

Ornamentals for Microclimates in Oklahoma

By Al Sutherland

Your House's North Side

When someone talks about "microclimates" you may not be sure what they're talking about or why. Microclimate is a combination of "micro" meaning small and "climate" meaning the total sun, wind, and rain. Microclimate is a term used to discuss what a plant will experience on each of the different sides of your home. This is the first article of a four part series on microclimates in your landscape and the best plants for the various microclimates. During this series, we're going to look at the plants adapted to each side of your house.

The plants on the north side of a house receive little, if any sunlight. Because of the movement of the sun between summer and winter, the amount of shade changes through the year. The roof overhang along with the sun movement determines the shade line. You'll need to assess where this shade line occurs in the summer and choose plants accordingly.

The north side of large trees, especially evergreens is similar to the north side of the house and adapted plants are similar. Plants on the north side are protected from southerly summer winds. In the winter more wind comes from the north. This can cause broadleaf evergreens on the north side of a structure to dry out. Check soil moisture on the north side a little more often and water as needed.

The following is a list of plants that will do well on the north side of a house. Most will need regular watering and good soil drainage. To improve soil drainage for smaller shrubs and perennials, add liberal amounts of organic matter and loosen the soil 18-24 inches deep before planting. Mulch all plants with compost, a compost product, peat moss or wood chips to help retain soil moisture. Pecan shells can be used as a mulch material and will also lower soil pH.

TREES:

- Amur Maple (*Acer ginnala*)
- Japanese Maple (*Acer palmatum*)
- Eastern Redbud (*Cercis canadensis*)

SHRUBS:

- Acuba (*Acuba japonica*) – needs summer and winter shade
- Japanese Holly (*Ilex crenata*)
- Dwarf Bamboo (*Arundinaria pigmaea*)
- Oregon Grape (*Mahonia aquifolium*)
- Leatherleaf Mahonia (*Mahonia bealei*)
- Nandina (*Nandina domestica*)
- Arrowwood Viburnum (*Viburnum dentatum*)
- Burkwood Viburnum (*Viburnum* x 'Burkwoodi')
- Koreanspice Viburnum (*Viburnum carlesii*)
- Yew (*Taxus* species)

CLIMBERS AND GOUNDCOVERS:

- English Ivy (*Hedera helix*)
- Liriope or Blue Lily-turf (*Liriope muscari*)
- Mondograss or Monkeygrass (*Ophiopogon japonicus*)

PERENNIALS:

- Ajuga (*Ajuga reptans*)
- Autumn Fern (*Dryopteris erythrosora*)

- Golden Male Fern (*Dryopteris affinis*)
- Lady Fern (*Athyrium filix-femina*)
- Marginal Shield Fern (*Dryopteris marginalis*)
- Royal Fern (*Osmunda regalis*)
- Hosta (*Hosta* hybrids)
- Solomon's Seal (*Polygonatum biflorum*)
- Sweet Woodruff (*Galium odoratum*)

ANNUALS:

- Garden Balsam (*Impatiens balsamina*)
- Wax Begonia (*Begonia semperflorens-cultorum*) – variegated and green leaf types
- Browallia (*Browallia speciosa*)
- Caladium (*Caladium x hortulanum*)
- Coleus (*Solenostemon scutellarioides*)
- Impatiens (*Impatiens wallerana*)
- New Guinea Impatiens (*Impatiens* New Guinea Group)

Your House's East Side

This is the second article of a four part series on microclimates in your landscape and the best plants for the various microclimates. During this series, we're going to look at the plants adapted to the different sides of your house. Each side of your home offers very different light levels, wind exposures, temperatures and rainfall.

Plants on the east side of a home, building or large tree typically receive 4-6 hours of morning sun. Morning sun is less likely to burn heat sensitive plants, because the air temperature is cooler than in the afternoon. These plants benefit by being shaded in the afternoon, the hottest part of the day.

