Bulletin No. 5

LOUISIANA CAMELLIA SOCIETY

With Camellias

summering means watering

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Los Angeles

REPRINTED FROM

HOME GARDENING FOR THE SOUTH

Vol. VII No. 7 Pages 152, 153, 165, 166
“The camellia,” writes Berlèse in his *Monographie du Genre Camellia*, “likes almost a constant humidity, especially in summer. Frequent waterings during the hot season powerfully contribute to reanimate and sustain its beautiful appearance.”

There is surely no single substance so essential to the life of a camellia as water. The basic cultural practices of summer care—irrigation, shading, syringing, mulching—are simply round-about ways of expressing this straight fact: Summering is Watering.

Perhaps the most striking climatic feature of the Pacific Coast “camellia belt” is the ordering of its seasons, of which it has practically but two, the wet and dry. The winter, or “rainy season,” lasts approximately six months, with the heaviest precipitation occurring on the coast of the Pacific Ocean and gradually decreasing as it proceeds inland. From San Diego, at the extreme southern end of the belt, the annual rainfall averages rise from 10 inches to 14.56 at Los Angeles, 23.54 at San Francisco, up to 80 or more inches on the coasts of Northern California, Oregon and Washington. This northerly trend in rainfall is also marked by a corresponding increase in humidity, larger streams, and vastly richer forestation. It is not surprising, therefore, to find that Western camellias reach their greatest wellbeing in the cool, even temperature and abundant moisture of the upper Coast region, from the San Francisco Bay area north to Seattle.

But the camellia, with its broad tolerance to climatic variations, thrives in the arid southwest portions of the belt too. This subtropical area, including the coast section of California from Santa Barbara south to San Diego and inland through all the citrus belt, displays a wide diversity in sunlight, temperature, air currents and moisture. The ocean breezes and fogs which temper the bright sun and rainless summers of the coastal strip, keeping temperatures moderate and humidity high, are not to be found in the inland areas of the Pacific Southwest. Proper regulation of shade, moisture and humidity becomes an increasingly difficult problem as one moves inland from the coast—until a point is reached in the interior valleys and deserts where excessive summer heat and drought make camellia growing wholly impractical or impossible.

It is apparent, then, that the local situation has more to do with summering camellias than any general discussion such as this can hope to show. Successful summer care depends upon a thorough knowledge of the cultural conditions in one’s own locality, and more particularly, in one’s own garden.

**Watering**

For six months after May 1, rain is practically unknown over a large part of the Western camellia belt, particularly in California, and the proper regulation of moisture becomes the primary concern of every grower. The practice of watering camellias at this time calls for a great deal of common sense and careful observation. No one can tell beforehand how often a plant is going to require watering, for this depends entirely on the character of the soil; the prevailing atmospheric conditions; the plant’s exposure to sun, shade, and wind; and its state of growth. The experienced grower avoids scheduled irrigations, carefully tests soil moisture beneath the surface, and waters deeply but not too frequently. The soil is allowed to dry to a medium point, then a wide basin is built around the plant, filled up with water, and refilled as often as it will drain away within a reasonable time. By this means the soil is thoroughly wet down to the full depth of the feeding roots; and yet, because it is not kept saturated, proper aeration and root growth are encouraged throughout the entire soil mass.

The water that is absorbed by the roots is used primarily in keeping the plant turgid (like air in a balloon) and unless the plant receives an adequate supply of water, complications develop. Excessive transpiration of moisture from the leaves in very hot or dry weather results in greater demands for water in the root area. Frequent, shallow waterings which fail to wet the whole soil mass about the feeding roots will seriously affect the plant in such a period of moisture stress. When the plant uses water faster than the roots can take it up, a temporary wilting occurs. If the moisture deficiency continues, the plant may become sunburned; and if the permanent wilting point is reached, the plant may actually die. Camellias which are actively growing and forming new shoots, leaves and buds must be watered thoroughly before
the distress signal of wilting appears. Most of the difficulty with bud-drop in the blooming season may be traced back to periods of insufficient moisture in the summer and early fall. Camellias should never be permitted to wilt badly or permanently for they seldom recover from such injury. Any temporary wilting that may occur during the summer should be quickly relieved by thorough watering and syringing.

