



# STATE FOREST NOTES

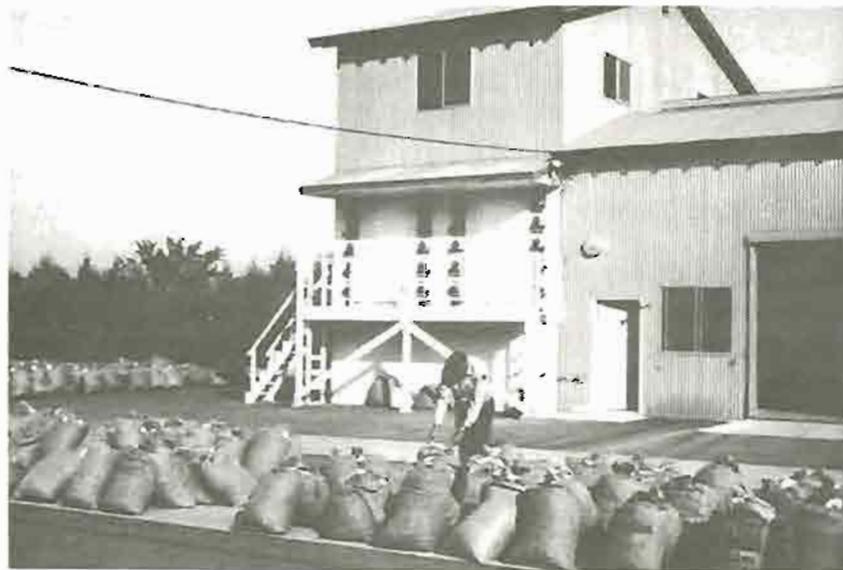
Office of the State Forester  
Sacramento

No. 50

August, 1972

## CALIFORNIA CONE CROP FOR 1972<sup>1/</sup>

Cone crop surveys were made in June and early July 1972. One hundred report forms were received from field stations. A summary of the information indicates a very light (2.4 rating) over-all cone crop (table 1). Comments such as "In almost all areas it has been impossible to find more than two or three trees of any species having cones," and "This is one of our poorest seed years. Environmentalists are deeply concerned over how the squirrels are going to make it," describe the 1972 cone crop.



Checking identification tags on sacks of cones received at processing center.

<sup>1/</sup> This report was compiled and summarized by C. J. Eden, Forester II, California Division of Forestry, Davis Headquarters Nursery.

No over-all heavy (5.0 rating) crops were reported except for two species where only one report for each species was received. Sierra redwood was reported to have a good cone crop throughout its range. The highest over-all rating for any species where extensive reports were submitted was 3.3 for Coulter pine.

Heavy (5.0 rating) crops were reported for bigcone Douglas-fir in Zone 997 and Monterey cypress in Zone 092 (plantations). Medium (4.0 rating) crops were reported for beach pine in Zones 092 and 093 (plantations), Coulter pine in Zones 163 (4.5 rating) and 996, sugar pine in Zone 994, and ponderosa pine in Zone 097 (4.5 rating).

### Cone Reporting System

Annual cone crop data are compiled from reporting forms completed by California Division of Forestry and U. S. Forest Service, Region 5, personnel. Report forms are submitted from Division field units for each State Forest and forested county, and from each Ranger District of the Forest Service.

Fowells and Schubert<sup>2/</sup> showed that most cones are borne on dominant and codominant trees. Dominant trees, 12 or more inches diameter breast height (d.b.h.) were selected as indicator trees for a cone crop rating system devised in 1960 by the Pacific Southwest Forest and Range Experiment Station and California Region of the Forest Service. Ratings are based on ocular estimates of cone quantities. The following five classes are used:

1. None--no cones on any seed trees.
2. Very light--few cones on less than one-fourth of the seed trees.
3. Light--few cones on more than one-fourth of the seed trees.
4. Medium--many cones on one-fourth to one-half of the seed trees.
5. Heavy--many cones on more than one-half of the seed trees.

### Cone Collection Areas

Cone crops are reported from eighty-seven tree seed zones in California<sup>3/</sup>. An attached map outlines the zones. Larger scale (1:1,000,000) maps and explanatory publication may be obtained free of charge from the office of the State Forester, Resources Building, 1416 Ninth Street, Sacramento, California 95814, or Regional Forester, U. S. Forest Service,

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<sup>2/</sup> Fowells, H. A., and G. H. Schubert 1956. Seed crops of forest trees in the pine region of California. U. S. Dept. of Agr. Tech. Bul. 1150. 48 pp. illus.

