Garden as Habitat: Knitting Habitat through Public and Private Land

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On some weekends, we stay at a small house in the coastal settlement of Somers, which is around 70 kilometres south-east of Melbourne, Australia. The house is just 75 square metres and situated within a third of an acre of garden (figure 1). We spend a lot of time in the garden, which for us is an important part of the place (figure 2). The property is part of a 1950s subdivision from a large piece of land that had never been fully cleared or heavily cultivated. The original owners built an Age Small Homes Service holiday house on the site in 1961.[1] The simple house sits within its informal, unfenced garden. From within the house, the garden fills the views through the windows, and to the north you can glimpse people walking along the quiet street through layers of different vegetation extending into the trees of surrounding properties.

Outside the house, the garden provides spaces for our children to play, which change as the children grow and the garden evolves. The garden is also shared with fauna such as a tawny frogmouth pair that have chosen the garden as their home since before we first came.

Visits to the house and garden start by our taking slow, careful, meandering walks to see what has grown, germinated, died, decomposed or spread, is in flower, has set seed, or has become the home or food for an insect or animal. When I bought the property in 2002, I discovered signs of remnant indigenous vegetation among the 1960s planting of native and exotic trees and the hosts of weeds. Since then, and for more than 10 years, I have focused on regenerating the land as an indigenous garden. I did not set out with the knowledge of how to do this, and the gardening project has been both more challenging and more rewarding than I ever imagined. It is a fine balance between discerning what to do and recognising what not to do; between allowing the garden to be and letting it become itself. The process is intrinsically linked to and influenced by what is beyond the garden so any work done within it feels like a contribution to the larger environment. The garden does not have a fixed design or an ideal image to achieve; it is an ongoing, interactive and dynamic process. Gardening here is immediately rewarding but also requires long, slow work. Over time, I have made an extensive plant list of the species I know to be present in the garden. Many different and changing phenomena can be observed at different times of the day or of the year. On each walk, I see special and unexpected things, and slowly I have learnt to see more. The plants tell the story of this garden.

Observing the ephemeral

Gardening starts with careful observation of the garden, of what grows in the surrounding area and along the coastal and bushland reserves. Yellow star

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REPORT

(*Hypoxis vaginata*) (figure 3) and early Nancy (*Wurmbea dioica*) (figure 4) appear and flower for a short time in spring. It is a delight each time to find them. Because many plants are dormant for long periods of the year, it takes time and careful observation to learn what grows naturally in the garden through the seasons and to see what appears. Some plants emerge for only a short time; some fungus species for just a few days. Even plants that are present year-round may not be identifiable until they flower, and other plants bloom only briefly.

Patient scrutiny

On warm days in early summer if you wait and watch the soft, wafting flowering grasses – *Austrodanthonia geniculata* (kneed wallaby-grass) and *Austrodanthonia caespitosa* (common wallaby-grass) – you will see the rhythmic flight of butterflies aloft and visible (figure 5). Then they alight and are immediately disguised. The grasses are important food plants for caterpillars, while the flowers of pimelea, bursaria, banksia and eucalyptus provide nectar for the butterflies.

The exquisite beauty of the detail of the grass flower is not visible to the naked eye and can only be seen with a hand lens. Grasses evolved comparatively recently and the flowers use the wind for pollination. As a result, there are no showy petals to attract bees; instead, the stigma of each flower is a beautiful, delicate, branching structure that catches the pollen blown from the anthers as they wave gently on their slender filament in even the slightest breeze.

Twenty-three species of *Austrodanthonia* exist in Victoria, and the two growing in this garden are very dissimilar; the stalk bearing the flowers of *A. geniculata* is only 20–40 millimetres high and the flowering stalk of *A. caespitosa* is usually about 70 millimetres high. Grass species are identified through the variation in the minute detail of their flowers. Using a hand lens, you can see the seed body of *A. geniculata* is covered with hairs while the hairs on the seed body of *A. caespitosa* are in three neat, horizontal rows.

Figure 1: Residence within the indigenous bush garden. (Photo: Fiona Harrisson.)

Figure 2: Somers garden. (Photo: author's own.)

Figures 3 (left) and 4 (right): Yellow star (Hypoxis vaginata) *and early Nancy* (Wurmbea dioica). *(Photos: author's own.)*

The vegetation class 'grassy woodland' is one of the most threatened in Australia, because it is easily colonised by people and weeds. Indigenous grasses, a major species of this vegetation class, are generally neglected as a garden species because they are not easily appreciated. Such appreciation comes through reading about them in books, from seeing the habitat and food they provide, and by looking at the small-scale detail of the plant.

Respecting complexity

The sun orchid (*Thelymitra pauciflora*) (figure 6) is so-named because its flowers only open in hot sunny weather. Because we normally visit Somers on weekends we do not always see the open orchid flowers, despite the many buds we may observe.

Orchids are a special plant in an indigenous garden. They are sensitive to soil disturbance and cannot be easily propagated and planted, so they usually exist as remnant vegetation where the ground has not been cultivated. They live in a symbiotic relationship with a soil fungus and can only be transplanted if the soil they are growing in is also included.

Land clearance is the most serious threat to biodiversity. Within a square metre of rich biodiversity, hundreds of species of plants and micro-organisms can exist. The complexity of plant systems, such as the association between the mycorrhizal fungi and orchids, cannot be seen. Once land is cleared, it is almost impossible to restore pre-disturbance levels of biodiversity.

Welcoming wildlife

After 10 years of gardening, I was thrilled to finally see small birds in the garden. We now have regular visits from small groups of white-browed scrubwrens and eastern spinebills.

