CHAPTER 5

Seed collection in the field

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This chapter outlines the main issues that need to be addressed in order to collect seeds in a comprehensive and sustainable manner. The photographs are drawn from a wide range of collection trips in Western Australia and in Africa. The principles associated with seed collecting are applicable to most situations and although some issues, such as the terrain and the climate, will differ, collecting protocols are the same.

The primary reasons for collecting seeds, especially the end use of the material, must be clearly understood by the collector as they will influence the degree and rigour of sampling. The storage conditions and the sampling strategies used for collecting seed of rare species are different from those applied to more common species. Collectors may be collecting material needed for restoring degraded lands, or for conserving genetic diversity of species and populations considered endangered or threatened. Equally, they might be harvesting seed from cultivated and wild sources for commercial uses, including forestry, horticulture and sale to the general public, or seeking material for display or study purposes in botanic gardens or other research institutions.

Collecting seeds from appropriate plants can ensure the selection of notable forms, and those with inherently desirable characteristics – selecting for salt tolerance, for example. In the majority of cases, seeds provide a good representation of a population and the inherent strengths and subtleties of a species. However, propagation via seed in a nursery may not exert the same natural selection pressures on a seed batch as in the wild and it must be remembered that not all characteristics are passed on by seeds. Some species of variable flower colour will not produce true to type from seeds. Some forms, such as a prostrate habit, can be of an environmental origin, rather than an inheritable characteristic. And low seed viability or deep, intractable dormancy may limit propagation and storage potential.

GENERAL PRINCIPLES FOR COLLECTING SEEDS

Some principles are common to all types of collecting, regardless of the sampling strategies. Correct horticultural technique is essential when collecting seeds to ensure the ongoing health and vigour of the source population. If the resource is well managed and plants are present in reasonable numbers, seeds may be harvested without adverse impacts on the sustainability of the population.

Plants should be assessed as to the availability of material and whether collecting is likely to place the population under stress. If the population is wilted, diseased or unhealthy in appearance, it should be left alone.

Collectors should try to leave the population in as good a condition as it was when they arrived. Shrubs should be pruned rather than disfigured or lopped.