<sup>3/</sup> Buck, John M., Ronald S. Adams, Jerold B. Cone, M. Thompson Conkle, William J. Libby, Cecil J. Eden, & Michael J. Knight, 1970. California tree seed zones. California Region U. S. For. Ser., and State of Calif., the Res. Agency, Dept. of Cons., Div. of For. 6 pp.

630 Sansome Street, San Francisco, California 94111. A universal identification coding system for seed lots is detailed in the explanatory publication.

Seed Certification

A voluntary program for certification of the source of collection for seed has been formulated for California. The California Crop Improvement Association is the Certifying Agency. Inspection for compliance is administered by the County Agricultural Commissioners. A committee representing U. S. Forest Service, California Division of Forestry, California Department of Agriculture, Extension Service, forest industry, and seedsmen will provide advisory services.

During the 1971 collection year the program operated in Del Norte, Humboldt, and Mendocino counties. A few private companies and California Division of Forestry collected or bought cones under the program. In 1972 the program will be expanded to Shasta, Siskiyou, Lassen and Modoc counties.

Table 1. Summary of California cone crops for 1972, by species and tree seed zones.

Species	Tree Seed Zone	Average Rating <sup>a/</sup>	Species	Tree Seed Zone	Average Rating <sup>a/</sup>
<hr/>					
<u>Abies concolor</u> (white fir)	091	1.0		533	2.0
	301	1.3		720	2.0
	302	1.5		731	2.0
	303	1.1		732	1.3
	311	1.0		741	1.0
	321	1.0		742	1.5
	322	2.0		752	2.0
	331	1.0		760	1.0
	340	1.1		771	1.0
	371	2.0		772	2.0
	372	1.0		994	1.5
	516	2.0		996	1.0
	521	1.0		997	1.5
Overall	522	2.0		998	1.0
rating 1.4	523	1.5			
	524	1.5			
	525	1.0	<u>Abies grandis</u>		
	526	1.0	(grand fir)	091	2.0
	531	1.0		092	2.0
				093	2.0
			Overall	094	2.0
			rating 2.0	301	2.0
				302	2.0

<sup>a/</sup> See footnote at end of table.

Species	Tree Seed Zone	Average Rating <sup>a/</sup>	Species	Tree Seed Zone	Average Rating <sup>a/</sup>
<u>Abies magnifica</u> (red fir)	301	1.0	<u>Libocedrus decurrens</u> (incense-cedar)		
	303	1.0	Continued	371	3.0
	321	1.0		372	1.0
	322	1.5		380	1.0
	331	1.0		390	1.0
	371	2.0		516	2.0
	516	2.0		521	1.0
	521	1.0		522	2.0
	522	1.0		523	1.0
	523	1.5		524	2.0
Overall	524	2.0	Overall	525	1.0
rating 1.5	525	1.0	rating 1.6	526	2.0
	526	1.5		531	1.0
	531	2.0		732	2.5
	532	3.0		741	2.0
	533	1.5		742	2.0
	720	1.0		771	3.0
	732	1.0		992	1.0
	741	1.0		993	1.0
	771	1.0		994	1.0
	772	2.0		996	1.0
	782	2.0		997	1.0
	791	2.0		998	1.5
<u>Chamaecyparis lawsoniana</u> (Port-Orford cedar)	092	2.3	<u>Picea breweriana</u> (Brewer spruce)	301	2.0
	301	2.0		302	1.0
	302	2.2	Overall		
Overall	303	2.8	rating 1.5		
rating 2.3			<u>Picea sitchensis</u> (Sitka spruce)	091	2.2
<u>Cupressus macrocarpa</u> (Monterey cypress)	092*	5.0		092	2.0
			Overall		
			rating 2.1		
<u>Libocedrus decurrens</u> (incense-cedar)	092	1.3	<u>Pinus attenuata</u> (knobcone pine)	301	3.6
	301	2.0		331	1.0
	302	1.6	Overall	521	1.0
	303	1.3	rating 1.9		
	322	3.0			
	331	1.0			
	340	1.6			

<sup>a/</sup> See footnote at end of table.

