

AUSTRALIAN FORESTS.

In South Australia, as in other Australasian Colonies, they have wisely adopted a system of scientific forestry, giving much attention to the conservation of existing forests and the formation of new plantations. Large tracts have been reserved for forests.

From the South Australian Advertiser we take the following extracts from a report of a visit by Ministers and members of the Legislature to some of the forest reserves:—

SOUTH AUSTRALIAN FORESTS.

Not long after Mr. Brown's arrival in South Australia the Forest Board was abolished and the department placed under the Commissioner of Crown Lands, with Mr. Brown at its head, Mr. Melville retaining his position as secretary. From that time to the present the work has made steady and valuable progress, as the following figures will prove:—At the present time there are 139,595 acres of country devoted to forest purposes in this colony, independently of reserves on the Murray Flats, the area of which have not yet been declared. On June 30th, 1885, there were in the northern district the Bundaleer, Wirrabara, Mount Remarkable, Penwortham, and Mount Browne forests, 89,769 acres. Central district—Port road reserve, and Goolwa forest, 203 acres. Western district—Walleroo forest, 4,174 acres. Southern district—Mount Gambier, Mount Burr, Mount Muirhead, Glenroy Flat, Mundulla, Bordertown, Cave Range, Penola, and Mount McIntyre forests, 45,449 acres. In these various localities the total of lands enclosed for planting amounted to 5,727½ acres, which area has been increased since the conservator made his last annual report. Since the organization of the forest department in 1876 the total revenue to June 30th, 1885, shows £50,919 12s 9d; total expenditure do. do., £52,752 8s 8d; revenue last year, £8,202 14s 5d; expenditure last year, £8,028 18s 4d; total number of trees alive from last year's operations, 162,000; total number of trees alive from the planting operations since 1876, 1,200,000; raised by conservation in indigenous forests, 600,000; number of trees reported to be alive of those given away to landowners, 400,000; probable revenue over expenditure this year, £1,200; estimated value of plantations at the end of present year, £130,000. These are figures which speak for themselves, and no doubt when they are presented to Parliament they will occasion close scrutiny, and obtain for the conservator a large meed of commendation. But as to the actual value of the forest and of its real importance to the State, members of Parliament generally have but very vague notion. It is only by a visit and personal inspection that they can form anything like an adequate idea of the work that has been done in connection with the nurseries and plantations. Protecting the natural-grown timber is a matter that could be done to some extent by regulations from the department with officers to carry them into effect, but it is in the nurseries and plantations where the skill of the scientific forester is shown, and upon what is done here depends our forests of the future.

TREE PLANTING AT JAMESTOWN.

The visitor who may have known Jamestown a few years ago would fail to recognize its once open and dusty streets in the umbrageous and pleasing aspect they now present. Tree-planting has been very largely indulged in by the corporation, to whom the young trees were furnished gratuitously by the Forest Department. The enclosures down the centre of the main street, the public reserves, and the sides of the creek all display a very neat growth of forest timber. There are no less than 75,000 forest trees at Jamestown within the corporation plantations, and though their value a few years hence will represent a considerable sum of money, their cost to the Government at the time they were presented to the corporation would not be more than one half penny each. Jamestown is blessed with a stream of water which runs all the year round and a nice sheet is formed between the railway station and the township where the creek has been dammed back. Forest trees, however, are not dependent on irrigation. If the young plants have been properly reared, and are put in the ground in avenues, or 8 or 10 feet apart at the proper

time of year, they will flourish and do well, this being exemplified in the healthy appearance of the trees after the present long dry summer. The owners of various farms around Jamestown have also availed themselves of the chance of procuring plants from the department, and Mr. Brown sets as much value to the country in the dissemination of these plants as he does in rearing them in the forest. He contends that the benefits will be almost incalculable if farmers as a body will plant groves or avenues or rows of trees about their farms. In addition to the protection from the weather which it affords to their stock the rainfall will be increased and become more general than at present. The showers will be less tropical in their character, and consequently the effects of the rainfall will be more lasting. There are dozens of farmers and private people in the Jamestown district who have planted the Eucalyptus globulus (Tasmanian blue gum), and the Eucalyptus corynocalyx (sugar gum), which are the two hardiest and best known of their species. One farmer, Mr. Mitchell, has 10,000 trees on his estate, Mr. Crane has a similar number, Mr. Neil about 5,000, and altogether, within a radius of seven or eight miles of the township, there are now 100,000 trees growing, where formerly there was scarcely a tree visible in the landscape. Although the original settlers in the area were glad to find the country so bare that no clearing was needed before they put the plough in the land, they have since discovered that timber is needed, at least for fencing and firewood, and for various purposes in connection with the working of a farm. By-and-bye too they will be able to supply the larger timber to railway contractors and others, just as the department is doing now, and thus will realise a substantial profit from their treegrowing.

