PUERTO RICAN WOODS AND THEIR UTILIZATION

A Bibliography

Information Reviewed and Reaffirmed
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No. 1793
Foreword

Prepared at the request of the Tropical Forest Experiment Station of the U. S. Forest Service, Rio Piedras, Puerto Rico, this bibliography attempts to list background references contributing to a better understanding of available Puerto Rican woods and their uses. The time-span covered by the references is roughly 1900-1950. Historical material, trade statistics, and botanical description largely are omitted, although these aspects may be followed up by examining reference lists included in items cited in the bibliography.

A study of available information points out that little work has been done on Puerto Rican woods. Such a study also confirms statements of L. V. Teesdale and J. W. Girard of the U. S. Forest Service in their 1945 reconnaissance report, Wood Utilization in Puerto Rico, to the effect that there are no existing reliable statistics on the forest resource, growth, drain, production, or products requirements of the Island as a whole. A large volume of rough and finished timber products consumed in Puerto Rico are imported, although yields from existing forest cover have continuing, if unmeasured, economic importance. Better utilization of island-produced and imported timber products is a concern of the Tropical Forest Experiment Station staff, as well as of others interested in improving Puerto Rico's general economy.

Most references in the bibliography were collected by Eloise Gerry, Forest Products Technologist, in connection with her work on foreign woods in the Division of Silvicultural Relations, U. S. Forest Products Laboratory. Further checking of sources, and preparation of the list for reproduction, were done by Frances J. Flick, bibliographer, from the staff of the U. S. Department of Agriculture Library.

The bibliography is divided into three sections: I, Puerto Rican Woods and their Utilization (General); II, References Relative to Wood Protection and Preservation; III, Other References with Possible Application to the Puerto Rican Situation. Sections II and III do not represent intensive search in the subjects involved. The material is included as supplementary information for uses of the bibliography.

General arrangement within the sections is alphabetical by author. Due to the small number of references, it has not been thought necessary to index subjects
covered. Unless otherwise indicated, call numbers at the end of each citation are those of U. S. Department of Agriculture libraries.

A primary source of references, heavily drawn upon, was a typewritten list, References on the Woods of Puerto Rico, compiled in 1948 by the Tropical Forest Experiment Station.

Other sources consulted are as follows:

Card catalogs:
U. S. Department of Agriculture Library, especially that of its Branch in the Forest Products Laboratory, Madison, Wisconsin. University of Wisconsin libraries.

Bibliographies, Indexes and Special Files:
Ahern, G. P., and Newton, H. K. A bibliography on woods of the world. 1928.
Blake, S. F., and Atwood, A. C. Geographical guide to floras of the world. USDA Misc. P. 401. 1942.
Tropical Woods, cumulative index, 1949.
U. S. Forest Service, Tropical Forest Experiment Station. Publications of the Tropical Forest Experiment Station. 1950.

Bibliographies attached to included references.
Files in the Forest Products Laboratory.
References on woods of the West Indies, p. 18-21.


BARRETT, O. W. The fall of Porto Rican forests. Plant World 5: 11-112. June 1902. 450 P69

Includes illustrations of Puerto Rican trees.

Examples of plantation failures and inferior species utilization in Puerto Rico.


Rept. No. 1793 -3-
CARIBBEAN RESEARCH COUNCIL. COMMITTEE ON AGRICULTURE, NUTRITION, FISHERIES AND FORESTRY. Forest research within the Caribbean area. Washington, 1947. 128p. Ref. 99.34 C19
Puerto Rico, p.55-59.

The fauna and flora of Porto Rico, by A. Stahl, p.222-230, includes lists of tree species, woods, their specific gravity, and their uses.


Includes tests of the following Puerto Rican woods: Buchenavia capitata, Hymenaea courbaril, Manilkara bidentata, and Tetragastris balsamifera.

