



*This beautiful orchid was on display at one of the many flower & garden shows held every year.*



*Poinsettias are easy to force into flowering with a 12/12 day/night light schedule.*



*Impress your friends by inducing Christmas cactus to flower in the middle of summer with a 12-hour photoperiod.*



*Carnations grow well in containers and are a good example of long-day plants.*

## Introduction

In order for a plant to complete its annual lifecycle successfully, it must first flower. Dioecious plants are either male (pollen producing) or female (ovule producing). Hermaphrodite plants are bisexual, with both male and female flowers on the same plant. Most plants fall into the latter category. When dioecious plants turn hermaphrodite, any resulting seeds are usually female.

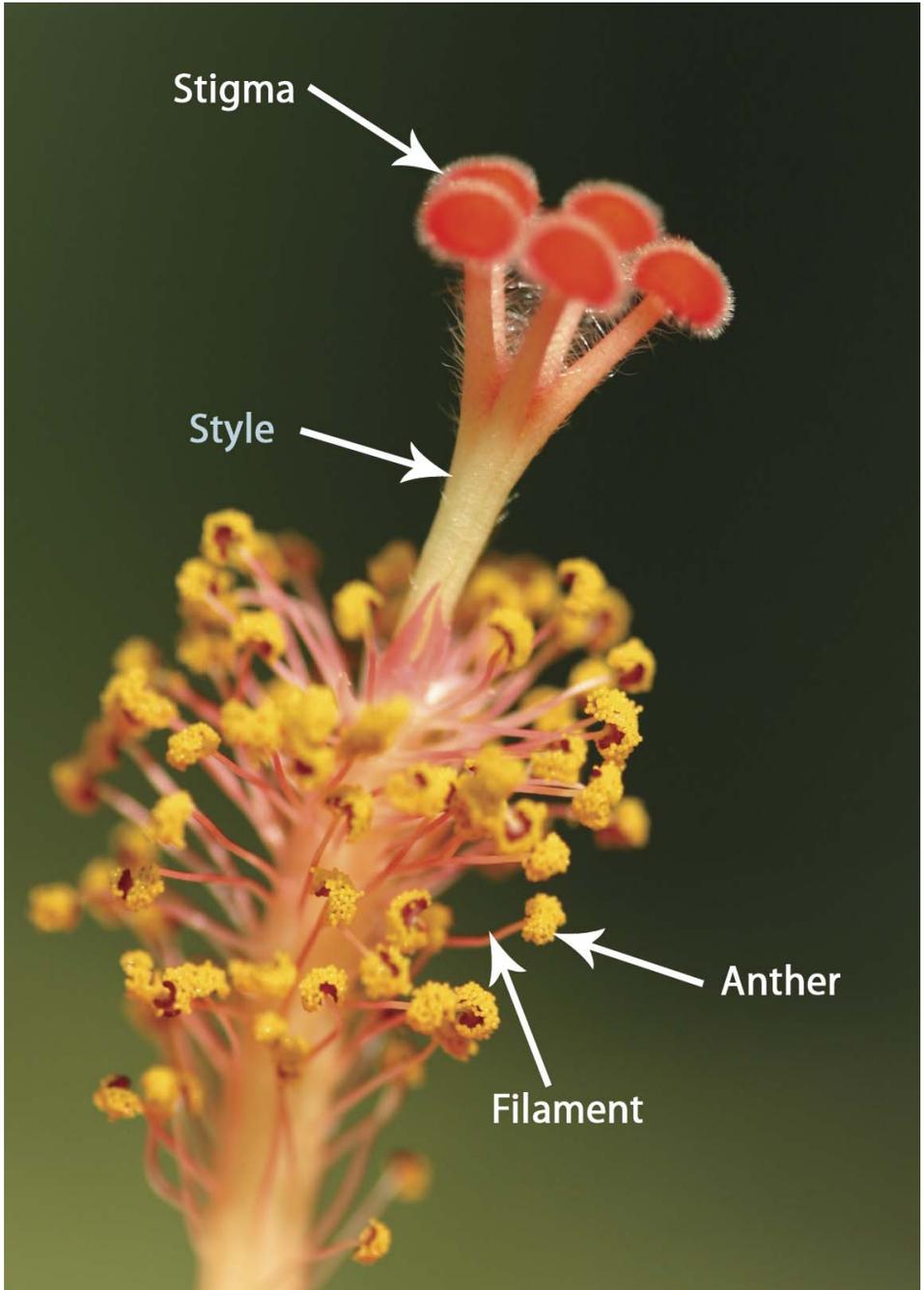
When a plant is fertilized, one of the many tiny grains of pollen from the male (staminate) flower pod lands on a pistil of the female (pistillate) flower. Each calyx harbors an ovule and a set of pistils. Actual fertilization takes place when the grain of male pollen slides down the pistil and unites with the female ovule, deep within the calyx. Once fertilization takes place, a seed will form within the calyx or seed bract. Seeds are the result of this sexual propagation and contain genetic characteristics of both parents.

## Long-day plants

In nature, annual plants' lifecycle ends in the fall, after the long, hot, days of summer. The long nights and short days of autumn signal long-day plants to start the flowering stage. Growth patterns and chemistry change. Stems elongate and flower formation is rapid at first then slows. All this causes new nutrient needs. Attention is now focused on flower and fruit production, rather than on leafy vegetative growth. Production of chlorophyll, requiring much nitrogen, slows. Phosphorus uptake increases to promote floral formation. Light needs change as well. During autumn, in most climates, the sun takes on a slightly reddish appearance, emitting a light that



*Grow poppies indoors or under cover to protect the delicate flowers from harsh wind and rain.*



*The filament and anther are part of the male stamen. The stigma and style are part of the female flower parts.*