



Diablo Diggins

"We Dig Rocks"
Since 1950

Monthly Newsletter of the Contra Costa Mineral & Gem Society

March 2024
VOL. 72 NO 4

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DONNER CREEK OUTING
Clayton, Ca
See story within

GENERAL MEETING - GEM
We will have a discussion presentation by our outings chair about the geology of Mt. Diablo and how relates to the Donner Creek Outing. We will also have a RAFFLE to support our June club picnic.

CCMGS MISSION STATEMENT: Our purpose is to promote popular interest and education in the earth sciences, including geology, mineralogy, paleontology, the lapidary arts, and related subjects; to sponsor and provide means of coordinating the work and efforts of persons and groups with similar interests; and by and through such means to strive toward greater community and international good will and fellowship.

We also support promoting and ensuring the right of amateur hobby collecting, recreational prospecting and mining, and the use of public and private lands for educational and recreational purposes related to the earth sciences. We fulfill our mission by holding monthly meetings and special programs. Members attend and participate in local and statewide events and hold a yearly public show.

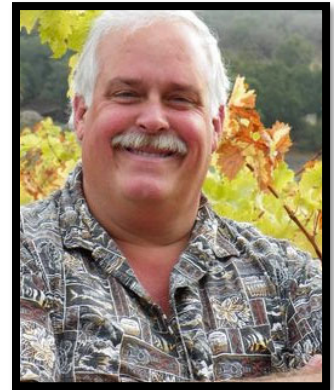
NEXT GENERAL MEETING: April 8, 6:30pm, Endeavor Hall



PRESIDENTS MESSAGE

At our last General meeting we all got a reminder that 'The Demon Murphy' often has the last laugh. But we conducted our meeting in good graces and fellowship in the dark parking lot and cold pizza. Even though we had a signed and paid permit for the space, the City of Clayton booked the hall to another group without notifying us. Cheryl contacted the city to straighten things out.

Our outing to Donner Creek was an outstanding success. We showed our civic pride by picking up pounds of litter and scored a few local rock treasures along the way. Remember 'Pack it in, Pack it out'.



Michael Hopkins

General Educational Meetings [GEM} are not just entertainment. These meetings are to share knowledge and experiences with your fellow members. Unfortunately, the speaker bureaus for clubs have dwindled since COVID. We have very few people that are willing to step up to speak in front of our group. We will from time to time ask our talented members to speak. If you take a rock-hounding trip, take a class, find a new rock shop, or learn a new skill please share with the group your experience. Show off your finds. If you don't want to speak talk to Cheryl Morgan.



I want to thank CCMGS members Donna, Barbara, Arron, Rob, Cheryl, Neomi, and Janelle for taking the time to create our annual case at the Clayton Community Library. The display case showed off many of the 'facets' of our club and hobby.



Donner Creek Outing—Clayton, Ca.

The CCMGS Donner Creek outing was an outstanding success!

Club members braved the elements and avoided Poison Oak collected many pounds of trash and debris and were rewarded with some lovely rocks to take home. The rain stopped on queue as Rudy Trautner singed us in and we organized our gear. Local artist, and trail hiking and biking enthusiast, Rob Savre, acted as the outing guide for this adventure. He has combed the local creeks for treasures since coming to this hobby a year ago and has created many cabochons to show off his creativity using his finds.

We had a short walk from the parking lot to find easy access to the creek. We found many species of rocks. The yellow and oranges of jasper, along with quartz in serpentine host rock were plentiful. Some rocks had beautiful blues of exotic blue schist. Our finds reflect the high pressure, low-temperature metamorphism found in subduction environments such as the Diablo Range, and rarely any other place. We found occasional huge boulders that we had to stop and admire, but alas we left the mules at home this time.

As is our club's custom on outings, we picked up a great deal of trash in the short time we spent in the creek. A passing couple must have mistaken our rain ponchos for hazmat suits because they asked if we were looking for bodies. When they heard that we were picking up trash they were very appreciative, **and relieved**.

The three hours went by quickly and everyone became familiar with a creek that few knew was even there. This outing has already proven to have whetted their appetite for exploring local streams for their bounty.

