



# BIG MORONGO CANYON PRESERVE

## NEWSLETTER

Friends of Big Morongo Canyon Preserve

Spring/Summer, 2018

### Big Morongo Canyon Preserve Volunteers Receive Training

In an effort to recruit more volunteers to assist with education programs, staff presented three training sessions at the end of January and continuing into February. Each day began with an introduction to BMCP operations and interpretive techniques. A different speaker addressed the group every week: Tracy Albrecht, Interpretive Specialist at Santa

Rosa and San Jacinto Mountains NM, gave attendees an overview of the BLM and the three new monuments, and then introduced them to native snake species by teaching them how to use a dichotomous key. The following week, Robin Kobaly, Executive Director of the SummerTree Institute (and former BMCP Preserve Manager), shared her knowledge

of native desert plants with the group, and then took them onto the Marsh Trail for some lessons in field identification, ethnobotany, and plant food tastings. On the final day of the training, Jane Olson shared her extensive knowledge of birds with the group. Specimens were laid out as small groups of prospective volunteers made observations and inferences about what these objects were



Studying bird wings can be uplifting!  
Photo by Caryn Davidson



Birds are the focus of Jane Olson's training session for BMCP volunteers.  
Photo by Caryn Davidson

and how they compared to other specimens. We thank the presenters as well as the prospective and returning volunteers for making this training a richly informative and enjoyable experience!

by Caryn Davidson

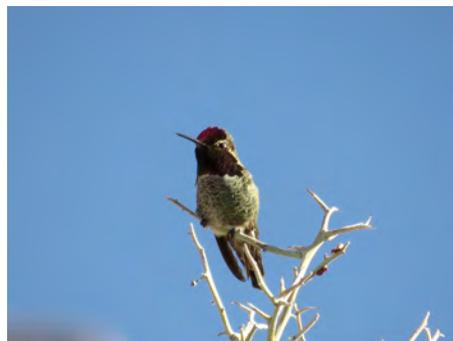
### Bird Coloration– What's in a Feather? by Jane Olson

More and more often these days, the secrets of nature are being revealed by the study of molecular structures of a plant or an animal. This is particularly true of unraveling the secrets of how the enticing colors and intriguing patterns in feathers are formed. The variegated shades of gold and brown on an owl's wing, the bright red on the Vermilion Flycatcher, the variation of plumage among House Finch and the brilliant colors that shine from a hummingbird all hint at the intricacy of the process that creates such varied effects.

Feather color is the result of a combination of pigments, structure and the physics of the color spectrum in light reflected from the feather. Achieving

color and pattern in feathers is every bit as complex as that sounds.

The structure of the feather is as important as the pigments in producing pat-



Hummingbirds, such as this male Anna's, are well-known for the brilliance of their iridescent colors.  
Photo by Joe Zarki

tern and color. The parts of the feather that we easily see are the shaft, called a rachis, and the vane. The rachis looks and feels a bit like plastic. The vane is the complex, flexible flat sheet structure attached to the rachis. The vane is composed of thousands of parallel branches called barbs which are connected by even smaller cross-links called barbules. All these tiny parts can add up to over a million bits in a large feather! These bits are measured in nanometers which is 1/10,000,000 of a centimeter. We can't see them, but these minuscule constructs are integral in producing the color in a feather.

The barbs are the microstructure that help create non-iridescent coloration

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**Volunteer Work Projects**  
**Monthly 4th Saturdays**

9:00 to 11:30 a.m.

A monthly morning to accomplish the preserve's needed tasks.

*If you are age 13 to 17 and are not a registered volunteer, your guardian needs to complete and sign a BLM Volunteer Service Agreement before you participate. Youth ages 12 and under may attend ONLY if accompanied by an adult.*

For information, contact Volunteer Coordinator Leslie Burkhardt, or visit [BigMorongo.org](http://BigMorongo.org) and follow this path: Friends of BMCP Forum, Volunteer Information, then:

- "New Volunteer Application Forms" for BLM Volunteer Service Agreements (if you are a minor) and Health & Safety Guidelines; OR
- "Volunteer Work & Learn Program" for information on upcoming projects.