The following is a list of plants that will do well on the east side of a house or that can be planted in a location with 4-6 hours of morning sun. The list includes plants that require afternoon shade and some that can be planted in full sun, but tolerate partial shade.

The shrubs, perennials, bulbs and annuals listed will benefit from adding organic matter to the soil before planting. To add compost spread 2-3 inches of compost, compost product, peat moss or aged manure. Next, till this layer into the top 6-8 inches of soil. After planting, use 1-3 inches of mulch depending on the material to cool the soil, reduce water loss from the soil and reduce the number of weeds.

TREES:

- Amur Maple (*Acer ginnala*)
- Red Maple (*Acer rubrum*)
- Caddo Sugar Maple (*Acer saccharum* Caddo)
- River Birch (*Betula nigra*)
- Atlas Cedar (*Cedrus atlantica*)
- Eastern Redbud (*Cercis canadensis*)
- Leyland Cypress (*X Cupressocyparis leylandii*)
- Southern Magnolia (*Magnolia grandiflora*)
- Saucer Magnolia (*Magnolia soulangiana*)

- Colorado Blue Spruce (*Picea pungens*)

SHRUBS:

- Glossy Abelia (*Abelia grandiflora*)
- Dwarf Bamboo (*Arundinaria pigmaea*)
- Wintergreen Barberry (*Berberis julianae*)
- Small-leaved Boxwood (*Buxus microphylla*)
- Hinoki False Cypress (*Chamaecyparis obtusa*)
- Burning Bush or Winged Euonymus (*Euonymus alatus*)
- Althea or Rose of Sharon (*Hibiscus syriacus*)
- Oakleaf Hydrangea (*Hydrangea quercifolia*)
- St. John's Wort (*Hypericum prolificum*)
- Burford Holly (*Ilex cornuta* 'Burford')
- Foster's Holly (*Ilex x attenuata* 'Foster')
- Nellie R. Stevens Holly (*Ilex x* 'Nellie R. Stevens')
- Blue Hollies (*Ilex x meserveae*)
- Yaupon Holly (*Ilex vomitoria*)
- Golden Privet (*Ligustrum x vicaryi*)
- Variegated Japanese Privet (*Ligustrum japonicum* 'Variegatum')
- Oregon Grape (*Mahonia aquifolium*)
- Nandina (*Nandina domestica*)
- Dwarf Alberta Spruce (*Picea glauca* var. *albertiana*)
- Mugo Pine (*Pinus mugo*)
- Gold Mound Spirea (*Spirea japonica* 'Goldmound')
- Eastern Arborvitae (*Thuja occidentalis*)
- Arrowwood Viburnum (*Viburnum dentatum*)
- Burkwood Viburnum (*Viburnum X* 'Burkwoodi')
- Koreanspice Viburnum (*Viburnum carlesii*)

CLIMBERS OR GOUNDCOVERS:

- Bishop's Weed (*Aegopodium podogaria*)
- Evergreen Wintercreeper (*Euonymus fortunei* 'Coloratus')
- Evergreen Candytuft (*Iberis sempervirens*)
- Liriope or Blue Lily-turf (*Liriope muscari*)
- Moneywort (*Lysimachia nummularia*)
- Mondgrass or Monkeygrass (*Ophiopogon japonicus*)

PERENNIALS:

- Ajuga (*Ajuga reptans*)
- Plumbago (*Ceratostigma plumbaginoides*)
- Bleeding Heart (*Dicentra spectabilis*)
- Blue Fescue (*Festuca ovina*)
- Sweet Woodruff (*Galium odoratum*)
- Coral Bells (*Heuchera sanguinea*)
- Hardy Hibiscus (*Hibiscus moscheutos*)
- Japanese Blood Grass (*Imperata cylindrica* var. *rubra* 'Red Baron')
- Rhizomatous Iris hybrids (*Iris* species and hybrids)
- Four-O'Clock (*Mirabilis jalapa*)