BUNDALKE FORESTS.

Stretching away for miles on either hand nothing but a bare, dead-looking country, with perhaps here and there a ploughed paddock, or bits of straggling scrub, met the eye after the visitors had turned their back upon Jamestown till approaching Mount Robertson in the hundred of Belalie, and on the east of Yangya to the north of Mount Campbell they descried the forest of Bundaleer in the distance. Situated at the foot of a long chain of ranges the reserve includes various descriptions of soil from rich black alluvial in the swamps to brown and red sandy loam, very rich chocolate, and other varieties in the bottom lands and around the ironstone and limestone ridges. Gravel beds, slate reefs, sandstone, and rough rocks abound on the higher elevations, through which water-courses find their way to the creek which runs from the north through the main part of the forest to the southeastern boundary. The site is 1,800 feet above sea level, and the rainfall last year was 23 inches spread over 57 days. The area of this reserve was 22,000 acres; area planted, 2,300 acres; number of trees planted last year, 146,298; number of these now alive 106,000; revenue in 1884-5, £2,834 8s 7d; expenditure in 1884-5, £1,548 11s 6d; total number of trees alive from the planting since commencement in 1876 about 600,000; total revenue since 1876, £25,731 19s 10d; total expenditure since 1876, £17,211 8s 7d. The reserve is divided into plantations A B C D E F G, where according to the soil the various kinds of trees are placed. Plantation F for example is devoted to Eucalyptus globulus; E. corynocalyx, E. viminalis, Pinus insignis, P. pinaster, sarcocolla excelsa, cupressus semper-virens and Abies douglasii. In plantation G there are gums only, viz., three kinds named above, and in addition the Eucalyptus rostrata, E. gunnii, leucocylon, and gomphoccephala. In the nurseries on this reserve there are now about half a million plants and the following are the popular names of the different varieties: Sugar gum, Tasmania blue gum, manna gum, white swamp gum, red gum, South Australian blue gum, toart gum of Western Australia, English oak, remarkable pine, maritime pine, Aleppo pine, the bunya bunya, Indian cedar, pepper tree, white mulberry, white cedar, tamarisk tree weeping willow, sycamore, cork elm, English elm, American white ash, upright poplar, seedling olives, common cedar cypress, American catalpa tree, and Canadian maple. As the party approached the forest they gave

vent to exclamations of surprise and admiration at the 75,000 Tasmanian blue gum which extended on their right hand for miles along the road at an average height of 40 feet in rows about 10 feet apart. This vigorous picture of life and beauty formed a marked contrast to the barren plain on the left, which extended as far as the eye could see; and when on nearing the forest cottage the Pinus insignis, with its deeper green foliage, was met with, standing in equal rows to the height of twenty feet and many thousands in number, there were more ejaculations of astonishment and gratification. Undoubtedly the legislators who had heard and read of the forest operations had little or no idea of what was meant by them. The blue-gums, to which we have referred, were planted nine years ago, and are now of a size nine inches through, fit to be cut for telegraph poles. This season 5,000 will be cut for this purpose, representing 10s. each to the Telegraph Department. This is merely a thinning out process which will take place each season to allow room for the growth of larger timber, which in time to come will furnish the colony with railway sleepers. It takes nearly 30 years to bring a gum tree to perfection, but the pines mature in about 20 years and then furnish deals for building purposes. Of this tree there is a very number thriving wonderfully well, and of 30,000 planted open root (like cabbages) 98 per cent. are surviving. The Tasmanian gums planted in the same manner thrive nearly as well, as also the sugar gum, but most other varieties are planted out in bamboo. Over 43,000 of the latter are alive and thriving out of 45,000 planted out last season. Some years ago it was supposed that pines must be planted out in pots, but here there is ocular proof to the contrary. Four year old pines raised from seed reach 16 feet in height, and the Tasmanian gum 20 feet in the same period. The visitors left their vehicles at the forest cottage, and under the guidance of Mr. Brown climbed the hillside, where three hundred acres enclosed two years ago now carry 90,000 young gums, and 150 acres were shown that last season was ploughed eight inches deep, and planted half with pines and half with sugar gums. Of these 97 per cent. are doing well, notwithstanding the very dry season, and are now eighteen inches and two feet in height.

WIRABARA FOREST RESERVES.