\* Plantations

Species	Tree Seed Zone	Average Rating <sup>a/</sup>	Species	Tree Seed Zone	Average Rating <sup>a/</sup>
<u>Pinus contorta</u> <u>var. contorta</u> (beach pine)	091	3.0	<u>Pinus jeffreyi</u> (Jeffrey pine)	782	3.0
	092	4.0	Continued	791	3.0
Overall	092*	3.0		994	3.0
rating 3.2	093*	4.0		997	2.0
	094	3.0		998	2.0
	095	2.0			
<u>Pinus contorta</u> <u>var. latifolia</u> (lodgepole pine)	525	1.0	<u>Pinus lambertiana</u> (sugar pine)	095	2.0
				301	2.0
				302	1.8
				303	1.7
<u>Pinus coulteri</u> (Coulter pine)	163	4.5		321	2.0
	994	2.5		322	1.5
Overall	996	4.0	Overall	331	1.5
rating 3.3	997	2.0	rating 2.0	340	1.5
	998	3.3		372	1.0
				380	2.0
<u>Pinus jeffreyi</u> (Jeffrey pine)	092	2.0		390	2.0
	303	1.0		516	2.0
	312	2.0		521	1.5
	322	1.5		522	3.0
	331	1.0		523	2.0
	340	2.7		524	2.5
	390	2.0		525	2.0
	516	2.0		526	3.0
	521	1.0		531	2.0
	522	2.0		532	1.7
Overall	523	2.0		533	1.5
rating 2.0	524	2.0		732	1.7
	525	1.3		741	1.5
	526	3.0		742	2.0
	531	2.0		771	1.5
	532	2.0		992	1.0
	533	1.3		993	1.0
	731	2.0		994	4.0
	732	2.0		997	3.0
	741	2.0		998	3.0
	742	2.0	<u>Pinus monticola</u> (western white pine)	091	2.0
	752	2.0		092	2.0
	760	1.0	Overall	301	2.2
	771	2.0	rating 1.8	302	2.0
	772	2.0		303	1.0
	781	3.0		322	1.0
				525	2.5

<sup>a/</sup> See footnote at end of table.

\* Plantations

Species	Tree Seed Zone	Average Rating <sup>a/</sup>	Species	Tree Seed Zone	Average Rating <sup>a/</sup>
<u>Pinus muricata</u> (Bishop pine)	091*	3.0	<u>Pinus ponderosa</u> (ponderosa pine)	752	1.0
	092	3.7	Continued	760	1.0
	092*	3.0		771	2.0
	093*	2.5		772	2.0
Overall	094	3.0		994	1.5
rating 2.8	095	2.0		996	2.0
	096	2.0		997	2.0
	301*	2.4		998	1.0
	302*	3.0			
	303*	3.0	<u>Pinus radiata</u> (Monterey pine)	091*	3.0
	390*	3.0		092*	3.7
<u>Pinus ponderosa</u> (ponderosa pine)	091	2.0	Overall	093*	2.8
	092	1.8	rating 2.7	301*	2.0
	094	2.0		302*	2.7
	097	4.5		303*	2.5
	301	1.4		340*	2.0
	302	1.7		390*	3.0
	303	1.8	<u>Pinus sabiniana</u> (Digger pine)	303	2.0
	311	1.0			
	312	1.7	<u>Pseudotsuga macrocarpa</u> (bigcone Douglas-fir)	998	5.0
	321	1.0			
	322	1.5	<u>Pseudotsuga menziesii</u> (Douglas-fir)	091	1.6
Overall	331	1.0		092	1.6
rating 1.6	341	2.0	Overall	093	1.2
	351	2.0	rating 1.5	094	2.0
	360	1.0		095	1.5
	371	2.0		096	1.0
	372	1.0		301	1.0
	380	1.0		302	1.3
	516	2.0		303	1.5
	522	2.0		311	2.0
	523	1.5		312	2.0
	524	2.5		321	1.0
	525	1.2		322	1.5
	526	2.3		331	1.0
	531	1.5		340	1.6
	532	1.0		351	2.0
	720	2.0		360	1.0
	731	1.0		371	3.0
	732	2.0		372	1.0
	741	1.3			
	742	1.0			
	751	2.0			

