



**November, 2016**

**“It’s in our name . . . It’s what do we do . . . We collect rocks!!!!”**

The **CENTRAL OREGON ROCK COLLECTORS** (CORG) is an informal group dedicated to sharing the rock hound hobby. We meet for field trips, collecting rocks, monthly programs, and related activities. You do not have to be a member to attend. However, if you are interested in joining, yearly memberships are only \$20 for individuals, or \$25 for families. A form for joining the CORC is available on our website.

Visit **OUR WEBSITE** at <http://www.corockcollectors.com>

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**PROGRAM COMMITTEE CHAIR:** Sue Liebetrau [liebetrauam@msn.com](mailto:liebetrauam@msn.com)

**NORTHWEST FEDERATION REPRESENTATIVES:** Del and Clara Walker [cdwalker@q.com](mailto:cdwalker@q.com)

**Welcome:** Rockhounding is best when it is shared. We welcome visitors to our meetings, anytime. If anyone has any interesting adventures or unusual materials that they would like to share, we would love to hear about them.

**The Club meets the 3<sup>rd</sup> Wednesday of the month, March through October except the month of the picnic, either July or August, the November meeting is a potluck holiday get-together on a Sunday. No winter meetings.**

**Regular meetings are held at the Redmond Senior Center, 325 NE Dogwood Avenue, Redmond, starting at 7:00 pm until 8:30 or 9:00.**

### **October Meeting:**

A good crowd attended our October meeting and enjoyed an excellent presentation by Dorothy and John Kashuba on The Nature of Meteorites. The presentation included presenting small slices of actual stoney meteorites to the attendees. Very nice.

### **Upcoming Field Trips:**

October is the end of our field trip season and the planning begins for the next year. If you would like to visit a particular site, just have a suggestion, or are willing lead a trip, we would welcome your input. The committee is always open to active members.

Questions: Elizabeth Prindle at [pointingathemoon@bendcable.com](mailto:pointingathemoon@bendcable.com).

### **Upcoming Programs:**

**November 20:** Annual Holiday dinner/potluck at the Powell Butte Community Center, 8404 SW Reif Road, Powell Butte, Sunday, November 20. Arrive as early as 11:00. Dinner served at 12:30 pm. The Community Center is on Reif Road about 1.25 mile south of Highway 126 between Redmond and Prineville. Bring a side dish or dessert; meat and drinks furnished; also a rock-related unwrapped gift. You are welcome to also exhibit and sell your creations. There will be a short business meeting, as we do need to elect both a President and Vice President for the 2017 and 2018 term.

**March 15, 2017:** Set your calendar now for the first meeting of the 2017 season, same time, same place; Redmond Senior Center, 7:00 pm on the 3<sup>rd</sup> Wednesday of the month. Program to be announced.

Contact: Sue Liebetrau, Program Chairperson at [liebetrauam@msn.com](mailto:liebetrauam@msn.com)

### **Updates & Announcements:**

- Sue Liebetrau has been Program Chair for several years now. She is willing to participate on the committee, but will no longer chair it. We need a volunteer.
- Thanks to Laurie Sensibaugh for volunteering to do meeting refreshments next year. We still need a couple of members for hospitality – making sure that visitors are welcomed and given a name tag.
- The NMFS show is May 19 – 21 in Hamilton, Montana. The shows and presentations are good, but Jan and I have enjoyed the field trips just as much. The field trips give us out-of-towners a chance to collect areas we otherwise might never get to. Only 628 miles by freeway through Spokane.

- 2017 dues are needed by the March meeting – pay Marty Betsch, treasurer, and update your contact information as needed please. \$20 single, \$25 family

**Of Interest:**

- Suzie Meeker led several of us skeptics on a trip to Hampton Butte recently. Hampton Butte is not dug out, contrary to my personal opinion after making several nonproductive trips. Suzie had found a good spot to dig. No logs, but we all found some good stuff.



Hampton Butte good stuff

--Jules Wetzel

**The club is always looking for members willing to help. Please offer to step in where-ever you can volunteer.**

**Welcome New Members:**

Darrell Carter, Prineville

Brian and Joyce Cutler, La Pine

Art and Carolyn Hess, Tualatin

Kelly Schukis, Madras

Laurel Speck, Redmond

Be sure to say Hi when you see them.

