

FIG. 2. Mosaic chart of the vegetation of the Santa Catalina Mountains (and elevations above 9000 ft in the Pinaleno Mts.), Arizona, based on 400 vegetation samples. Major species are indicated by their centers of maximum importance; dominants of lower strata are indicated in parentheses.

<u>Mile</u>	<u>Elev. (ft)</u>	
0	2860	Catalina Highway at Mt. Lemmon Short Road. Set odometer.
2.7	3280	Babat Duag (frog mountain) Pullout. View of bajada and Tucson basin. Agua Caliente Wash to the south; Rincon Mountains to the southeast.
3.8	4000	
4.8	4160	Pullout on southeast side of road. <i>Arizona sycamore</i> and <i>velvet ash</i> in Molino Canyon.
5.6		Molino Basin. Restrooms.
7.3		Prison Camp Road intersection.
7.8	5000	
10.1	5420	Pullout on southeast side of road. Bear Canyon. <i>Arizona cypress</i> , <i>alligator juniper</i> , <i>Fremont cottonwood</i> , <i>Arizona sycamore</i> , <i>piñon pine</i> .
11.3	5820	Pullouts on both sides of road. Bear Canyon drainage. <i>Ponderosa pine (5 needle)</i> , <i>piñon pine</i> , <i>alligator juniper</i> , <i>Chihuahua pine</i> .
11.4		Bear Canyon recreation area. Restrooms.
12		General Hitchcock turnoff. Restrooms.
12.1	6000	
14		Windy Point Vista.
14.5		Geology Vista.
15.9	7000	Pullout on northwest side of road. Walk up hill to the northwest. <i>Douglas-fir</i> , <i>Arizona madrone</i> , <i>ponderosa pine (5 needle)</i> , <i>silverleaf oak</i> .
16.3		John Brinkley tailhead on southeast side of road.
16.5	7000	
17.1		Rose Canyon turnoff.
17.5	7350	San Pedro Vista pullout on east side of road. <i>Southwestern white pine</i> , <i>Douglas-fir</i> , <i>ponderosa pine (5 needle)</i> , <i>silverleaf oak</i> . Green Mountain trailhead.
19.8		Palisade visitor center. Phone & restrooms.
21.5		Spencer Canyon Road intersection.
22	7920	Pullout on south side of road. <i>White fir</i> , <i>quaking aspen</i> , <i>southwestern white pine</i> , <i>Douglas-fir</i> . Revegetation project on roadway shoulder.
23.5		Restrooms.
24.8		Turn right at Ski Valley road.
26.2	8360	Ski area and Lodge.
26.6		Road gate.
27.3	8800	Park along southwest side of road. <i>Alpine fir</i> , <i>white fir</i> , <i>Douglas-fir</i> , <i>southwestern white pine</i> , <i>ponderosa pine (3 needle)</i> .