<sup>a/</sup> See footnote at end of table.  
\* Plantations

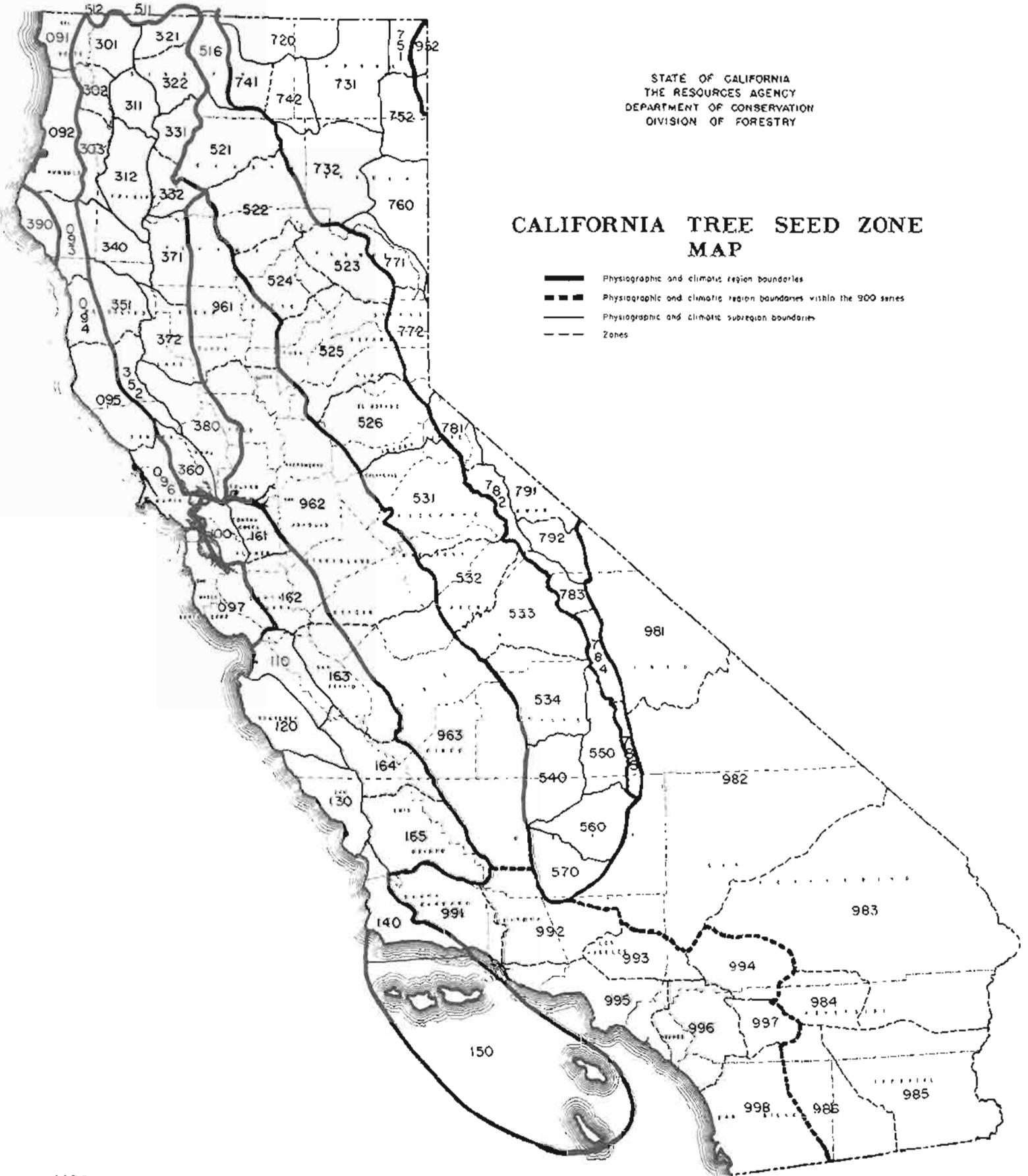
Species	Tree Seed Zone	Average Rating <sup>a/</sup>	Species	Tree Seed Zone	Average Rating <sup>a/</sup>
<u>Pseudotsuga menziesii</u>					
(Douglas-fir)					
Continued	380	1.0			
	390	1.4			
	516	2.0			
	521	1.0			
	522	2.0			
	523	1.5			
	524	1.5			
	525	1.0			
	526	1.8			
	531	1.0			
	732	2.0			
	741	1.0			
	771	2.0			
<u>Sequoiadendron</u>					
<u>giganteum</u>					
(Sierra redwood)	534	4.0			
<u>Sequoia sempervirens</u>					
(coast redwood)					
	091	2.0			
	092	2.0			
	093	2.0			
	094	2.0			
Overall	095	1.5			
rating 2.0	096	2.0			
	097	2.5			
<u>Thuja plicata</u>					
(western red cedar)					
	091	2.0			
	092	2.0			
Overall	390	2.0			
rating 2.0					
<u>Tsuga heterophylla</u>					
(western hemlock)					
	091	2.2			
Overall	092	2.6			
rating 2.2	093	2.0			
	303	1.8			

<sup>a/</sup> Based on numerical scale - 1, 2, 3, 4, & 5 of crop rating system.  
 \* Plantations

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF CONSERVATION  
DIVISION OF FORESTRY

## CALIFORNIA TREE SEED ZONE MAP

- Physiographic and climatic region boundaries
- - - Physiographic and climatic region boundaries within the 900 series
- Physiographic and climatic subregion boundaries
- - - Zones



FROM  
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TO: