



Friends
of the
Palomar College

ARBORETUM

NEWSLETTER
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<http://www2.palomar.edu/pages/arboretum/>

Deergrass: A Native Bunchgrass Planted At Palomar College

By W. P. Armstrong

One of the most conspicuous plants of mountain meadows in San Diego County is deergrass (*Muhlenbergia rigens*), a tall, perennial bunchgrass. It forms dense clumps up to four feet tall in Doane Valley, Palomar Mountain, and across meadows of the Cuyamaca and Laguna Mountains and Pine Valley (Figure 1). It also grows in moist canyons on the coastal and desert sides of the mountains, including Borrego Palm Canyon, Gopher Canyon and tributaries of the San Dieguito River. There are 17 additional species of *Muhlenbergia* native to California, generally smaller grasses often referred to as "muhlys." They belong to the large grass tribe Agrostidae, along with bentgrass (*Agrostis*), three-awn (*Aristida*), needlegrass (*Stipa*), and reedgrass (*Calamagrostis*). Recent DNA analyses place *Muhlenbergia* in the subfamily (DNA clade) Chloridoideae, tribe Eragrostidae.

Grounds supervisor and horticulturist Tony Rangel has planted deergrass on the campus of Palomar College at the west end of the TLC Building (Teaching Learning Center). Deergrass is drought tolerant, has few insect pests, and is relatively low maintenance (Figures 2 & 3). The following comment is from the Dave's Garden on-line page: "Fast growing California bunch grass. It gets about 2 feet tall and the plumes are another two feet above that. It is quite spectacular. Can be grown as a specimen or multiples. Very low maintenance, only need to cut it back once a year before the new growth starts. Does not seem to be as demanding with respect to drainage as many other natives. Water efficient. This is a very good grass."



Figure 1



Figure 2



Figure 3

An Important Plant In Cahuilla Culture

Deergrass was very important in the lives of Cahuilla people because of its use as foundation bundles in baskets (Figure 4). It was also used for the foundation in Kumeyaay baskets (Figure 5). The following information about Cahuilla basketry is from Dr. Deborah Dozier of the Palomar College American Indian Studies Department: The patterned surfaces are all made by wrapping a foundation bundle of cleaned and sized deergrass stems in paper thin strips of basket sumac (*Rhus trilobata*) and more typically basket rush (*Juncus textilis*). The sumac is left untreated and is valued for its pure white color. *Juncus* is valued for the distal end that is buried in the soil and turns a mahogany red, as well as the golden tan color that most of the rush takes when properly dried. Sometimes the *Juncus* is dyed black using the leaves of elderberry (*Sambucus mexicana*) mixed with emptied hulls of acorns, mostly black oak (*Quercus kelloggii*). When the basket is finished, no trace of the deergrass foundation is visible.

To create a basket 14 inches in diameter and 4 inches deep takes about 1,500 stalks (culms) of deergrass. The pattern of the stitching in a top-notch basket is remarkable in that it expresses the same Fibonacci patterns as pineapples, pine cones, and other arrangements of rotational geometry. It is amazing that these women did this at 40+ stitches per inch without any pattern to follow. For more information see *Temalpakh: Cahuilla Indian Knowledge and Usage of Plants* by Lowell John Bean and Katherine Siva Saubel (1972).

Did Dinosaurs Dine On Grasses?

Phytoliths are microscopic silica bodies found inside the cells of stems and leaves of grasses (Figure 6). Depending on the species of plant, they range from 5 to 100 micrometers in length. Because they are made of a crystalline form of silica called opal, they are very durable and retain their characteristic shapes over millions of years. Different genera of grasses have phytoliths with unique shapes, including square, rectangular, oblong, and dumb-bell shaped. Like microscopic pollen grains and diatoms, the phytoliths remain perfectly preserved in spaces between soil particles. Phytoliths have recently been discovered in petrified dinosaur droppings (coprolites), evidence that these enormous prehistoric herbivores fed on grasses.



