Place and Plant Design - Plant Signatures

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I recently arrived in Aotearoa New Zealand from England to take up a lecturing post in the Department of Landscape Architecture at Lincoln University. Perhaps because of my particular interest in planting, I was soon struck by the wealth and diversity of plants these islands support. The distinctive visual and spatial qualities of the indigenous vegetation I saw stimulated thoughts and questions about how these might be used in landscape design. This article explores some of these reactions and a newcomer's perspective that will, I hope, be of interest to landscape architects in this country.

With its unusually high proportion of endemic species (approximately 85% (Wardle, 1991)), Aotearoa New Zealand's plants are rare with regard to the biosphere as a whole, and many are no less unusual in their visual qualities. When travelling through the landscape of this country we see plants and, what is often more memorable, plant associations which express something of the uniqueness of the place. For the landscape designer this close identity between place and plants prompts a fundamental question: How can the distinctive qualities of Aotearoa New Zealand plants and plant associations be interpreted and articulated in designed plant associations?

If we first consider the work of some of the most successful planting designers such as Gertrude Jekyll, Jens Jensen, Roberto Burle-Marx and Preben Jacobsen - designers who have worked in different periods, with different palettes and in contrasting styles - we see that one of the reasons for the success of their schemes was their sensitivity to the essential qualities of each species they used and their ability to employ them to the fullest advantage by association with other plants and materials. In other words, their design was inspired by an understanding of the plants and plant associations they saw around them, whether these were, as for Jekyll, in the cottage gardens of Surrey or, as for Burle-Marx, in the untamed jungles of the Brazilian interior.

If this knowledge of the 'raw' medium is the starting point for distinctive and expressive design, what then are the characteristics of this country's vegetation that suggest an idiom for indigenous design?

The fecundity of growth and the variety of form and foliage makes an immediate impression on the visitor from northern temperate lands. Many plants here have a striking visual characteristic which, being partly the result of their adaption to environmental conditions, also express something of the character of the place that has moulded them For example, shrubs such as *Myoporum laetum* (ngaio), *Griselinia lucida* (akapuka), *Vitex lucens* (puriri) and many species of *Coprosma* have leaves which are 'polished' to a high gloss and reflect the sharp southern light, creating shimmering, swaying masses reminiscent of the sun on water. In contrast to such light, almost ethereal foliage, there are assertive, sculptural forms like the bristling aciphyllas, the candelabra-like branching of *Dracophyllm traversii* (nei nei), the larger species of *Cordyline* and the juvenile stages of *Pseudopanax ferox* and *P. crassifolius* (horoeka) rising like maypoles strung with dark ribbons of foliage. The sturdy dome-like habit of many of the sub-alpine and coastal shrubs (for example *Hebe, Olearia* and *Brachyglottis* spp.) protects them from the severity of the wind in these exposed habitats. In more sheltered lowland and coastal areas, the moist, mild climate is reflected in a number of plants which have leaves of tropical and sub-tropical dimensions (Dawson, 1988). These include *Meryta sinclairii,* (puka), *Pseudopanax laetum, Myosotidium hortensia* (Chatham Island forget-me-not) and even the common *Phormium tenax* (harakeke). Although there are only two true palms native to Aotearoa New Zealand (the nikau *Rhopalostylis sapida* and its Kermadec Islands relative *R. baueri* var. *cheesemanii*), the 'palm habit' is quite common and, for the European, adds an exotic and, at times, romantic note to the landscape. Species with the palm habit include the larger

***Below Dracophyllm traversii , Dracophyllum longifolum and Nothofagus solandri* form the distinictive plant signature of the sub-alpine forest below Mount Arthur, Nelson.**

Cordyline and *Dracophyllum* spp. and the emblematic tree ferns.

In addition to this diversity of form, natives also offer displays of flowers, fruit and decorative bark to rival the best of cultivated exotics. These ornamental qualities have led to native plants being widely employed in conventional gardens, courtyards, parks and urban greenspace where aesthetic variety and horticultural display are expected. Flowering and foliage plants such as *Sophora tetraptera*, *Libertia peregrinans*, *Clianthus puniceus*, *Leptospermum scoparium* and *Cordyline indivisa* are also choice specimens in British gardens and hardy genera such as *Hebe*, *Phormium* and *Brachyglottis* form the mainstay of many public and civic planting schemes in north-west Europe. The use of these species in Aotearoa New Zealand tends to be in similar sites, with similar objectives and with a similar approach to maintenance and so it could be argued that although they are native plants they are cultivated here as though they were exotics.

It is precisely because many Aotearoa New Zealand plants are such good garden and landscape subjects that they can be used to furnish ornamental and amenity planting schemes in a conventional manner. Furthermore, they can be arranged with no less attention to aesthetic nuance than would be lavished on exotics in traditional gardens, or would be afforded the massing of texture and colour in modernist landscapes. Their design flexibility, however, raises the key question of the balance between artistic composition on the one hand, and spontaneous local character on the other.

