

# *In Praise of Dahlias*

*Mario A. Abreu*



## General cultivation Points

Dahlias absorb nutrients best when the pH is as close as possible to 6.5 (or in a range of 6.5-7.0). Limestone added to soil raises the pH. Aluminum sulfate lowers the pH.

### Planting Dahlias-

Plant when danger of last frost has passed.

Plant tuberous root horizontally, in a hole 4"-6" deep.

Bone meal added into planting soil

Planted tubers do not require watering until sprouts emerge.

Plant in site that has minimum of 8 hours of sunlight.

Peak blooming season August-September, however, begin blooming in late June, and conclude in October.

**Topping Dahlias-** To obtain more flowers one must "top" or "carefully" break off the very top of the stem after the plant has two to four sets of leaves. Illustration: Note that if one breaks too much off, then you increase the risk of leaving a hollow spot through which water can go down into the plant and rot the roots.

**Pinching Dahlias-** Pinching excess flower buds from all branches will provide more energy for remaining buds to develop nicely.

**Staking** – plastic coated steel stakes, rebar, heavy-duty bamboo stakes, tomato cages, and wooden stakes are placed about 2" from Dahlia tuber.

**Tying Dahlia** stems to stakes will support them by using twine or synthetic tape. Note that any twine that falls into the planting bed will decompose, unlike synthetic materials.

**Irrigation** – Dahlias need 1 inch of water per week once they emerge from the ground. Once the plant starts blooming increase the water to 2 inches per week. Slow soakings every 5 to 7 days will encourage feeder roots to go further compared to receiving more frequent and short watering. In general, water early in the day, and avoid getting the leaves and flowers wet in the evening. The "exception" for young plants that have not bloomed yet is that light sprinkling (a fine mist) on a very hot and sunny day (95 degrees or more) will help revive the plants. Avoid overhead watering once the Dahlias start to bloom.

**Fertilizer** – Low nitrogen; N-P-K 5-10-10; 10-20-20;

**Mulching** - lessens evaporation of ground water, and inhibits weeds. However, it can provide hiding places for some pests, primarily earwigs, slugs, and snails. Common mulches used include pine needles, fine chipped pine bark, shredded oak leaves, and straw. Note that straw may contain weed seeds.

**Winterization: Digging up and Dividing Dahlias** - After the plant turns completely brown, stop watering and cut it down to 3-4 nodes or notches above the ground. The notches act as water seals to prevent crown rot. Wait at least 4 weeks until digging and dividing; the tubers must go dormant. **Dig the clumps up with care!** Dig on all sides of the clump about a foot away from the main stalk. Carefully remove the clump and turn it upside down to drain out any water in the stem. After 1-2 hours one can begin to remove the soil with less chance of breaking fragile tubers. Then hose or wash away the soil from the Dahlia.



# Dahlias

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## General Topic Points

### Brief History -Origin

Dahlias are native (endemic) to Mexico, Central America, and Columbia. The first written Aztec record of dahlias was in a 1582 manuscript.

1789 Genus Dahlia was 1<sup>st</sup> introduced to Europe at the Royal Botanic Gardens in Madrid, Spain

1798 Introduced to Kew Gardens, England

1881 British National Dahlia Society was formed

1915 The American Dahlia society is founded in New York (currently over 75 chapters/societies established throughout the US and Canada.

1961 Schoefer Plantings at 47 acre Flowerland to the Sea, Fort Bragg, CA

1991 Dahlia Garden expanded at Mendocino Coast Botanical Gardens (MCBG)

1998 El Nino destroys MCBG Dahlia Garden. Mario A. Abreu re-establishes Collection.

### Dahlia Genus

Dahlia named in honor of Andreas Dahl, a Swedish botanist (1751-1789)

Dahlias are members of the plant genus *Dahlia* in the family Asteraceae.

Dahlia varieties (more than 20,000 distinct varieties)

The modern hybrids (progeny) of Dahlia derive primarily from the species *Dahlia coccinea* and *Dahlia pinnata*.

