FLORA - PRACTICALITIES

BIODIVERSITY REVEGETATION - HABITAT ISLANDS

by Penny Hussey

IN the past, farmers have often attempted to manage their land so that there was an even growth of crop or pasture, no matter what terrain or soil type they were planted on. This attitude is changing, with planting to soil type, and even companion planting, being undertaken, but a farm is still a relatively simplified ecosystem compared with the natural systems it replaced.

Nature seldom produces a uniform vegetation across a variable landscape. While an unbroken expanse of bushland appears superficially to be a uniform mass, in reality there are differences in soil type and topography which create a mosaic of habitats, changing constantly across the landscape. The bush is incredibly varied, and the variations permit a wide variety of plants and animals to exist alongside one another. In this diversity lies strength - the resilience that has allowed the biotic elements of the landscape to adapt and change, yet remain a functioning system, as the climate has changed over an immense length of time.

When attempting to revegetate the landscape and incorporate the needs of native flora and fauna (biodiversity), we need to recreate this natural variety. This will provide the varied resources - food and shelter throughout the year - that native fauna need.

One suggestion to add biodiversity into general or commercial revegetation is to incorporate 'habitat islands' into the replanting concept. A habitat island is a dense clump of trees/shrubs/groundcovers designed to provide resources for native fauna.

Each habitat island should be planted as a dense clump of mixed local species which attempts to eventually mimic the structure of the appropriate local vegetation community, eg trees, tall/medium/low shrubs and ground layer in a woodland, mixed shrubs and mallee on sandplain. If using a tree-planter, reduce the spacing and interplant between rows. Better still, use, or combine with, direct seeding. As the plants grow, they will adjust in density as the best adapted survive.

Firstly, as with any reveg project, good weed control is essential. Scalping is best for direct seeding.

What species should be included? As a general rule, include

CREATION OF A HABITAT ISLAND IN POOR QUALITY REMVEG - ST RONAN'S WELL RESERVE, YORK.

*Site preparation, 1991: * cool fire removed grass thatch * pic above, spray to kill Cape Tulip * cultivate to break up CT bulb mass * direct seed.*

Result: 1997, 21 species of local shrubs established.

