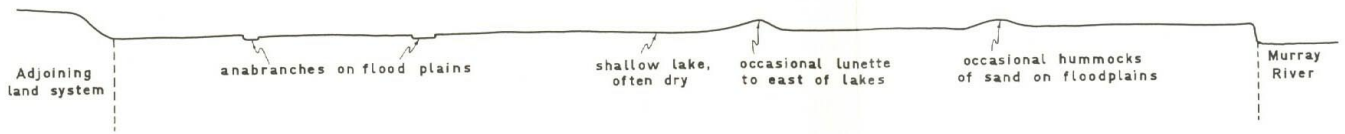


Lindsay Island Land System

Fig. 28 – Lindsay Island Land System

LINDSAY ISLAND LAND SYSTEM

(a) Distribution of land forms



(b) Land system diagram

AVERAGE ANNUAL RAINFALL: 10"-13"

LAND USE: Red gum and black box timber production; recreation; irrigation; sparse grazing; conservation of native flora and fauna.

LAND FORM	Type Approx. percentage of land system Approx. cross-section	Plain			Lunette	Hummock
		92 50 yards-10 miles			1 50 yards	7 100 yards
PARENT MATERIAL	Parna and/or alluvium	Crust of saltation material or alluvium over parna or alluvium	Coarse alluvium		Parna (with saltation material at surface?)	Mainly coarse saltation material
NATIVE VEGETATION	Woodland of lignum, shrub	redgum and black steppe woodland of bladder saltbush	box, scrub of black box and		Indeterminate	Mallee and woodland of pine
SOIL	Textural group	Heavy clays	Sandy loams	Sands	Sandy loams	Sands
	Morphological group	Grey heavy clays	Shallow sandy loams over grey clays	Grey and white sands	Group C	Group D reddish yellow
	Proportion on land form	Dominant	Subdominant	Minor	Dominant	Dominant
	Moisture characteristics	Very poor	Poor	Good	Moderate	Good for deep-rooted species
	Fertility reserves	High		Low to moderate	Moderate	Low
LAND USE	Most suitable form	Unsuitable for agricultural production		Grazing	> 12" cropping and grazing < 12" grazing	Grazing of native vegetation
	Nutrients required in fertilizers	Fertilizers uneconomical		Fertilizers not used	P	Fertilizers not used; lack P and N?
	Recommended pastures	Native vegetation			> 12" barrel medic, Wimmera ryegrass < 12" native vegetation	Native vegetation
	Land use class	6		5	> 12" 2 (b) < 12" 5	5
WIND EROSION HAZARD	Slight	Slight to moderate	Severe	Moderate scalding followed by severe water erosion	Very severe	
OTHER HAZARDS	Flooding					

In north-western Victoria the River Murray flood plain is of variable width and occasionally discontinuous, as for example where the river runs up against cliffs of the Central Mallee and Millewa land systems. It covers some 590 square miles and constitutes the Lindsay Island land system (Fig. 28). Most of the plain is dry for the greater part of the year and the whole is flooded only rarely, the last occasion being in 1956.

The average annual rainfall decreases downstream from 13 inches at Swan Hill to 10 inches towards the South Australian border. The soils are mainly grey heavy clays. These are frequently overlain by an inch or two of grey sandy loam and occasionally by deeper grey and white sands. The distribution of the native vegetation is governed more by the drainage pattern of floodwaters than by the soils pattern. Beside the more permanent creeks and around the lake shores there are woodlands of redgum (Plate 33) whilst on the lake and creek beds lignum scrub and reeds are frequently found. However, black box woodland is the most widespread community and it occupies the plains furthest from the drainage lines. In the north-western corner of the land system scattered remnants of bladder saltbush and old-man saltbush (*Atriplex nummularia*) suggest that saltbush woodland may have been an original community.

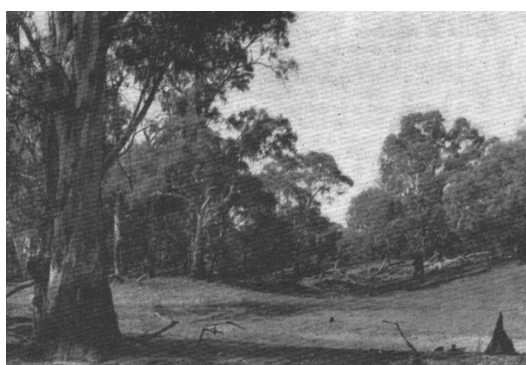


Plate 33 – Red gum woodland fringing Chalka Creek in the Lindsay Island land system

Since the 1840's the country has been used as a source of redgum and black box timber but complete removal of the trees is infrequent except in the north-western corner of the land system. Most of the timber is now reserved as State Forest. Parts of the land system are used for grazing of the native vegetation but the carrying capacity is low because of the paucity of edible shrubs or grasses. A small proportion of the land system is irrigated, mainly around Swan Hill where dairying is the main enterprise. Levee banks are required as a protection against flooding. Therefore, the effects of additional banks on the general scheme of flood control along the River Murray need careful consideration in deciding whether further areas within the land system should be irrigated.

The erosion hazard within the land system is low and severe only on "spot" areas of atypical country afforded by occasional hummocks and lunettes. The lunettes occur to the east of several shallow lake beds: Their soils are mainly sandy loams of Group C. In the drier north-western parts of the land system the lunettes are badly wind and water eroded. The problems of reclamation are similar to those on the sandy loams of Group, C in the Ned's Corner land system, accentuated by the more severe water erosion. Further to the south-east the lunettes are cropped and relatively productive. Reddish yellow sandy hummocks occupy about 40 square miles to the east of Hattah and Nowingi. They were originally clothed with pine and mallee. The pine has been drastically thinned out and replaced by grass and ham and eggs daisy (*Myriocephalus stuardi*). The hummocks are grazed but because of the low stocking rates the general level of erosion is low.

The attractive river frontage has long been a favorite area for recreation and a portion of it has recently been reserved for this purpose with the gazetting of the Hattah Lakes National Park.