

# Ground Covers: Their Uses and Limitations

Francis T. Ching

## Introduction

Ground covers are essentially low-growing plants that may be used as a lawn substitute or as a lawn complement. A wide variety of plants fall into this category, but mainly they are vines, perennials, annuals, succulents, and low-growing shrubs. These plants are effective in varying degrees in minimizing certain environmental problems. For this reason, and also because they offer so many choices to home gardeners and landscape architects, they have become increasingly popular in recent years.

## Lawn Substitute

ONE OF THE first uses for ground covers on a large scale was to provide an easy way out of mowing a lawn. Ground covers such as Algerian ivy (*Hedera canariensis*), hottentot-fig (*Carpobrotus edulis*), coyote brush (*Baccharis pilularis*), ivy geranium (*Pelargonium peltatum*) are easy to plant and grow rapidly. Besides serving as a lawn substitute, they can also be used to eliminate dusty, weedy and unkept areas where minimum maintenance is desired.

Low maintenance, however, should not be considered a general characteristic of ground covers. Just as they differ in size, shape, and color so they can vary in all degrees of difficulty in establishing and maintaining. As an example, dichondra is often used in place of a grass for a lawn but it is comparatively harder to establish and maintain because of its susceptibility to various types of weeds, insects and diseases that, singly, can constitute a problem and, collectively, can result in a catastrophe.

## Color and Landscaping

YEAR AROUND COVER for extensive ground areas is an asset under most conditions. A bonus is added when that cover can offer colorful flowers for a few weeks to several months duration. These colorful ground covers have provided the landscape architect some valuable materials to work with along with trees, shrubs, and lawns.

At the Arboretum, extensive plantings of trailing South African daisy (*Osteospermum fruticosum*) and Cape weed (*Arctotheca calendula*) offer bright colors during late winter and spring months. Verbena, gazanias and ice plants offer spectacular colors during the spring and summer months. When not in flower, all of these plants offer a green to grey cover of foliage for the remainder of the year.

During the early spring months, a display of California native plants for ground cover uses may be seen at Rancho Santa Ana in Claremont. Large plantings of coral bells (*Heuchera sanguinea*), manzanitas (*Arctostaphylos*) and California lilac (*Ceanothus*) offer a colorful display and a cover of drought-tolerant green plants for the rest of the year.

In many inland valley areas, and to a greater degree in coastal areas, large plantings of ivy geranium and bougainvillea thrive almost throughout the year.

## Erosion and Fire Prevention

ANOTHER IMPORTANT interest in ground covers stems from their potential as a fire retardant and as a possible tool in erosion control. Fire and erosion control are interrelated.



*Sedum rubrotinctum* can serve as an easy-to-maintain lawn substitute or lawn border. Among other virtues: it is colorful throughout the year and controls erosion when used as a cover on moderate grades. Used in a mountain-side area it provides minimum fuel for fire.

In past years new shrub growth in mountainous areas has been desirable for slope protection and for esthetic values. Fire, however, has been able to sweep through these highly flammable areas very quickly threatening nearby homes. Fire-fighting equipment and personnel in any number are almost useless under these conditions.

Whenever a fire occurs in the heavily populated foothills and in mountainous areas, one of the first follow-up activities is to seed the area with fast-germinating and fast-growing grasses. This action is often a gamble as adequate rains are necessary for the seeds to germinate. Too much rain will wash the seeds away and can also cause erosion. Too little rain will not allow proper germination, or the seeds may germinate and then die due to lack of moisture. This gamble and its risks was graphically demonstrated by the Glendora fire in late 1968. In early 1969, in spite of intensive seeding of grass, sudden and heavy rain caused widespread flooding and mud slides.

A forest fire is dependent upon such conditions as wind, soil moisture, humidity and, most important, the type and amount of plant fuel available. It

has been estimated that 40 acres of burning chaparral is equal to the energy of the atomic bomb dropped on Hiroshima. Since this native type cover grows so densely and is so highly flammable, clearing and replacement is necessary.

### *Fire and Erosion Retardants — Ground Covers*

**W**ITHOUT A DOUBT, ground covers, when properly selected, planted and maintained, will go a long way toward minimizing the hazards of fire and erosion.

Selection of the right plant for the prevailing conditions is the first consideration. Where erosion is a threat, selection of a ground cover that will quickly establish itself is most important. Where fire is the predominant hazard, the most suitable plant is one that is low growing, succulent, has a high moisture content and contains a minimum of woody material.

Where mixed types of plants are used, moisture requirements must be similar so that watering needs for all plants are the same.

A sprinkler system is an absolute necessity for large slopes in high fire areas. Plants on slopes must be watered slowly so that the moisture will penetrate into the soil and not just run off the surface. The sprinkler system, if automatic, should be set so that the sprinklers are off and on for periods of time. In this way moisture can soak into the ground to a desirable depth.

Until the planted ground cover has taken hold, weeds can be a problem. Fumigation is one of the best means of getting rid of weed seeds although this can be very expensive when large areas are involved. A rather simple but efficient way to control weeds is to water the area to be planted thoroughly to encourage weed growth. After the weed seeds have germinated and are growing, a contact

spray will easily eradicate them. Selective pre-emergence and post-emergence herbicides are other methods of controlling weeds — directions must be carefully followed when these chemicals are used.

Control of woody plant material, especially chaparral, is a problem of an entirely different nature. Established plants can be cut back or sprayed with a contact spray but this is only a temporary control as the plant will usually produce new shoots from the stems, trunks or roots. Chaparral will resprout even following a severe forest fire. New plant growth or the trunks or stems of the plants should be cut and the newly cut surfaces painted with a combination of 2, 4-D and 3, 4, 5-T. Treatment should be repeated as necessary. Spraying with these chemicals should be done only by experienced people as these chemicals are active against all plants.

