

6. Weeds of the North Central States

IN THE FOLLOWING CHAPTERS the more common or important weeds and weed groups of the North Central States are described. It is desirable to consider briefly the manner of treatment and the uses which may be made of this part of the text.

RECOGNITION AND IDENTIFICATION

Weeds and weed groups are distinguished in terms of their structure and appearance. Many of the distinctions are on specific characters of flowers and fruit, and technical terms (previously reviewed) are employed to present the descriptions. Since it is possible, however, to recognize many weeds without recourse to botanical characters, it is natural to inquire concerning the necessity of technical descriptions or why relatively inconspicuous characters are often employed.

There is a difference between recognition and identification. One recognizes a friend by a large number of subjective and variable features which he assembles more or less subconsciously. If it were possible to catalogue all of the characters which are involved and necessary in recognizing an individual or a plant, the description might be pages long. Furthermore, recognition is usually possible only after a period of close association with the subject under consideration.

On the other hand, identification is concerned with the conscious use of relatively few characters which experience has indicated to be relatively constant and which can be used as "signposts." Such characters are frequently those which have evolutionary significance in the interpretation of plant classification; they must have a genotypic as well as phenotypic basis and not be influenced by environmental factors. In some instances, from the standpoint of gross size, they are small or insignificant characters.

In order to learn individual species and plant groups in an efficient and orderly fashion, one must proceed through the mental process of identification. Once he is able to identify the plants concerned, and continues to work with them, he will begin to be able to recognize them. Subsequently he may largely dispense with conscious identification and depend almost entirely upon recognition. Botanists who "know" many

plants probably recognize most of them. Nevertheless, they frequently fall back upon identification characters for verification if for one reason or another they are uncertain of their recognition reaction. They then follow the same conscious process employed in originally learning the species.

PLANT FAMILIES AND GENERA

It goes without saying that an individual working with weeds should know the common species. He should also have some knowledge of methods of identifying unfamiliar kinds or to verify ones partially forgotten. Botanists identify plants by employing botanical keys — outline forms which through a series of alternative choices lead to the name of the plant. It is frequently possible to short-cut the employment of keys by learning the characteristics of plant groups, families, and genera. If the family to which an unknown belongs can be easily identified (or recognized), much of the job of identification is completed. It is necessary only to search for the plant in a book or bulletin within the confines of that specific group. Furthermore, if one is familiar with the family to which an unknown weed belongs, he will automatically know a great deal about it. For example, he may be able to hazard a guess as to its sensitivity to 2,4-D; e.g. members of the grass family are highly resistant to this herbicide while the mallow family is quite susceptible.

METHOD OF TREATMENT

The following chapters present brief descriptions of the more common or important weedy species of the North Central States. It is not practical to consider all kinds if the treatment is to be maintained within usable limits. As an alternative, and for the reasons given above, many weed groups, families and genera, have been characterized.

The sequence of treatment, inasfar as arrangement of families is concerned, is essentially that employed in most botanical manuals except that grasses and other monocotyledons have been placed at the end. Since the grasses constitute a technical group, it is usually easier for the beginning student to work with them subsequent to gaining experience with other plant families.

The descriptions presented include not only weeds but also the common agricultural species of the North Central States. Too often weedy and crop species are confused, or determination of a weed (especially a grass) is tentative because of uncertainty that it may be a planted species. Accurate identification of weeds predicates a knowledge of the plants with which they grow and of the distinctions between them.

The diagnoses are not complete descriptions; the latter would consume much more space. They present only the more important characters, especially those useful in distinguishing each from similar kinds

with which they are easily confused. If employed with specimens, the diagnoses are useful in pointing up what to look for in learning the plants, and they help avoid the pitfall of reliance on undependable characters which chance to be conspicuous on a given specimen. As a useful adjunct to these descriptions, the pictures in the regional bulletin "Weeds of the North-Central States" (see Chapter 25) are useful in learning many of the weed kinds.

Seeds of some weed kinds are frequent contaminants of agricultural seed. Such seeds are briefly characterized and the nature of their occurrence in crop seed given.

Brief statements as to range, habitat, and seasonal time of abundance or blooming follow the descriptions. Statements as to range, i.e. "western," "southeastern," apply specifically to distribution within the North Central States, not the United States as a whole.

*Classification of Weeds
by Family Characteristics*