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## How to Determine the Proper Orientation for Successful Cutting of Lithophysae (Thunder Eggs)

Albert Liebetrau

(with Apologies to R. Paul Colburn, The Geode Kid)

**Disclaimer** I have relied heavily on the work of The Geode Kid for this article. The figures and much of the text are his. Any errors that remain are mine.

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Most nodules and geodes have features on their surfaces that can be identified by sight. The experienced lapidarist uses these surface features to orient the nodule or geode for cutting so as to capture the best features of its interior. A few helpful pointers are given here.

**Many thunder eggs** (lithophysae), for example, have lines known as *flow bands* on their exteriors (see Figure 2). So, unless a deposit has been deformed prior to filling, a cut made *perpendicular to the flow banding and through the long axis* (for the widest face) will yield a cut face showing the sequences of agate, waterline "floors," and stalactite deposition "right side up."

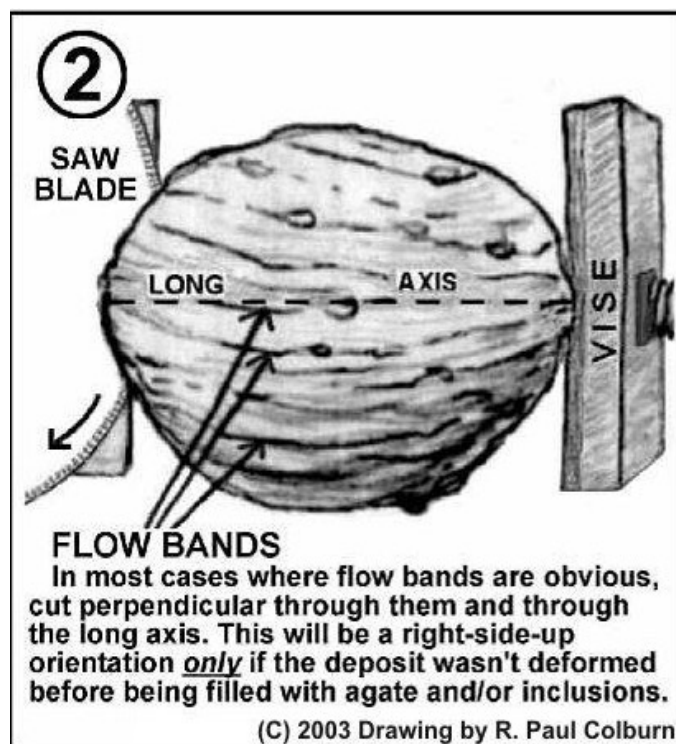
The proper orientation can also be found by thinking of the thunder egg in comparison with a sphere, or globe. If you hold the egg so that the flow bands are horizontal or parallel with the floor, you will be able to identify a top and bottom, which can be thought of as poles.

Looking at the egg from the top, you will be able to identify the long axis (unless the egg is perfectly spherical). The egg can then be oriented in the saw so that it will be cut through the poles along the long axis.

Thunder eggs from the Friend Ranch or from the Buchanan Beds are examples of eggs with flow bands.

If a formation has been tilted by some *diastrophic event* (a deformation of the earth's crust, such as folding and faulting), the subsequent filling of the affected lithophysae will be at odds with both the flow bands and the long axis. This can make orientation more difficult, but not impossible.

