

# University Herbarium Helps Identify Plants

By K. F. PARKER

A herbarium is a place where dried and pressed plants are stored for future reference. The University of Arizona herbarium contains over 100,000 specimens. The largest percentage of these are from Arizona, but other western states and Mexico are well represented.

Words are most inadequate for describing plants. The best description leaves much about the plant unsaid. The Chinese have a saying that "One picture is better than a thousand words". An actual plant is proportionately more valuable than a mere picture.

## Used for Identification

The herbarium is a working tool and one of its principal uses is for checking identifications. Farmers, ranchers, agricultural extension workers, gardeners, allergy specialists, and tourists are but a few examples of those constantly bringing or sending in plants for identification.

The ease and accuracy of a determination is somewhat proportional to the amount of the plant sent. It is best to bring the whole plant where practical, but at least the important diagnostic characters, flowers or fruits, (both when present) and leaves are

essential. Too often a single leaf, a flower fragment, or a few seeds are all that accompanies a "What is it?" request.

A formal book description is of little value in determining the name of such plants. For the purpose of comparison it is desirable that a given plant be represented in the herbarium from many localities and by many stages of growth.

Many people are disappointed when they enter the herbarium because they expect to see growing plants. This would be highly impractical, temporary at best, and only a mere fraction of the same number of plants could be housed.

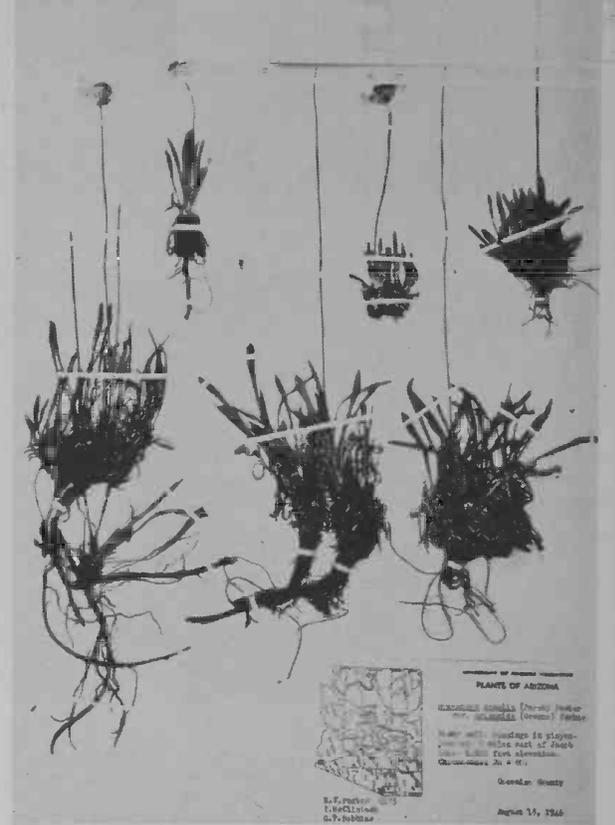
Due to the bulky nature of plants it has long been the custom to press them flat. The dried, flattened plant is mounted (with glue and tape) upon a thick white sheet of paper, about 12 by 16 inches. (See picture above). Every specimen bears a label giving its scientific name, plus pertinent collecting data such as the exact locality, habitat, altitude, county, date and the collector's name and number.

Common names are very confusing and of little scientific value. Many species do not have common names. Frequently a large group of related species all have the same common name. Or a single name is applied to totally unrelated plants in different parts of the state. For example, "greasewood" in northern Arizona is an entirely different plant from "greasewood" of southern Arizona.

The unpopularity of scientific names is due more to their unfamiliarity rather than their complexity. Such familiar scientific names as *Chrysanthemum*, *Zinnia* and *Asparagus* are used by everyone.

Each sheet with the same scientific names is filed in the same folder. The folders are stacked one on top of the other and kept in herbarium cases. The old cases are wooden but recently 10 new safety-steel cases, in-

The plant is being placed in the press by K. F. Parker. A press consists of 2 slatted-wood frames, 2 adjustable straps, and absorbent blotters. An open herbarium case is shown in the background, filled with herbarium specimens in folders.



Above is shown a herbarium specimen sheet. The dried plants are mounted with glue and tape upon a thick white sheet of paper. The label on each sheet gives the scientific name of the plant and important collecting data.

sect and fireproof and less bulky, were added to the herbarium.

## Press Plants Before They Wilt

To produce good herbarium specimens the plants must be pressed before they wilt. The best method is to press them as soon as they are picked. Many botanists prefer to collect into a tin container, called a vasculum, and press the plants later.

To press, the plants are laid between sheets of newspaper alternated between heavy absorbent paper, then placed in a press. The press is composed of 2 frames, each made from slatted pieces of wood. (See picture). These frames are held together tightly by a pair of straps which are easily adjustable to the number of specimens in the press.

Professor J. J. Thornber's extensive Arizona collections form the basis of the herbarium. For over 40 years, beginning in 1902, traveling at first by horse or on foot, he collected plants throughout the state. New additions are now added to the herbarium at the rate of about 2,000 sheets each year.

That the value of the University of Arizona herbarium has been recognized by other institutions is evidenced by the increasing number of requests for loans. At present 18 such loans are out to various students and specialists at other universities.

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