Reviews

Although the purpose of reviewing books in *Desert Plants* is not to sell them, in response to requests by readers who have found it difficult to obtain titles elsewhere, the Arboretum will, as a courtesy, make them available by mail at the prices set by the publishers, with the request that $1.00 per book be added for postage and handling. Orders may be sent to Boyce Thompson Southwestern Arboretum, P.O. Box AB, Superior, Arizona 85273.

Exotica. Series 4.
Alfred Byrd Graf. Roehrs Company. East Rutherford, New Jersey. 1982. 2,560 pp. (2 vols.), $175.00.

Users of the various editions of this pictorial cyclopedia of exotic plants doubted that the book could get much larger when in 1963 "Series 3" proved to be a volume four inches thick at the spine and weighing 13 pounds. But the publishers nevertheless seem ever intent on continuing to expand this reference work. The new "Series 4," released in 1982, represents essentially the eleventh edition and weighs over 17 pounds. The problem of fitting it all into one book was solved by binding it in two volumes.

Exotica 4 contains 16,600 illustrations compared to 11,300 in Series 3 and 7,600 in Series 2. There were only 4,000 in the original version which appeared in 1957. Aside from the additions, there have been numerous corrections over the years.

Regardless of which edition a person refers to, many of the exotic plants depicted come from arid or sub-arid regions. Cacti and succulents are well represented. Over the last 25 years *Exotica* has been perhaps the most commonly consulted work for identifying tropical and subtropical plants cultivated in temperate countries. Users generally open the book to the proper plant family and then page through until a photo is located which resembles the plant in question. This pragmatic technique is quite different from (and much easier than) the theoretic approach to plant identification taught in college plant taxonomy classes; it has undoubtedly evoked shudders from countless scholastics. Nevertheless, *Exotica* has clearly established itself as the reference of choice among plant professionals and hobbyists alike for quickly finding the name of perhaps 80% of the plants commonly grown in greenhouses or as house plants. It can also be used as a "wish book" for finding names of plants which might be desired for greenhouse collections or "indoor landscaping." In the Sonoran Desert, where the winters are mild, it is possible to grow many outside.

Agaves of Continental North America.
Howard Scott Gentry. University of Arizona Press. Tucson, Arizona. 1982. 670 pp. $49.50.

This is Dr. Gentry's *magnum opus* on the Century Plants and their wild relatives. It is the result of a lifetime of exploration in rugged terrain (largely in Mexico) and careful study in herbarium, laboratory, library and garden. Certainly no other person knows nearly as much about the genus *Agave* as Gentry. The author very ably shares his knowledge with the reader. We owe Gentry an enormous debt of gratitude for sorting through the hundreds of proposed taxa to eventually characterize 136 acceptable species for continental North America. Gentry's mature judgement is all the more appreciated because the bewildering array of morphologic types in the genus has made taxonomic decisions difficult. Although the classification is obviously arbitrary in many places, we feel better about accepting it knowing that the subjective decisions were made by a person who knew the plants so well.

Although the book is clearly the last word in taxonomy of the genus, it also admirably treats various ethnobotanic aspects of Agave. Several species provided food, fiber and drink for prehistoric and modern people. Indeed, hardly a species exists which has not been used by man for one purpose or another.

The complex Nahuatl society of central Mexico made ceremonial use of an alcoholic drink made from the large "maguey" Agaves. Such a fermented product is still drunk in Mexico under the name "pulque." The art of distilling fermented Agave (to concentrate the alcohol and remove unwanted tastes) dates from the Spanish occupation only. Nevertheless, this has produced the "tequila" made in Jalisco as well as the "mescal bacanora" of Sonora and "mescal con su propria gusano" bottled in Oaxaca. The latter product includes a larva of the *Agave* weevil in the bottom of each bottle as proof of being a genuine Agave drink!

Pit-baking of *Agave* "cabezas" (hearts of the plant with the leaves cut off) provided food for prehistoric and modern Indians in northern Mexico and the Southwestern United States. The cooked cabezas were sweet and tasty. Usually a larger quantity was processed than was eaten right away. The excess cooked cabezas were cut into chunks which were flattened out and air-dried. The resulting "mescal cakes" were stored for later use or were traded to Indians who lived far away from a good source of Agaves.

Indians, both prehistorically and recently, have woven sandals, mats, blankets, bags, nets, baskets, clothing and other articles from *Agave* fibers. Although most any *Agave* could be used for fiber to some extent, two types were long ago selected for special cultivation in quantity. *Agave fourcroydes* has produced huge annual tonnages of "henequen" fiber while *Agave sisalana* has yielded even larger tonnages of "sisal."

Agave species have precursor chemicals capable of yielding either cortisone or synthetic hormones suitable for birth-control pills. Precursor chemicals are extracted from *Agave* leaves as byproducts of sisal and henequen fiber operations. Dr. Gentry's work with *Agave* was stimulated by the desires of the U. S. Department of Agriculture to assay as many wild species of *Agave* as possible to determine if they might be better sources of corticosteroid precursors than the cultivated fiber types. Dr. Gentry's *Agave* explorations resulted in the success of this program and some of the chemical findings are summarized in the present book. Several wild species with high concentrations of corticosteroid precursors await exploitation.