CHAPTER 7-3
GARDENING: PRIVATE MOSS GARDENS

Figure 1. This is a large private moss garden in Nagoya, Japan, using boulders to add interest. Photo by Janice Glime.

Private Gardens

In Japan, even tiny spaces a meter wide by three meters long are usually used for a garden. It may be a vegetable garden, but often it is a moss garden with a few tracheophyte highlights (Figure 1). Such private gardens give their owners a sense of space and tranquility (Figure 2). Mosses are particularly enjoyed because they miniaturize the landscape and give the feeling of greater distance (Figure 3 - Figure 9). Cushions of *Leucobryum* can resemble distant mountains. *Polytrichum* can simulate a forest. Small mosses in the foreground provide the open fields. Pebbles become boulders.

Figure 2. This peaceful scene is a private moss garden in Kyoto, Japan.
Figure 3. This lamp adds interest in a private moss garden at a home near Nagoya, Japan. Photo by Janice Glime.

Figure 4. These rocks form a path through *Polytrichum* in a private moss garden in Nagoya, Japan. Picture by Janice Glime.

Figure 5. Fukushima-san sweeping his private moss garden in Nagoya, Japan. Photo by Janice Glime.

Figure 6. This path leads through *Polytrichum* in a private garden in Nagoya, Japan. Photo by Janice Glime.

Figure 7. *Entodon* and *Polytrichum* grow in a private moss garden in Nagoya, Japan. Typically, the *Polytrichum* will outgrow the pleurocarpous mosses such as *Entodon*. Photo by Janice Glime.

Figure 8. This portion of a private moss garden in Nagoya, Japan, has texture created by different species of mosses. Photo by Janice Glime.
Figure 9. This private moss garden in Nagoya, Japan, has a dry "stream" and bridge. Photo by Janice Glime.

Gardens outside Japan

Private moss gardens are common in Japan (Pullar 1966/1967; Inoue 1980), but elsewhere they are rare. In Chatsworth, Great Britain, there is a moss and lichen garden of 33 moss and 4 liverwort species, including such common taxa as Dicranella heteromalla, Dicranum scoparium, Hylcomium splendens, Neckera crispa, Plagiomnium undulatum, Polytrichum commune, P. piliferum, Rhizomnium punctatum, and Thamnobryum alopecurum (Ando 1972). And where else but at the home of a poet – we find cushions of Polytrichum commune adorning the gardens of Poet Laureate W. Wordsworth.

In the Netherlands, a Japanese garden at the estate of Clingendael has become a moss garden. It sports several locally rare species (Odontoschisma denudatum and Plagiochila asplenoides) among its 57 taxa. Schoenmakers (1985) speculates that several of the species that are restricted to paths are the inadvertent contributions of visitors.

In the United States, mosses are being used as a means of exploring new garden themes (Massie 1996). A number of web sites give instructions for planting moss gardens, often supplying pictures of very small ones to the large ones of Japan. Gardeners such as Case (1994) have found Sphagnum bog gardens to be a viable alternative in the Great Lakes area, avoiding the high maintenance problems of woodland species unsuited for residential living. But even in the highly settled New Jersey, one anthropologist maintains an entire acre of moss (Whiteside 1987). And the prestigious journal Horticulture sports one article titled "Even a rolling stone could get some moss here" (Atkinson 1990).

In spite of the presence of moss gardens in the United States at least as early as the 1930's (at Cutting Estate, Great River, Long Island, N.Y.; Grout 1931), few suppliers provide a selection of mosses. Atkinson (1990) complained that when inquiring of the editor of a horticulture magazine where one could obtain mosses for gardens he was referred to Carolina Biological Supply! Nevertheless, a quick search on the web revealed several sources for Atrichum, Callicladium, Dicranum scoparium, Campylopus, Hypnum imponens, Thuidium delicatulum, Leucobryum, Climacium dendroides, Dicranella heteromalla, and Plagiomnium cuspidatum. One site sold sheet moss that had been cleaned, spread on a backing, glued down, and dyed green! No, thank you! Another source offers a complete garden, including 400 sq feet of moss, for $US 399.99.

