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The Author

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Few areas in the world have so many introduced plants as the Hawaiian Islands. Government agencies, private organizations, and many individuals have engaged in sometimes major efforts to bring in useful species. Introducing new species for forestry purposes began well before the turn of the century and is still continuing. Follow-up appraisal of the adaptability of introduced trees forms an important part of forestry research.

The Hawaii Forestry Division (and its predecessor agencies) has probably been the most active in tree introduction work. As early as 1887 Walker (1887) reported that "The Government Plantation on the hills between Makiki and Pauoa... now contains... about 200,000 trees of useful species which have by selection from a much larger number experimented upon, been cultivated as amongst those found to flourish in this climate...." In 1912, Ralph S. Hosmer, Superintendent of Forestry, emphasized: "An important phase of forest work in Hawaii is the introduction into the Territory of exotic trees of economic importance. This is a line of investigation that should receive much greater attention than has been given it in recent years" (Hawaii Board of Commissioners of Agriculture and Forestry 1912). In the same report he described some experimental plantings. Such tree introduction work has continued over the years; the Waiakea Arboretum in Hilo includes the latest major group of introduced species (Richmond 1963).

Many but not all of the introduced species have been appraised for forestry purposes. In 1886, Lubker (1886) wrote of Acacia dealbata and A. pycnantha: "...already it is plain, that there cannot be any other kinds of trees, which are better adapted to these islands for the purpose of Arbor culture...." Zschokke (1930) reviewed the adaptability and use of several species, mainly as windbreaks and for erosion control and fuelwood. Bryan (1947) made a significant contribution by rating the adaptability and use of most species introduced to the Big Island up to 1946. Carlson and Bryan (1959) provided detailed information about several important timber species.

No sustained efforts have been made to maintain organized records of all introductions throughout the Islands. Nor has an organized attempt been made to evaluate their adaptability on the many different sites in Hawaii. Among the many hundreds of introductions are possibly some valuable "sleepers." Similarly, some potentially valuable species that could and should be brought in have, no doubt, been overlooked.

Need for Appraisal

Plans for the initial Forest Survey in Hawaii pointed out the need for a systematic appraisal of past forest plantings, to gain full benefit from previous work and to guide future research¹. This appraisal is now underway. Its objectives are to compile organized records of:

- Where and when each species was planted and the number planted.
- Adaptability of species as related to site factors.
- Suitability of tree species for timber production, based on growth, form, and wood quality.

The over-all purpose is to provide a reference to aid in selecting the best kinds of trees to grow for timber production and other forestry purposes on different sites in Hawaii. Underway is field appraisal of past plantings--the most important phase of this work.

Preparatory to the field work, we compiled available information about plantings made by the Hawaii Division of Forestry². We extracted and coded information from three sources: (a) Card records maintained by the Hawaii Division of Forestry from 1917-1954; (b) monthly Forestry Division reports from 1954 to 1960; and (c) annual Forestry Division reports before 1917. Records and reports earlier than 1908 did not yield information useful for this compilation. Although introduced species have been favored in the plantings, several native species were also planted and we included these in our compilation. We included plants other than trees too, for as complete a record as possible.

Other agencies and individuals have records of tree plantings, but we have not yet tapped these sources.

Ideally we wanted accurate information on species identity, location of field plantings, number of seedlings planted, and dates of plantings. We recognized that the original records contain omissions, errors, and duplications. A serious handicap is the lack of information about precise locations of outplantings. Synonyms and errors in plant naming are troublesome. But the wealth of information available far outweighs any problems of extraction.

Arrangement of Data

The data obtained were transferred to punch cards from which two primary tabular listings have been compiled to guide and facilitate the actual species appraisal work.

One listing begins with the species Abelia chinensis, only two plants of which were planted. The next species in this listing is Aberia gardneri, a shrubby tree planted at 28 locations in 18 Forest Reserves.

¹Nelson, Robert E. Plan for an initial survey of the timber resource in the Territory of Hawaii. 1958. (Unpublished report on file at Pacific SW. Forest & Range Expt. Sta., U. S. Forest Serv., Honolulu, Hawaii.)

²Most of the staff of the Forest Service's Forestry Research Center, Hawaii, participated to some degree in compiling this information. Roger G. Skolmen and Ronald M. Lanner extracted and coded most of the recorded information.

Between 1928 and 1941 a total of 16,088 plants of *A. gardneri* were planted. This list ends with *Zizyphus jujuba*, a small tree; 51 plants of this species were set out in only one location on Oahu in 1926. All told, nearly 1,100 species are listed as planted from 1908 to 1960. Of this total, about 800 are tree species; the balance are shrubs, vines, herbs, ferns, grasses, or palms. This listing also shows 136 plantings made, involving nearly 27,000 plants, in which the species are not identified.

Another arrangement of the data lists the plantings in each Forest Reserve. It shows for example, that 55 tree species and 2 shrub species have been planted in the Kalepa Reserve on the Island of Kauai. About 48,000 plants were set out in all in this Reserve between 1944 and 1958. This listing also shows that 1,198,000 plants have been set out in the Honolulu Forest Reserve.

From limited literature review and first hand knowledge, each listed species has been tentatively rated for probable silvical adaptability in Hawaii and for its use potential for wood products. These preliminary "value" ratings, as well as information on location and number of trees planted, provide the basis for screening species and selecting plantings for field appraisal.