Pictures continued on next page

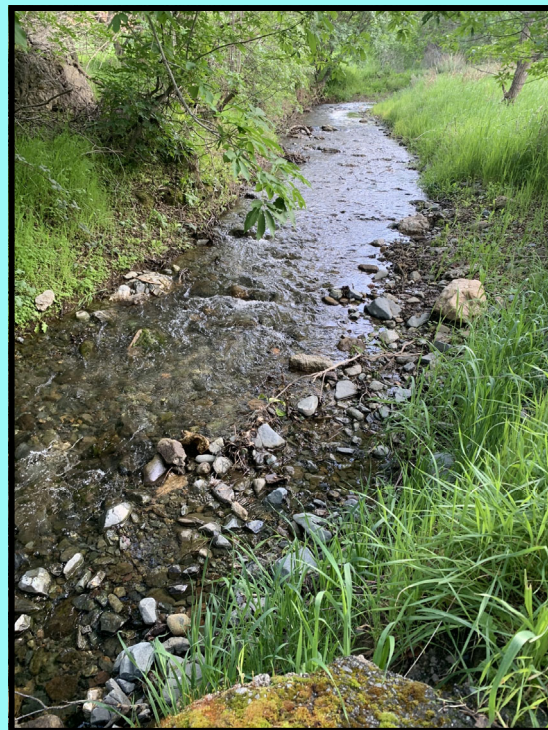
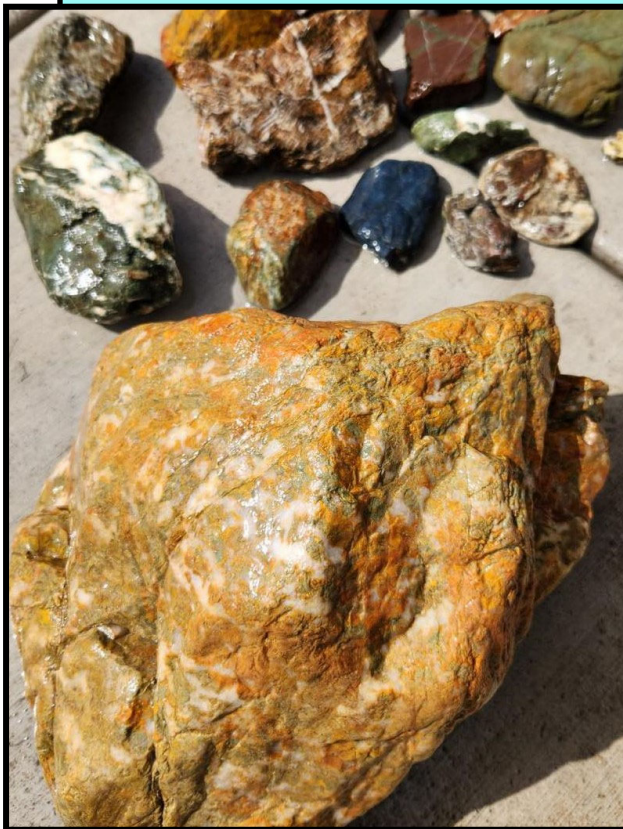


Some of the trash removed from the creek and an interesting jasper find.



Donner Creek Outing—Clayton, Ca.

Pictures



Davis Creek Outing

Our outing for Davis Creek Obsidian Mine and other points is set for August, More information to come. For questions contact Rudy Trautner, Field Trips rudytrautner@gmail.com

What is the difference between chert and flint?

SY DONNÉ · MARCH 28, 2016

The difference between chert and flint ...

One of the most common questions asked by artifact collectors is: "What is the difference between flint and chert"? This article attempts to answer that question from a geological and chemical perspective.

Minerals

The Silica Group Minerals are the natural crystalline materials that form the Earth and make up most of its rocks. The most important group of minerals involved in the formation of flints/cherts is the Silica Group. This large group includes all minerals with the primary chemical formula SiO_2 (silicon dioxide) and is most abundantly represented in nature by pure quartz and its many cryptocrystalline forms.

Cryptocrystalline Quartz

Cryptocrystalline quartz is simply quartz whose crystals are so small that they can only be seen with the aid of a high-power microscope. It is formed geologically from silica that has dissolved from silicate materials. Over geological time, this amorphous silica gel dehydrates to form microscopic crystals and eventually becomes what we know physically as rock. Cryptocrystalline quartz occurs in many varieties. These varieties have been named based on their color, opacity, banding and other

observable physical features. Technically speaking, the two varieties that account for the vast majority of "flint" artifact materials are chalcedony and chert.

