In his Report for 1878, he said:—

Eucalypts—My anticipation about the Eucalypti when I wrote my last Annual Report, have not been verified; for, although they germinated freely enough, the majority of these species die as they get a few inches high.

E. globulus appears to be the worst species for this climate, *E. citriodora*, *E. amygdalinus*, *E. goniocalyx*, *E. pilularis* and *E. calophylla* do best. I attach very little importance, however, to this, as the belief in their prophylactic virtues is now considerably weakened and they are quite unsuited, owing to their straggling, ragged appearance, for garden ornaments.

In his report for 1880, he said:—

When sown *in situ* they seem to thrive fairly well in Singapore but do not appear to stand transplanting. *E. siderophloia*, *E. Baileyii* and one or two other species are growing well in the nursery. (none of those are now to be found).

One must perforce come to the conclusion that the Eucalypts (with rare exceptions) are not suited to our climate, and taken for granted that all the useful and healthful effects which are attributed to the Eucalypts, in so far as influence on climate is concerned, be perfectly true, I think it has been proved conclusively that the tree will not grow in sufficient quantities to warrant further trials.

J. W. ANDERSON.

NOTE.

Since writing the above note on the Eucalypts, I have been able to obtain the correct determinations of the eleven large Eucalypts mentioned therein. Specimens were sent to Mr. Maiden, Director of the Botanic Gardens, Sydney and Government Botanist, who most kindly identified them for me. The one adjacent to the bandstand and under the name of *intermedia* has been identified as E. corymbosa, Sm., while those in the Economic Gardens are probable specimens of E. terminalis, F. & M., but owing to incomplete specimens being sent (no seed being available), Mr. Maiden was unable to say for certain as to whether this was correct or not.

A SACCHARINE CONSTIUTENT OF PARA RUBBER.

In October, 1909, two small specimens of smoked Para rubber from the Botanic Gardens at Singapore, representing a consignment offered for sale in the United Kingdom, were forwarded for examination to the Imperial Institue by brokers in London, who stated that the rubber had been prepared experimentally by the Brazilian method

of smoking. On examination in the usual manner, it was found that the rubber contained a very high percentage of "resin" (*i.e.*, matter soluble in acetone), amounting to 5.2 per cent on the dry material. This proportion of resin is very much higher than is usually present in Para rubber from the East, but owing to the smallness of the samples supplied to the Imperial Institute it was not possible to investigate the matter in detail. Subsequently, however, a large specimen of smoked rubber, carefully prepared from the latex of a single tree by the same process as that employed for the earlier specimens, was forwarded for further examination to the Imperial Institute by the Director of the Botanic Gardens at Singapore.

The specimen consisted of a spindle-shaped piece of smoked rubber, weighing 6 lbs., which was almost black externally but whitish within when cut. The rubber was rather moist, and a quantity of brown viscous liquid was present between the concentric layers.

An analysis of the rubber gave the following results:—

	Rubber as received.	Composition of dry rubber.
	per cent.	*per cent.*
Moisture	7.4	——
Caoutchouc	84.6	91 4
"Resin"	4.4	4.8
Proteid	2.9	3.1
Ash	0.7	0.7

The percentage of "resin" present in the dry rubber was a little lower than that found in the previous samples (4.8 per cent. compared with 5.2 per cent.), but was still very much higher than the amount usually present in plantation rubber from the East.

An examination was made of the portion of the rubber dissolved by hot acetone, and it was found that a large quantity of a solid crystalline substance, which was soluble in hot water, was included with the resin. The substance amounted to no less than 2.7 per cent. of the dry rubber, so that the true figure for the percentage of resin in dry rubber was only 2.1 per cent. instead of 4.8 per cent.

The crystalline substance was submitted to a detailed examination and proved to be a carbohydrate, which was identified as *laevo*-methylinosite. The presence of this substance in the aqueous portion of the latex of *Hevea brasiliensis* remaining after the coagulation of the rubber has been previously recorded by de Jong, and closely allied carbohydrates are known to occur in other latices. The presence of such a large amount of the *l*-methylinosite in this specimen of Para rubber is no doubt to be attributed to the method of preparation employed, whereby the whole of the solid constituents of the latex remain in the rubber, whereas in the usual method of coagulation adopted in the East, the rubber separates from the aqueous portion of the latex, which retains the soluble constituents in solution.

In order to complete the investigation, a supply of the latex of the same tree from which the rubber had been prepared was obtained from Singapore. The aqueous portion of this latex, after separating the rubber, was found to contain a quantity of the *l*-methylinosite, amounting to 0.46 per cent. of the total latex. The presence of this carbohydrate has also been proved in fine hard Para rubber from South America.

The results of this investigation are of considerable practical interest as showing that in the analysis of rubber prepared by the Brazilian method (or by any method which leads to the inclusion in the rubber of all the solid constituents of the latex) it will be necessary to take into account the possibility of other substances besides resin being extracted from the rubber on treatment with hot acetone.

A preliminary note on the results of this investigation has been communicated to the Chemical Society of London, by Dr. S. S. Pickles and Mr. B. W. Whitefeild, of the Scientific and Technical Department of the Imperial Institute.—(*Bulletin of the Imperial Institute, April, 1912.*)

PARA RUBBER IN ST. LUCIA.

Ten thousand seeds of Para Rubber *(Hevea brasiliensis)* were obtained from Ceylon and arrived in October. Some of them were distributed to purchasers and the remainder were sown at the Experimental Station nursery. Only 10 per cent. of the whole consignment germinated. At the station 780 plants were raised and some of the number will be reserved for planting in a plot. About 600 will be available for distribution.

Para rubber planting in St. Lucia is at present only on experimental lines, but the trees planted in 1908-09 appear to be making very satisfactory growth, and some interest in the cultivation is developing. A more extended trial is desirable, to test the suitability of different soils and localities for the successful cultivation of this tree.

Experiments have been carried out to test the hardiness of Para rubber plants for distribution in the Island, when they are packed, with the view of reducing the bulk in and therefore the cost of transporting parcels of them, at the same time ensuring that they shall arrive at the various estates in sound condition. The trial was carried out as follows: Twelve plants were lifted from the seed beds, the tops cut back leaving the plants a little over a foot in length and all the leaves were removed. The soil was then shaken from the roots leaving them quite bare. The plants were then divided into two bundles and wrapped up in banana trash, which had previously been thoroughly soaked in water; each bundle containing six plants. One bundle was placed in a dry close potting shed, the temperature of which often reached 95° F., and the other bundle was placed in the Office.