77. DEATH & REGENERATION IN SPECIES-RICH SHRUBLANDS AFFECTED BY DROUGHT

by R.J. HNATIUK

Western Australian Herbarium

A study of 87 sites about 8 km south of Eneabba, Western Australia (19°53'S lat., 115°16'E long.) during a period of prolonged drought showed that individuals of native shrubland species are affected by drought. The effects range from minor to severe, including death, and the areas affected are generally patchy in distribution. There is a slight tendency for a greater number of deaths to occur on high sand ridges than on lower parts of the landscape.

Of the 338 species recorded for the area, 86 (25%) were found with dead individuals. They represented 43 genera and 15 families. Also, 49 species were recorded to have seedlings. 58 species with dead aerial parts had resprouting from perennating organs. 31 species were found with dead individuals but no seedlings or sproutings. No species was reduced to dead individuals alone.

The family Epacridaceae was most severely affected in so far as 70% of its species had dead individuals. Dead individuals made up 67% of Proteaceae but only 20% of each of Myrtaceae and Fabaceae. Sprouting was observed in 32% of Proteaceae, 28% of Myrtaceae and 35% of Fabaceae. The species most frequently recorded with dead individuals were Petrophile drummondii (47%), Dryandra shuttleworthiana (36%) and Petrophile macrostachya (36%).

The most frequently occurring seedlings were of Petrophile drummondii (36%) and Beaufortia elegans (31%).