

Land of Extremes

QUESTIONS? Contact Local Content Editor Richard Montenegro Brown at rbrown@ivpressonline.com or 760-337-3453.

EDITOR'S NOTE A series of stories on the history of man in our desert and the efforts of the Imperial Valley Desert museum to tell that story will run through October, replacing the Teen page until a new crop of interns return in the fall connected to the IVHigh journalism program.

3,000 PLANTS AND THEIR CULTURAL USES IDENTIFIED

Desert plant life

comes alive through tech, education

BY NEAL V. HITCH | Special to this Newspaper/Imperial Valley

In the 1970s and 1980s, ethnobotanist Lorraine Pritchett was in the process of compiling a book of Imperial Valley desert plants used by Native Americans. Lorraine and her husband, Howard, were among the early pioneers of Imperial Valley archaeology and worked with museum founder Jay von Werhlof on many projects.

Pritchett specialized in plant life found in the Imperial Valley. She identified more than 3,000 plants and their cultural uses.

Under the direction of von Werhlof, the Desert Museum Society had a very active publishing program.

Countless archaeological manuscripts and monographs were put into print, including Jay's first book on the earthen art geoglyphs of Imperial Valley.

According to Pritchett, her work was in line to be published next, but the Society ceased its publishing activities before her work could be printed.

The adaptation of plants to the desert environment is now at the forefront of the Desert Museum's field trip programs, and is essential to understanding how life continues over time, even in an area with little to no water.

Many of the species of desert flora in the Imperial Valley have had nearly 9,000 years to develop into drought-resistant survivors.

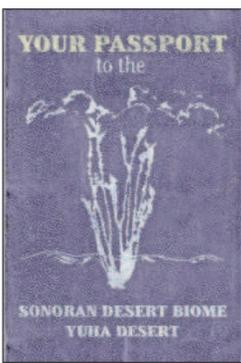
New archeology research is now indicating that humans have been learning to adapt over the same long period, making Lorraine Pritchett's work of primary importance. In the new permanent exhibit, "The Land of Extremes," the Desert Museum is integrating Pritchett's ethnobotany research with state and national education standards and the help of DOVES, the Donors of Valley Endeavors.

The museum's new way of publishing

The Desert Museum is utilizing the adaptation of plants and their cultural uses in several areas of the new permanent exhibit, opening in spring 2015. The exhibit will include a durable flip book showcasing details for eight specific plants.

Thirty additional plants will be formatted for publishing on a wireless tablet device.

The adaptation of plants is also the focus of a new field trip curriculum aimed at encouraging a hands-on look at plant identification. For the field trip, information will be published in the form of a small passport booklet with maps and images.



Passport to the Sonoran Desert

With the help of a significant grant from DOVES, the museum is enhancing field trips through the development and production of a "passport" to the Sonoran Desert.

The passport content will meet school curriculum for fourth-, fifth- and sixth-grade Native American history and earth science.

A key component of the current museum field trip curriculum is firsthand investigation of the unique adaptation of plants found on a desert hike outside the museum. Many student participants express that they have never been in the desert before.

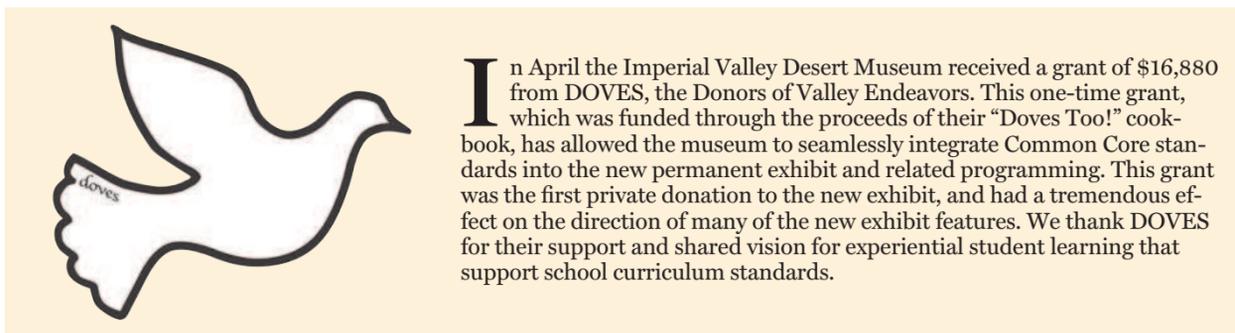
The field trip is their first taste of the desert ecosystem. They walk among the hardy plants, see the tracks of desert animals and explore the stories that geology can tell us about the desert.



ABOVE: Howard Pritchett documents a stand of agave in 1976.



LEFT: Land of Extremes exhibit section on agave and its use began fabrication in August and will be part of the permanent exhibit opening in the spring of 2015. PHOTOS COURTESY OF IMPERIAL VALLEY DESERT MUSEUM



In April the Imperial Valley Desert Museum received a grant of \$16,880 from DOVES, the Donors of Valley Endeavors. This one-time grant, which was funded through the proceeds of their "Doves Too!" cookbook, has allowed the museum to seamlessly integrate Common Core standards into the new permanent exhibit and related programming. This grant was the first private donation to the new exhibit, and had a tremendous effect on the direction of many of the new exhibit features. We thank DOVES for their support and shared vision for experiential student learning that support school curriculum standards.

Excerpts from "Passport to the Sonoran Desert"



Ocotillo (*Fouquieria splendens*)
Propagation Ocotillo is common in most areas of the Sonoran and Chihuahuan deserts. The plant will grow from both seeds and cuttings, but must be in sandy soil. The root is only 6 inches deep.

Adaptation Ocotillo is a drought-deciduous shrub that remains dormant when leafless to conserve water. The Ocotillo is pollinated by hummingbirds that like the honey nectar its flowers produce

Cultural Uses Kumeyaay used ocotillo branches to build frames for houses and fences. The Ocotillo flowers can be mixed with water to make a sweet drink tasting like melon that can also be used as a cough medicine.



Brittlebush (*Encelia farinosa*)
Propagation Brittlebush is found in the sandy or gravelly hills of the Mojave and Sonoran deserts. Brittlebush is a member of the sunflower family.

Adaptation The white color reflects the sunlight helping to keep the plant cool. They also help trap any moisture and reduce the amount of water lost.

Cultural Uses The wood secretes a clear resin used as glue by Native Americans. Ground up fresh leaves can be placed on insect bites to relieve itching and inflammation. Tea made from the leaves will relieve fevers related to colds.

This type of experience allows students to experience the minutiae of the desert environment.

The "Passport to the Sonoran Desert Biome" will expand on these themes, allowing students to learn about noteworthy plants in detail.

Each student will receive their own informational passport booklet to guide him or her in plant identification and Native American cultural uses. Students will collaborate to creatively solve problems of desert adaptation. Critical thinking questions are posed:

if you had to live in the desert without any modern conveniences, what three plants would you want to have around you? How would you transplant or propagate desert plants near where you live?

The field trips that will be offered at the museum in 2015 will seamlessly integrate Common Core State Standards with experiential learning at the museum.

Educators with whom the museum consults stress that experiential learning leads to deeper student learning.

The goal of the Desert Museum is to support teachers as students discover the world around them. Matching programming to California and national educational standards is a key way in which the museum will reach that goal.

With the support of DOVES, researchers like Lorraine Pritchett, and our educational consultants, we are excited to be a part of the discovery process.

Neal V. Hitch is director of the Imperial Valley Desert Museum.