My Personal Garden

For my own moss garden, I managed to rescue Marchantia polymorpha with gemmae cups (Figure 10) that was being overtaken by lawn grass on the university campus. It started as a small clump, but one day only a few weeks later I found tiny grey-green specks all over my bare soil (I was just starting the garden). On closer inspection, I found these to be germinating gemmae – the liverwort had spread all over the bare surface and was invading my dying Leucobryum cushion as well. By the second year, I had several forests of archegoniophores (Figure 11), but it seems I didn't get any males.

Added to that were Fissidens, Brachythecium, Climacium dendroides, Dicranum scoparium, Leucobryum glaucum, Plagiomnium cuspidatum, Rhytidiadelphus triquetrus, Barbula, Thuidium delicatulum, and Ceratodon purpureus that I was able to collect locally, mostly in places where they were doomed to be overgrown or destroyed by traffic.

Figure 10. My moss garden initially had a small patch of Marchantia polymorpha, about 10 cm in diameter. Within a month, it spread by gemmae, extending about a half meter in each direction. Photo by Michael Lüth..

Figure 11. The second year these Marchantia plants produced archegoniophores in abundance. Now I have to remove some of the Marchantia to provide space for mosses. Photo by Janice Glime.

The Leucobryum glaucum was a gift from a friend, and it fared well the first year. It looked bad when winter ended and stains of tannic acid from leaf litter discolored it.
It survived, but not well, so the next year I made sure it was not covered with litter for the winter, but it did not make it.

Some night-active animal tore up all the *Dicranum scoparium* and *Thuidium delicatulum* the first night, and once dismembered from its normal growth habit, both failed to thrive. However, they have survived a winter and both are producing new growth, so there is hope. Some rodent decided that the *Thuidium* patch was the best place to enter its underground passage, but I seem to have thwarted that hole by stepping on it and filling it in. Alas, now there is a hole in the *Polytrichum* patch. Most of the *Polytrichum juniperinum* is doing fine (Figure 12). It is only the large patch that didn't have good structural integrity that looks like a fallen forest. But even there a few die-hards are putting up new shoots.

![Image](https://via.placeholder.com/150)

Figure 12. My personal moss garden, now about three years old, in Houghton, Michigan, USA. Photo by Janice Glime.

The real winners (*Marchantia* aside) are *Fissidens* and *Plagiomnium cuspidatum*, with the latter looking a luscious bright green. To my surprise, the *Rhytidiadelphus triquetrus* is doing well, whereas *Hylocomium splendens* didn't like its transplant at all. One patch of *Climacium dendroides* has mostly brown plants with a few new green shoots arising, but the second patch has just this week sprung to life, producing a solid cushion of plants of a most vital green. The old, weedy *Ceratodon purpureus* seems not to like my gardens much and disappears rather rapidly.

A new patch of *Conocephalum conicum* seems to be doing well. It, and *Fissidens* also fared well in my indoor garden. That is, they fared well until the birds ate the *Conocephalum*. I found it with triangular cuts around the edge. Each day it grew smaller until it disappeared. The *Fissidens* diminished and ultimately disappeared after the box turtle died. Apparently the turtle had been an effective dispersal agent for both species because they kept appearing in new places until after the turtle died.

I attribute my success, after several failures, to the installation of a sprinkling system. It comes on about 4am for 20 minutes each night. (We don't get much rain in spring or summer.) That makes it hydrated and ready to take advantage of the cool morning sun. It seems to have made all the difference.

I have learned that leaf litter apparently creates more problems than just deprivation of light during the growing season. The tannic acid seems detrimental to several species, because even when I remove the litter the day the snow retreats from its surface, the mosses that were covered with it seem to have suffered. This past winter there weren't many leaves on the mosses and they seemed to fare much better.

### Summary

Private moss gardens tend to serve the same purpose as the larger moss gardens. Rocks, pebble paths, lamps, and other items add interest, and the limited color gives them a peaceful appeal. Outside of Japan, few moss gardens exist, in part because the climate is often not suitable. Another difference seems to be the love of color in other parts of the world. Worldwide, mosses such as *Polytrichum* and *Leucobryum* seem to be popular choices for these gardens.

### Literature Cited