**To sign up: contact Leslie at 760-363-1159, or [LBurkhardt@bigmorongo.org](mailto:LBurkhardt@bigmorongo.org)**

**Friends of Big Morongo Canyon Preserve**

**Board of Directors**

- David Miller, President
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- Ann Garry
- Robin Kobaly
- Bill LaHaye
- Tish Miller
- Jane Mootz
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- Laura Sherrod

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- Leslie Burkhardt, Volunteer Coordinator
- Caryn Davidson, Education Director

**NEWSLETTER**

Editors: Leslie Burkhardt, Joe Zarki

Spring/Summer, 2018

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**Remembering Bonnie- Birder, Naturalist, Volunteer, Friend**

**by Margaret Hoggan**

Bonnie Smith (née Compton) was born on April 8, 1949 in the Washington D.C. area, where she and her brother Bill grew up. Bonnie attended the University of Alabama, earning a medical degree with a specialization in Psychiatry. After a brief marriage, Bonnie relocated, moving to the southern California desert in 1996.

Dee Zeller first met Bonnie when he worked at the Coachella Valley Preserve more than 20 years ago. When he became Preserve Host and Bird Walk Leader at Big Morongo Canyon Preserve, Bonnie started attending the bird walks there.

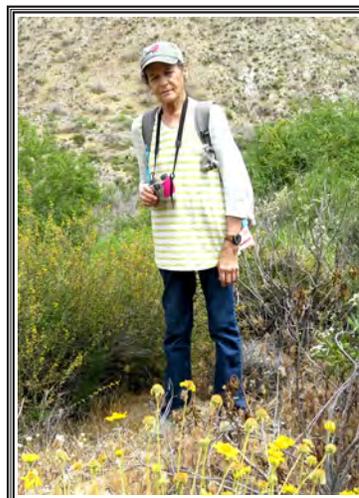
In 2009, Bonnie became a preserve volunteer, leading bird walks, field trips and the Christmas Bird Count, and collecting data to help her fellow birders learn about local birds. Bonnie was a familiar figure at the preserve's Bird Walks, with her bundle of index cards in hand to record data, and colorful socks depicting wildlife. She was honored for her contributions as a volun-

teer by the Board of Directors of Friends of BMCP on March 17, 2015 when her name was placed on the Recognition Rock near the kiosk.

Bonnie's interests were not limited to birds - other wildlife, geology, and native plants interested her too. Bonnie particularly enjoyed wildflower walks at the preserve as well as at Joshua Tree National Park. When a butterfly walk was introduced at the preserve, Bonnie was delighted to attend.

Bonnie's energy and dedication as a volunteer were all the more amazing considering the serious and steadily worsening health concerns that she had lived

with for many years. Her friends and colleagues were very sad to learn that she had passed away shortly after attending this year's Christmas Bird Count, just a few months short of her 69th birthday. We'll miss you Bonnie. Happy birding wherever you are!



**EXECUTIVE DIRECTOR'S REPORT by Meg Foley**

On February 9, Friends of Big Morongo Canyon Preserve participated in the Sand to Snow National Monument 2nd Anniversary Celebration at the Cactus Mart. The National Monument designation came through the urging of many local and regional groups and individuals who wanted greater protection for the local areas of critical environmental concern. Recreational users, environmentalists, residents, business owners, tribal governments and local governments worked with Senator Dianne Feinstein to obtain greater protection for the BMCP and surrounding lands. You may recall the BMCP, with a designation of "Area of Critical Environmental Concern", had virtually no protection from development like the Los Angeles Department

of Water and Power's Green Path North transmission line project. Thanks to local efforts, the project was dropped and the National Monument protection was sought and obtained. The designation preserves wildlife corridors, recreation opportunities, riparian habitat and cultural and archeological resources.