Figure 4



Figure 5

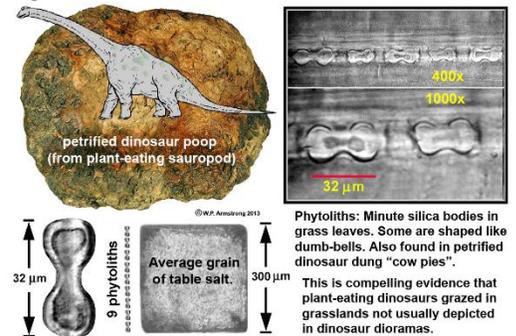


Figure 6

Calendar Of Events For 2015

<http://www2.palomar.edu/pages/arboretum/calendar-of-events/>

“Spring Garden Days”

April 25, 2015

10:00 am – 2:00 pm

Location: NS-137, NS-138, NS-139 & Adjoining Patio Area

Multiple Workshops:

10:00 am – 11:00 am “Caring for Fruit Trees, Vines and Shrubs”

speaker Tony Rangel

Room: NS-137

10:00 am – 11:00 am “Growing a Vegetable Garden”

speaker Richard Borevitz

Room: NS-138

11:00 am – 12:00 pm “Plants and Man” (focus on global edibles)

speakers Wayne Armstrong and Tony Rangel

Room: NS-137

12:00 pm – 1:00 pm **LUNCH**

1:00 pm – 2:00 pm “Growing A Vegetable Garden”

speaker Richard Borevitz

Room: NS-138

1:00 pm – 2:00 pm “Mushrooms and Health”

speaker Steve Farrar

Room: NS-139

For More Information: Tony Rangel

call (760) 744-1150 x2133

email: arangel@palomar.edu

<http://www2.palomar.edu/pages/arboretum/calendar-of-events/>

Thank you for your support of the Palomar College Arboretum!

NOTE TO FACULTY: You can receive Professional Development credit by taking our workshops, tours and lectures. Maximum of 2 hours of PD credit per semester.

Please sign-up with the Professional Development office. <http://www.palomar.edu/pd/>

Call (760) 744-1150 x2250 for more information.

[Read More About Our Speakers: http://www2.palomar.edu/pages/arboretum/about-our-speakers/](http://www2.palomar.edu/pages/arboretum/about-our-speakers/)

The Passing of an Amazing Man

By Elaine Armstrong

The Friends of the Palomar College Arboretum dedicate this newsletter to Mr. Dick Henderson.



The Friends of the Palomar College Arboretum Board were saddened by the passing of Mr. Dick Henderson on February 19, 2015. Dick was one of our former Arboretum Vice Presidents, Community Liaison, Workshop Speaker and an incredible 13+ year volunteer as the Curator/Garden Manager of the Palomar College Cactus and Succulent Garden. He donated thousands of dollars' worth of drought tolerant plants to Palomar College. Dick devoted countless hours to the Palomar College Cactus and Succulent Garden. Dick gave many free workshops, tours and talks to students, Palomar College employees, organizations and the local community. He often volunteered his time 5-days a week, 8 hours a day, especially on weekends. It truly was a labor of love for him. Dick was a 3rd generation farmer near North Platte Nebraska prior to moving to California with his parents in 1956. He had over 40 years' experience growing and propagating cactus, succulent and native plants. He worked for Rohr Industries for 30 years.

He had a delightful personality, amazing knowledge of plants, and a kind and caring spirit. He loved nature, animals and outdoor activities, like backpacking and camping. Dick was a supporter and member of many wildlife and botanical gardens.

- Life member of the Friends of the Palomar College Arboretum.
- Life member Palomar Cactus and Succulent Society.
- San Diego Zoological Society member for 35 years. Volunteering at the San Diego Zoo and the San Diego Safari Park. (Old and new world succulent gardens).
- Member of the California Native Plant Society since 2002.
- Mr. Henderson lent a living rock cactus and other plants to the Palomar College and Vista Library for display.

Dick leaves behind 2 daughters Roxanne and Christine, son-in-law Gary, granddaughter Amber, and great-granddaughter Rene. He will be missed by all who knew him.

Friends of the Palomar College Arboretum Committee

- Tony Rangel, President
- Susan Snow, Vice President
- Christine Brady, Treasurer
- Pauline Riley, Secretary
- Elaine Armstrong, VP of Membership & Webmaster
- Richard Borevitz, Community Liaison
- Dr. Bill Adams, Business Liaison
- Wayne Armstrong, Newsletter Editor & Life Science Liaison