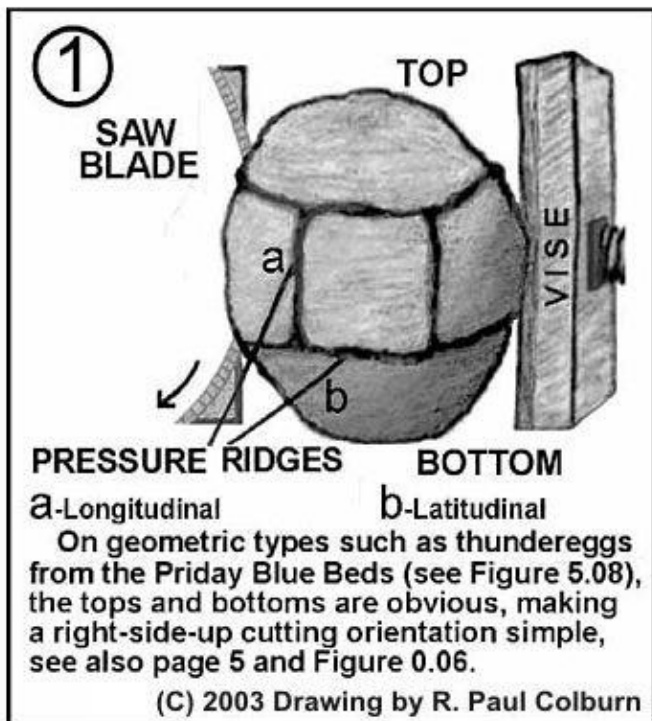
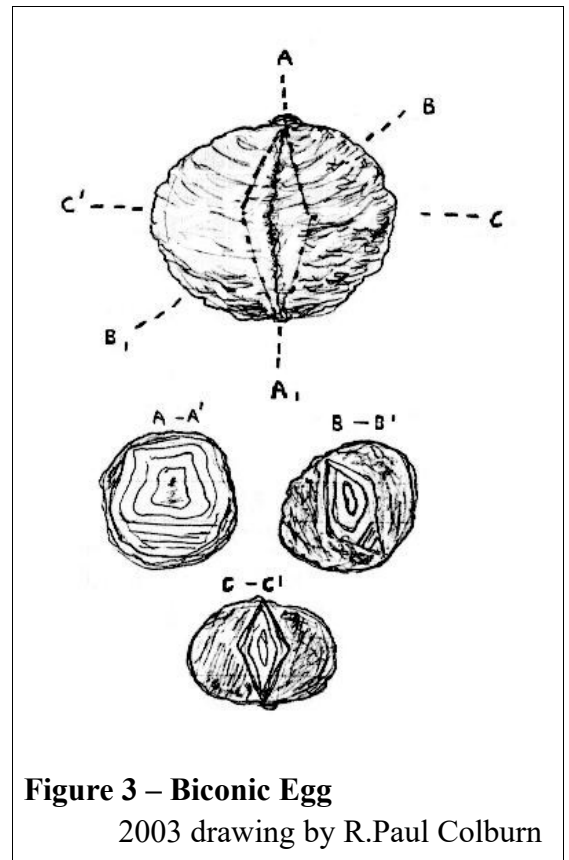
**Biconoid Thunder eggs**—Eggs with a biconic core (literally, two cones) require special attention. Most of these eggs will yield a face with a high degree of matrix if not cut properly. The goal is to



orient the egg for cutting to expose the largest cross-sectional area of its biconic interior, which in Figure 3 looks somewhat like a space ship on edge or a pair of saucers placed together face-to-face. Clearly, we must cut on the “equator” of the interior. Equivalently, we must cut on a vertical plane through the A-A’ axis. Note that the cross-sectional area of the interior decreases as we rotate the egg so that the plane passes from the A-A’ axis through the B-B’ axis to the C-C’ axis.

Fortunately, these eggs have *pressure ridges* that are left behind when a spherulite (spherical cavity) degases and fills with agate (typically) to become a lithophysa, and these pressure ridges are the key to proper orientation. A biconoid thunder egg should be cut *along the pressure ridge* to achieve the largest agate face.

**Pressure Ridges** Pressure ridges are, In fact, a key to orienting any thunder egg in which they are found. Consider Figure 1, which shows the classic Richardson Ranch thunder egg. When ideally formed, these eggs have easy-to-see



pressure ridges that clearly define a top and bottom, and four “sides” or “faces.” Some eggs may have a different number of faces, with five and six perhaps being most common. Thunder eggs from the Buchanan beds, typically have six or more faces.

It is clear from Figure 1 that any cut through the North and South poles will yield a cut face that shows the deposition layers, that is, the sequences of agate, waterline “floors,” and stalactite deposition “right side up.”

As with thunder eggs that have flow bands, you will want to rotate the eggs so as to cut on the longest axis. It is best to cut on one of the longitudinal pressure ridges, even if this means rotating the egg slightly away from the

longest axis. The thunder eggs from most beds at Richardson’s Ranch, as well as those from many other beds, have pressure ridges that make orientation comparatively easy.

**Special Note on Orientation** If you cut many thunder eggs, you will quickly discover that not all have layered interiors. Indeed, the agate in the interiors of thunder eggs from some sites are quite uniform, or at least has a pattern that is uniform. Others will have surface features (flow lines, pressure ridges) that are so indistinct as to make proper orientation difficult or impossible. In these cases, the best strategy is to cut the egg to get the largest cross-sectional area possible. Of course, if you can identify some pressure ridges or flow lines, it is usually good to use them to at least partially orient the egg.