Hedge wattle (*Acacia paradoxa*) is a dense, prickly bush that protects small birds from larger birds and other animals. I planted acacias, along with other shrubs, in areas of this unfenced garden, hoping to contribute to a biological corridor that would allow for the movement of small birds through the larger

Figures 5 (left) and 6 (right): Kneed wallaby-grass (Austrodanthonia geniculata) *and sun orchid* (Thelymitra pauciflora). *(Photo: author's own.)*

environment. Smaller bird species, such as wrens, can be seen in the nearby foreshore reserve, which has dense vegetation that offers protection. The wildlife corridor along the coast is effective but requires sufficient cover in the adjoining private properties for the birds to venture far inland.

To strengthen biodiversity, we need to take a multi-scale approach, from small-scale lot regeneration to large-scale biological links, maintaining genetic, species and ecosystem diversity. Connected wildlife corridors are essential for preserving species' strength by allowing a wide variety of fauna to move through different ecosystems. Important diverse wildlife corridors, both potential and existing, could or do provide links across the Mornington Peninsula from Port Phillip Bay to Westernport (figure 7). As wildlife does not recognise land ownership, the establishment of corridors requires both large government reserves, such as Cerberus and Devilbend Natural Features Reserve, as well as habitat provided on private land. A private garden may be a small part of the connection, but each piece is vital in generating a link.

Figure 7: The garden contributes to wildlife corridors crossing the Mornington Peninsula. Somers sits in the south-eastern corner of the peninsula. (Image: author's own.)

Avoiding disturbance

If you crouch down and look carefully, you may see the hairs of the *Drosera peltata* (ssp. *auriculata*, tall sundew) with its leaves closed and wrapped around a small insect, perhaps a mosquito.

Droseras are small, carnivorous, perennial herbs. They trap insects on special sticky hairs on their leaves. The plants receive their nutrients from the insects and thus can survive in poor soils. Their presence is a sign of an intact ecosystem and undisturbed soil. Part of my discovery about the best way to garden here lies in knowing what *not* to do. To retain and strengthen the indigenous biodiversity and foster the plants that have evolved to survive in these conditions, the soil should be neither fertilised nor changed.

Many small, delicate plants do not tolerate much disturbance. In parts of the garden we have inset wooden 'stepping stones' to encourage paths through sensitive areas (figure 8). Our children enjoy these small-scale passages through the garden. These paths are found through observing and respecting the existing plants, rather than being planned and then planted. After a large tree died, it was used to make the steps as well as a child's climbing structure (figure 9). Other dead trees are left standing, providing habitat and food for birds and insects. The tawny frogmouths often roost during the day in a dead eucalypt, camouflaging well with its rough, grey branches.

Awakening what is dormant

Acacia mearnsii (black wattle) and *A. melanoxylon* (blackwood) have self-sown in the garden. When I notice a self-sown plant I wonder where the parent plant is or was, and why the seed has now germinated.

Gardening here is mainly a process of weed removal. Much more work is involved in carefully removing invasive species than in planting. The work is indirect or catalytic; nurturing what is there, allowing for vegetation to regenerate through seed dormant in the soil, carried by birds and animals or wind-blown. Most of this work is done in the winter and spring months when weeds germinate.

Figures 8 (left) and 9 (right): Inset timber garden steps and children's climbing structure. (Photos: author's own.)

By summer the garden is more dormant. Plants have flowered and set seed and now protect themselves from the heat.

As I write this, the pimeleas (common rice-flower, *Pimelea humilis*) are just about to flower. Their intricate, symmetrical flower heads, made up of many small flowers, are so pretty when seen from above among the grasses (figure 10).

Some plants are cultivated from seed, others from cuttings. Some are easily cultivated, others difficult. These pimelea plants were propagated from cuttings and have been planted in a group. They have a suckering habit and are starting to spread through their root systems.

Figure 10: Common rice-flower (Pimelea humilis). *(Photo: author's own.)*

Sowing seed

The *Allocasuarina littoralis* (black she-oak) and *A. verticillata* (drooping she-oak) were grown from seed and planted in a group now producing a veil of delicate foliage that catches the light. The fallen branchlets form a blanket underneath the trees.

The seed was collected nearby because local seed will help maintain the local species. The process of growing plants from seed takes time; it can take two years before the young plants are ready to go into the ground. Mature seeds can be collected only at certain times of each year. They need to be stored in specific conditions and then germinated in seed trays before being individually potted into small containers. There they can grow until they are established and ready to be planted out. Plants grown from local seed act as a seed bank.

Small beach houses providing flexible accommodation have long been built in coastal settlements such as Somers. They provide a means of staying in and enjoying the coastal landscape. In this area, private land was not clearly demarcated and, consequently, the landscape is more continuous between the coastal reserves and private property. Coastal walking tracks link the land subdivisions and provide pedestrian trails.

The enjoyment of this garden comes through an appreciation of the small detail of the plants within it and the ecosystems that extend beyond it. The garden cannot be understood in one moment or from one point of view. Each visit, each meander along its paths, is different and, like the garden itself, is best unplanned. It opens up the opportunity to observe and savour. Observing each moment of the plants' life cycles is part of the enjoyment of the garden.

There is no end to the work required to nurture this garden. Many more plants are yet to be identified and the challenge remains of trying to understand the boundless complexity of plant systems. At the same time, the garden has its own surprising life that needs to be left alone. This requires time to observe and learn its particularities – time that cannot be rushed. Just as each person can patiently enjoy the interconnected landscape knit between public and private land, an indigenous garden contributes to that broader landscape. Moreover, within its boundary, the garden provides joy in its own right as well as contributing to something beyond its boundaries.

NOTE

1 The Small Homes Service was instigated in Victoria, Australia, by architect Robin Boyd and the *Age* newspaper in 1947 as an affordable way for people to build well-designed homes.