The designation also brings new audiences. January 2018 marked the highest single month visitation in Big Morongo Canyon Preserve history! Many recent visitors said they came specifically to see the "Sand to Snow National Monument". We attracted some new volunteers from amongst the new visitor groups. The Coachella chapter of Council of Mexican Federations in North America (COFEM),

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# BIG MORONGO CANYON PRESERVE

## Look Who Is Visiting the Preserve! by Leslie Burkhardt



Left: Jan. 27. Docent Reuben Schmit leads a tour of the preserve for Por la Creación, a faith-based alliance that advocated for the creation of Sand to Snow National Monument. Photo by Meg Foley



Right: Jan. 20. The Sands RV Hiking Group brings help for BMCP's boardwalk trails. Photo by Leslie Burkhardt

***The Friends of Big Morongo Canyon extend their gratitude to our many volunteers and community partners for all that you do at BMCP. ¡Muchas gracias!***



Left and Right: On Feb. 3, the Mojave Desert Land Trust brought a group of stalwart youths from the Council of Mexican Federations (COFEM) and Yucca Valley High School to help with brush clearing, a never ending task at the preserve. Photos by Jacqueline Guevara



## Executive Director's Report (cont. from p.2)

led by partner Mojave Desert Land Trust, assisted with a weed abatement project for 2 hours after their hike! Sands RV Club spent several days helping to repair the boardwalk and tackled other jobs requiring a specialized skill set.

The designation did not come with any funding for the operation of the BMCP. BLM and USFS offices are understaffed with increasing workloads. Groups like us— the Friends of Big Morongo Canyon Preserve— must increase our support of the preserve by providing funding to bring more students tours of the preserve, maintaining trails, developing and publishing interpretive materials, fostering an appreciation of the BMCP's flora and fauna by leading walks and increasing a presence on the preserve. The Friends of Big Morongo Canyon Preserve provides trail maps, educational brochures such as "Native American Uses of Plants", track maps and



Speakers at the California Desert Monuments 2nd Anniversary Celebration at Cactus Mart. From left to right: Mark Lundquist, Field Representative for San Bernardino County 3rd District Supervisor James Ramos; Jihadda Govan, Sand to Snow National Monument Manager; Robin Kobaly, Executive Director, Summertime Institute; Meg Foley, Executive Director, Friends of BMCP; Diana Marlo, Executive Director, Joshua Tree Gateway Communities; Kelly Crawford, Joshua Tree Excursions; Jacqueline Guevara, Director of Public Engagement, Mojave Desert Land Trust.

information about fire ecology.

We need to continue expanding our support of the BMCP to protect the preserve and serve visitors. It is easy to support the BMCP with time, talent and/or funds. Watch in coming months for

a new website and expanded volunteer opportunities. The renewed website will allow mobile device users to easily read BMCP on phones or tablets. We will soon add a credit card payment option to the website that will allow members to easily renew memberships, make donations or purchase shirts, sweatshirts, hats, and books. If you can help by making a tax-deductible donation to help underwrite education materials – any amount is appreciated!

Volunteer Coordinator, Leslie Burkhardt can match any volunteer interests to needed tasks. We need help greeting visitors, removing invasive weeds, raking leaves from near structures and the parking lot and with office tasks. If you have a few hours to spend at the BMCP, consider volunteering – it is a wonderful way to meet new friends and share your love of the preserve!

# BIG MORONGO CANYON PRESERVE

## History Trails, Part One: *The Serrano* by Larry Rosen

During my ten years of walking the trails of The Big Morongo Canyon Preserve, I have enjoyed the marvelous birds, mammals, reptiles, insects, geology, and the beautiful seasonal changes that make the preserve an exceptional place to wander through. My interest in the BMCP led me to research the history of the Big Morongo Canyon Preserve .

Our story may have started some 2500 years ago with The Serrano People. Historically the Serranos lived in the San Bernardino Mountains and San Bernardino Valley. They later extended into the San Gabriel Mountains, east into the Mojave Desert, west into the Sierra Pelona Mountains, and into the southern Tehachapis. The Cahuilla People also used the Morongo Valley area, traded with the Serranos, and set up temporary encampments just outside of the BMCP boundaries. In this article, I will mainly discuss the Serrano Indians who were believed to have permanent encampments within the preserve's boundaries.

A small clan of Serrano Indians, called the Maringa, found their way to the Morongo Valley. Water was plentiful all year, food was abundant and materials for survival surrounded them. Nearly every plant in Big Morongo Canyon is documented to have had at least one use for food, medicine, tools, building material, or clothing. Rather than moving constantly to new places, they found what seemed to be a permanent home. They settled in the meadow making their rain-proof circular shaped homes, called *kiich*, from the tule growing in the lower stretches of Big Morongo Creek. They



A Tejon Serrano. c. 1924.  
Photo by Edward S. Curtis, courtesy Library Of Congress

also constructed a ceremonial house, a sweat-house, and grainerys. The Serrano clan lived in this valley until the mid 1800's.