How, as designers, we should weight these factors is partly dependent on the scale and the purpose of the planting. Let us examine two hypothetical examples which illustrate what could be a successful balance at the smaller scale of plant grouping: A shady corner on the south side of a building might support a lush ground cover of astelias, sedges and common hard fern (*Blechnum discolor*). This will form a pleasing carpet because of the contrast in leaf patterns and texture seen in the harmonious context of the densely tufted growth form which these plants share. A second example shows how contrast in form can create a striking specimen group: the energetic ascending form of a nikau palm (*Rhopalostylis sapida*), the intricate domed foliage of kawakawa (*Macropiper excelsum*) and a soft spreading carpet of kowaowao (*Phymatosorus diversifolus*) would form an assemblage which is both dynamic and balanced and could provide a memorable focus.

Above **a west coast plant signature of *Rhopalostylis sapida, Phormium tenax and Cordyline australis*; cliff top scrub near Punakaiki.**

The visual qualities of these groupings illustrate certain principles of composition (Robinson, 1992) but, in addition, they are both combinations which occur naturally in forest and bush and so may recall the experience of their natural setting. Their presence in an ornamental planting scheme introduces, by association, some of the qualities of the ecosystem from which they originate, even though the present setting might be entirely artificial.

Selected combinations such as these which have both a natural affinity and a strong visual relationship can represent the typical character and also the uniqueness of a particular place or area. They can be thought of as plant *signatures*; that is, a unique, identifying mark which stands for a place or plant community. A plant signature, then, is an abstraction from the actual place or plant community, but it is a composition which offers some essence of the place. The term 'plant signature' is one that I believe has been used by previous writer(s). What follows is a personal exploration of the idea.

For designers, the plant signatures can be a powerful part of their vocabulary, enabling them to make reference to a significant place and to introduce some feeling or idea associated with that place into a designed landscape on quite a small scale. It is the simplicity of plant signatures that are their strength and that distinguishes them from larger scale naturalistic planting, habitat creation and re-vegetation. They are most effective if they consist of three or four species which are striking and memorable in their original setting. The choice will depend on the personal response of the designer to a place and this gives a plant signature a subjective and, therefore, human aspect which adds to the richness of design.

What follows are some personal selections of plants in addition to the examples given above. They are combinations which, to me, signify an essence of some of the places I visited soon after my arrival.

Dracophyllum traversii / Drracophyllum longifolium / Olearia ilicifolia - sub-alpine scrub at Arthur's Pass.

Phormium tenax / Freycinetia baueriana / Coprosma repens - cliff-top vegetation at Pancake Rocks, Paparoa National Park.

Olearia lacunosa / Brachyglottis laxifolius / Hebe albicans - Mount Arthur, Nelson.

Phormium cookianum / Pachystegia insignis / Hebe hulkeana - coastal cliffs at Kaikoura.

Plagianthus regius / Fuchsia excorticata / Psuedowintera colorata / Olearia avicenniaefolia - Port Hills, Bank's Peninsula.

Cordyline australis / Phormium tenax / Poa cita / Poa colensoi - vestiges of pre-European Canterbury Plain vegetation.

Populus nigra 'Italica' / *Salix alba / Ulex europaeus* clipped hedge - immigrant vegetation of the Canterbury Plain.

Because they are restricted to a small number of species which can be carefully composed, plant signatures give flexibility in design and may be employed with different purposes in mind. A small grouping might be planted to mark the entrance to a building or development complex or to provide foci within a garden space. Alternatively, a chosen selection of species might be combined in various permutations and on a larger scale to form the background to activities such as play, social gathering and car parking.

Many smaller scale planting schemes throughout the country are already typified by a range of native species which have been adopted for a variety of reasons such as availability, ease of maintenance, and a sense of identification with the country or the region. In Canterbury, for example, the common use of tussock grasses, sedges and hebes reflects an affinity with the plains and mountains of Canterbury, but their use is on such a wide scale that they cease to bring distinctiveness to any particular scheme and they become merely predictable and arbitrary. A closer study of the great variety of plant communities within the general classes of grassland and sub-alpine scrub would quickly reveal the richness of visual and spatial character to inspire the designer and might suggest plant signatures particularly suited to different projects.

The choice might depend on the site location or growing conditions, or it could be a visual response to other landscape components such as hard materials or building colours. Some of the species chosen may be difficult to obtain or cultivate, in which case advanced horticultural skills can be put to purposeful use. We should not be afraid to contend with ecological purists by, for example, planting shrubs of sub-alpine origin in the gardens and public spaces of cities like Christchurch. Hebes and olearias may not have grown in this soil before the city was spread out over the swamps and alluvial flats, but these shrubs can provide a link with the distant ranges which are so much part of the identity of the city.

A plant signature is a simple concept but one which offers a way to design with native plants in intensively managed landscapes that both celebrates the uniqueness of the country's vegetation and satisfies the desire for visual and horticultural interest. It encourages us to learn from the ecology of the forests, shrublands and grasslands of our landscape and to interpret this in an artificial setting with an artist's eye.

References

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