Zones Clarify Plant Categories

by Dr. H. Marc Cathey

IT WAS PEDANIUS DIOSCORIDES, a Greek physician working in Rome nearly two millenia ago, who first outlined the basic categories—annuals, herbaceous perennials, shrubs, vines, and trees—we have traditionally used to classify plants. But in studying the plants growing around him, Dioscorides considered only how they performed in the climate of Rome. He did not take into account that many of the plants he observed had found their way to Rome from elsewhere in the Roman Empire—which at that time stretched from the frigid Alps to the tropics—and thus might exhibit different growth habits under different climatic conditions.

Since the time of Dioscorides, horticulturists have coined a variety of terms to distinguish between plants that are "true" annuals—those that complete their life cycle and die in a year or less no matter where they are grown—and plants that survive and thrive only in frost-free areas. Among the terms in common usage are half-hardy annuals, hardy annuals, and tender perennials. These terms may be helpful to gardeners who live in areas where the climate is relatively consistent, such as the British Isles, but they are not meaningful when applied across a broad range of climatic zones such as we have in the United States.

One example that exposes the shortcomings of such terms is the lantana *(Lantana camara).* In northern climates, it can be grown outdoors only over the summer, so it is sometimes categorized or used as an annual. But in areas where winters are mild, it is root hardy and will act more like an herbaceous perennial—even if the above-ground portion of the plant is killed by frost, new sprouts usually emerge from the ground in spring. Thus it is also referred to as a tender perennial. And in frost-free areas, lantanas will grow and flower continuously, becoming woody and assuming a shrubby or even treelike habit over time.

CODING IS THE SOLUTION

One of the major benefits of the newly revised USDA Plant Hardiness Zone Map is that, used in combination with the AHS Plant Heat Zone Map, we can now code plants in a manner that will give gardeners a more accurate picture of their growing requirements. In this way, our understanding of plant growth habits no longer need be constrained by the rigid classifications and terminologies we have used in the past.

Tropical plants such as *Lantana* 'Lucky Peach Sunrise' can now be more accurately categorized by hardiness and heat zones.

Through a system I devised, plants can now be quantified with four codes—two for hardiness and two for heat tolerance. The first two numbers in the series identify the winter range from the coldest to the least cold zone in which the plant can thrive. Numbers three and four in the series identify the range of summer tolerances of plants from the zone with most "heat" days (days when temperatures rise above 86 degrees Fahrenheit) to the zone with least heat days.

Thus the lantana can now be coded 11–15, 12–1. The first number indicates that the plant will not reliably survive the winter in a region cooler than USDA Zone 11. The second number indicates that it will thrive into USDA Zone 15. The third number indicates it will thrive in the warmest heat zone (AHS Zone 12); and the fourth number tells us that it will grow and flower successfully in the least-warm heat zone and all the others in between.

The four-number zone code offers tremendous benefits and potential applications not only for gardeners, but for ecologists, foresters, and farmers. To make it easier for everyone to use this new tool, the hardiness and heat maps are digitalized, and growing zones can be easily identified through an index searchable by postal zip codes (available on the AHS Web site *www.ahs.org).* No matter where you live, you can now use these codes to help select the plants best suited to the expected winter and summer temperatures in your region. You will see the codes listed with plants described in each issue of *The American Gardener.*

I encourage gardeners around the country to help us refine and improve the coding system by observing plants in their gardens and reporting any apparent inconsistencies. The coding is, after all, a work in progress. The improved precision that can be achieved through shared observations can only lead to a better understanding of plant growth.

Dr. H. Marc Cathey is AHS president emeritus.

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