If you find cacti fascinating, look at the other succulents as well. They come in many shapes, colours and sizes. Some have succulent leaves, which may be on stems or in rosettes. Others have succulent stems, or under or above-ground water-storage bodies. Succulents are found throughout the world, wherever water deprivation, for whatever reason, has resulted in the evolution of these special plants. What we need to remember is that plants must have access to water at some stage in the yearly cycle. Water is essential for the transport of nutrients, the production of plant tissue and gas exchange. Without water there is no plant life.

Many plant families have some succulents in them. Some families are composed almost entirely of succulents, for instance the Aloeaceae (Aloe, Gasteria, Haworthia) (Figs. 1–3). There are many levels of succulence, ranging from thriving on light misting for a month or two each year to needing regular weekly dousing. Consequently there is a vast range of plants from which to choose to grow. Cacti are of course also succulent plants.

Because they come from such diverse families and many different climates, some knowledge of their growing periods is needed for successful cultivation. Perhaps the most enigmatic is the mesembryanthemum family (Figs. 4–6). Such a difference exists between the plants of this family and their different growing periods that a separate leaflet is provided to help you. A separate leaflet is also available for Haworthia cultivation.

Whichever plants you wish to grow, the general advice is to water when in growth. As with cacti, wait until the compost is dry before watering again. Do not stand any succulents in water except for a short period to draw it up from the base. Only buy one or two plants of a family until you get an idea of their requirements.

Flowers are produced when the plant is sufficiently mature, as with all perennial plants. At which time of year this happens depends on the plant itself. Some flower at the start of their growing period; others toward the end of it. Some depend on the strength of light to initiate flower buds. Many species of Aloe and Crassula flower in the winter or very early spring (Figs. 1 and 7).

Leaf Succulents

When a plant’s leaves are thick with water-storage tissue it is called a leaf succulent. These leaves may be perennial or semi-perennial, but tend to stay on the plant for several years. Some have a waxy coat eg Gasteria (Fig. 2); others have a mealy coating or farina which will rub off exposing the green skin underneath eg Echeveria, Dudleya (Figs. 8 and 9). Try to prevent people touching these leaves as it will leave finger prints on the leaf surfaces! Agaves are also examples of leaf succulents and have become increasingly popular in recent years as patio plants for the summer (Fig. 10). Take care with these plants as the
leaf tips can be very sharp. Pieces of polystyrene or wine corks are useful for pushing on the end of the leaf to prevent damage if there are children or pets in the vicinity.

**Stem Succulents**

To make the most of any water around, a plant has to store as much as possible while reducing the natural loss through leaves. This is the strategy adopted by the stem succulents. Often you will find their stems beautifully marked and examples of this are found in the Euphorbiaceae (Euphorbia) (Fig. 11) and the Asclepiadaceae such as Stapelia and Huernia (Figs. 12 and 13).

The production of a tuber or caudex above ground is a special case of stem succulence. These succulents are called caudiciforms. Some of these plants have the potential to grow into large shrubs and trees and most growers choose smaller or slow-growing species which are better suited to a windowsill or greenhouse environment. They can be potted to display the caudex above ground but care must be taken to ensure that the tuber does not get burnt on a hot day as this can damage the plant. Caudiciforms are not specific to one family and examples are found in many different plant families. A popular, smaller growing, caudiciform, which you will frequently find on the BCSS seed list is Dioscorea elephantipes (the elephants foot), (Fig. 14). This is a member of the Dioscoreaceae. Other examples of caudex growing plants suitable for the windowsill or greenhouse are species of Adenium and Pachypodium (Apocynaceae), Dorstenia (Moraceae), Fockea (Asclepiadaceae), Ipomoea (Convolvulaceae) and Pelargonium and Sarcocaulon (Fig. 15), (Geraniaceae).