

mainly), mites, scale, slugs, spittlebugs, whitefly, powdery mildew, septoria leaf spot, and verticillium wilt. Good air flow, following sanitary care practices, vigilance, and early diagnosis and treatment will help to keep most of these potential problems in check.

*Chrysanthemum carinatum* or tri-color daisy originated in Africa. This half-hardy plant likes full sun, will grow to about 2' – 3' tall but often needs some support late in the season. The most common center color is purple with either single or double petal formation; flowering colors may be yellow, red, purple or a mixture of colors. Two varieties to check out are 'Northern Star' (white and yellow petal color) and 'Monarch Court Jesters' which is a large-sized flowering mix. *C. coronarium* (common name: crown daisy) is from Portugal. This full sun annual has yellow centered single or double 1" - 2" flowers, and gets to be about 2' – 4' in height. Commonly found cultivars include 'Golden Gem' - only 1' tall; and 'Primrose Gem' which reaches to 2'. *C. segetum* or corn marigold, is an annual flower from the Mediterranean area. It requires full sun, will get 2' tall with yellow, single flowers. 'Prado' cultivar has red centered, gold 2 ½" flowers; and 'Eastern Star' will make you smile with its brown centered, yellow flowers.

Some of those taken out of the *Chrysanthemum* genus – remain wonderful plants to try or retry. *Ajania pacificum* (was *C. pacificum*) - this Japanese native is commonly called Silver & Gold. The small button-type yellow or pink ('Pink Ice') flowers grow from beautifully variegated light green with silver-edged foliage. It is not particularly hardy for us as a perennial but will do well as an annual in full sun with good drainage. *Argyranthemum frutescens* (*C. frutescens*) or Marguerite daisy, originated in the Canary Islands, and is an annual for our area, reaching about 3' in height. The color range on the flowers goes from white singles with yellow centers, to yellow with yellow centers, to double pink with yellow centers. *Dendranthema x grandiflorum* (*C. x morifolium*), commonly called Chrysanthemum or "mum", has Chinese and Japanese origins with some moderately perennial behavior in our area. Increasing night length induces flower development, so in warmer climates they will flower in spring and fall, but generally in northern climates the soil temperature is too low and perennial plant development is often not far enough along to flower in the spring (unless it's a newly purchased plant close to bloom). For this one, look for early flowering "mums" (requires fewer weeks of longer night length) to insure a display, as late flowering (requiring more weeks of longer nights) can lose flower buds to an early frost. Pinching back a couple of times early in the growing season (don't do this past July or you won't get any flower development) will encourage good, strong vegetative growth at a manageable height. If you don't pinch these back, they can get tall and leggy, with droopy stems by the time the flowers emerge. The 'Minn' and 'Morden' series are showing good cold hardiness. Flower types within this species include: cushions which have compact vegetative growth (20" or less), and are double flowering; daisies – yellow centered, single flowers; decorative (incurved, reflexed, intermediate) – semi- or full double usually

taller than cushions; pompons – shorter than cushions, with lots of round, small flowers; buttons which can be very short to tall plants with a bushy habit, lots of very small flowers (usually 1" or less). *Dendranthema zawadskii* hybrids (*C. x rubellum*) are usually hardy to zone 4 with possible parentage from Siberia daisies. They need full sun and get to be about 2' – 3' in height, have lots of structural branches with 2" - 3" yellow-centered, daisy type, early fall flowers. The color range is quite wide – pink, red, light yellow, and copper. These should be pinched back in the spring to encourage a more compact, full habit. *Leucanthemum x superbum* (was *C. x superbum*) or Shasta Daisy; hybrid origins are from Portuguese and Pyrenees "mums". 2' – 2 ½' tall plants with dark green foliage produce white flowers that are 2" – 3" across. 'Alaska' is the most commonly found cultivar and remains a good choice; 'Polaris' is a 3' tall form with 4" – 5" flowers; 'Sedgewick' has double 4" flowers, is very cold hardy, and will take a bit of shade; 'Snow Lady' is a nice dwarf variety reaching only about 15" at maximum height, a nice choice that flowers consistently the first year from seed. *Nipponanthemum nipponicum* (*C. nipponicum*), common name is Montauk or Nippon Daisy. This plant originated in Japan, and is one that requires pinching back - but only once in the spring. The 2"- 3" white flowers with green centers emerge in September or October on very nice, dark green foliage; requires full sun and moist, well-drained conditions. *Tanacetum coccineum* (*C. coccineum*) often called painted daisy or pyrethrum, originated in Asia, and is a good perennial garden plant. This original source of a common insecticide, produces nice single 2"-3" yellow-centered flowers of red or white. This is a somewhat high maintenance and short-lived perennial - needing division every 2 years. In full sun, it reaches about 12" in height but can get a bit droopy. Some to try: 'Buckeye' which has white-spotted red, 2" double flowers; 'Duro' which reaches 2'-3' tall with purplish-red flowers (good one for cutting); 'Evenglow' has salmon-red flowers; and 'Sensation' with red, double flowers. *Tanacetum parthenium* (*C. parthenium*), or feverfew, is originally from the Caucasus area and has white to yellow flowers in a full range of types: button, ball, daisy, and doubles. The height varies from 1' – 3', but all have a nice branching structure with very strongly scented foliage. The University of Minnesota plant breeding program has recently provided a beautiful selection of cold hardy perennial mums under the trademark of 'My Favorite'. These truly perennial "mums" consistently grow to 3 ½' tall (with some reaching up to 6' across, yes – 6') over three years with beautiful colors of white, yellow, pink, coral, and red. These rhizomatous rooting, self-branching bushy plants need no pinching back – they actually do much better when left alone. Spring brings beautiful, lush and relatively problem free foliage followed by flower bud formation in late July/August. In trials, the first year of plant development consistently produced around one thousand flowers – by year three they were covered with roughly five thousand flowers! Yes, they did count them. Although these have proven hardy to about 30 below zero Fahrenheit, covering with mulch after the ground freezes will help prevent damage from the freeze/thaw cycles in late winter and early spring. As a result of thousands of years of work, today we have a large selection of beautiful flowering "mums" to enjoy throughout the growing season.