The latest figures at our command up to June 30th of last year give:—The area of this reserve, 48,600 acres; area planted, 450 acres; number of trees planted last year, 43,640; number of these now alive, 35,000; revenue in 1884-5, £1,925 11s 2d; expenditure in 1884-5, £1,450 1s 5d; total number of trees alive from the planting since commencement in 1876, 250,000; total revenue since 1876, £15,697 12s 9d; total expenditure since 1876, £12,690 16s 3d; total number of trees raised in natural forest and pruned since 1876, 500,000. To these figures must be added the planting, etc., which have taken place during the present season which will show a vast increase on the above, and which will be placed before parliament when the time comes around for the conservator to present his yearly report. Within the forest there are six saw mills in full work, and a number of sawpits cutting sleepers for the Silverton railway. A halt was made en route at one of these mills, where the Commissioner of Public Works officially inspected the sleepers that were being cut, and was very well satisfied with their quality. They are of red gum and sugargum, both close grained substantial timber. The railroad authorities are very strict in respect to these, and rejected some 15,000 which were not considered worthy, but these will certainly be useful for other purposes. Mr. Brown in his last annual report says:—“Hitherto the sleepers for our northern railways have been procured chiefly from Western Australia and Victoria, notwithstanding that large quantities of useful timber were available in the forest under review. Owing, however, to the searching enquiries made by the late Commissioner of Public Works (the Hon. T. Playford) in regard to the lasting qualities of the respective timbers, it was decided to make use of the Wirrabara timber as far as possible for the Silverton railway. In consequence of this decision the number of sleepers referred to are now being

contracted for in this forest. Messrs. Moorhouse & Jesser, of Laura, the successful tenderers, being under agreement with the department, the above named contractors have engaged to take the required number of sleepers, or as many of these as the forest will provide, at the rate of 4d per sleeper, upon the understanding that all the waste timber left in the forest and at the saw mills, in connection with their production, remains the property of the department. The contractors have erected two powerful mills, and engaged the service of another saw mill plant which was in the forest previous to their contract. Should the 200,000 sleepers be procured from the forest, a sum of £3,333 odd will accrue to the department therefrom. This does not include the waste timber, of which there will be a very considerable quantity, and from the sale of which a sum of at least £200 may be looked for. Apart altogether from the revenue which will be derived from the sale of these sleepers, the removal of the old matured trees will be of incalculable benefit to the forest as a whole. There is a very large number of matured trees in this forest which are now only incumbering the ground, and their removal is advisable not only in order to utilize the timber at its best stage, but also to make room for a younger crop of trees, so that a regular rotation of timber may be available from the reserve. By doing this and encouraging the natural growth by systematic conservation, the output capabilities of the forest may in time be made to yield a regular and permanent supply of valuable timber both for the maintenance of our public works and the requirements of the surrounding country. In order to increase the lasting capabilities of the sleepers it is specially contracted that no trees will be felled whilst they are in full sap. By adhering to this most desirable condition it is estimated that from three to four years will be added to the durability of the sleepers. A large number of trees having been rung during the dormant period of the sap, the cutting and hauling of these to the mills will thus be carried on at all seasons without detriment to the timber.” Messrs. Moorhouse & Jesser have already supplied or stacked at the Laura station 170,000 out of the 200,000 required for the Silverton line. Other contracts besides that for Silverton are also being in progress of fulfilment. There is ample material in the forest for works of this nature, as the area extends for thirty miles, with an average breadth of six miles at the foot of the Flinders Ranges. Of the trees planted in this forest 250,000 are now alive and doing well, and these consist mostly of Pinus insignis, American and English walnuts, American catalpa, Canadian maple, cork, English elm, and the sugar gum. The grazing rents in this reserve last year amounted to £1,344. Shortly after two o'clock the party arrived at head quarters in the forest, and after dusting down partook of a reliable luncheon laid within the garden belonging to the Areas Garden Company. This is a lovely spot, where the natural attractions have been added to by the careful industry of the skilled horticulturist and gardener, as beautiful flower-beds, fruit trees, and all kinds of vegetable are to be seen there in the highest state of culture. Some speechifying was indulged in at the luncheon, when well-deserved compliments were paid to the Commissioner of Crown Lands for organizing the trip, to Mr. Krichauff for his early efforts in the direction of forest culture, and to the conservator, Mr. Brown, for his marked ability, skill and energy in bringing the plantations and reserves to their present state of perfection. The distance to be travelled to reach Laura before dark and the dangerous state of the roads prevented more than a casual glance being taken of the wattle and pine plantations and the nurseries at Wirrabara, but sufficient was seen to impress everyone present with the practical results that have been already achieved, and the great importance of forest reserve work as a lasting and remunerative national industry.

40,000 saw-logs belonging to the Gilman Company have been abandoned at Partridge Creek, owing to low water.