Other varieties encountered in the artifact world are agate, jasper and petrified wood. Interestingly, petrified wood is usually wood that has been replaced by agate. This same process also occurs with coral, hence the term "Agatized coral".

Chalcedony Chert and Flint

Chalcedony is a variety of cryptocrystalline quartz with extremely small crystals and a fibrous texture along with a specific gravity (SG is the density of the object divided by the density of water at the same temperature the object was weighed) nearly identical to that of pure quartz. Due to its very high quartz content and super fine particle matrix, chalcedony has a very waxy luster.



Chert Nodule Coated with Chalk
White Cliffs of Dover Kent England
From editors collection

What is the difference between chert and flint? Cont.

Chert is composed of larger crystal particles and has a specific gravity similar that of pure quartz. Due to impurities and larger particle sizes, chert is somewhat less "quartz-like" than chalcedony. Chert is duller and more opaque than chalcedony and its luster ranges from non-existent to very waxy, depending on the individual rock formation.

So what is flint? By mineralogical definition, flint is simply black chert. It appears that the term "flint" was originally applied to the high quality black cherts found in England. Over the years names have evolved for local chert formations/deposits that may include the word "flint" and technically speaking these would be incorrect more often than not. The reality of the flint verses chert debate is that in most cases it is something like "splitting hairs", there really is very little difference, chemically speaking. Artifact collectors tend to call materials that have a more waxy luster "flints" and those which have less luster to no luster "cherts".

The difference between them lies in their purity relative to pure quartz and their matrix particle size. The smaller the particle size and the purer the material, the more likely we collectors would be to call the material flint. To a purist, we would be wrong. A generalist would say "close enough".

Note: Some examples of Flint Ridge Flint are known to be 98.93 % pure silicon dioxide.

I hope you enjoyed this little lecture and hope it helped a few of you.

[Reprinted from **Files** section, 'Rockhounds' Facebook]



A fine fellow looking at an example of a folded chert formation on Mt Diablo State Park

From the desk of Rob Savre — Show Chair

Many of the local mineral and gem clubs have had their yearly gem shows and I was able to help set up the Antioch Lapidary Club show in February and visit the Castro Valley Gem and Mineral Society show in March. I am reminded that it takes lots of helping hands to hold a successful show. Luckily we have time to prepare for our Gem & Mineral Show November 2nd and 3rd 2024 at Centre Concord.

We could still use some help sewing bags for the youth activities. We need just over 300 more bags to get to our goal of 500 gift bags. Once they are completed will be stuffing them with beautiful polished stones Donna Albrecht picked up for us in Quartzite, AZ on her recent visit. Email or call me if you can assist with the sewing project and I will give you the finished size for the bags.

Looking ahead, we need to get the word out for the show and one way you can help is to attend the club meeting April 8th. I will have postcards advertising the show to hand out and please take some with you. Give them to other groups you are part of or spread the word with your neighbors.

We all look forward to having a successful show.

Rob Savre
CCMGS 2024 Show Chair
925-323-4289
Robertsavrejr@gmail.com

MARCH GENERAL MEETING—GEM

CCMGS GEMM March 11, 2024

Endeavor Hall, Clayton

Thank you to those who showed up for the meeting tonight only to find out the meeting was canceled. Location was overbooked and CCMGS was not notified of the rescheduling.

The impromptu tailgate in the parking lot lasted until after dark. Good company and great conversations with 18 members and 3 guests. New members received their badges and a few free rocks.

Submitted for the record by Barbara Roderick, Secretary CCMGS 2024

Fun stuff from Mini Miners Monthly

Editors note—

Mini Minors Monthly is geared for younger rock hounds but I look at it for the pictures. It is free and has many great products to purchase.

Blue Minerals

Minerals are found in every color of the rainbow, plus some! It is amazing how many minerals are a shade of blue! Can you find the blue minerals listed below in this word search puzzle?