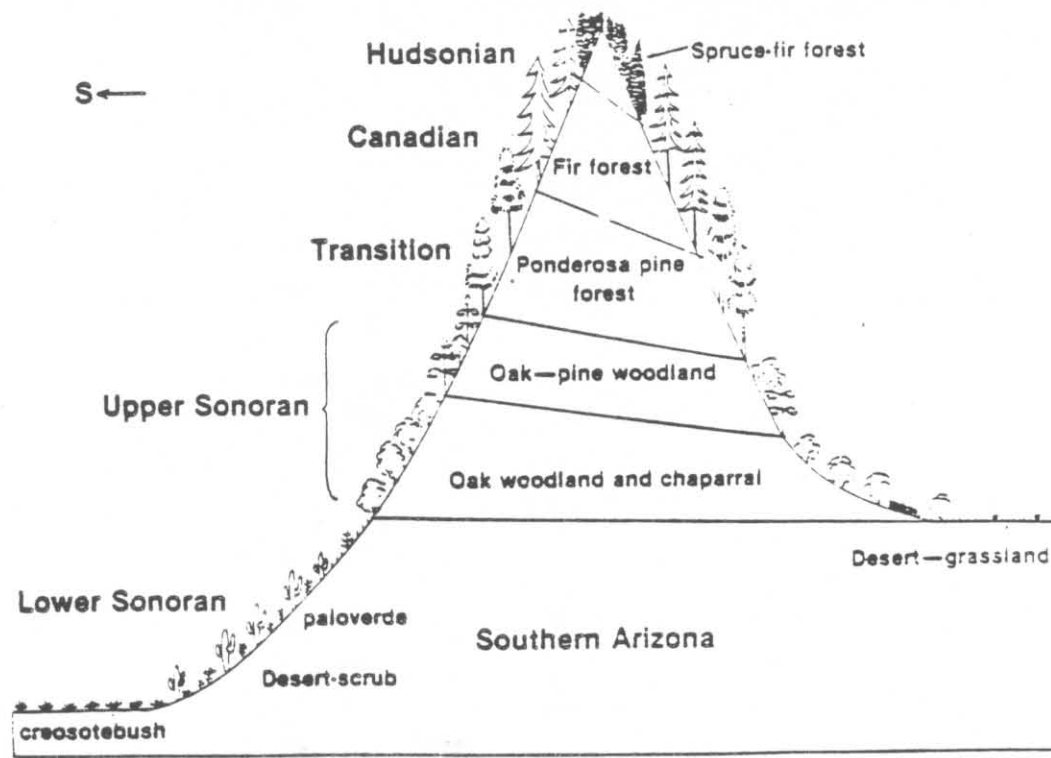


Table 2. Biomes and Life-zones in Arizona, Sonora, Chihuahua, New Mexico, and adjacent areas. Table of equivalents (Lowe 1964).

Biome	Life-zone
Thornforest (deciduous)	Tropical Life-zone
Thornscrub (deciduous)	Tropical Life-zone
Desertscrub (evergreen/deciduous)	Lower Sonoran and Upper Sonoran Life-zones
Chihuahuan Desertscrub	Lower Sonoran Life-zone
Sonoran Desertscrub	Lower Sonoran Life-zone
Mohave Desertscrub	Lower Sonoran Life-zone
Great Basin Desertscrub	Upper Sonoran Life-zone
Grassland (evergreen)	Upper Sonoran Life-zone
Chaparral (evergreen)	Upper Sonoran Life-zone
Woodland (evergreen)	Upper Sonoran Life-zone
Forest (coniferous)	Transition, Canadian, and Hudsonian Life-zones
Pine Forest	Transition Life-zone
Fir Forest	Canadian Life-zone
Spruce Forest	Hudsonian Life-zone
Tundra (alpine)	Arctic-Alpine Life-zone
Forest and Tundra	Boreal Life-zone

SPECIES

STOP

1

2

3

4

5

6

FAMILY CACTACEAE (cactus)

saguaro

(Cereus gigantea)

prickly pear

(Opuntia phaeacantha)

staghorn cholla

(Opuntia versicolor)

teddy bear cholla

(Opuntia bigelovii)

jumping cholla

(Opuntia fulgida)

hedgehog cactus

(Echinocereus fasciculatus)

barrel cactus

(Ferrocactus wislezenii)

Mammalaria

(Mammalaria microcarpa)

FAMILY LEGUMINOSAE (pea)

velvet mesquite

(Prosopis juliflora)

foothills paloverde

(Cercidium microphyllum)

catclaw acacia

(Acacia greggii)

fairy duster

(Calliandra eriophylla)

Wait-a-minute

(Mimosa biuncifera)

FAMILY SOLANACEAE (potato)

wolf-berry

(Lycium pallidum)

Jimson weed

(Datura meteloides)

FAMILY EUPORBIACEAE (euphorbs)

limberbush

(Jatropha cardiophylla)

FAMILY COMPOSITAE (composites)

brittle bush

(Encelia farinosa)

