

# ON COURSE WITH NATURE BUTTERFLIES

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**M**OURNING CLOAK (not a jacket of sorrow), Comma, and Question Mark (not punctuation terms) are but three of over 700 butterfly species that need food, cover, water, and breeding areas for their survival. Naturalizing areas of the golf course, encouraging native grasses, tolerating weeds like dandelion and chickweed, encouraging native wildflowers, eliminating pesticides from certain areas, and cutting natural areas only once a year are important activities the golf course manager can do for the conservation of butterflies.

Taking care of the early stages in the butterfly's development is critical. Native meadows can provide an important food source for butterflies during the caterpillar stage. Each species must have specific plant materials on which to lay their eggs, and the plants must have uncontaminated foliage to provide a food source for the emerging caterpillar. Native grasses, weeds, and wildflowers provide food sources for caterpillars. Butterfly caterpillars are rather fussy about what they will eat. For example, Monarch caterpillars eat only milkweed species. Once natural areas are in place on the golf course, creating a butterfly garden will benefit the butterfly's life as an adult, serving as a food source and breeding area.

Many golf courses have beautification committees that add plant materials to the golf course surrounds to improve aesthetics. Trees seem to be the most popular form of expression, and while the well-placed tree can be a nice addition to the course, trees in the wrong place can be the cause of many maintenance problems. Butterfly gardening represents an alternative that provides beautification and an environmentally friendly approach to landscaping.

Although winter seems like the least likely time to think about butterflies, now is

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*Female monarch (Danaus plexippus) nectaring at rabbitbrush, a native ornamental shrub widely used in western gardens.*

the time for planning a garden or meadow. Although there is no butterfly activity during the cold winter months, the butterflies are still there. They survive the winter season in hibernation, some as adults protected in the cracks of trees, others as over-wintering chrysalises (the pupal stage) in meadow areas or leaf litter, waiting for the return of spring.

## Gardening for Butterflies

The butterfly garden needs to provide a variety of features for butterfly habitat:

- Sunshine to keep them warm and energetic,
- Flowers with nectar,
- Trees and shrubs for protected hiding places, and
- Appropriate plants for caterpillars to eat.

Of course, the idea of attracting crawling, chewing insects to the golf course may not be palatable at first suggestion. Rest assured, the golf course will not be overrun by new pests, and maintenance will not be impacted, with the exception of the need to eliminate chemical applications in the designated butterfly areas. In fact, it is rare for butterfly species to overeat their welcome.

The best way to attract butterflies is with native plants, as these are the flowers that are more familiar. Once established, native plants often are easier to care for than their ornamental counterparts, as they are adapted to soil and climate conditions. Each part of the country has flowers of regional distribution that are especially attractive to butterflies in the area. In the eastern states, wild bergamot and birdfoot violet are valuable nectar sources during the spring and summer. Morning glory vines and beggar-ticks offer abundant nectar during the long bloom season in the southeastern states. The Great Plains prairies are abundant with coneflower, ox-eye daisy, and blazing star, and the

southwestern desert offers harbor milkvine. In the western states, rabbitbush and buckwheat are popular with butterflies. Observing which flowers in the wild attract the most butterflies is the best way to identify preferred species in your area.

Generally, butterflies are attracted to flowers with yellow, orange, and purple blossoms, and occasionally red, pink, and white blossoms. Flowers with flat surfaces, clustered florets, or large-lipped petals provide an area where butterflies can perch while getting nectar. Single flowers often provide more abundant and accessible nectar than hybridized, double flowers. Efforts to incorporate beneficial trees such as American elm, wild cherry, white ash, tulip tree, black locust, and sassafras can help, and an occasional wild patch that includes milkweed, goldenrod, tickseed, and black-eyed susan is invaluable to butterflies.

Start a butterfly garden near the clubhouse or as an occasional patch near play areas. The Standard Club in Atlanta, Georgia, had great success making their butterfly garden an integral part of the practice putting green. Listed in the table are some popular garden flowers that provide the needed food sources