F	L	U	O	R	I	T	E	E	T	I	E	L	O	B
S	L	T	Y	E	E	E	N	I	T	S	E	L	E	C
M	A	U	P	T	U	M	I	N	E	R	A	T	B	H
I	N	R	O	I	C	T	O	P	A	Z	I	A	E	A
T	H	Q	W	R	L	P	O	I	U	R	R	N	N	L
H	Y	U	F	A	A	V	B	N	U	Y	L	Z	I	C
S	D	O	L	N	S	P	Y	Z	T	K	L	A	T	A
O	R	I	D	I	E	Q	A	E	F	G	H	N	O	N
N	I	S	N	L	M	U	Y	T	C	D	E	I	I	T
I	T	E	O	X	C	A	L	C	I	T	E	T	T	H
T	E	R	M	P	L	R	A	S	D	T	K	E	E	I
E	K	Y	A	N	I	T	E	J	K	L	E	R	T	T
H	A	L	I	T	E	Z	S	A	P	P	H	I	R	E
H	N	A	D	A	M	I	T	E	T	I	O	N	I	K
M	I	N	E	R	E	N	I	L	A	M	R	U	O	T

Azurite; Adamite; Anhydrite; Baryte; Benitoite; Boleite; Calcite; Celestine; Chalcantite; Euclase; Diamond; Fluorite; Fluorapatite; Halite; Kinoite; Kyanite; Linarite; Quartz; Sapphire; Smithsonite; Topaz; Tanzanite; Tourmaline; Turquoise

Go online and find a picture of each of these blue minerals. Draw a picture of each and color it. Notice how many different shades of blue are found in the world of minerals!

WHAT DOES THAT MEAN? - DRUZE

A mineral surface covered with small projecting crystals; specif. the crust or coating of crystals lining a druse in a rock, such as sparry calcite filling pore spaces in a limestone. Etymol: German. Adj: drusy. MINDAT.ORG



A 'Druzy pocket'

Great information locations Print and keep this page for later use

CCMGS memberships/affiliations

American Federation of Mineralogical Societies, Inc. (AFMS)	www.amfed.org
California Federation of Mineralogical Societies, Inc. (CFMS)	www.cfmsinc.org
American Lands Access Association, Inc. (ALAA)	www.amlands.org

Selected Museums

American Museum of Natural History, New York, NY
The Worldwide Museum of Natural History (online)

Selected Magazines

Extra Lapis	
Lapidary Journal	
The Mineralogical Record	
Rock and Gem magazine	
Mineralogical Record	www.mineralogicalrecord.com

General Information

Mindat.org Mineral & Locality database.	www.mindat.org
Mindat Free Mineralogy Book Downloads	www.mindat.org/mindat_books.php
Virtual Museum of the History of Mineralogy	www.mineralogy.eu
Friends of Mineralogy	www.friendsofmineralogy.org
The Arkenstone	www.irocks.com/rock-and-mineral-collecting-for-beginners
The-Vug.com	http://the-vug.com/educate-and-inform/fakes-and-forgeries/
Smithsonian	https://www.si.edu/spotlight/geogallery https://geogallery.si.edu/gems-minerals-meteorites-rocks
Treasure Mountain Mining - 12 Tips for Displaying Your Collection	www.treasuremountainmining.com/index.php?route=pavblog/blog&id=40
Mineral Expert - Best Tools for Mineral Collecting	https://mineralexpert.org/article/mineral-collecting-tools
Friends of Minerals Forum	https://www.mineral-forum.com/message-board/
Nature's Rainbows - Fluorescent Mineral Collecting Supersite	www.naturesrainbows.com
Atlas of Rocks and Minerals	eggeo.unc.edu/Petunia/IgMetAtlas/mainmenu.html
Common Minerals & Their Uses	mineralseducationcoalition.org
The Mineral and Gemstone Kingdom	www.minerals.net
Official State Fossils	www.netstate.com/states/tables/state_fossils.htm
Ultimate Beginners Guide to Rock Tumbling	http://www.smarterhobby.com/rock-tumbling/
British and Exotic Mineralogy	https://www.c82.net/mineralogy/
Beyond 4Cs 23 Online resources and references related to gemology	https://beyond4cs.com/free-gemology-courses-and-resources/
Geology.com	https://geology.com/minerals/legal-aspects-of-rock-collecting/
Mt Diablo Interpretive Association	www.mdia.org/guide-to-mount-diablo-geology

If you have any other sites you wish to share with your fellow members please let the editor know.