There are 30 species of perennial herbs or sub-shrubs, usually tuberous-rooted.

Flower colors include: white, yellow, orange, bronze, red, pink, lilac, lavender, purple, and violet.

*Dahlia imperialis* is called the "tree dahlia" with a height up 20 feet.

Most dahlias range in height from 1-6 feet tall.

There are 10 groups (forms) and 18 size classifications recognized by the American Dahlia Society (ADS).

Official ADS Classification of Dahlias described by size, form, type, and color variations. **Five petal formations** (formal decorative, informal decorative, semi-cactus, cactus, and fimbriated).

**Five size categories** (giant, large, medium, small, and miniature). Diameter of the flower includes: giant (more than 10"), large (at least 8" to 10"), medium (at least 6" to 8"), small (at least 4" to 6"), and miniature (not more than 4"). Size classification are AA (10"), A (8-10"), B (6-8"), BB (4-6"), M (up to 4"), and P (up to 2")

**Eleven other petal types** (ball, miniature ball, pompon, waterlily, peony, anemone, collarette, single, mignon single, orchid, and novelty-2 kinds).

## DAHLIAS 2016

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*Dahlia* is a genus of bushy, tuberous, perennial plants native to Mexico, Central America, and Colombia. There are at least 36 species of dahlia. Dahlia hybrids are commonly grown as garden plants. The Aztecs gathered and cultivated the dahlia for food, ceremony, as well as decorative purposes, and the long woody stem of one variety was used for small pipes.

F. Hernández visited Mexico in 1615 and noticed two spectacular varieties of dahlias, which he mentioned in his account of medicinal plants of New Spain, not published until 1651. The French botanist Nicolas-Joseph Thiéry de Menonville, sent to Mexico to steal the cochineal insect valued for its scarlet dye, noted the strangely beautiful flowers he had seen in his official report, published in 1787. Seeds sent from the botanical garden of Mexico City to Madrid flowered for the first time in the botanical garden in October 1789, and were named *Dahlia coccinea* by Antonio José Cavanilles, the head of the Madrid Botanical Garden, in his *Icones plantarum*, 1791. A few seeds were secured by Lord Bute and sent to England, where they flowered but were lost. The introduction of the dahlia to the florists of the Netherlands was effected about the same time, when a box of dahlia roots was sent from Mexico to the Netherlands. Only one plant survived the trip, but produced spectacular red flowers with pointed petals. Nurserymen in Europe crossbred from this plant, which was named *Dahlia juarezii*, with parents of dahlias discovered earlier and these are the progenitors of all modern dahlia hybrids. The Jardin des plantes in Paris received dahlias in 1802, again from Madrid. A second species, *D. variabilis*, was at last successfully grown in 1804 by the gardener at Holland House, Kensington, of Lady Holland, who sent the seeds from Madrid. An early breeder of dahlias was comte Léon-Charles LeLieur de Ville-sur-Arce, *intendant* of the château de Saint-Cloud, its glasshouses and gardens, who had four varieties to work with, and by 1806 had produced three double-flowered dahlias. Since 1813, commercial plant breeders have been breeding dahlias to produce thousands of cultivars, usually chosen for their stunning and brightly coloured waxy flowers. Dahlia plants range in height from as low as 12" (30 cm) to as tall as 6-8 feet (180-240 cm). The flowers can be as small as 2" (5 cm) in diameter or up to a foot (30 cm) "dinner plate". The great variety results from dahlias being octoploids (they have eight sets of homologous chromosomes, whereas most plants have only two).

