

TANOAK ... a bibliography for a promising species

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U.S. DEPARTMENT OF AGRICULTURE
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USDA FOREST SERVICE
GENERAL TECHNICAL
REPORT PSW- 22 /1977



McDonald, Philip M.

1977. **Tanoak . . . a bibliography for a promising species.** USDA Forest Serv. Gen. Tech. Rep. PSW-22, 8 p., Pacific Southwest Forest and Range Exp. Stn., Berkeley, Calif.

Lists 177 references, including most of the available citations on tanoak (*Lithocarpus densiflorus* [Hook. & Arn.] Rehd.), with major emphasis on dendrology, synecology, diseases, chemical control, seasoning, and uses of the wood.

Oxford: 176.1 *Lithocarpus densiflorus*: (048.1)

Retrieval Terms: tanoak; *Lithocarpus densiflorus*; bibliography.

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The potential worth of tanoak (*Lithocarpus densiflorus* [Hook. & Arn.] Rehd.) was recognized as early as 1908 when Sudworth¹ noted the "promise it gives of furnishing good commercial timber in a region particularly lacking in hardwoods." Abundant in northwestern California and southwestern Oregon (specifically in Del Norte, Humboldt, Mendocino, Curry, and Josephine Counties), the species extends southward in the California Coast Ranges to Santa Barbara County. It grows particularly well in the central Sierra Nevada, and is in plentiful supply in Butte and Yuba Counties, in central California.

The wood of tanoak has several outstanding attributes, not the least of which is appearance. Numerous tall rays give rotary-cut veneer and flat-grain surface lumber a striking appearance, resembling rift-sawed oak. The wood is tough and hard. It has outstanding strength, resists denting and abrasion, machines easily, and does not split when fasteners are used. In addition, it takes stains and finishes well, and forms strong joints with glues.

Ironically, native California hardwoods, and specifically tanoak, which could provide a major opportunity for increased wood and fiber production, are scarcely utilized. Although California has a variety of well established hardwood industries, raw material for them traditionally is imported from other sources. Recently, however, increased utilization of tanoak for pulp, prohibitive costs of rail transportation from east to west, and the dwindling supply of high quality

hardwood sawlogs in eastern forests have prompted a new look at this species.

According to 1954 and 1968 surveys, the supply of tanoak sawtimber is 2.04 billion board feet in California and 1.52 billion board feet in Oregon. About 58 percent of this volume is in trees larger than 20.9 inches in breast-height diameter. This high proportion of large trees is significant because less than one-fifth of the hardwood sawtimber in the United States is 15 inches in diameter or larger and of grades 1 and 2.²

Seasoning used to be a problem, but reliable techniques are available now and are described extensively in the literature. The cold soda process works well and produces a good pulp.³ Satisfactory offset printing and duplicating papers have been manufactured with mixtures of Douglas-fir and sulfate pulps of tanoak. Recently, tanoak and other hardwood species have been mechanically chipped in the woods and exported to Japan. The wood is ideally suited for pallets, flooring, industrial decking, and baseball bats. It is recommended for paneling, veneer, and plywood, and has been used for boat parts, crossties, and mine timbers. Suggested limitations to increased utilization are the scattered nature of the stands and the high amount of cull material in the trees.

² Siegel, William C., and Clark Row. 1965. *U.S. hardwood imports grow as world supplies expand*. USDA Forest Serv. Res. Paper SO-17, 25 p., Southern Forest Exp. Stn., New Orleans, La.

³ Overholser, James L. 1968. *Oregon hardwood sawtimber*. Forest Res. Lab. Rep. G-9, 52 p., Oregon State Univ., Corvallis.

¹ Sudworth, George B. 1908. *Forest trees of the Pacific slope*. 441 p. U.S. Government Print. Off., Washington, D.C.

INDEX

Oxford Decimal Classification

<i>Classification</i>	<i>Subject</i>	<i>Reference</i>
116.14	Fog drip	107
151.	Animal ecology	157
165.	Mutant	165
166.1	Useful plants	13, 30, 40, 60, 158
174.	Dendrology	21, 25, 29, 31, 44, 48, 67, 70, 74 75, 77, 78, 79, 80, 84, 90, 91, 95 96, 104, 105, 116, 125, 135, 145 159, 161, 170
181.	Autecology	11, 68, 129, 139
181.351	Mycorrhizae	163
181.71	Exceptional size	8
181.8	Phenology	14
182.	Synecology	24, 28, 32, 33, 58, 65, 76, 142, 156 172, 173, 174
220.	Silviculture	12
231.4	Coppice	136
232.3	Seed	26, 27, 49, 103, 138, 149, 176
232.328	Grafting	102
268.3	Forage plants	37, 143
310.	Logging	5
332.3	Slash disposal	152
414.	Chemical control	15, 34, 54, 66, 81, 89, 128, 137, 146 150, 151, 164
443.	Diseases	18, 19, 20, 59, 69, 72, 101, 106, 127 141, 153, 166, 171, 177
453.	Insects	53, 82, 83, 94, 110
524.	Tree volume	16, 17, 73, 175
530.	Special measurements	160
540.	Site quality	123
610.	Forest management	119, 140
710.	Marketing	41, 144
812.	Wood properties	36, 87, 112, 113, 115, 124, 169
812.7	Strength	117, 130, 132, 147, 148
823.	Machining	35
824.86	Gluing	23, 42, 108, 109
830.	Uses of wood	2, 7, 55, 56, 71, 85, 92, 99, 114 118, 121, 122, 134
832.2	Veneer	57, 93, 120
841.	Preservation of wood	61, 62, 63, 64, 100
847.	Seasoning	4, 6, 10, 45, 46, 47, 50, 51, 52, 131 133, 154, 155, 162
852.	Grading	38, 39, 86
861.	Pulping	88
892.4	Tanstuffs	1, 3, 9, 22, 126
905.	Forest statistics	97, 98, 111, 168
906.	Economic significance	43, 167

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