AS A RESULT of many years of study and planting, the Arboretum today has developed one of the largest displays of ground covers anywhere, and at the same time a considerable store of information.

In 1956 the Arboretum produced its first plant introduction, *Felicia amelloides* 'Santa Anita,' a ground cover. The most recent, some 30 plant intro-

ductions later, is *Osteospermum fruticosum* 'Burgundy Mound.'

The horticultural and botanical staff of the Arboretum have under observation many other plants that show promise as ground covers. These plants, obtained from arboretums and botanical gardens throughout the world and through plant breeding, will be released if they are horticulturally desirable.

#### *Drought Tolerant Ground Covers*

| Description   | Exposure | Rate of Growth | Flower Color |
|---|----------|----------------|--------------|
| Spreading, low growing to 6" high; grey foliate               | Full Sun | Fast           | Yellow       |
| Low growing, eventually reaching 3' high; light green foliage | Full Sun | Moderate       | White        |

*Arctotheca calendula*

Cape Weed

*Baccharis pilularis*

Coyote Brush

*Ceanothus griseus horizontalis*

Carmel Creeper

*Gazania uniflora*

Trailing Gazania

*Helianthemum nummularium*

Sunrose

*Lantana montevidensis*

Trailing Lantana

*Santolina chamaecyparissus*

Lavender Cotton

*Santolina virens*

Green Santolina

*Verbena rigida*



*New juniper garden at Arboretum offers visitors display of over 60 ground cover, shrub, and columnar types. Several varieties of sweet alyssum fill out the area.*

*Ground Covers as Lawn Substitutes*

*Armeria maritima*  
 Sea Pink  
*Arctotheca calendula*  
 Cape Weed  
*Asparagus sprengeri*  
*Baccharis pilularis*  
 Coyote Brush  
*Ceanothus griseus horizontalis*  
 Carmel Creeper (Calif. Lilac)  
*Dianthus sp.*  
*Duchesnea indica*  
 Mock Strawberry  
*Euonymus fortunei radicans*  
 Winter Creeper  
*Festuca ovina 'Glauc'*  
 Blue Fescue  
*Fragaria chiloensis*  
 Wild Strawberry  
*Fragaria* #25  
*Gazania uniflora*  
 Trailing Gazania  
*Hedera canariensis*  
 Algerian Ivy  
*Hedera helix*  
 English Ivy  
*Helianthum nummularium*  
 Sunrose  
*Huchera sanguinea*  
 Coral Bells  
*Hypericum calycinum*  
 Aaron's Beard  
 Ice Plants  
*Carpobrotus*  
 Hottentot Fig  
*Cephalophyllum speciosum*  
 'Red Spike'  
*Delosperma alba*  
 Trailing Ice Plant  
*Drosanthemum floribundum*  
*Drosanthemum hispidum*  
 Rosea Ice Plant  
*Hymenocylus crocea*  
*Lampranthus sp.*  
*Juniperus sp.*  
 Prostrate, spreading varieties  
*Lippia repens*  
*Lonicera japonica*  
 Japanese Honeysuckle  
*Lotus berthelotii*  
 Parrots Beak  
*Ophiopogon japonicum*  
 Mondo Grass  
*Osteospermum fruticosum*  
 Trailing South African Daisy  
*Pachysandra terminalis*  
 Japanese Spurge  
*Pelargonium peltatum*  
 Ivy Geranium  
*Polygonum capitatum*

*Potentilla verna*  
 Spring Cinquefoil  
*Rosmarinus officinalis 'Prostratus'*  
 Trailing Rosemary  
*Sagina subulata*  
 Irish Moss  
*Sagina subulata 'Aurea'*  
 Scotch Moss  
*Thymus serpyllum*  
 Creeping Thyme  
*Trachelospermum asiaticum*  
*Trachelospermum jasminoides*  
 Star Jasmine  
*Verbena peruviana*  
 Peruvian Verbena  
*Verbena rigida*  
 Rigid-leaved Verbena  
*Vinca major*  
 Periwinkle  
*Vinca minor*  
 Dwarf Periwinkle

*Ground Covers for Hillsides —  
 Erosion Control*

*Arctotheca calendula*  
 Cape Weed  
*Baccharis pilularis*  
 Coyote Brush  
*Ceanothus griseus horizontalis*  
 Carmel Creeper (Calif. Lilac)  
*Delosperma alba*  
 Trailing Ice Plant  
*Duchesnea indica*  
 Mock Strawberry  
*Gazania uniflora*  
 Trailing Gazania  
*Hedera canariensis*  
 Algerian Ivy  
*Hypericum calycinum*  
 Aaron's Beard  
*Juniperus* (prostrate forms)  
 'San Jose'  
 'Conferta'  
 'Bar Harbor'  
 'Webberi'  
 'Wiltonii'  
 'Tamariscifolia'  
*Lantana montevidensis*  
 Trailing Lantana  
*Lonicera japonica*  
 Japanese Honeysuckle  
*Pelargonium peltatum*  
 Ivy Geranium  
*Osteospermum fruticosum*  
 Trailing South African Daisy  
*Rosmarinus officinalis 'Prostratus'*  
 Trailing Rosemary  
*Vinca major*  
 Periwinkle  
*Vinca minor*  
 Dwarf Periwinkle



Ching, Francis. 1969. "Ground covers: their uses and limitations." *Lasca leaves* 19, 60–63.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/132110>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/144833>

**Holding Institution**

Missouri Botanical Garden, Peter H. Raven Library

**Sponsored by**

Los Angeles Arboretum

**Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: The Arboretum Library at the Los Angeles County Arboretum and Botanic Garden

License: <http://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <https://www.biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.