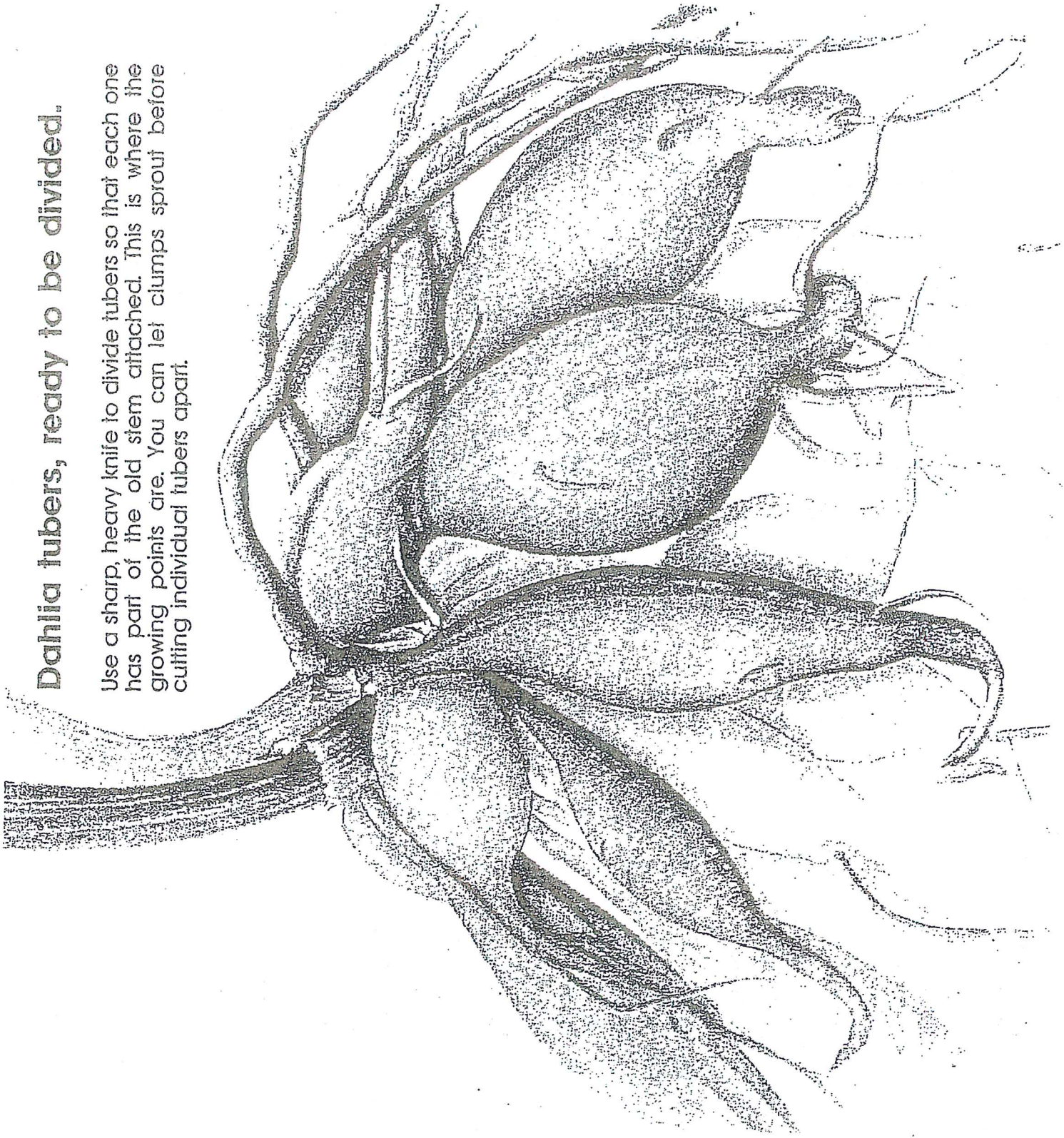
Dahlias are used as food plants by the larvae of some Lepidoptera species including Angle Shades, Common Swift, Ghost Moth and Large Yellow Underwing.

The dahlia is named after Swedish 18th-century botanist Anders Dahl. In German the dahlia was known during most of the 19th century as *Georgia*, being named after the naturalist Johann Gottlieb Georgi of St. Petersburg, Russia.