We have gathered this information about the planting work of the Forestry Division primarily to enable us to evaluate and select the best tree species for forestry purposes in Hawaii. As information from field evaluations becomes available it will be reported. Meantime the information already compiled serves as a valuable reference for investigators and others in research. Part of this organized reference material is summarized in the appendix that follows.

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Appendix

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹

Genera ^{2/}	:	Family ^{3/}	:No. of : :species:	No. : :planted :	:Growth :form ^{4/}
Abelia (Linnaea)	:	Caprifoliaceae	1	2	S
Aberia (Donyalis)	:	Flacourtiaceae	1	16,088	T,S
Abies	:	Pinaceae	5	359	T
Abutilon	:	Malvaceae	2	10	S
Acacia	:	Leguminosae	20	1,547,413	T,S
Acalypha	:	Euphorbiaceae	1	2	S
Acer	:	Aceraceae	4	361	T
Achras	:	Sapotaceae	1	300	T
Ackama	:	Cunoniaceae	1	89	T
Acoelorrhaphe	:	Palmae	1	3	P
Acrocarpus	:	Leguminosae	1	312	T
Actinidia	:	Dilleniaceae	1	2	S
Actinophloeus (Drymophloeus)	:	Palmae	1	3	P
Adansonia	:	Bombacaceae	1	188	T
Adenanthera	:	Leguminosae	1	1,406	T
Aegle	:	Rutaceae	1	12	T
Aesculus	:	Hippocastanaceae	1	7	T,S
Aframomum	:	Zingiberaceae	1	6	H
Afzelia	:	Leguminosae	1	1	T
Agathis	:	Pinaceae	4	2,228	T
Agave	:	Amaryllidaceae	1	1,600	S
Ailanthus	:	Simarubaceae	1	1,740	T
Ajuga	:	Labiatae	*	4	H
Albizia (Albizzia)	:	Leguminosae	14	303,795	T
Alectryon	:	Sapindaceae	1	1	T
Aleurites	:	Euphorbiaceae	3	16,433	T
Allamanda	:	Apocynaceae	1	214	S
Alnus	:	Betulaceae	5	44,113	T
Alocasia	:	Araceae	2	9	H
Alpinia	:	Zingiberaceae	2	140	H
Alyxia	:	Apocynaceae	1	10	V
Amoora	:	Meliaceae	2	43	T
Anacardium	:	Anacardiaceae	1	773	T
Andira	:	Leguminosae	1	40	T
Angiopteris	:	Marrattiaceae	1	1	F
Angophora	:	Myrtaceae	2	21,451	T
Anona	:	Anonaceae	5	821	T,S
Anthurium	:	Araceae	1	1	H
Antidesma	:	Euphorbiaceae	2	15	T
Aphanamixis	:	Meliaceae	2	32	T
Aphelandra	:	Acanthaceae	1	70	S
Aralia	:	Araliaceae	1	6	S

See footnotes at end of table.

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera ^{2/}	:	Family ^{3/}	:No. of : :species:	No. : planted :	Growth form ^{4/}
Araucaria	:	Pinaceae	7	153,829	T
Arbutus	:	Ericaceae	1	8	T
Archontophoenix	:	Palmae	1	17	P
Ardisia	:	Myrsinaceae	2	251	S,T
Areca	:	Palmae	1	2	P
Arenga	:	Palmae	1	2	P
Argania	:	Sapotaceae	1	1	T
Argyroxiphium	:	Compositae	1	50	H
Artocarpus	:	Moraceae	5	2,749	T
Aspidistra	:	Liliaceae	1	16	H
Azalea	:	Ericaceae	1	307	S
Baccharis	:	Compositae	1	6	S
Bambusa	:	Gramineae	2	7,450	G
Baphia	:	Leguminosae	1	1	T
Barringtonia	:	Lecythidaceae	2	47	T
Bassia (Illipe)	:	Sapotaceae	1	1	T
Bauhinia	:	Leguminosae	14	716	T,S,V
Begonia	:	Begoniaceae	*	72	H
Beloperone	:	Acanthaceae	1	3	S
Betula	:	Betulaceae	1	30	T
Bidens	:	Compositae	1	4	H
Bignonia	:	Bignoniaceae	*	4	H
Bischofia	:	Euphorbiaceae	1	6,553	T
Bixa	:	Bixaceae	1	96	T
Blighia	:	Sapindaceae	1	9	T
Bocconia	:	Papaveraceae	1	4	S
Bombax	:	Bombacaceae	3	720	T
Bombycidendron (Hibiscus)	:	Malvaceae	2	263	T
Bougainvillea	:	Nyctaginaceae	*	11	S,V
Brachychiton	:	Sterculiaceae	5	4,399	T
Brassaia	:	Araliaceae	2	1,489	T
Brexia	:	Saxifragaceae	1	19	T
Breynia	:	Euphorbiaceae	1	24	S
Bridelia	:	Euphorbiaceae	2	382	T
Broussonetia	:	Moraceae	1	18	T
Brownea	:	Leguminosae	2	5	T
Bruguiera	:	Rhizophoraceae	1	133	T
Bucida	:	Combretaceae	1	2	T
Bucklandia	:	Hamamelidaceae	1	8	T
Bumelia	:	Sapotaceae	1	2,791	T
Butea	:	Leguminosae	1	152	T
Cactus	:	Cactaceae	*	2	H
Caesalpinia	:	Leguminosae	2	208	T,S
Calamus	:	Palmae	1	2	P

See footnotes at end of table.

