesting accounts of his own labors as a missionary in New Brunswick, and the good results. He was fully convinced that there should be one Home Missionary organization for the Province. This is the great work of the Association, to carry the gospel beyond the limits of existing churches. Much more ought to be done. In the spirit of the older ministers we should go out, and by that means the churches would know the destitution that existed, and would be stirred up to greater efforts on behalf of their fellow countrymen.

Rev. P. F. Murray gave some interesting details of Shelburne town and county, where he had labored as a missionary. He had found many families within only a few miles of Shelburne which no minister had ever visited, where there seemed a readiness to listen to the good news, but where darkness reigned supreme. He had felt deeply the great demand for christian labor among the poor and destitute.

Rev. W. H. Richan thought there should be more attention given to this great matter. He highly approved of the remarks made respecting one Board for the Province, and thought that much good might be effected by more vigorous measures being adopted. There must be a wise oversight, and he believed that many places might