fruit-growing. The vineyards have been replanted with Ameri­can stocks. The Stellenbosch valley is closed in by ranges of hills beyond which, eastward, lies Frenchhoek valley, with a village of the same name. This district was the headquarters of the Huguenot refugees who settled in South Africa at the close of the 17th century.

In the early days of the Boer War (1899-1902) Stellenbosch was one of the British military bases, and was used as a “remount ” camp; and in consequence of officers who had not distinguished themselves at the front being sent back to it, the expression “ to be Stellenbosched ” came into use; so much so, that in similar cases officers were spoken of as “ Stellenbosched ” even if they were sent to some other place. The remount dépôt is maintained ; horses and mules thrive here.

**STEM** (O. Eng. *slaefn, stemn,* cf. Du. *stam,* Ger. *Stamm,* &c., probably related to “ staff ”), in popular language the stalk of a plant, the trunk of a tree (for the technical use of the term in botany see below). There are many transferred uses of the word, such as for the slender structure which joins the foot or base of a vase or goblet to the bowl, a stock or branch of a family, or, in philology, a derivative from a root, the unchanged part in a series of inflected forms. The stem of a ship is the prow, properly a curved piece of timber or metal to which the two sides are attached at its foremost end. This was a Scandinavian use early adopted in English; the word meant simply post, and custom alone restricted it to the bows rather than to the stern; in Danish the distinction is made between *fram stam* and *bak stam* and also in German, *Vordersteven H inter steven.*

In botany a stem may be defined as an axis bearing leaves. The stem with its leaves is known as the shoot. Structurally it differs from a root in having no development of cells forming a cap over the growing-point. Under the term *caulome* (stem-structure) are included all those parts of a plant morphologically equivalent in bearing leaves. The stem generally ascends, seeking air and light, and has therefore been termed the *ascend­ing axis.* Stems have usually considerable firmness and solidity, but sometimes they are weak, and either lie prostrate on the ground, thus becoming *procumbent,* or climb on plants and rocks by means of rootlets, like the ivy, being then called *scandent,* or twist round other plants in a spiral manner like woodbine, when they are *twining.* Twining plants turn either from right to left, as the French bean, convolvulus, dodder and gourd; or from left to right, as honeysuckle, twining polygonum, hop and black bryony *(Tamus).* In other-eases climbing plants are supported by tendrils, as in vine, bryony, passion-flower, or by the tendril-like leaf-stalks, as in clematis and *Tropaeolum.* In warm climates twining plants *(lianas)* often form thick woody stems, while in temperate regions they are generally herbaceous. Some stems arc developed more in diameter than in height, and present a peculiar shortened and thickened aspect, as *Testudinaria* or tor­toise-plant, cyclamen, *Melocactus, Echino­cactus* and other Cactaceac; while in many orchids (fig. 1) the stem assumes an oval or rounded form, and is called a *pseudobulb.*

Names are given to plants according to the nature and dura­tion of their stems. *Herbs,* or *herbaceous* plants, have stems which die down annually. In some of them the whole plant perishes after flowering; in others, the lower part of the stem forming the *crown of the root* remains, bearing buds from which the stem arises next season. In *biennial* herbs the whole plant perishes after two years, while in *perennial* herbs the crown is capable of producing stems for many years, or new annual products are ’repeatedly added many times, if not indefinitely, to the old stems. The short permanent stem of herbaceous plants is covered partially or completely by the soil, so as to protect the buds. Plants producing permanent woody stems are called *trees* and *shrubs.* The latter produce branches from or near the ground; while the former have conspicuous trunks. Shrubby plants of small stature are called *under-shrubs* or *bushes.* The limits between these different kinds of stem are not always well defined; and there are some plants occupying an inter­mediate position between shrubs and trees, to which the name of *arborescent* shrubs is occasionally given.

The stem is not always conspicuous. Plants with a distinct stem are *caulescent*; those in which it is inconspicuous are *acaulescent,* as the primrose, cowslip and dandelion. A similar term is given in ordinary language to plants whose stems are buried in the soil, such as cyclamen or sowbread. Some plants are truly stemless, and consist only of expansions of cellular tissue representing stem and leaf, called a *thallus,* and hence are denominated *Thallogens,* or *Thallophytes.*

The first rudiment of the young shoot of the embryo appears from the seed after the radicle (young root) has protruded. It is termed the *plumute* (fig. 2), and differs from the radicle in the absence of a root-cap and in its tendency to ascend. The apical growing portion constitutes the terminal bud of the plant, and by its development the stem increases in height; projections appear at regular intervals, which are the rudimentary leaves, and in addi­tion there is a provision for the production of lateral buds, which develop into lateral shoots more or less resembling the parent stem, and by these the branching of the plant is determined (fig. 3). These buds are found in the *axil* of pre­viously-formed leaves; or, in other words, in the angle formed between the stem and leaf. They are hence called *axillary.* They are produced like the leaves from the outer portion of the stem (exogenous), and at first consist entirely of cellular tissue, but in the progress of growth vascu­lar bundles are formed in them continuous with those of the stem, and ultimately branches are produced, which in every respect resemble the axis whence the buds first sprang. In the Lyco- pods branching takes place by forking of the growing-point, the main axis being thus replaced by two equiva­lent axes (fig. 4) ; in most cases the new axes develop unequally, the weaker be­coming pushed aside and appearing later as a lateral branch of the stronger. The place of origin of the leaf is called a *node* ; the intervals between nodes are called *in­ternodes.* The stem, although it has a tendency to rise up­wards when first developed, in many instances becomes prostrate, and either. lies along the ground partially covered by the soil, or runs completely underneath its surface, giving off roots from one side and buds from the other. Some stems are therefore subterranean, and are distinguished from roots by the provision made for regular leaf-buds.

Growth in length of the stem is due to elongation of the internodes; the zone of most rapid growth is at some distance below the apex; below this the rate of growth gradually diminishes until the portion is reached where growth in length no longer takes place. In some cases, as in the stems of grasses, growth in length persists for a longer time in a small region at the base of the internodes; this is known as *intercalary* growth. In the dwarf or short shoots, such as those of the larch, the internodes do not elongate and the leaves remain close together. Lateral buds give rise to *branches,* from which others, called *branchlets* or *twigs,* arise. The terminal bud, after producing leaves, sometimes dies at the end of one season, and the whole plant, as in annuals, perishes; or part of the axis is persistent, and remains for two or more years, each of the leaves before its decay producing a bud in its axil. This bud