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera ^{2/}	Family ^{3/}	:No. of : :species:	No. : planted	:Growth : :form ^{4/}
Calliandra	Leguminosae	2	63	S
Callicarpa	Verbenaceae	1	17	S
Callistemon	Myrtaceae	2	3,105	S,T
Callitris	Pinaceae	7	6,183	T
Calocarpum (Lucuma)	Sapotaceae	1	2	T
Calodendrum	Rutaceae	1	56	T
Calophyllum	Guttiferae	5	1,751	T
Calotropis	Asclepiadaceae	1	16	S
Calpurnia	Leguminosae	1	2	S
Calycophyllum	Rubiaceae	1	11	T
Camellia (Thea)	Theaceae	3	30	S
Cananga (Canarium)	Anonaceae	1	41	T
Canarium	Burseraceae	3	24	T
Canthium (Plectronia)	Rubiaceae	1	227	S
Carica	Caricaceae	1	103	T,S
Carludovica	Cyclanthaceae	1	358	S
Carya	Juglandaceae	3	514	T
Caryota	Palmae	1	6	P
Casimiroa	Rutaceae	1	460	T
Cassia	Leguminosae	16	3,436	T,S
Castanea	Fagaceae	5	650	T,S
Castanospermum	Leguminosae	1	1,187	T
Castilla (Castilloa)	Moraceae	1	42	T
Casuarina	Casuarinaceae	13	1,136,217	T
Catalpa	Bignoniaceae	3	3,621	T
Cavanillesia	Bombacaceae	1	56	T
Cecropia	Moraceae	1	752	T
Cedrela	Meliaceae	3	3,549	T
Cedrus	Pinaceae	1	102	T
Ceiba	Bombacaceae	1	1,662	T
Celtis	Ulmaceae	2	2	T,S
Centrolobium	Leguminosae	1	1	T
Ceodes (Pisonia)	Nyctaginaceae	1	4	T
Ceratonia	Leguminosae	1	9	T
Cerbera	Apocynaceae	1	3	T
Cercis	Leguminosae	1	42	T
Cestrum	Solanaceae	2	235	S
Chaenomeles (Cydonia)	Rosaceae	1	1	S
Chamaecyparis	Pinaceae	5	56,656	T
Chamaedorea	Palmae	1	10	P
Chamaefistula (Cassia)	Leguminosae	1	1	T,S
Charpentiera	Amarantaceae	1	3	T,S
Chiranthodendron	Sterculiaceae	1	5	T
Chorisia	Bombacaceae	1	4	T

See footnotes at end of table.

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera ^{2/}	Family ^{3/}	No. of : species	No. : planted	Growth : form ^{4/}
Chrysalidocarpus (Hyophorbe)	Palmae	1	61	P
Cibotium	Cyatheaceae	1	27	F
Cinnamomum	Lauraceae	3	5,116	T
Cipadessa	Meliaceae	*	20	S
Citharexylum	Verbenaceae	1	367	T
Citrullus	Cucurbitaceae	1	26	V
Citrus	Rutaceae	*	8,798	T,S
Cladium	Cyperaceae	1	230	H
Claoxylon	Euphorbiaceae	1	1	S
Clematis	Ranunculaceae	*	2	V
Clerodendron	Verbenaceae	2	1,894	T,S
Clusia	Guttiferae	1	60	T
Coccoloba	Polygonaceae	1	995	T,S
Cochlospermum	Cochlospermaceae	1	83	T
Cocos	Palmae	*	25,452	P
Coelococcus	Palmae	1	17	P
Coffea	Rubiaceae	2	366	T,S
Colensoa (Pratia)	Campanulaceae	1	6	H
Colubrina	Rhamnaceae	2	2,436	T,S
Colutea	Leguminosae	1	27	S
Colvillea	Leguminosae	1	1	T
Congea	Verbenaceae	1	2	S
Conocarpus (Leucadendron)	Proteaceae	1	84	T,S
Copaifera	Leguminosae	1	46	T
Coprosma	Rubiaceae	*	1	S
Cordia	Borraginaceae	10	2,844	T
Cordyline	Liliaceae	2	118,460	H,S
Cornus	Cornaceae	1	4	T,S
Corylus	Betulaceae	2	14	S
Corynocarpus	Corynocarpaceae	1	5,145	T
Costus	Zingiberaceae	1	24	S
Cotoneaster	Rosaceae	4	150	S
Crescentia	Bignoniaceae	1	2,290	T
Cryptomeria	Pinaceae	1	499,306	T
Cryptostegia	Asclepiadaceae	1	233	V,S
Cunninghamia	Pinaceae	1	11,040	T
Cupressus	Pinaceae	12	254,273	T
Cuscuta	Convolvulaceae	1	287	V
Cyanea	Campanulaceae	2	8	S
Cydonia	Rosaceae	1	29	T
Cynometra	Leguminosae	1	100	T,S
Cyperus	Cyperaceae	1	9	G
Cyphomandra	Solanaceae	1	12	S
Dacrydium	Taxaceae	1	4	T

See footnotes at end of table.