turpentine bush

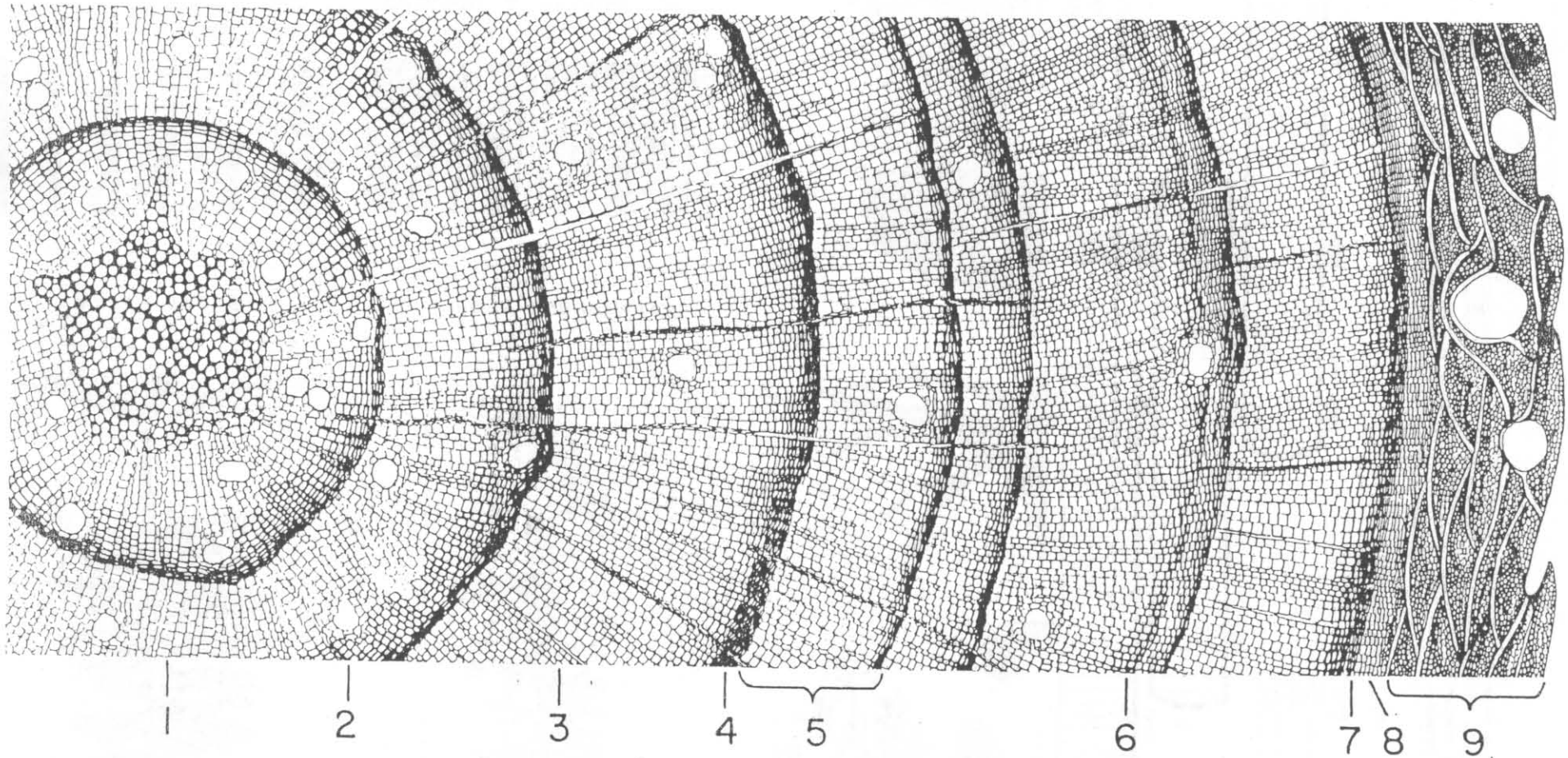
(Aplopauppus laricifolius)

FAMILY FOUQUERIACEAE

ocotillo

(Fouquieria splendens)

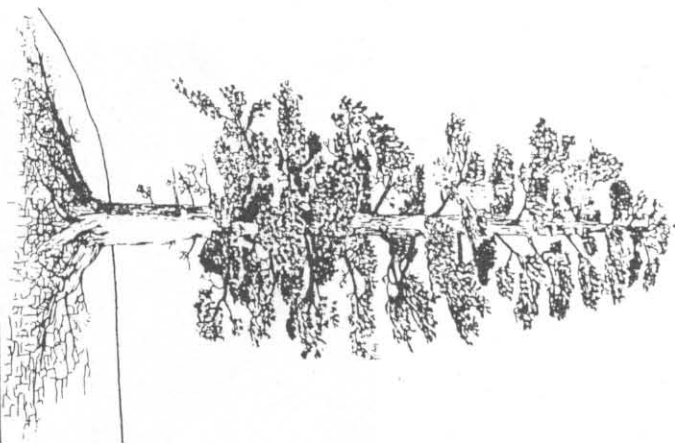
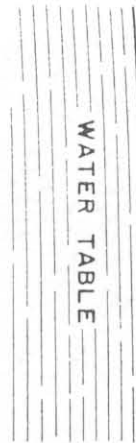
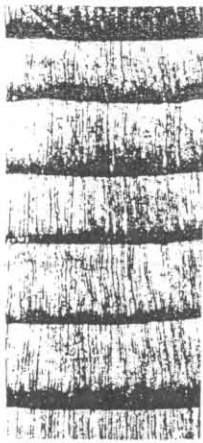
Illustration of annual rings in a conifer