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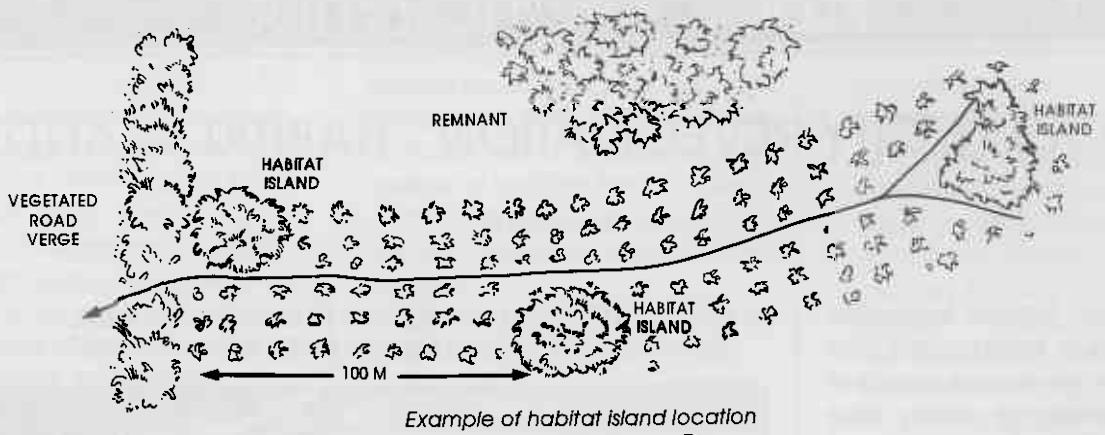
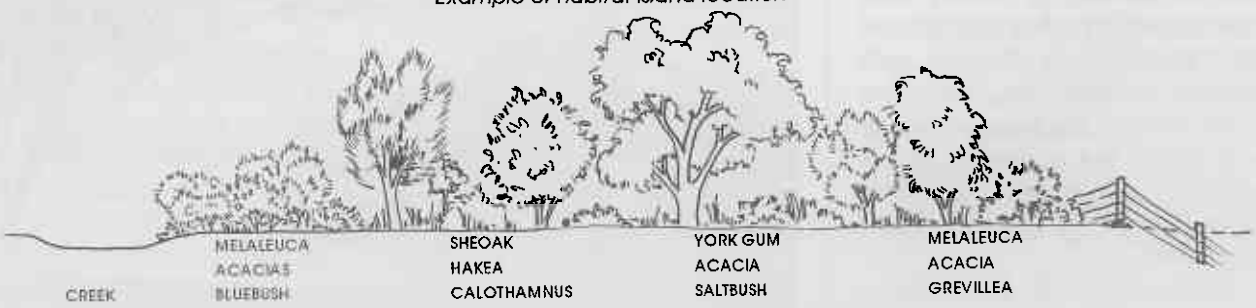
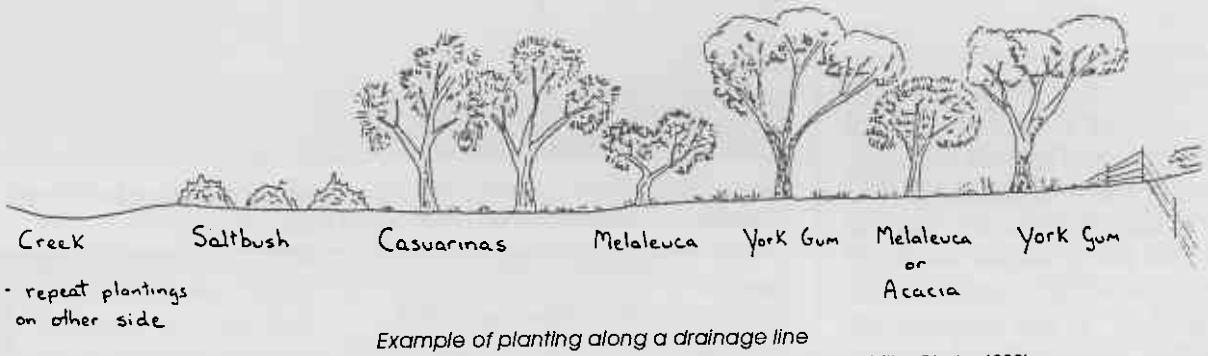


Example of habitat island location



In this example, a habitat island might look like this



Example of planting along a drainage line

(Diagram reproduced from 'Kennedy Creek Catchment Management Report' Mike Clarke 1993)

some trees for height and eventual hollows and a variety of shrubs, some prickly, which grow to different heights and flower at different times. If possible, a log or two should be placed within the area, as extra habitat for fauna. Leaf litter is necessary to provide material for nutrient recycling and the soil formation process. Brushing is the most practical way of providing sufficient litter, and the seeds in the brush will help to increase the plant diversity within the clump. Topsoil is also useful for introducing beneficial soil fungi which will provide a marvellous boost to the plants. If wildlife habitat is the prime consideration, stock must be excluded.

How big should the habitat islands be? I believe that 'one tennis court' is an excellent size but 'half a tennis court' would do!

Where should they be put? Fit them into corners, around rocky areas, in the bends of creeks, etc, within small-bird flight-hopping distance from the nearest remnant vegetation. The distance varies for different species, but they should be no greater than 100 m (or in line of sight) from other such islands or patches of native vegetation. If doing linear revegetation, put habitat islands at intervals along the line - again, 100 m would be an arbitrary figure. That is, there would be 10 habitat islands in one km of creekline corridor.

Dense stands like this are good windbreaks and water users, and will provide resources for small birds such as robins, thornbills and honeyeaters, which contribute to the ecological balance of the area. Thus the nature conservation and the agricultural values of the property may both be increased.

Much of this article is taken from a talk given by Denis Saunders and Penny Hussey to the "Productive Use and Rehabilitation of Saline Lands' Conference in Albany in March 1996. The full paper is 'Creating a Hans Heysen: Painting Saline Lands into a Nature Conservation Picture'.

Habitat islands need to contain a variety of local native species. We have already provided lists of such species for some Land for Wildlifers - if you would like help with species selection for a particular site, ring me on 08 9334 0530. *Penny*