

**REPORT OF THE COMMISSIONERS
OF AGRICULTURE AND
FORESTRY;
HONOLULU, JUNE 30, 1902;
(DECEMBER 31ST, 1902, PP. 1-19)**

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VARIOUS

**REPORT OF THE COMMISSIONERS
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REPORT
OF THE
Commissioner of Agriculture and
Forestry.

HONOLULU, TERRITORY OF HAWAII, June 30, 1902.

HIS EXCELLENCY SANFORD B. DOLE,

Governor, Territory of Hawaii.

Sir:—I have the honor to submit the following report of the Commissioner of Agriculture and Forestry for the year ending June 30th, 1902. This report touches on the work of the Government Entomologist; Lantana scale; Nuuanu Forest station; Tantalus forest; the Government Nursery; diversified industries; new varieties of trees planted, with their comparative vigor and growth; the visit of Mr. E. M. Griffiths, U. S. Expert Forester; the work of the U. S. Agricultural Experiment station; distribution of seeds and plants, and the forest fires in the districts of Hamakua and North Hilo, Island of Hawaii.

The past year has been a very active one and I do not hesitate in saying that the work done has far exceeded

that of any previous one in the history of this department, which was established as a Bureau by an Act of the Legislature of the Hawaiian Kingdom, on the 4th day of January, 1893. And it may be further said that the work accomplished must be beneficial to the agricultural interests of the Territory, if not right away, certainly at no distant date. The office is to a large extent a bureau of information. From all over the Territory and foreign countries have come letters by every mail seeking information on agricultural matters. These have been carefully answered and there has been no attempt whatever at exaggeration, plain facts only have been given. Many tourists have visited the office as I keep there a display of Island woods, forest photographs, blights, beneficial insects, seeds of many different kinds, also fruits in preservative. The office is small and does not admit of a large display which could easily be obtained, and made very attractive. Owing to the prevalence of certain blights and the absence of the entomologist, it has devolved on your Commissioner to make personal visits to note the affected trees and suggest the remedies, whenever complaints have been made.

This has left no one in the office able to answer questions and give advice in agricultural matters. Part of the duties of your Commissioner is to visit (or send a representative at least once a year) the homesteads and principal agricultural enterprises throughout the Territory, but as the Legislature made no appropriation for travelling expenses, I have on several occasions sent out the Forester, who was supplied with an appropriation for expenses. This will no doubt be remedied by the next Legislature.

THE GOVERNMENT NURSERY.

The free distribution of palms, shade, windbreak and ornamental trees, shrubs, vines, and fruit trees has been exceedingly large during the year, no doubt, caused by the many new homes built in the suburbs of Honolulu. This increased demand led me to suspend distribution during the first three months of the year so as to get well ahead with the planting of seeds, increase the number of germinating beds and make other needed alterations. C. J. Austin was appointed Gardener September 1st, 1901, and his work has been very systematic. The total number of plants distributed during the year was 32,341, divided as follows

Palms	8,082
Shade and windbreak trees, shrubs, etc.	11,861
Fruit trees	4,571
Forest trees	7,827
	<hr/>
	32,341

The distribution by islands was as follows:

Oahu	25,250
Hawaii	2,631
Mauī	506
Kauai	3,267
Molokai	687
	<hr/>
	32,341

Two days each week were set apart for the distribution, but in order to give every convenience to the public these were increased on May 1st, 1902, to every day in the week except Saturdays. The upper part of the grounds is used for experimental purposes.

There has been grown here alfalfa, red clover, teosinte, sorghum, Buffalo grass, Kentucky blue grass, corn, crimson clover and pencillaria, records of which are kept and by these is determined what seeds are best for distribution. In another part of the grounds we are experimenting with Samoan taro, yams, dryland and wetland taro.

The Nursery has been visited during the year by a very large number of people, including many scientists and tourists. Many rare trees are to be found in the grounds. At one time, we had about seventy large ornamental palms in tubs, which were loaned out for the benefit of the public for decorative purposes, but they came back in such bad condition on several occasions, that I discontinued the practice and divided them among the public schools, where they are much appreciated, and well taken care of. Also sent some to the hospital for incurables.

There is kept on hand at the Nursery a large quantity of resin and other washes to be used for the spraying of affected plants. These washes are distributed in quantity to those applying for them. The old quarters occupied by the laborers have been taken down and new ones erected. Repairs have also been made to the gardener's cottage. One man is kept busy doing nothing else but going out and collecting seeds.