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera ^{2/}	Family ^{3/}	No. of : : species:	No.: planted	Growth : form ^{4/}
Dalbergia	Leguminosae	3	588	T
Datura	Solanaceae	1	1	S
Deguelia (Derris)	Leguminosae	*	*	*
Dendrocalamus	Gramineae	1	36	G
Desmoncus	Palmae	1	2	P
Dieffenbachia	Araceae	*	24	H
Dillenia	Dilleniaceae	1	21	T
Diospyros	Ebenaceae	5	718	T, S
Diplotropis	Leguminosae	1	25	T
Dipterocarpus	Dipterocarpaceae	1	1	T
Dodonaea	Sapindaceae	2	4,115	S
Dolichandrone	Bignoniaceae	2	408	T
Dombeya	Sterculiaceae	*	1	T, S
Duranta	Verbenaceae	1	153	S
Durio	Malvaceae	1	7	T
Elaeocarpus	Elaeocarpaceae	1	36	T
Elaeodendron	Celastraceae	1	86	T, S
Entandrophragma	Meliaceae	1	224	T
Enterolobium	Leguminosae	1	16,067	T
Eranthemum	Acanthaceae	1	2	S
Eriobotrya	Rosaceae	1	826	T
Eriogonum	Polygonaceae	1	16	S
Erythrina	Leguminosae	8	7,455	T, S
Eucalyptus	Myrtaceae	89	4,220,996	T, S
Eugenia	Myrtaceae	8	49,002	T, S
Euphorbia	Euphorbiaceae	2	14	S, H
Euphoria (Nephelium)	Sapindaceae	2	424	T
Eurya	Theaceae	1	2,100	T, S
Euterpe	Palmae	1	2	P
Fagraea	Loganiaceae	1	438	T
Feijoa (Orthostemon)	Myrtaceae	1	10	S
Ficus	Moraceae	36	128,694	T, S
Filicium	Sapindaceae	1	6	T
Firmiana	Sterculiaceae	1	1	T
Fitchia	Compositae	1	181	T
Flindersia	Rutaceae	3	4,093	T
Fortunella	Rutaceae	2	7	S
Fraxinus	Oleaceae	5	686,893	T
Galphimia	Malpighiaceae	1	71	S
Garcinia	Guttiferae	4	28	T
Gardenia	Rubiaceae	5	399	T, S
Gaussia	Palmae	1	2	P
Ginkgo	Ginkgoaceae	1	20	T
Gleditsia	Leguminosae	1	20	T

See footnotes at end of table.

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera ^{2/}	:	Family ^{3/}	:No. of : :species:	No. : planted :	Growth : form ^{4/}
Gliricidia		Leguminosae	2	2,075	T,S
Gossypium		Malvaceae	4	323	S
Grevillea		Proteaceae	1	2,242,027	T
Grewia		Tiliaceae	1	100	T,S
Guaiacum		Zygophyllaceae	1	1,081	T
Guazuma		Sterculiaceae	1	394	T
Guilielma (Bactris)		Palmae	1	1	P
Gynocardia		Flacourtiaceae	1	766	T
Haematoxylon		Leguminosae	1	107,729	T
Hakea		Proteaceae	1	26	S
Harpullia		Sapindaceae	3	1,984	T
Hedera		Araliaceae	1	4	S
Hedychium		Zingiberaceae	1	650	H
Helianthus		Compositae	1	45	H
Hevea		Euphorbiaceae	1	51	T
Hibiscus		Malvaceae	8	8,027	T,S
Holmskioldia		Verbenaceae	1	2	S
Hopea		Dipterocarpaceae	3	3	T
Hovenia		Rhamnaceae	1	1	T
Hydnocarpus		Flacourtiaceae	4	10,207	T
Hymenaea		Leguminosae	1	12	T
Hymenosporum		Pittosporaceae	1	4	T
Hyophorbe		Palmae	1	6	P
Idesia		Flacourtiaceae	1	2	T
Ilex		Aquifoliaceae	5	268	T,S
Inga		Leguminosae	1	85	T
Intsia		Leguminosae	1	285	T
Ipomoea		Convolvulaceae	1	3	V
Ixora		Rubiaceae	3	9	S
Jacaranda		Bignoniaceae	1	7,166	T
Jacquinia		Theophrastaceae	*	11	T
Juglans		Juglandaceae	4	1,898	T,S
Juniperus		Pinaceae	6	7,687	T,S
Khaya		Meliaceae	2	115	T
Kigelia		Bignoniaceae	1	137	T
Kleinhovia		Sterculiaceae	1	14	T
Koelreuteria		Sapindaceae	2	447	T
Kokia		Malvaceae	*	297	T
Lagerstroemia		Lythraceae	5	5,219	T,S
Lagunaria		Malvaceae	1	6	T
Larix		Pinaceae	2	24	T
Latania		Palmae	1	6	P
Lecythis		Lecythidaceae	4	567	T
Leea		Vitaceae	1	1	S

See footnotes at end of table.