Amid the groves of Fremont cottonwoods and red willows, early Serrano women collected inner bark from these trees to make clothing, and used the willow fibers for diaper material. They would also pound the bark from honey mesquite to fashion their skirts. They constructed other clothes from woven rabbit skins and buckskins. They made sandals from the fiber of the century plant. Using a wealth of local materials, they fabricated garments for wear throughout the year.

Food was abundant in the preserve and in the surrounding mountains. The men would hunt deer, bighorn sheep, and small game, while the women gathered yucca roots, mesquite beans, various flowers and cactus fruit close to the village site. In the summer, the clan would make trips to the mountains. There the women would gather acorns and piñon pine nuts. The men hunted deer, antelope, sheep, and small game using bows and ar-

rows, traps, and curved throwing sticks. Birds were also hunted, especially quail, and occasionally fish were caught.

Back home, the women used mortars and metates to grind mesquite beans, acorns, piñon nuts, and even deer bones. The ground deer bones were mixed with food for additional flavor and nutrition. The honey mesquite bean was the standard vegetable food, and was highly valued. In the spring and summer, green mesquite beans were picked and cooked. Later in the fall dry beans were gathered and ground to a flour to make a pancake-like food.

The leader of each village was called *kika* and was determined by heredity. He had an assistant in charge of ceremonies called *paha*, the *tcaka*, or singer, knew the myths of creation and clan songs. The *huremite* was the healing shaman. The shaman's healing power came through dreams or visions.

The Serranos were prolific makers of terracotta pottery, basketry, seed beaters, mats, bags, and ropes. They also made digging sticks for plant collection. Music was made from whistles of bone and turtle shells were fashioned into rattles.

The Serrano People lived peacefully in the valley until white settlers entered the area in the mid-19th Century. In 1846 smallpox destroyed a large portion of the Serrano population in the valley. Survivors were forced to relocate to Banning, with the Cahuilla People, to what is now the Morongo Reservation. This exodus opened the door for the next residents of Big Morongo Canyon, the Pioneers.

### References

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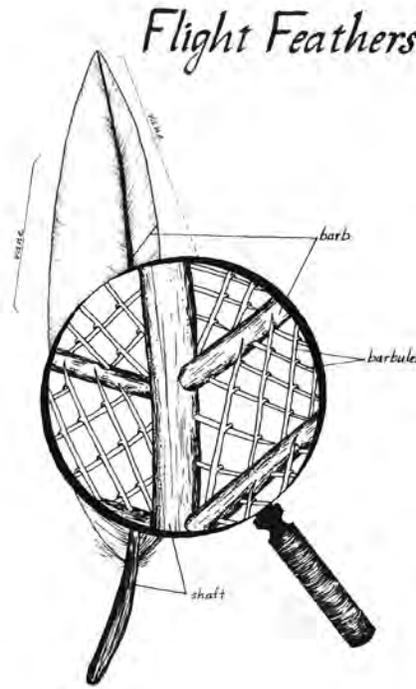
A house of this type may have been constructed by the Serranos  
Courtesy of The Southwest Museum, Los Angeles, CA.

# BIG MORONGO CANYON PRESERVE

## Bird Coloration— What's in a Feather? (cont. from p.1)

of feathers using a combination of structure and pigments. Because of the arrangement of the molecules in this nanostructure, the color stays constant no matter at what angle it is viewed. Barbules create iridescent colors just through the cellular arrangement within the barbules. Different patterns of distribution and the number of layers of keratin in the cortex of the barbule determine the intensity of color. No pigments are needed. Hummingbirds have the greatest range of structural color.

Melanins and carotenoids are the two main families of pigments. Pigments that are deposited in the barbs may be made within in the bird's body from available compounds or eaten in specific food. The melanin family of pigments create grey to black, browns ambers and rust. Melanin producing cells are turned off and turned on during feather growth. This produces bars, spots, caps, bibs and other patterns. Carotenoids occurring in food are used at the feather develop-



For much more information, see *Bird Coloration* by Geoffrey E. Hill, National Geographic Society, c.2010

ment site. Disruption of the transport, absorption or deposition of the carotenoid color substance results in color variations like the ones we see among the House Finch's red plumage. There are over a dozen types of carotenoids. Yellow is the most common of the carotenoid colors. Red is widespread. Shades are determined by the mix of red or yellow in their pure forms. Intensity of the color is determined by how densely the color is packed into the cells in the barbs.

