

## 4. Scientific Names and Technical Terms

THE GREATEST BARRIER to an understanding of any specialized area of knowledge on the part of the general public is unfamiliarity with the terminology. The student approaching such an area immediately finds himself faced with the necessity of learning at least some of this terminology.

The only words in the English language which are not technical to some degree are those which relate to objects and experiences which all human beings contact or share in. All other areas of endeavor possess technical terminology, e.g. words not generally employed in common parlance. Such words are a necessity: nouns for names of things, adjectives and adverbs to describe conditions, and special terms or combinations thereof to communicate concepts. The automobile mechanic, the radio ham, the stamp collector each has his special vocabulary. It should not be strange then, that we need names for plants and terms descriptive of their parts and functions.

### SCIENTIFIC NAMES

The use of scientific names is much more exact and less likely to lead to confusion than that of common names. Common names are exceedingly provincial, and their usage is varied in different parts of the country. The same plant may have numerous common names, or a given common name may be employed to refer to a variety of plants.

Let us consider but a single example: some of the various common names applied to the weed *Erigeron canadensis*, i.e. Whitetop, Fleabane, Horsetweed, Bitterweed, Hogweed, Mare's-tail, and Blood stanch. The name Whitetop is also used to refer to a perennial noxious weed, *Cardaria draba*, which is also called Perennial peppergrass or Hoary cress. Horsetweed also refers to several other plants, most commonly *Ambrosia trifida*, otherwise Great ragweed, Giant ragweed, or Bloodweed. Bitterweed may mean any of several plants in addition to *Erigeron canadensis*, commonly referring to certain species of *Helenium*, which are also designated Sneezeweeds. Hogweed may mean any of half a dozen kinds of plants; it is frequently applied to *Anthemis cotula*, which is also known as Dog fennel, Mayweed, Stinkweed, or Chamomile.

Only the more common and conspicuous plants possess common names. Scientific names are not more difficult than common names. They are merely names which many of us are not used to. *Dahlia*, *Gladiolus*, and *Lespedeza* are scientific names which have been adopted into common usage.

It must be admitted that scientific names have certain limitations. They cannot be used when talking to the general public. Furthermore, they are sometimes subject to change as our knowledge of plant classification increases.

### CLASSIFICATION OF PLANTS AND FORMATION OF SCIENTIFIC NAMES

Every recognizable kind of a plant that ordinarily does not interbreed with other kinds is termed a species. Similar species are grouped together in genera (singular, *genus*). Scientific names consist of the generic and specific names written together, the generic name first, capitalized, the specific name following in small letters. The weeds yellow foxtail and green foxtail are both members of the genus *Setaria*. The scientific name of yellow foxtail is *Setaria lutescens*; that of green foxtail is *Setaria viridis*. Both plants have the same generic name but different specific ones.

Similar genera are grouped together into plant families. *Setaria* belongs to the grass family or Gramineae. Red clover, *Trifolium pratense*, belongs to the pea family, the Leguminosae. The flowering plants existent in the world include about 300 families.

### TECHNICAL TERMS

The employment of technical terms in this book will be held to a reasonable minimum. Many of those which are essential should already be familiar to the student. They are reviewed in the following chapter.

The necessity of terms to obtain precision of expression and as a means of referring to plant parts was discussed above. It is impossible to read botanical material intelligently without knowing some terminology. Sometimes students avoid the use of such words in their own attempts at communication and resort instead to cumbersome descriptive phrases. Mark Twain did just this in his description of the process of harnessing a team of horses, quoted below.

"The man stands up the horses on each side of the thing that projects from the front end of the wagon, and then throws the tangled mass of gear on top of the horses, and passes the thing that goes forward through a ring, and hauls it aft, and passes the other thing through the other ring and hauls it aft on the other side of the other horse opposite to the first one, after crossing them and bringing the loose end back, and then buckles the other thing underneath the horse and takes

another thing and wraps it around the thing I spoke of before, and puts another thing over each horse's head, with broad flappers to keep the dust out of his eyes, and puts the iron thing in his mouth for him to grit his teeth on, uphill, and brings the ends of these things aft over his back, after buckling another one around under his neck to hold his head up, and hitching another thing on a thing that goes over his shoulder to keep his head up when he is climbing a hill, and then takes the slack of the thing which I mentioned a while ago, and fetches it aft and makes it fast to the thing that pulls the wagon, and hands the other things up to the driver to steer with." Mark Twain. *A Tramp Abroad*, Vol. II. 19-20.