**Syringing**

Increasing the amount of moisture in the air by means of a fine spray (syringing) reduces the amount of water lost by the plants through their leaves. With this increase in humidity comes a reduction in temperature, too, for as the water evaporates, it cools. Transpiration is thus cut down to a rate that is lower than the absorption by the roots and, as a result, wilted leaves and stems become turgid. Frequent syringing also keeps the foliage free of dust; controls red spider and aphids; and helps the plants look fresher and greener.

The foliage is best sprayed early in the morning or evening, to avoid possible scalding in the full heat of the day. And this is why. As long as a leaf transpires rapidly, its temperature is kept near or below the air temperature, even though the full sun beats upon it. But without this evaporative cooling, the leaf temperature usually would be 10 to 20 degrees higher than it actually is. When a film of water is sprayed over the leaves in midday it interferes with this normal transpiration, and the leaf temperature may increase to a point of scalding or burning. Humidity may be maintained more safely in the hottest part of the day by wetting-down the walks and ground areas around the plants several times. But this sprinkling must never be confused with the regular process of watering. Syringing is primarily intended for the foliage and not the roots of the plants.

**Mulching**

The surface-rooting camellia may be protected against injury in dry weather by mulching the ground with leaf mold or peat moss so that more water is retained about the feeding roots in the top 3 or 4 inches of soil. The mulch keeps the roots cool and moist, prevents excessive evaporation and weed growth, and serves as an excellent medium for applying fertilizer. Some Western growers also use a groundcover of Angel-Tears (*Helxine soleirolii*) to shade the base of their plants.

**Shading**

Wherever there is considerable heat, wind, or drought in the summer months, it is usually advisable to provide some kind of shading or shelter for camellias. In coastal or near-coastal areas where summers are moist and cool, camellias can be grown in almost any location or exposure. There are many fine old specimens thriving in full sun in the earlier settled sections of Central and Northern California. In the San Francisco Bay region, where sunlight is never intense because of foggy overcast skies, even the reputedly tender *C. reticulata* has been grown in full sun. As a general rule, however, an eastern exposure sheltered from the hot afternoon sun is best for coastal plantings, and a full northern exposure is most satisfactory in the hot inland valleys.

In all parts of the Western camellia belt the filtered sunshine under trees or lath is preferable to either full shade or full sun. The moving foliage of high-branching trees such as oak, olive, or elm provides camellias with the alternate sun and shade characteristic of their native woodland habitat. This natural shelter reduces the intensity of the sunlight, lowers summer temperatures, and protects plants against wind injury and excessive evaporation. Care must be taken, however, to keep the plants at some distance from the trunks of such trees as oaks, which may be killed by the abundant summer watering given to camellias.

If natural shade is not at hand it can be provided easily by an inexpensive lath house. The protection afforded by lath is ideal for the cultivation of camellias throughout the Pacific Coast, but it is particularly effective in the arid Southwest. Growers in the interior valleys, faced with the hazards of heat, low humidity and frequent winds, space the laths ½-inch to 1-inch apart on the top, south, and west sides. A few have even installed overhead mist spray systems which are operated by a humidistat and an automatic magnetic valve that begins to operate as soon as the humidity gets below a certain point. In coastal areas the laths are spaced at twice the distance used in the warm interior sections, and humidity is easily maintained by frequent syringing and sprinkling of the paths and laths overhead.

Temporary lath pits are sometimes used for sheltering cuttings and container-grown grafts through the first summer. An excavation of 12 inches is half filled with wood shavings, and a frame 2 feet high is erected over it. Removable panels, 4x4 feet, with the same lath spacing as for a lath house are placed on the frame, making a compact and efficient shelter.