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera <u>2/</u>	:	Family <u>3/</u>	:No. of : No.	:Growth
:	:	:	:species:planted	:form <u>4/</u>
Leptospermum		Myrtaceae	4	1,553 S
Lespedeza		Leguminosae	1	250 S
Leuceria		Compositae	1	3 *
Libocedrus		Pinaceae	1	631 T
Ligularia		Compositae	1	13 H
Linociera		Oleaceae	1	10,614 T
Lippia		Verbenaceae	1	28 S
Litchi		Sapindaceae	1	46 T
Loniceria		Caprifoliaceae	*	31 S,V
Lucuma		Sapotaceae	2	23 T
Luffa		Cucurbitaceae	1	4 V
Lupinus		Leguminosae	1	23 S
Lysiloma		Leguminosae	2	727 T
Macadamia		Proteaceae	1	20,411 T
Macaranga		Euphorbiaceae	3	545 T
Machaerium		Leguminosae	1	2,246 T
Maclura		Moraceae	1	229 T
Magnolia		Magnoliaceae	3	11 T
Malpighia		Malpighiaceae	1	14 S
Malus (Pirus)		Rosaceae	*	101 T
Mammea		Guttiferae	1	101 T
Mandevilla		Apocynaceae	1	2 S
Mangifera		Anacardiaceae	2	2,445 T
Manihot		Euphorbiaceae	1	24 S
Markhamia		Bignoniaceae	1	47 T
Martinezia		Palmae	1	2 P
Melaleuca		Myrtaceae	8	1,737,323 T,S
Melia		Meliaceae	1	46,186 T
Melicocca		Sapindaceae	1	30 T
Melochia		Sterculiaceae	2	5,705 T
Mesembrianthemum		Aizoaceae	*	52 H
Metasequoia		Pinaceae	1	39 T
Metrosideros		Myrtaceae	3	139 T
Mezoneuron (Mezoneurum)		Leguminosae	1	81 T
Millettia		Leguminosae	1	2 T
Mimosa		Leguminosae	1	111 T
Mimusops		Sapotaceae	2	1,900 T
Monstera		Araceae	1	87 V
Montezuma (Thespesia)		Malvaceae	1	24 T
Montrichardia		Araceae	1	4 S
Morinda		Rubiaceae	1	6 T
Moringa		Moringaceae	1	425 T
Morus		Moraceae	4	17,981 T
Mucuna		Leguminosae	1	1 V
Muntingia		Elaeocarpaceae	1	149 T

See footnotes at end of table.

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera ^{2/}	Family ^{3/}	No. of : : species	No. : : planted	Growth : : form ^{4/}
Murraya	Rutaceae	1	1,126	S
Musa	Musaceae	*	36	H
Musanga	Moraceae	1	7	T
Myoporum	Myoporaceae	1	16,723	T
Myrica	Myricaceae	3	2,695	T,S
Myrospermum	Leguminosae	1	20	T,S
Myroxylon	Leguminosae	1	970	T
Myrsine	Myrsinaceae	*	219	T,S
Neowawraea	Euphorbiaceae	1	28	T
Nerium	Apocynaceae	2	14	S
Nesoluma (Chrysophyllum)	Sapotaceae	1	7,029	T
Noronhia	Oleaceae	1	8,961	T
Nothocestrum	Solanaceae	*	2	T,S
Nyssa	Cornaceae	1	4	T
Ochna	Ochnaceae	1	2	S
Ochroma	Bombacaceae	1	1,471	T
Ochrosia	Apocynaceae	2	7	T
Olea	Oleaceae	2	1,810	T,S
Olneya	Leguminosae	1	30	T
Omphalea	Euphorbiaceae	1	2	*
Oncoba	Flacourtiaceae	2	20	T,S
Oreodoxa	Palmae	1	24	P
Ormosia	Leguminosae	1	12	T
Osmanthus	Oleaceae	1	181	T
Osteomeles	Rosaceae	1	504	S
Pachira (Bombax)	Bombacaceae	2	23	T
Pahudia	Leguminosae	1	128	T
Palaquium	Sapotaceae	1	16	T
Palagea (Palovea)	Leguminosae	1	25	T
Panax	Araliaceae	*	2	S
Pandanas	Pandanaceae	2	26,442	T
Parinarium	Rosaceae	1	1	T
Passiflora	Passifloraceae	1	14	V
Paulownia	Scrophulariaceae	1	206	T
Pelea	Rutaceae	*	10	T
Peltophorum	Leguminosae	1	10,154	T
Persea	Lauraceae	1	57,374	T
Phaeomeria	Zingiberaceae	1	153	H
Philadelphus	Saxifragaceae	1	2	S
Philodendron	Araceae	*	25	H,V
Phoenix	Palmae	*	34	P
Phormium	Liliaceae	1	718	H
Photinia	Rosaceae	2	166	S

See footnotes at end of table.