- Solomon's Seal (*Polygonatum biflorum*)
- Spiderwort (*Tradescantia x andersoniana*)
- Sweet Violet (*Viola odorata*)

BULBS:

- Daffodils or Narcissus (*Narcissus* species and hybrids)
- Tulips (*Tulipa* species and hybrids)

ANNUALS:

- Wax Begonia (*Begonia semperflorens-cultorum*) – green and bronze leaf types
- Browallia (*Browallia speciosa*)
- Lobelia (*Lobelia erinus*)
- Alyssum (*Lobularia maritima*)
- Stock (*Matthiola incana* 'Annuua')
- Flowering Tobacco (*Nicotiana alata*)
- Geranium (*Pelargonium* species)
- Annual Fountain Grass (*Pennisetum setaceum*)
- Petunia (*Petunia x hybrida*)
- Polyanthus Primrose (*Primula x polyantha*)
- Nierembergia (*Nierembergia hippomanica* var. *violacea*)
- Super Sun Coleus (*Solenostemon scutellariodes* 'Plum Parfait' and 'Burgundy Sun')
- Wishbone Flower (*Torenia fournieri*)
- Nasturtium (*Tropaeolum majus*)
- Pansy (*Viola x wittrockiana*)

Your House's South and West Sides

This is the third article of a four part series on microclimates in your landscape and the best plants for the various microclimates. In this article there is a list of trees, shrubs, and ground covers for the south or west sides of your home or business. In the last article in this series, you'll find a list of annuals and perennials best adapted to southern and western exposures.

Plants on the south side of a home, building, or large tree typically receive full sun. In Oklahoma, that means high temperatures along with southerly winds. Plants in this group often have thicker, waxier leaves to reduce leaf water loss in these tough conditions.

Plants on the west side face a climate similar to southern exposures. The only difference is that they receive fewer hours of direct sunlight. Plants in western exposures have the sun shining on them during the hottest part of the day, so they too, have to be able to handle lots of heat.

The plants listed below love heat and sunlight. Most of these plants also need good drainage and will not survive in sites with extensive water logging. Even though most of these plants are drought tolerant, they need supplemental water during dry spells, especially when they are young. The following is a list of plants that will do well on the south or west side of a house or site with similar conditions.

TREES:

- Shantung Maple (*Acer ginnala*)
- Caddo Sugar Maple (*Acer saccharum* Caddo)
- Pecan (*Carya illinoensis*)

- Atlas Cedar (*Cedrus atlantica*)
- Sugar Hackberry (*Celtis laevigata*)
- Oklahoma Redbud (*Cercis canadensis* variety *texensis* 'Oklahoma')
- Desert Willow (*Chilopsis linearis*)
- Leyland Cypress (X *Cupressocyparis leylandii*)
- Arizona Cypress (*Cypressus arizonica*)
- Ginkgo (*Ginkgo biloba*)
- Kentucky Coffeetree (*Gymnocladus dioica*)
- Eastern Red Cedar (*Juniperus virginiana*)
- Pinyon Pine (*Pinus edulis*)
- Loblolly Pine (*Pinus taeda*)
- Chinese Pistache (*Pistacia chinensis*)
- Sycamore (*Platanus occidentalis*)
- London Plane Tree (*Plantanus x acerfolia*)
- Ornamental Pear (*Pyrus calleryana*) - includes 'Bradford, Chanticleer, Aristocrat, Redspire'
- Sawtooth Oak (*Quercus acutissima*)
- Bur Oak (*Quercus macrocarpa*)
- Chinkapin Oak (*Quercus muhlenbergii*)
- Shumard Oak (*Quercus shumardii*)
- Live Oak (*Quercus virginiana*)
- Western Soapberry (*Sapindus drummondii*)
- Bald Cypress (*Taxodium distichum*)
- Cedar Elm (*Ulmus crassifolia*)
- Lacebark Elm (*Ulmus parvifolia*)
- Japanese Zelkova (*Zelkova serrata*)
- Jujube (*Ziziphus jujuba*)