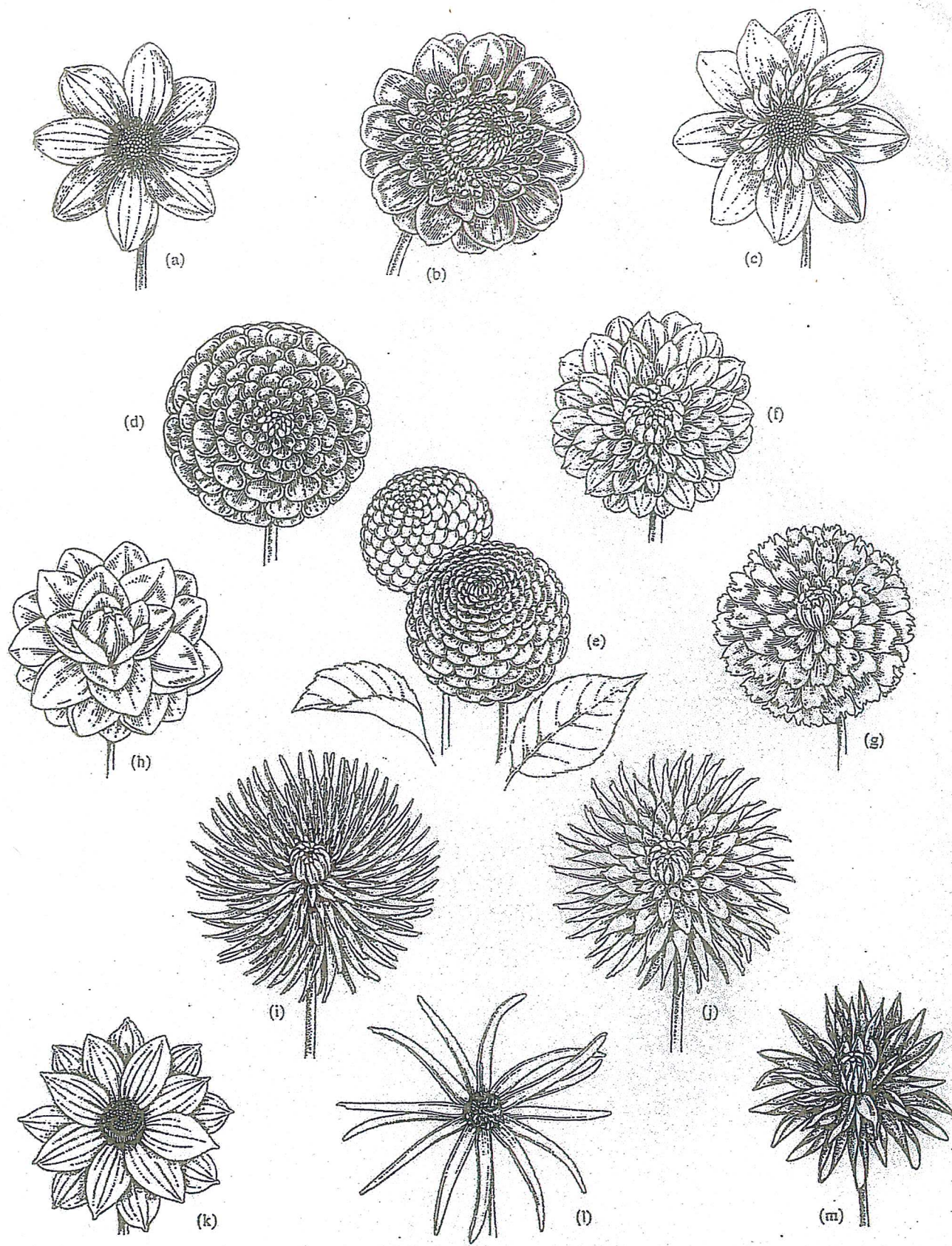


## Dahlia tubers, ready to be divided.

Use a sharp, heavy knife to divide tubers so that each one has part of the old stem attached. This is where the growing points are. You can let clumps sprout before cutting individual tubers apart.