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera ^{2/}	:	Family ^{3/}	:No. of : :species:	No. planted	:Growth :form ^{3/}
Phyllocarpus		Leguminosae	1	4	T
Physalis		Solanaceae	1	18	H
Picea		Pinaceae	5	2,615	T
Pimenta		Myrtaceae	1	2,432	T
Pinanga		Palmae	1	8	P
Pinus		Pinaceae	46	437,588	T
Piper		Piperaceae	2	1,820	S
Piptadenia		Leguminosae	1	50	T
Pipturus		Urticaceae	*	10	T,S
Piscidia		Leguminosae	1	86	T
Pisonia		Nyctaginaceae	1	6	S
Pistacia		Anacardiaceae	*	25	T
Pithecellobium		Leguminosae	2	802	T
Pittosporum		Pittosporaceae	3	114	T,S
Plagianthus		Malvaceae	1	25	*
Planchonella (Sideroxylon)		Sapotaceae	1	2	T
Platanus		Platanaceae	2	521	T
Platymiscium		Leguminosae	2	5,597	T
Pleomele (Dracaena)		Liliaceae	2	723	T
Plumeria (Plumiera)		Apocynaceae	*	227	S
Podocarpus		Taxaceae	5	596	T
Poinciana (Delonix)		Leguminosae	1	173	T
Polyalthia		Anonaceae	1	55	T
Polygonum		Polygonaceae	*	2	S,V
Pometia		Sapindaceae	1	3	T
Pongamia		Leguminosae	3	90	T
Populus		Salicaceae	2	22	T
Posoqueria		Rubiaceae	1	247	T
Pothos		Araceae	1	1,083	V
Pritchardia		Palmae	*	1,092	P
Prosopis		Leguminosae	1	70	T
Prunus		Rosaceae	*	7,271	T
Pseudomorus		Moraceae	1	1	T,S
Pseudotsuga		Pinaceae	1	1,835	T
Psidium		Myrtaceae	3	26,840	T,S
Pteralyxia		Apocynaceae	1	35	T
Pterocarpus		Leguminosae	6	1,167	T
Ptychosperma		Palmae	*	151	P
Punica		Punicaceae	1	211	T,S
Pyracantha (Cotoneaster)		Rosaceae	2	338	S
Pyrus (Pirus)		Rosaceae	2	124	T
Quercus		Fagaceae	7	2,398	T
Rauwolfia		Apocynaceae	1	2	T
Ravenala		Musaceae	1	24	P

See footnotes at end of table.

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera <u>2/</u>	:	Family <u>3/</u>	:No. of : :species:	No. planted	:Growth :form <u>4/</u>
Reynoldsia	:	Araliaceae	1	20	T
Rhamnus	:	Rhamnaceae	1	146	S
Rhododendron	:	Ericaceae	2	145	S
Rhus	:	Anacardiaceae	2	38	T,S
Ricinus	:	Euphorbiaceae	*	20	S
Robinia	:	Leguminosae	1	2,215	T
Rubus	:	Rosaceae	*	98	S
Sabal	:	Palmae	*	1,567	P
Salix	:	Salicaceae	3	130	T,S
Samanea (Pithecellobium)	:	Leguminosae	1	24,566	T
Sambucus	:	Caprifoliaceae	*	801	T
Sandoricum	:	Meliaceae	1	3,545	T
Santalum	:	Santalaceae	2	20,655	T,S
Sapindus	:	Sapindaceae	2	2,305	T
Sapium	:	Euphorbiaceae	1	8	T
Saraca	:	Leguminosae	1	1	T
Saxifraga	:	Saxifragaceae	1	2	H
Scaevola	:	Goodeniaceae	*	442	S
Scheelea (Attalea)	:	Palmae	1	1	P
Schinus	:	Anacardiaceae	2	13,759	T,S
Schotia	:	Leguminosae	1	1	T
Sequoia	:	Pinaceae	2	130,474	T
Sesbania	:	Leguminosae	2	1,121	T,S
Sicana	:	Cucurbitaceae	1	4	V
Sida	:	Malvaceae	*	2	S
Sideroxylon	:	Sapotaceae	1	1	T
Solanum	:	Solanaceae	8	1,675	T,H,S
Sophora	:	Leguminosae	4	514	T,S
Spathodea	:	Bignoniaceae	1	30,536	T
Spondias	:	Anacardiaceae	3	7,163	T
Stemmadenia	:	Apocynaceae	1	3	T
Stenocarpus	:	Proteaceae	1	2	T
Sterculia	:	Sterculiaceae	1	22	T
Straussia	:	Rubiaceae	*	24	T,S
Strelitzia	:	Musaceae	1	8	H
Streptosolen	:	Solanaceae	1	2	S
Strophanthus	:	Apocynaceae	*	4	S
Styphelia	:	Epacridaceae	1	10	S
Swietenia	:	Meliaceae	2	20,009	T
Syncarpia	:	Myrtaceae	2	99,358	T
Syzigium	:	Myrtaceae	1	143	T
Tabebuia (Tecoma, Cybistax)	:	Bignoniaceae	6	1,304	T
Tabernaemontana	:	Apocynaceae	*	1	S
Tamarindus	:	Leguminosae	1	1,235	T