DURLAND, W. D. Forest regeneration in Porto Rico. Econ. Geog. 5: 369-381 Oct. 1929. 278.8 Ec7


Puerto Rico and Haiti, p.127-146.

Rept. No. 1793

Includes tables of common and scientific tree names, and some notes on utilization incidental to silviculture.


HAMAN, M. Where pine and tropical hardwood meet. Pan Amer. Union B. 44: 350-351. March 1917. 150.9 M76

HIBBEN, T., and PICO, R. Industrial development of Puerto Rico and the Virgin Islands of the United States. Port-of-Spain, Trinidad, 1948. 300p. 280.14 C192

Forest resources, p.142-144.

HILL, R. T. Notes on the forest conditions of Porto Rico. USDA Div. Forestry B. 25, 48p. 1899. 1 F76B


The possibility of close cooperation for mutual benefit between agriculture and forestry in the American tropics. Carib. Forester 1(3):25-29. Apr. 1940. 1.9622 T2C23


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Experience with 38 species.


MATTOON, W. R. Forest trees and forest regions of the United States. USDA Misc. P. 217, 54p. June 1940. 1 Ag84M

Forests of Puerto Rico, p.48-49, lists tree species by relative importance or abundance.


NEW YORK ACADEMY OF SCIENCES. Scientific survey of Porto Rico and the Virgin Islands, v. 5-8, 11-15. 1923-1935. 409 N483

Rept. No. 1793 -6-

Describes native trees, among which are *Guaiacum officinale* and *Haematoxylon campechianum*.


Ed. 1 issued as B. 37 by Puerto Rico Agr. Expt. Sta., Río Piedras, 1931. 100 P83


PUERTO RICO. FEDERAL EXPERIMENT STATION, MAYAGUEZ. Annual reports, 1936-1950. 1 Ex65

Include reports on insect investigations and on bamboo development.


Includes employment information and statistics for furniture and planing-mill establishments.


Typewritten summaries evaluate 13 publication with respect to forestry information.

PUERTO RICO. SERV. FORESTAL INSULAR. Reports. Incomplete. 1935/36-to date. 99.9 P96

Reports and summaries of activities are also available in annual reports of the Puerto Rico Dept. Agriculture & Commerce and in annual reports of the Governor of Puerto Rico.

QUIÑONES, L. R. Informe preliminar sobre la utilización practica de la corteza del mangle (*Rhizophora mangle*). Carib. Forester 5: 44-47. Oct. 1943. 1.9622 T2C23


Rept. No. 1793
RECORD, S. J. The woods of Mexico, Central and South America and the West Indies. In, International Critical Tables 2: 39-42. New York, McGraw-Hill, 1927. 325 In8i


A general index and index to scientific names was issued in Dec. 1949; an index to vernacular and trade names, in May 1950.

U. S. FOREST SERV., TROPICAL FOREST EXPERIMENT STATION. Annual reports, 1940-1947. Irregular. 1.9622 T2An7
Certain reports not issued separately are summarized in Caribbean Forester. An example is the Tenth Annual Report, published in Caribbean Forester 11: 59-104. Apr. 1950. 1.9622 T2C23 P.63 summarizes the year's research in forest products.


U. S. FOREST SERV. TROPICAL REGION. General utility classification of the more important timber tree species occurring in the natural forests of Puerto Rico. 1947. 6p. 1.9622 T2G28


*USES and characteristics of some native trees. Puerto Rico Serv. Forestal Insular C. 6, 4p. 1924. 99.9 P96B
*Not examined.

Summary of research conducted by the U. S. Forest Service, Tropical Forest Experiment Station.

Classifies Puerto Rican woods as A., Desirable species; B., Mediocre species; C., Inferior species.

Rept. No. 1793 -8-
WADSWORTH, F. H. The evaluation of forest tree species in Puerto Rico, as
1.9622 T2C23

How should farm forests be managed? Carib. Forerster 10: 253-
259. Oct. 1949. 1.9622 T2C23
Common utility and growth rate of farm forest trees, p. 57-59.