There is now at the Nursery for free distribution the following varieties and number of trees and plants:

ADENANTHERA PAVONIA—Red sandal wood.....	2,000
ACACIA BAILEYANA—Cootamundra Wattle.....	28
ACACIA MELANOXYLON—Australian blackwood.....	180
ACACIA PENDULA—Weeping myall.....	37
ALBIZZIA LERBEK—Siris tree	400
ANONA MURICATA—Sour sop	360

AVERRHOA CARAMBOLA—Chinese Fruit	80
ACHRAS SAPOTA—Sapota plum	86
BAUHINIA TOMENTOSA—St. Thomas tree	200
BIGNONIA TWEEDIANA—Vine, orange flowers	100
CITRUS LEMETTA—Lime tree	1,250
CAESALPINIA PULCHERRIMA—Pride of the Barbadoes	250
CASSIA FISTULA—Golden shower	1,650
CASSIA NODOSA—Pink and white flowers	920
CASSIA GRANDIS—Pink flowers	900
CASUARINA EQUISTIFOLIA—Ironwood	2,000
CLITORIA TERNAETA—Blue Pea Vine	300
CHRYSOPHYLLUM CAINITO—Star apple	18
CALOPHYLLUM INOPHYLLUM—Kamani	208
CARICA PAPAYA—Papaya	600
EUCALYPTUS CITRIODORA—Lemon gum	400
EUCALYPTUS GLOBULUS—Blue gum	150
EUCALYPTUS ROBUSTA—Swamp Mahogany	500
EUGENIA JAMBOS—Rose apple	133
EUGENIA JAMBOLANA—Plum	250
EUGENIA MICHELO—Surinam Cherry	30
ERYTHRINA MONOSPERMA—Wiliwili	300
ERIOBOTRIA JAPONICA—Loquat plum	60
GREVILLEA ROBUSTA—Silk oak	350
HIBISCUS POPULNEUS—Milo	260
IPOMEA CHRYSANTHA—Vine yellow flowers	96
JASMINE VINE	38
LEMON—Rough skin	2,000
MACADAMIA TERNIFOLIA—Australian nut	145
MANGIFERA INDICA—Mango	504
MURRAYA EXOTICA—Mock orange	40
MUSA ENSETE—Abyssinia banana	26
PERSEA GRATISSIMA—Alligator pear	62
PANDANUS HALA—Screw palm	110
PARKIA AFRICANA—African locust tree	690
PINUS MARITIMUS—Cluster pine	30

PINUS PONDEROSA—Yellow pine	35
PINUS PINEA—Parasol pine	35
PINUS TORREYANA—Small coastal pine.....	35
POINCIANA REGIA—Scarlet flowers.....	1,250
POINCIANA—Yellow Flowers	2,000
POINSETTIA—Shrub scarlet leaves.....	300
PASSION VINE—Yellow fruit	100
SPONDIAS DULCIS—Vi apple	50
SCHINUS MOLLE—Pepper tree	1,000
THEVETIA NERKIPOLIA—Yellow oleander	70
TECOMA STANS—Yellow elder	35
YLANG YLANG	230

PALMS.

ARENGA SACCHARIFERA—Sugar palm	510
ARECA RUBRA—Red palm	3,500
ARECA CATECHU—Betel nut palm.....	80
CHAMÆCROPS EXCELSA—Fan palm.....	20
CARYOTA URENS—Wine palm	1,700
ELAEIS GUINEENSIS—Oil palm	50
HYOPHORBE AMARICAULIS—Bottle palm	170
KENTIA MACARTHURII—South Sea palm.....	15
LANTANIA BORBONICA—Fan palm	2,800
LANTANIA GLAUCOPHYLLA—Blue palm	265
LIVISTONA ROTUNDFOLIA—Ornamental palm	1,065
OREODOXA REGIA—Royal palm.....	1,100
PHOENIX DACTYLIFERA—Date palm	250
PRITCHARDIA GAUDICHAUDII—Hawaiian loulu palm.	2,300
SABAL BLACKBURNIANA—Fan palm.....	250
SEAPORTHIA ELEGANS—Australian palm.....	880
THEPINAX ARGENTEA—House palm.....	1,400

MAKIKI OR TANTALUS FOREST.

Very little work has been done at the Makiki or Tantalus forest, outside of stationing a laborer there to look after fires, keep the trails clean, and protecting the trees. The greater part of this tract was turned over to the U. S. Government and is now used as an Experimental Station. About thirteen acres of the forest has been cut down to make way for experimental work. Mr. E. M. Griffith, the U. S. Expert Forester, in his report says: "The reforestation of Tantalus by the Department of Agricultural and Forestry is an unusually fine piece of work very successfully carried out." The principal trees growing in this Tantalus forest are:

- ACACIA DEALBATA—Silver Wattle.
- ACACIA DECURRENS—Black Wattle.
- ACACIA MELANOXYLON—Australian blackwood.
- CAMPHORA OFFICINARUM—Camphor tree.
- CASUARINA EQUISTIFOLIA—Ironwood.
- CRYPTOMERIA JAPONICA—Japanese Cedar.
- EUCALYPTUS—Several species.
- GREVILLEA ROBUSTA—Silk Oak.
- SYNCARPIA LAURIFOLIA—Turpentine tree.
- TERMINALIA CATALPA—Tropical Almond.

It is only since 1893 when the Board of Agriculture and Forestry was organized that any record has been kept of the different kinds of trees planted in the Tantalus forest. Previous to that date it is known that several varieties of eucalyptus and monkey pods were planted. Commencing with the year 1893 the system of planting, as regards distance apart, the selection of the fast growing species, the different kinds producing the most valuable timber, were the main objects in view. The general European system was followed, it having proven after many years