See footnotes at end of table

Table 1.--Forest plantings in Hawaii by genera, 1908-1960¹, continued

Genera ^{2/}	Family ^{3/}	No. of : : species:	No. : : planted	Growth : : form ^{4/}
Tarrietia	Sterculiaceae	1	1	T
Tecoma (Tabebuia)	Bignoniaceae	5	5,946	T,S
Tetraplasandra	Araliaceae	*	8	S
Tetrazygia	Melastomataceae	1	8	*
Themeda	Graminae	*	201	G
Theobroma	Sterculiaceae	1	114	T
Thespesia	Malvaceae	1	10,647	T
Thevetia	Apocynaceae	2	5	S
Thrinax	Palmae	1	2	P
Thuja	Pinaceae	4	78,994	T
Tibouchina	Melastomataceae	3	1,007	S
Toona	Meliaceae	2	190,004	T
Tournefortia	Borraginaceae	1	1,376	T,S
Toxylon (Maclura)	Moraceae	1	8	T,S
Trachylobium	Leguminosae	1	41	T
Trema	Ulmaceae	2	31,462	T
Triplaris	Polygonaceae	1	274	T
Tristania	Myrtaceae	1	396,177	T
Tsuga	Pinaceae	2	21	T
Typha	Typhaceae	1	151	H
Ulmus	Ulmaceae	4	6,703	T
Vaccinium	Ericaceae	1	91	S
Veronica	Scrophulariaceae	1	172	H
Virgilia	Leguminosae	1	270	T
Vitex	Verbenaceae	5	10,619	T,S
Vitis	Vitaceae	*	82	S
Wallaceodendron	Leguminosae	1	1	T
Warszewiczia	Rubiaceae	1	167	S
Wikstroemia	Thymelaeaceae	*	396	S
Wilkesia	Compositae	1	142	S
Wormia (Dillenia)	Dilleniaceae	1	2	S
Wrightia	Apocynaceae	1	2	S
Xanthorrhoea	Liliaceae	1	20	H
Xylia	Leguminosae	1	66	T
Xylosma	Flacourtiaceae	*	4	T
Yucca	Liliaceae	1	12	T
Zizyphus	Rhamnaceae	1	51	T
Unidentified (Canal Zone)	*	1	15	*
Unidentified (Tongatabu #9530)	*	1	9	*

¹Plantings of record by the Hawaii Division of Forestry.

²Recorded names have been corrected in cases of obvious error, and synonyms are provided to help identify some plantings.

³Dalla Torre and Harms (1900-1907) is the primary source of family names.

⁴T = tree, S = shrub, P = palm or palm-like, G = grass, V = vine, H = herb, F = fern.

*Not identified.

Table 2.--Tree species planted in Hawaii forests in numbers greater than
10,000, 1908-1960¹

Species	Number planted	Species	Number planted
	Thousand		Thousand
<i>Aberia gardneri</i>	16	<i>Eucalyptus stuartiana</i> ^{2/}	30
<i>Acacia confusa</i>	295	<i>Eucalyptus umbellata</i> (tereticornis)	53
<i>Acacia decurrens</i>	65	<i>Eugenia cumini</i>	11
<i>Acacia decurrens</i> var. <i>dealbata</i>	24	<i>Eugenia jambos</i>	29
<i>Acacia koa</i>	1,137	<i>Ficus macrophylla</i>	37
<i>Acacia melanoxylon</i>	17	<i>Ficus nota</i>	25
<i>Albizia lebbekoides</i>	10	<i>Ficus rubiginosa</i>	40
<i>Albizia moluccana</i> (falcata)	138	<i>Fraxinus americana</i> ^{3/}	386
<i>Albizia montana</i>	145	<i>Fraxinus uhdei</i>	74
<i>Aleurites moluccana</i>	16	<i>Grevillea robusta</i>	2,242
<i>Alnus nepalensis</i>	43	<i>Haematoxylon campechianum</i>	108
<i>Angophora lanceolata</i>	20	<i>Heliocarpus americanus</i>	25
<i>Araucaria cookii</i>	22	<i>Macadamia ternifolia</i>	20
<i>Araucaria excelsa</i>	123	<i>Melaleuca leucadendron</i>	1,733
<i>Casuarina cunninghamia</i>	13	<i>Melia azedarach</i>	46
<i>Casuarina equisetifolia</i>	70	<i>Morus nigra</i>	16
<i>Casuarina glauca</i>	998	<i>Myoporum sandwicense</i>	17
<i>Casuarina montana</i>	32	<i>Peltophorum inerme</i>	10
<i>Casuarina stricta</i>	11	<i>Persea americana</i>	57
<i>Cedrela odorata</i>	26	<i>Pinus caribaea</i>	27
<i>Chamaecyparis lawsoniana</i>	52	<i>Pinus elliottii</i>	64
<i>Cryptomeria japonica</i>	499	<i>Pinus patula</i>	15
<i>Cunninghamia lanceolata</i>	11	<i>Pinus pinaster</i>	173
<i>Cupressus arizonica</i>	10	<i>Pinus radiata</i>	121
<i>Cupressus macrocarpa</i>	216	<i>Psidium littorale</i>	27
<i>Enterolobium cyclocarpum</i>	16	<i>Samanea</i> (Pithecellobium) <i>saman</i>	25
<i>Eucalyptus camaldulensis</i>	429	<i>Santalum album</i>	20
<i>Eucalyptus citriodora</i>	127	<i>Sequoia sempervirens</i>	130
<i>Eucalyptus deanei</i>	30	<i>Spathodea campanulata</i>	31
<i>Eucalyptus maideni</i>	36	<i>Swietenia mahagoni</i>	13
<i>Eucalyptus marginata</i>	17	<i>Syncarpia hillii</i>	16
<i>Eucalyptus microcorys</i>	102	<i>Syncarpia laurifolia</i>	83
<i>Eucalyptus paniculata</i>	138	<i>Taxodium distichum</i>	42
<i>Eucalyptus pilularis</i>	121	<i>Taxodium mucronatum</i>	17
<i>Eucalyptus racemosa</i>	33	<i>Terminalia myriocarpa</i>	26
<i>Eucalyptus resinifera</i>	91	<i>Thespesia populnea</i>	11
<i>Eucalyptus robusta</i>	2,321	<i>Thuja plicata</i>	76
<i>Eucalyptus rudis</i>	34	<i>Toona ciliata</i> var. <i>australis</i>	190
<i>Eucalyptus saligna</i>	437	<i>Trema orientalis</i>	31
<i>Eucalyptus sideroxylon</i>	151	<i>Tristania conferta</i>	396