The Las Cobanitas campeche (Haematoxylon campechianum)
plantation. Carib. Forerster 4: 140-143. Apr. 1943. 1.9622 T2C23

Notes on the climax forests of Puerto Rico and their destruc-
1950. 1.9622 T2C23

Pomarrosa, Jambosa jambos (L.) Millsp. and its place in

Silviculture in tropical America and Puerto Rico. Carib.

and GILORMINI, J. A. The potentialities of forestry on Mona
Includes tree species.

Roble (Tabebuia pallida), a valuable forest tree in Puerto

What will be the returns from farm forestry? Carib. Forerster
Tabulates species, site, and age when suited for various products.

WELLWOOD, R. W. The physical-mechanical properties of certain West Indian
1.9622 T2C23

I, Dacryodes excelsa; II, Sloanea berteriana; III, Pinus Occidentalis.


COBIN, M., and SEGUINOT ROBLES, P. The relation between curing
1946. 1.9622 T2C23

ZON, R., and SPARHAWK, W. N. Forest resources of the world. New York, McGraw-
Hill, 1923. 2v. Ref. 99.1 Z7
Porto Rico, p.651-657.
References Relative to Wood Protection and Preservation


Insects affecting forest products, p.162.


Forests and forest entomology. Carib. Forester 4: 132-134. Apr. 1943. 1.9622 T2C23


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English summary.

The comparative resistance of woods to the attack of the termite Cryptotermes brevis Walker. Puerto Rico Agr. Expt. Sta. B. 33, 15p. Aug. 1924. 100 P83

The compounds of copper most effective in making wood resistant to the attack of the West Indian dry-wood termite, Cryptotermes brevis (Walker). Carib. Forester 10: 197-203. Ref. July 1949. 1.9622 T2C23


Factors in the natural resistance of woods to termite attack. Carib. Forester 7: 121-150. Apr. 1946. 1.9622 T2C23


A list of woods arranged according to their resistance to the attack of the "polilla", the dry-wood termite of the West Indies, Cryptotermes brevis Walker. Carib. Forester 1(4): 1-10. July 1940. 1.9622 T2C23


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Insects associated with trees both introduced and native.

Other References with Possible Application to the Puerto Rican Situation

BÄRNER, J. Die Nutzhölzer der Welt. Neudamm, Neumann, 1942-1943. 4v. 425.8 B26

BRUSH, W. D. Lignumvitae (Guajacum species). Washington, 1938. 14p. (Foreign Woods Series). 1 F76Fwo


Includes brief notes on properties of wood utilized.


LUXFORD, R. F. Strength values of various foreign woods. Madison, Wis., U. S. Forest Prod. Lab., 1929. 5 tables. FP Lab. 1-3 L97S


Investigated with regard to its adaptability to Puerto Rican conditions.


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American timbers of the mahogany family. Trop. Woods 66: 7-33. June 1, 1941. 99.08 Y1Tr


Lignum-vitae: a study of the woods of the Zygophyllaceae with reference to the true lignum-vitae of commerce -- its sources, properties, uses and substitutes. Yale U. School Forestry B. 6, 48p. Ref. 1921. 99.9 Y1B


VELEZ, ISMAEL, and VAN OVERBEEK, JOHANNES. Plantas indeseables en los cultivos tropicales; manual ilustrado para el agricultor (basado en material de Puerto Rico). Editorial Universitaria, Rio Piedras, P. R. 1950. 497p. illus.

Mostly weeds, but a few small trees are included.


WANGAARD, F. F. Tropical wood research for the furniture industry. Furniture Mfr. 64(8):50-54, 56. Aug. 1949. 300.8 F982


WEIMER, C. Die Pflanzenstoffe. Jena, Gustav Fischer, 1929, 1931. 2v. & sup. 1935. 463.2 W42

For information on chemical composition and wood extractives.


Rept. No. 1793 -14- .3-15