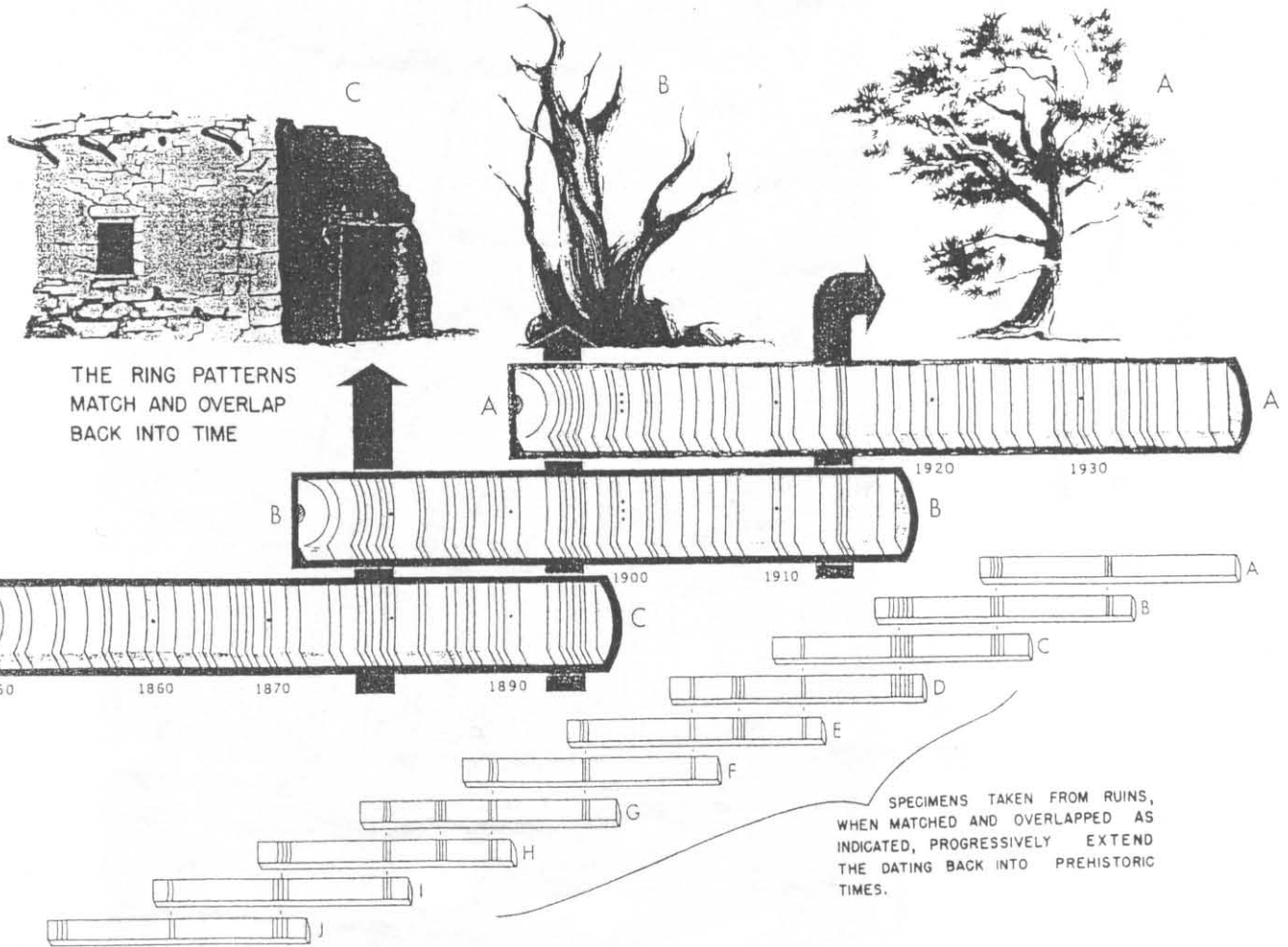
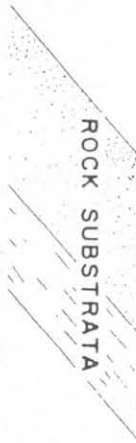
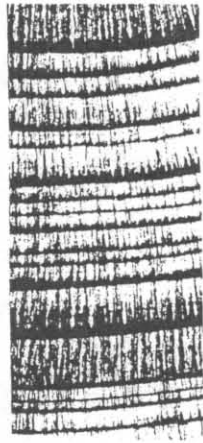
Cross section of a conifer stem showing:

- (1) Pith (2) Resin Duct (3) Earlywood (4) Latewood
(5) Annual Ring (6) False Intra-annual ring (7) Cambium Area
(1 to 7) Xylem or Wood (8) Phloem (9) Bark

RINGS OF UNIFORM WIDTH
PROVIDE LITTLE OR NO
RECORD OF VARIATIONS
IN CLIMATE.



RINGS OF VARYING WIDTH
PROVIDE A RECORD OF
VARIATIONS IN CLIMATE.



THE RING PATTERNS
MATCH AND OVERLAP
BACK INTO TIME

SPECIMENS TAKEN FROM RUINS,
WHEN MATCHED AND OVERLAPPED AS
INDICATED, PROGRESSIVELY EXTEND
THE DATING BACK INTO PREHISTORIC
TIMES.

The principle of crossdating.

DENDROCHRONOLOGY HANDOUT FOR SANTA CATALINA FIELD TRIP
 Dr. Thomas W. Swetnam, Univ. of Arizona Laboratory Tree-Ring Research

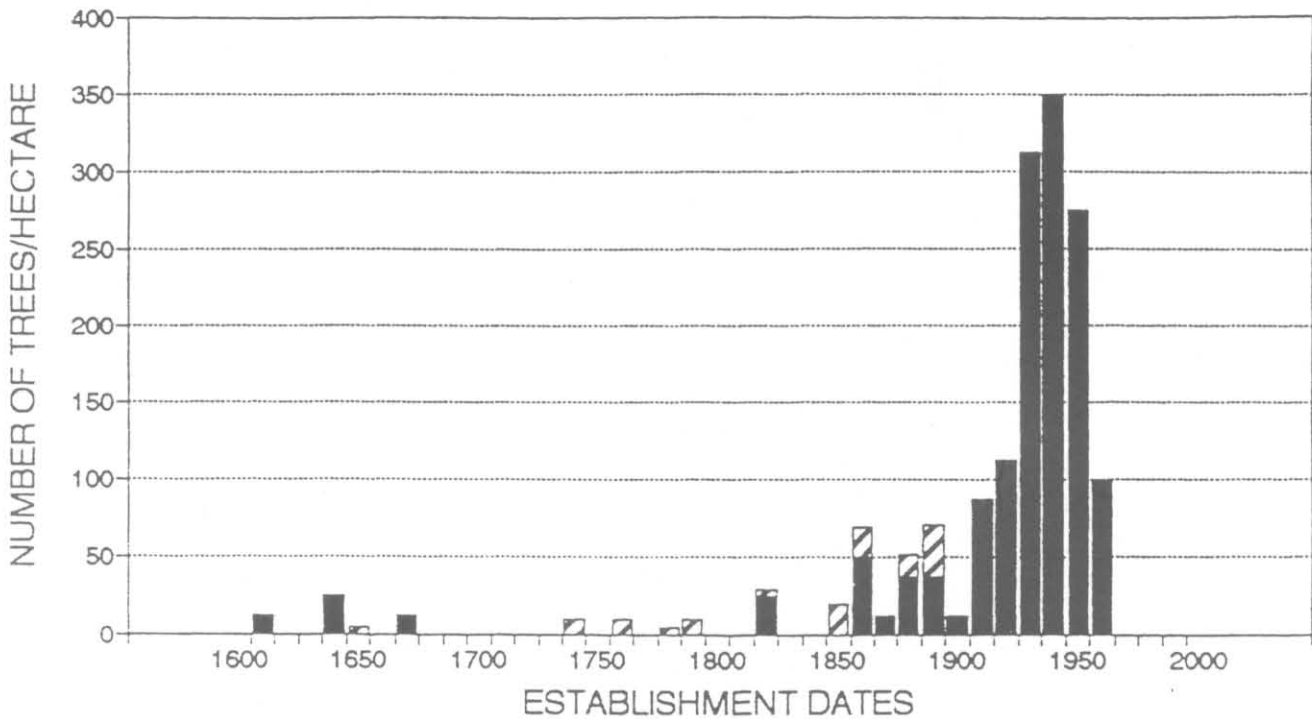
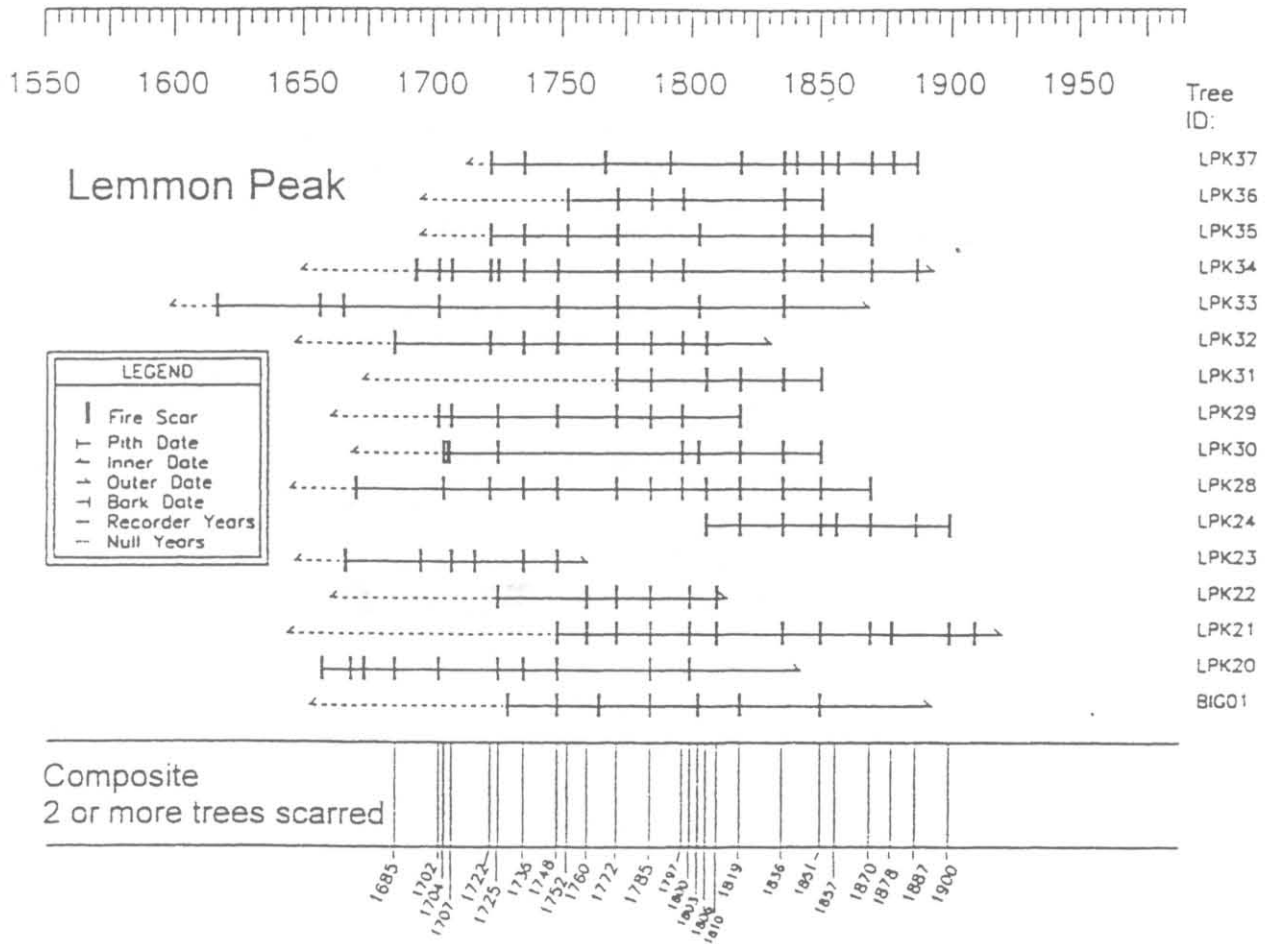


Figure 2. Estimated age structure of ponderosa pine in Rose Canyon area. Solid bars represent trees for which we had precise DBH measurements while hatched bars represent trees that we counted in rough 5-10 cm size class categories.