The next time there is a lull in birds to watch, contemplate the complex creation of a feather. The California scrub-jay that just left— his blue is completely structural. Here comes a lesser goldfinch. Its olive back is a combination of combined carotenoid pigments and the specific microstructure of the barbs in its feathers. Although, we don't need to know anything about the scientific aspect of feather structure to appreciate the constant beauty of color and pattern expressed in feathers.



FRIENDS OF BIG MORONGO CANYON PRESERVE

PLEASE RETURN YOUR TAX-DEDUCTIBLE DONATION TO:

**FRIENDS OF BMCP**  
**P.O. Box 780**  
**MORONGO VALLEY, CA 92256**

Yes, I Want to Help!

NAME(S) \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

COUNTRY \_\_\_\_\_ ZIP \_\_\_\_\_

EMAIL \_\_\_\_\_

**ENCLOSED MEMBERSHIP DUES:**

\$ 25.00      STUDENT ANNUAL MEMBERSHIP

\$ 35.00      INDIVIDUAL/FAMILY ANNUAL MEMBERSHIP

\$ 100.00      INDIVIDUAL/FAMILY SUPPORTER MEMBERSHIP

\$ 750.00      INDIVIDUAL/FAMILY LIFETIME MEMBERSHIP

**ADDITIONAL CONTRIBUTIONS:**

\$ 10.00                       \$ 50.00

\$ 20.00                       OTHER \_\_\_\_\_

**NEWSLETTER** (WINTER, SPRING/ SUMMER, FALL ISSUES)

EMAIL     MAIL     NEITHER

**BECOME A MEMBER OF**

**FRIENDS OF BIG MORONGO**

**CANYON PRESERVE**

Friends of Big Morongo Canyon Preserve is a nonprofit 501(c)(3) association organized for the support of programs at Big Morongo Canyon Preserve.

We are dedicated to the exploration, preservation, and stewardship of the preserve by protecting and managing its resources, and by providing educational programs, access for wildlife viewing, and recreational opportunities for the enjoyment of its visitors.

Donations to the Friends are fully tax deductible in accordance with the IRS and State laws. As a special thank you, new Friends receive a BMCP embroidered patch. Lifetime members also receive a canvas tote bag in addition to two BMCP color patches.

# BIG MORONGO CANYON PRESERVE



## NEWSLETTER

*is published by*

Friends of BMCP

P.O. Box 780

Morongo Valley, CA 92256

*GO GREEN...to choose the digital option for receiving your newsletter, call the Preserve.*



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## CALENDAR

AT BMCP

MARCH – JULY

**Gate open 7:30 a.m. to Sunset**

**365 days a year**

### WEDNESDAY BIRD WALKS

Bird walks are held each Wednesday throughout the year excluding Thanksgiving Eve, Christmas Eve or Day, and New Year's Eve or Day. From October through March, walks begin at 8 a.m. From April through September walks start at 7 a.m. Bring your binoculars and spend the morning strolling the trails with knowledgeable local bird walk leaders. Meet at BMCP parking lot. Beginning birders welcome.

### THIRD SATURDAY BIRD WALKS

Bird walks held on the third Saturday of each month only from October through May, excluding Christmas Eve or Day, and New Year's Eve or Day. From October through March, walks begin at 8:00 a.m. In April and May, walks start at 7:00 a.m. No Saturday bird walks are held from June through September. Same format as Wednesday bird walks.

### UPCOMING EVENTS

April 17, Volunteer Appreciation Luncheon, at the Education Center, 10:00 a.m.–1:00 p.m.

April 21, Yucca Valley Earth Day, Hi-Desert Nature Museum, 9 a.m.–2:00 p.m.

May 12, International Migratory Bird Day Open House, at the Education Center, 10:00 a.m.–Noon.

Monthly, 4th Saturdays, Volunteer Work Projects– March 24, April 28, May 26, and June 23. See p. 2 for details.

*Check [www.bigmorongo.org](http://www.bigmorongo.org) for information and updates on future events.*