SHRUBS:

- Glossy Abelia (*Abelia grandiflora*)
- Dwarf Bamboo (*Arundinaria pigmaea*)
- Rose Glow Barberry (*Berberis julianae*)
- Butterfly Bush (*Buddleia davidii*)
- Smoke Tree (*Cotinus* species)
- Silverberry Elaeagnus (*Elaeagnus macrophylla*)
- Althea or Rose of Sharon (*Hibiscus syriacus*)
- Burford Holly (*Ilex cornuta* 'Burford')
- Deciduous Holly (*Ilex decidua*)
- Yaupon Holly (*Ilex vomitoria*)
- Winter Jasmine (*Jasminum nudiflorum*)
- Junipers (*Juniperus* species)
- Crape Myrtle (*Lagerstromia indica*)
- Nandina (*Nandina domestica*)
- Mugo Pine (*Pinus mugo*)
- Vanhoutte Spirea (*Spirea x vanhoutte*)
- Goldflame Spirea (*Spirea x bumalda* 'Goldflame')
- Magic Carpet (*Spirea x bumalda* 'Magic Carpet')

- Shrub roses (*Rosa* species)
- Sumac (*Sumac* species)
- Eastern Arborvitae (*Thuja occidentalis*)
- Vitex or Chaste Tree (*Vitex angus-castus*)

CLIMBERS:

- Crossvine (*Bignonia capreolata*)
- Trumpet Vine (*Campsis radicans*)
- Clematis (*Clematis* species)
- Boston Ivy (*Parthenocissus tricuspidata*)
- Climbing roses (*Rosa* species)

GOUNDCOVERS:

- Hardy Ice Plant (*Delosperma cooperi*)
- Junipers (*Juniperus* species)
- Honeysuckle (*Lonicera* species)
- Creeping Phlox (*Phlox subulata*)
- Stonecrop (*Sedum* species)
- Santolina (*Santolina* species)

South and West Side Flowers

This is the last article of a four part series on microclimates in your landscape and the best plants for the various microclimates. During this series, we're looking at the plants adapted to the different sides of a house, building or large tree. Each side of your home offers very different light levels, wind exposures, temperatures and rainfall. In this article you'll find a list of bulbs, ornamentals grasses, perennials and annuals for the south and west sides of a home or business.

Plants on the south side of a home, building or large tree typically receive full sun. In Oklahoma, that means high temperatures and when combined with our southerly winds, plants need to be tough. Plants in this group often have thicker, waxy leaves that reduce leaf water loss.

Plants on the west side face a climate similar to southern exposure plants. The only difference is that they receive fewer hours of sunlight. When these plants are in the sunshine, it is also the hottest part of the day, so they have to be able to handle high temperatures, sunlight and wind.

The plants listed love the heat and sun, yet adding organic matter to the soil before planting will help them do better. Organic matter increases soil pore space, so the soil can hold more water, while maintaining good drainage and aeration. Even plants that love heat need adequate soil moisture. Most of these plants also need good drainage and will not survive in a site with extensive water logging. One way to increase soil organic matter is to spread 2-3 inches of compost, a compost product, peat moss or aged manure and till it into the top 6-8 inches of soil. After planting, use 1-3 inches of mulch depending on the material selected to cool the soil, reduce soil water loss and lower the number of germinating weeds.

The following is a list of plants that will do well on the south or west side of a house or in other full sun locations. This is not an all-inclusive list, yet you'll find these to be the best and hardiest plants for Oklahoma.