Dahlia garden forms (a) Single (b) Anemone-centred (c) Collerette (d) Ball (e) Pompon (f) Decorative (g) Decorative (fimbriated) (h) Waterlily (i) Cactus (j) Semi-cactus (k) Peony-flowered (l) Star (m) Orchid-flowered



## Drought Influences Dahlia Bloom at the Mendocino Coast Botanical Gardens

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The Mendocino Coast Botanical Gardens Dahlia Collection began its blooming cycle four weeks earlier than normal for 2014 year. The magical blooming event has brought out photographers (shutterbugs) to record this uncommon event south of the city of Fort Bragg, CA. The Gardens collection of more than 400 individual plants representing 150 varieties began to exhibit the diversity of flower color and shape in late May.

Visitors ask what the grounds staff has done differently to encourage such an early bloom. "Isn't this early for the dahlias to bloom"? "What did you do differently to make the dahlias bloom"? "What secret care, soil amendment or fertilizer was applied differently"?

It's no secret here along the Mendocino Coast that the normal climate of winter and spring rains, and cooler temperatures was quite the opposite. The Mendocino Coast received the lowest annual total rainfall in twenty-five years. A warming trend for spring began early which raised the soil temperature providing one of the key requirements that dahlias need. The soil of the dormant dahlia beds warmed to 61 degrees F. Underground dahlia tubers that are planted in the top six inches of soil will begin to grow when the soil temperature is above 50 degrees F. Dahlias grow naturally in climates which do not experience frost (the tubers are hardy to USDA Zone 8). However their tuberous nature enables them to survive periods of dormancy, and this characteristic means that gardeners in temperate climates with frosts can grow dahlias successfully, provided the tubers are lifted from the ground and stored in cool yet frost-free conditions during the winter.

Founder of the Botanical Gardens, Ernest Schoefer, introduced dahlias to his 47-acre "Flowerland to the Sea" in the 1960's. Since then a specific garden site dedicated to displaying the diversity of dahlias has been a major visitor attraction for gardeners, artists, photographers, weddings, and is the event site for both Art in the Gardens, and Winesong!

Dahlias are a member of the Asteraceae or Compositae family. These chrysanthemum and aster-like flowers are principally from the highlands of Mexico, Central America, and Columbia. The genus dahlia contains 35 species of tuberous-rooted herbaceous to woody perennials ranging in height from six inches to twenty feet such as with the tree dahlia *Dahlia imperialis*. Over the past 100 years more than 30,000 named dahlia varieties have been developed, listed, and registered. Dahlias have become tremendously diversified, available in numerous flower types and flower sizes (from 2 to 12 inches) and all colors but true blue. Dahlia forms and types include formal and informal decorative, semi-cactus, straight cactus, incurved cactus, ball, pompon, orchid, waterlily, anemone, and laminated forms. Large dahlias have been commonly called "dinner plates" because of their 10- 12 diameter size flowers. The American Dahlia Society has classified dahlias over 10 in. to be AA size. Some of my favorite AA size examples are; Kelvin Floodlight, Bodacious, Envy, Sherwood's Peach, Lavender Ruffles, Purple Taihejo, Mango Madness, and Emory Paul.

In addition to the garden display and seemingly endless cut flowers that are provided from dahlias, dyes for natural yarns and fabrics, food, beverages from roasted tubers, and medicinal applications can be included on the list of uses of dahlia.

For more information on growing and propagating dahlias contact Mendocino Coast Botanical Gardens Dahlia Curator Mario Abreu, at 707.964.4352 ext. 23, [naturalist@gardenbythesea.org](mailto:naturalist@gardenbythesea.org). Sign up for the up- coming August Dahlia Care workshop [events@gardenbythesea.org](mailto:events@gardenbythesea.org).