Local Shows and Events

April 13-14, 2024 — Mariposa, CA

Mariposa Gem and Mineral Club
Mariposa County Fairgrounds,
5007 Fairgrounds Rd.
Mariposa, CA
Hours: Sat 10–5, Sun 10–4
Website: mariposagemclub.org

April 13-14, 2024 — Placerville, CA

El Dorado Co. Mineral and Gem Society
El Dorado County Fairgrounds
100 Placerville Dr.
Placerville, CA
Hours: Sat 10–5, Sun 10–4 PM
Website: edcmgs.org

April 27-28, 2024 — Santa Cruz, CA

Santa Cruz Mineral & Gem Society
Santa Cruz Civic Center
307 Church Street Santa Cruz, CA
Hours: Sat 10-5, Sun 10-4
Website: scrockngem.org

April 27-28, 2024 – Paradise, CA

Paradise Gem & Mineral Club
475 Pearson Road, Paradise, CA 95967
NorCal UNEARTHED – Paradise Gem and Mineral Club's 68th Annual Gem and Mineral Show. Come and join us for a weekend full of prizes, auctions, raffles, a kids zone, food vendors, demos, geode cracking and shopping!
This year is going to be our BIGGEST show yet!! You won't want to miss this...please invite your rock loving friends and family. .
We can't wait to see you.

May 4, 2024 — Antioch, CA

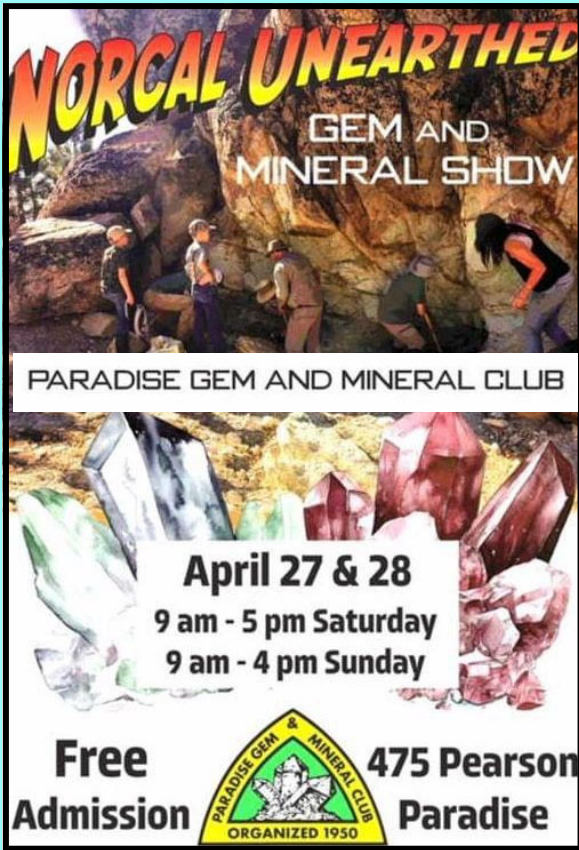
Antioch Lapidary Club
Artisan Jewelry and Rock Sale
425 Fulton Shipyard Rd., Antioch, CA
Hours: Sat 10-4 (Outdoor event)
Contact: (925) 457-1859, (510) 693-9075,
roccosgee1@yahoo.com,
kellyplumb900@yahoo.com
Website: antiochlapidaryclub.com

May 11-12, 2024 – Jackson, CA

Almador County Gem & Mineral Society
Kennedy Mine, Highway 49/88, Jackson, CA 95642
Hours: 10 AM – 4 PM Both Days
GEM AND CRAFTS FAIRE. Available will be rough/slabs of rock, lapidary items, arts & crafts vendors, handcrafted jewelry, beads and findings galore. Food and drink will be sold. Mine walking tours available. No dogs please.
Contact: (209) 304-9622

May 24-26—AFMS National & California State Show & Convention


Ventura County Fairgrounds
10 W Harbor Blvd Ventura County Fairgrounds Ventura, CA
Web: <http://www.2024cfms-afms.com/>



NORCAL UNEARTHED
GEM AND MINERAL SHOW

PARADISE GEM AND MINERAL CLUB

April 27 & 28
9 am - 5 pm Saturday
9 am - 4 pm Sunday

Free Admission  **475 Pearson Paradise**

SUPPORT LOCAL CLUB SHOWS



Antioch Lapidary Club's Annual Artisan Jewelry & Rock Sale

Saturday, May 4, 2024 10:00 am – 4:00 pm

NICE MOTHER'S DAY GIFTS!

FREE ADMISSION/Fun for the whole family

Everyone is invited to the Antioch Lapidary Club's annual Artisan Jewelry & Rock Sale/Swap. There will be booths with jewelry, slabs, rough and other rock-related items to purchase.