**Transplants**

Camellias recently planted out in exposed positions should be protected from strong wind and sun during the summer months with a lath or cloth covering. Such plants often lack moisture as there are not yet enough roots in the new soil to supply the plant with sufficient water, and the original soil ball dries out more rapidly than the new soil around it because it is full of roots. Wind and sun striking the leaf surfaces increase the transpiration beyond the ability of these roots to supply water, and the new plant wilts, burns, and dies. A lath or burlap shelter the first summer and a cheesecloth the second summer will provide ample protection until the roots become fully established.

**Grafts**

The “hardening off” process is quite important in handling grafted camellias, for by its neglect many grafts are lost in summer after growth has actually started. The
experienced grower makes a very gradual change for his plants from the humid atmosphere under the grafting glass to the open, airier day. The understock had little need for water when they were enlarging. The autumnal roots of the plant could have easily been rotted by careless watering or even too much rainfall. But now that the scions have begun their incredibly rapid growth (which may reach a half yard or more in length by autumn), the roots of the plant must get adequate moisture. All plants and plant parts are made of cells, the size of which depends upon the amount of water they receive when they are enlarging. The scion's rapid lengthening of stem, which seems more like stretching than growth, is due to the water that each cell in that stem receives. A lack of moisture at this time will seriously affect the scion's development and result in a weak, short-stemmed plant with small leaves.

During the first summer the long, brittle growth may need protection against careless passers and prowling animals. A tall cylinder of window screening fastened around the plant will shield it effectively until the growth has hardened. In areas where high winds prevail during most of the summer months, growers sometimes cover the understock and scions with damp earth to protect the tender cambium callus from drying out too rapidly, but the banked soil must be removed in fall to prevent termites from entering the understock. If the swelling callus has not broken the raffia, rubber, or thread binding used in grafting, it is a good idea to relieve the pressure by cutting the ties off; then, too, suckers which come up from the understock in summer must be removed as soon as they appear.

Cuttings

Amateur growers have found that cuttings made of mature or nearly mature wood in fall or winter are more likely to succeed than cuttings made of the softer summer wood. With outdoor propagation in a lath house or coldframe these cuttings may take from 3 to 8 months to root. But even so, they are far easier to handle than the unripened summer wood which roots in 6 to 8 weeks in the commercial grower's greenhouse.

When the cuttings have made roots from 1 to 2 inches long, usually by May or June, they should be removed from the propagating frame and potted firmly in 2 1/2-inch pots. Cuttings which are callused but still unrooted at this time should be dipped in a root-inducing hormone powder and potted with the rest. This treatment will stimulate rooting as effectively as the old practice of callus paring, and the cuttings will begin rooting almost at once. The potted plants are then placed in a shaded coldframe, sunk up to their rims in peat, sand, or wood shavings to conserve moisture. Careful attention must be given to watering and syringing, for moisture both at the roots and in the air is essential to success. The frame is kept rather close for a few days by raising the sash until only when the weather is warm and closing it entirely at night, this enables the roots to become established. Gradually more and more air is admitted until after three or four weeks the sash can be removed entirely, both during the night and day. A cheesecloth or lath screen is then placed over the plants to furnish the necessary shading for the rest of the summer.

Foresight

Through the summer months there is little evidence of the vital changes taking place in our camellias. Shoots and flower buds quietly enlarge and develop, leaves mature, new wood gradually becomes firm and hard. The processes are almost imperceptible, often overlooked, easily neglected—yet their effect endures forever. Winter's thrilling blooms and spring's lush growth are born in this quiet, difficult season, with fullness measured by the care and thought we give them now. It takes a kind of tireless vision to see the camellia through its seemingly unproductive summer season, a kind of foresight which sees the rich rewards of winter and spring in the commonest chores of summer care. And at the bottom of it all we must never forget the vital role of watering, that commonest of all chores, which feeds, sustains, and cools our plants. Fertilizing in summer is neither necessary nor desirable, and there are no pests or diseases which sound cultural practices cannot combat—but watering is the whole indispensable basis of summer care. Summering means watering. No last-minute solicitude will overcome the neglected waterings of summer, the omission of shading, syringing, or mulching. Berlese was very right when he said, "The camellia likes almost a constant humidity, especially in summer."