BULBS (Perennial):

- Lilies (*Lilium* species)
- Oxblood Lily (*Rodophiala bifida*)

ORNAMENTAL GRASSES (Perennial):

- Pampas Grass (*Cortaderia selloana*)
- Plume Grass (*Erianthus ravennae*)

- Maiden Grass (*Miscanthus sinensis* 'Gracillimus')
- Japanese Silver Grass (*Miscanthus sinensis* 'Variegatus')
- Zebra Grass (*Miscanthus sinensis* 'Zebrinus')
- Switch Grass (*Panicum virgatum*)
- Fountain Grass (*Pennisetum alopecuroides*)

PERENNIALS:

- Yarrow (*Achillea* species)
- Wormwood (*Artemisia* species)
- Blue Mist Spirea (*Caryopteris clandonensis*)
- Plumbago (*Ceratostigma plumbaginoides*)
- Chrysanthemum (*Chrysanthemum* species and hybrids)
- Shasta Daisy (*Chrysanthemum x superbum*)
- Coreopsis (*Coreopsis* species)
- Coneflower (*Echinacea purpurea*)
- Gaillardia or Blanket Flower (*Gaillardia grandiflora*)
- Guara (*Guara lindheimeri*)
- Daylily (*Hemerocallis* species and hybrids)
- Iris (*Iris* species and hybrids)
- Lavender (*Lavendula angustifolia*)
- Beebalm (*Monarda didyma*)
- Cupflower (*Nierembergia hippomanica*)
- Ornamental Oregano (*Origanum laevigatum*)
- Russian Sage (*Perovskia atriplicifolia*)
- Rosemary (*Rosmarinus officianalis*)
- Black-Eyed Susan (*Rudbeckia fulgida*)
- Mexican Petunia (*Ruellia brittoniana*)
- Autumn Sage (*Salvia greggii*)
- Verbena (*Verbena canadensis*)

ANNUALS:

- Copper Plant (*Acalypha wilkesiana*)
- Hollyhock (*Alcea rosea*)
- Joseph's Coat (*Alternanthera* species)
- Summer Snapdragon (*Angelonia angustifolia*)
- Swiss Chard (*Beta vulgaris*)
- Bidens (*Bidens ferulifolia*)
- Bougainvillea (*Bougainvillea* species and hybrids)
- Million Bells (*Calibrachoa* hybrid)
- Canna (*Canna* hybrids)
- Ornamental Peppers (*Capsicum* species)
- Vinca or Periwinkle (*Catharanthus roseus*)
- Madagascar Periwinkle (*Catharanthus rosea*)
- Cockscomb (*Celeosia* species)
- Cosmos (*Cosmos* species)
- Mexican Heather (*Cuphea hyssopifolia*)
- Blue Daze (*Evolvulus glomeratus*)
- Gazania (*Gazania splendens*)
- Gomphrena or Globe Amaranth (*Gomphrena globosa*)
- Firebush (*Hamelia patens*)
- Sunflower (*Helianthus annuus*)
- Ornamental Sweet Potatoes (*Ipomea batatas*)

- Moonflower (*Ipomea alba*)
- Shrimp Plant (*Justicia brandegeana*)
- Lantana (*Lantana camara*)
- Melampodium or Medallion Plant (*Melampodium paludosum*)
- Pentas or Starflower (*Pentas lanceolata*)
- Petunia (*Petunia* hybrids)
- Portulaca (*Portulaca grandiflora*)
- Purslanes (*Portulaca* species)
- Stock (*Matthiola incana* 'Annuua')
- Annual Fountain Grass (*Pennisetum setaceum*)
- Mexican Bush Sage (*Salvia leucantha*)
- Scaevola (*Scaevola aemula*)
- Dusty Miller (*Senecio cineraria*)
- Purple Heart (*Setcreasea pallida*)
- Marigolds (*Tagetes* species)
- Esperanza (*Tecoma* species)
- Princess Flower (*Tibouchina grandiflora*)
- Mexican Sunflower (*Tithonia rotundifolia*)
- Zinnia (*Zinnia elegans*)
- Mexican Zinnia (*Zinnia haageana* syn. *Z. angustifolia* and *Z. linearis*)