## Food Sources for Butterflies

PERENNIAL FLOWERS	Bloom Period	Flowering Color	Height	Hardiness Zone
Aster ( <i>Aster sp.</i> )	late summer/early fall	varies — purple, rose, peach, white, red	12" - 72"	3-8
Black-eyed susan ( <i>Rudbeckia fulgida</i> )	summer	yellow	18" - 36"	3-9
Blanketflower ( <i>Gaillardia aristata</i> )	summer	yellow with purple-red center	24" - 30"	2-10
Blazing star ( <i>Liatris spicata</i> )	late summer	purple	12" - 36"	3-9
Butterfly weed ( <i>Asclepias tuberosa</i> )	midsummer	orange	12" - 36"	3-9
Chrysanthemums ( <i>Chrysanthemum sp.</i> )	late summer/early fall	red, purple, yellow	12" - 60"	2-10
Globe amaranth ( <i>Gomphrena sp.</i> )	early summer	pink	12" - 24"	3-8
Goldenrod ( <i>Solidago sp.</i> )	late summer, early fall	yellow	12" - 60"	3-9
Lavender ( <i>Lavandula angustifolia</i> )	summer	blue-violet	12" - 35"	5-9
Lupine ( <i>Lupinus polyphyllus</i> )	late spring, early summer	white, pink, blue	36" - 60"	3-7
Marigold ( <i>Tagetes erecta</i> )	summer to fall	yellow, red, gold	6" - 24"	2-10
Purple coneflower ( <i>Echinacea sp.</i> )	summer	pink	12" - 48"	3-8
Scarlet sage ( <i>Salvia sp.</i> )	late summer, fall	purple	12" - 42"	3-10
Showy stone crop ( <i>Sedum spectabile</i> )	spring to summer	red, pink	12" - 42"	3-10
Vervain ( <i>Verbena sp.</i> )	summer	blue, lavender	12" - 60"	4-10
Wild bergamot, bee balm ( <i>Monarda fistulosa</i> )	midsummer to early fall	pink, lavender	12" - 48"	3-9
Zinnia ( <i>Zinnia elegans</i> )	late summer to early fall	red, orange, yellow, pink, others	12" - 36"	3-7
<b>SHRUBS/SMALL TREES</b>				
Blueberry ( <i>Vaccinium sp.</i> )	mid-spring	white with pink	10'	3-8
Butterfly bush ( <i>Buddleia davidii</i> )	mid- to late summer	red	6' - 10'	5-10
Hackberry ( <i>Celtis occidentalis</i> )	mid-spring	white	35' - 40'	5-8
Sassafras ( <i>Sassafras albidum</i> )	mid-spring	red	30' - 50'	5-9
Sweet pepperbush ( <i>Clethra alnifolia</i> )	mid- to late summer	white	3' - 8' height	3-4

for butterflies. Use these suggestions as a starting point, and add species you identify in the wild that have significance to local butterfly populations.

### Conclusion

Beautiful butterflies are the reward for practicing integrated pest management, minimizing broadcast spraying of pesticides,

and providing needed habitat. They can be a valuable symbol of your commitment to the environment and the enhancement of wildlife habitat. Beautification committees can find butterfly gardens a rewarding project, producing flowers for enjoyment by the golfers and contributing to the preservation of an important component of the natural environment.

For more information on butterflies, contact:

The Xerces Society  
10 Southwest Ash Street  
Portland, OR 97204

North American Butterfly Association  
39 Highland Avenue  
Chappaqua, NY 10514

## References

Opler, Paul A. 1992. *A Field Guide to Eastern Butterflies*. Houghton Mifflin Company, Boston, Massachusetts.

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## The Monarch Butterfly

Believe it or not, this small butterfly, one of summer's great symbols, undertakes an annual two-way, 2,500-mile migration, from breeding grounds in Mexico, Guatemala, and the southern coast of California to northern locations in search of milkweed, the sole food of the caterpillar. Habitat destruction in Mexico's breeding grounds is of concern for the Monarch's future, as is the loss of habitat areas in its winter feeding grounds in the United States. Areas that support the vital milkweed food source are valuable to the butterfly's survival. Golf courses can help by managing appropriate areas of the golf course as open fields and woodland meadows with milkweed species and thistles. Including the butterfly weed, the most popular cultivated species of milkweed, in the garden can also help the Monarch butterfly.

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# WINTER NEWS NOTE

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Howard Kaerwer (right) enjoying a close-up look at turfgrass research.

## In Memoriam

Howard E. Kaerwer, 73, a member of the USGA Turfgrass and Environmental Research Committee, died in Minneapolis, Minnesota, on November 10, 1993. He was best known for his work in turfgrass breed-

ing and consulting. He also was responsible for developing new technology for seed quality testing and became an international expert in alfalfa breeding.

Howard pioneered the breeding of new grasses suited for the needs of golf courses, athletic fields, parks, and lawns. He received many patents and awards for his turfgrass varieties and developed a salt-resistant *Puccinia* variety, durable enough to survive along highways. Howard traveled widely to discover new grasses that could be used to develop new varieties for golf courses.

Howard worked for

the Northrup King Company for 37 years and retired in 1984 as Director of Research and Development. In 1988, he received the GCSAA's Distinguished Service Award. He was very active with the University of Minnesota Landscape

Arboretum, serving as treasurer of the board of trustees and conducting research on breeding winter-hardy trees and shrubs.

He actively served on the USGA Turfgrass Research Committee for six years. Howard was known for his ability to thoughtfully evaluate the many diverse research proposals that came before the Committee over the years. His love of research and plant breeding was evident in all that he did. Howard was a wonderful person, an enthusiastic and productive member of our Research Committee, and a friend to us all. The turfgrass world will miss him very much.

A scholarship in Howard Kaerwer's name has been established at the University of Minnesota Department of Horticultural Science. Memorial contributions also may be made to the Minnesota Landscape Arboretum.

Howard Kaerwer Scholarship Fund  
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