¹Plantings of record by the Hawaii Division of Forestry.

²Probably mostly *E. robusta*.

³Probably mostly *F. uhdei*.

Table 3.--Forest plantings in Hawaii by family¹, 1908-1960²

Family	Number of genera planted	Family	Number of genera planted
Cyatheaceae	1	Hamamelidaceae	1
Marrattiaceae	1	Platanaceae	1
Ginkgoaceae	1	Rosaceae	12
Taxaceae	2	Leguminosae	69
Pinaceae	20	Zygophyllaceae	1
Typhaceae	1	Rutaceae	8
Pandanaceae	1	Simarubaceae	1
Gramineae	3	Burseraceae	1
Cyperaceae	2	Meliaceae	10
Palmae	26	Malpighiaceae	2
Cyclanthaceae	1	Euphorbiaceae	15
Araceae	7	Anacardiaceae	6
Liliaceae	6	Corynocarpaceae	1
Amaryllidaceae	1	Aquifoliaceae	1
Musaceae	3	Celastraceae	1
Zingiberaceae	5	Aceraceae	1
Casuarinaceae	1	Hippocastanaceae	1
Piperaceae	1	Sapindaceae	11
Salicaceae	2	Rhamnaceae	4
Myricaceae	1	Vitaceae	2
Juglandaceae	2	Elaeocarpaceae	2
Betulaceae	3	Tiliaceae	1
Fagaceae	2	Malvaceae	11
Ulmaceae	3	Bombacaceae	7
Moraceae	10	Sterculiaceae	10
Urticaceae	1	Dilleniaceae	3
Proteaceae	5	Ochnaceae	1
Santalaceae	1	Theaceae	2
Polygonaceae	4	Guttiferae	4
Amarantaceae	1	Dipterocarpaceae	2
Nyctaginaceae	3	Bixaceae	1
Ranunculaceae	1	Cochlospermaceae	1
Magnoliaceae	1	Flacourtiaceae	6
Anonaceae	3	Passifloraceae	1
Lauraceae	2	Caricaceae	1
Papaveraceae	1	Begoniaceae	1
Moringaceae	1	Cactaceae	1
Saxifragaceae	3	Thymelaeaceae	1
Pittosporaceae	2	Lythraceae	1
Cunoniaceae	1	Punicaceae	1

See footnotes at end of table.

Table 3.--Forest plantings in Hawaii by family¹, 1908-1960², continued

Family	Number of genera planted	Family	Number of genera planted
Lecythidaceae	2	Labiatae	1
Rhizophoraceae	1	Solanaceae	7
Combretaceae	1	Scrophulariaceae	2
Myrtaceae	13	Bignoniaceae	10
Melastomataceae	2	Acanthaceae	3
Araliaceae	6	Myoporaceae	1
Cornaceae	1	Rubiaceae	10
Ericaceae	4	Caprifoliaceae	3
Epacnidaceae	1	Cucurbitaceae	3
Theophrastaceae	1	Campanulaceae	2
Myrsinaceae	2	Goodeniaceae	1
Sapotaceae	11	Compositae	9
Ebenaceae	1		
Oleaceae	5		
Loganiaceae	1		
Apocynaceae	14		
Asclepiadaceae	2		
Convolvulaceae	2		
Borraginaceae	2		
Verbenaceae	8		

¹Families in order according to the Natural System of Classification of Engler (Dalla Torre and Harms 1900-1907).

²Plantings of record by the Hawaii Division of Forestry.

Addendum: Additional plantings of record to supplement Table 1

Genera	Family	:No. of : :species:	No. : planted :	:Growth :form
Chrysobalanus	Rosaceae	1	25	S
Chrysophyllum	Sapotaceae	1	455	T
Cinchona	Rubiaceae	5	6,880	T
Heliocarpus	Tiliaceae	1	24,666	T
Heritiera	Sterculiaceae	1	5	T
Hibiscadelphus	Malvaceae	1	34	T
Mahonia (Berberis)	Berberidaceae	1	9	S
Tamarix	Tamaricaceae	1	166	S
Taxodium	Pinaceae	2	58,801	T
Tectona	Verbenaceae	1	2,186	T
Tephrosia	Leguminosae	1	347	S
Terminalia	Combretaceae	7	27,725	T
Washingtonia	Palmae	1	3	P
Widdringtonia (Callitris)	Pinaceae	1	35	T