Join us for a fun-filled "rockhounding" day – visit our Rock and Mineral Museum; games for children; field trip to our rock pile behind clubhouse – rock by the pound – cheap.

BBQ lunch served at 12:00 – only \$5.00 with all the fixings!

Where: Antioch Lapidary Club's clubhouse
425 Fulton Shipyard Road, Antioch, CA

If you would like to sell/trade/swap items, bring a table or two and your jewelry, rocks, fossils, gems, minerals, extra equipment, etc. **Please call Gary Casillas at 925-458-4076 to reserve a spot.**

MARIPOSA Gem & Mineral Show

- Gems •Minerals •Jewelry •Demos
- Food •Raffle •Silent Auction



Photos Courtesy of Jeffrey Scovil

April 13 & 14 2024
Saturday 10am to 5pm Sunday 10am to 4pm
•\$3 Adults •Kids under 14 free

Mariposa Fairgrounds Highway 49
2 miles South of Mariposa
•FREE Parking



mariposagemclub.org

71st ANNUAL SHOW
CRYSTALS, GEMS, JEWELRY, ROCKS, MINERALS, FOSSILS
Santa Cruz Civic – April 27 & 28, 2024
Sat 10am-5pm; Sun 10am-4pm



\$7 Admission; \$1 off with ad
Santa Cruz Mineral and Gem Society
<https://www.scrockngem.org>



Contra Costa Mineral & Gem Society Show November 2-3



We're on the web!
UNDER CONSTRUCTION

We're on Facebook!
[www.facebook.com/
groups/CCMGS/](http://www.facebook.com/groups/CCMGS/)

ccmgs.2023@gmail.com

Diablo Diggins

Newsletter of the
Contra Costa Mineral
and Gem Society

Editor:
Michael Hopkins

Send reports/articles/
pictures by the 25th of
the month to:

mike@diablorocks.com

2024 Officers:

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mike@diablorocks.com

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Cheryl Morgan
ccmgs.2023@gmail.com

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Show Chair
Rob Savre

Show Co-chair
Michael Hopkins

Education Cochairs
Cheryl Morgan
Donna Albrecht
ccmgs.2023@gmail.com

UPCOMING MEETINGS

Board of Directors

Saturday April 6, 2024, 10am
Clayton Community Library
6125 Clayton Rd, Clayton, CA

General Meeting

Monday, April 8, doors open 6:30pm, program 7:00pm
Endeavor Hall
6008 Center Street, Clayton, CA

The Contra Costa Mineral and Gem Society was formed in 1950 to encourage the study of mineralogy, lapidary arts, and field collections.

Visitors are welcome! Bring a friend!

Calendar of the Contra Costa Mineral & Gem Society

APRIL 2024							1-31-2024
SUN	MON	TUE	WED	THU	FRI	SAT	
	1	2	3	4	5	6 BOD- Library	
7	8 CLUB- Endeavor Raffle short program, Officer comm 25	9	10	11	12	13 Placerville Show Mariposa Show	
14 Sonoma Coast outing Placerville Show Mariposa Show	15	16	17	18	19	20	
21	22	23	24 <i>Diablo Dan</i>	25 Newsletter reports due	26	27 Santa Cruz Show	
28 Santa Cruz Show	29	30	CFMS Show case deadline 1st	Prep IRS 990N & Ca 199N Ca State RRF-1 for Prez approval	due 5-12		

Holidays and Observances: 1: Easter Monday, 15: Tax Day

Wiki Calendar

MAY 2024							1-31-2024
SUN	MON	TUE	WED	THU	FRI	SAT	
			1 CFMS Show case deadline	2	3	4 BOD-Location not set Antioch Tailgate	
5	6	7	8	9	10	11 Almador Show Jackson	
12 Almador Show Jackson	13 CLUB- Endeavor	14	15 Entry deadline Ala. Fair	16	17	18	
19	20	21	22 <i>Diablo Dan</i>	23 Set up	24 AFMS & CFMS National Show	25 Newsletter reports due AFMS & CFMS National Show	
26 AFMS & CFMS National Show clean up	27	28	29	30 Ca State 51-100 due 6-30, Need ck Ct-TR-1 IRS 990N Due Ca State 199N Due	31		

Holidays and Observances: 5: Cinco de Mayo, 12: Mother's Day, 27: Memorial Day

Wiki Calendar