

BROWN WOOD.

O.W. Loneragan.

Brown discolouration of the sapwood of pole Jarrah has been recorded in stem anatomy studies in 1952 at Dwellingup as an effect of fire 1950 (Playins, Compartment 1). The suggestion has been made that this is possibly due to solution in the heated sap of sugars and tannins being deposited in the sapwood on cooling after the fire.

In Karri at Pemberton brown discolouration of the sapwood has been recorded in samples taken in 1955 as an effect of fire 1953 (Big Brook, Compartment 40). Brown discolouration of the heartwood of pole Karri also has been recorded in 1958 in Compartment (8) completely protected from fire. This brown wood was widest at the branch stubs and in the stump; the width varied, rapidly decreasing above the branch stubs but only gradually below them. This occurrence was assumed to indicate incipient decay associated with fungus. Brown wood in Karri therefore may be due to fire or fungus.

The question of what causes the smell associated with the brown wood of Karri has not been confirmed. It is suggested that the sourish smell may be associated with formation of pyroligneous acid (vinegar and alcohol) by fire; or fermentation of starches and sugars in the wood by fungi: for instance, in the main wood solutions, the weak acetic acid (vinegar) on reduction of oxygen is converted to the stronger smelling acetaldehyde (of the mouse smell), and starch is also converted by warm dilute acetic acid to sugars; which, through fermentation by bacteria and moulds (fungi) form alcohol (of the familiar smell): these ingredients may be sufficient then to constitute the sourish spirit of the brown wood of Karri.

----- oOo -----