The thunder eggs from the Friend Ranch typically have an interior that is quite uniform, so the best strategy is to cut for maximum cross-sectional area.

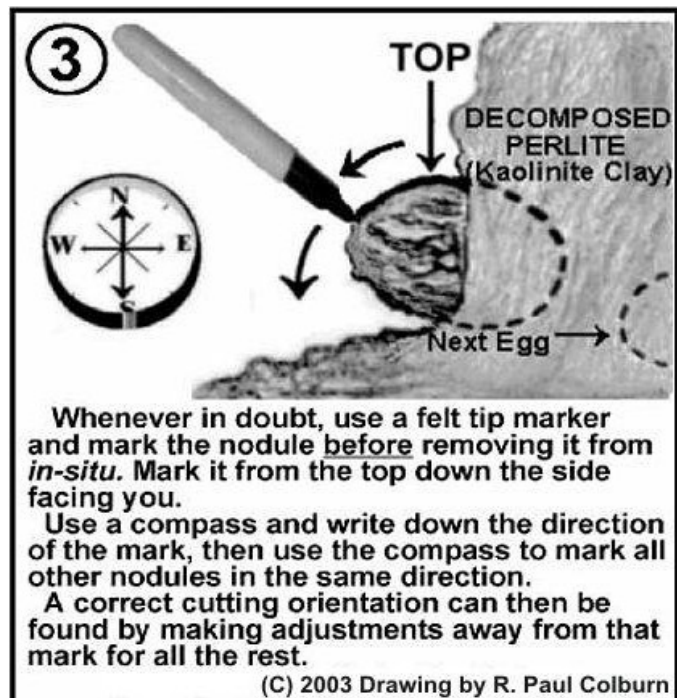
There may also be occasions when you **want** to orient a thunder egg differently than is shown here. Thunder eggs from the 79 claim east of McDermitt are a case in point. The eggs seldom contain layers of agate, so nothing is lost by cutting in some direction other than through the “poles.” On the other hand, these eggs have numerous faces (six is common). The pattern in the faces, which is often quite beautiful, is revealed **only** by cutting along the “equator” of the egg. Thus, experience suggests that thunder eggs from this claim are best cut parallel to the flow lines, rather than perpendicular to them as was suggested earlier.

Thunder eggs from the Buchanan claims also produce very attractive patterns when they are cut on the “equator.” But perhaps the best strategy is to cut some eggs parallel to the flow lines and others perpendicular to them . . . . Who knows what you will find?

**If all else fails . . .** Many collectors speak of “lucky cuts.” There are no such things—cuts are lucky only when the collector lacks knowledge about the structure of lithophysae. With a bit of study, it is possible for the informed collector to make all—or nearly all—cuts “lucky.”

In any case, there is a foolproof method for determining a proper orientation for any eggs dug directly from the material in which they formed (see Figure 4). Obviously, this method doesn’t work for eggs that come from a previously collected pile.

When you “hit” an egg while digging, carefully uncover enough of it to see the top and front. *Without removing it from in situ*, mark the top, and with a broad black felt-tip marker draw a line from the top towards you. Record the direction with a compass and then mark every egg from the A-A’ axis through the B-B’ axis to the C-C’ axis in the same way. After cutting just a few eggs, you will be able to determine an angle relative to that mark that will expose the most interesting features. With care, you will be able to increase the value and beauty of your nodules.



**Additional information** can be found on the website [zianet.com/geodekid](http://zianet.com/geodekid) or in the book *The Formation of Thundereggs*. by Robert Colburn, aka "Paul, the Geode Kid." Information about the book is also found on the website.

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## **October, 2016 Draft Minutes:**

### **Central Oregon Rock Collectors**

**Executive Meeting:** The Vice-President, Al Liebetrau, called the meeting to order at 6:02 p.m. In attendance: Marty Betsch, Karen Cameron, Sue Liebetrau, Suzie Meeker, Elizabeth Prindle, Deb Simon, Clara and Del Walker, and Jules Wetzel.

The Treasurer's report was made by Marty Betsch with approximately \$2188 in the bank. It was announced that the Clackamas Club is holding a show in Canby this coming weekend.

Elizabeth Prindle is willing to continue as Field Trip Chair for the coming year. The committee discussed setting up a particular weekend each month for the field trip. This would allow club members to make plans in advance.

Sue Liebetrau reported that the program tonight will be by John and Dorothy Kashuba on the Nature of Meteorites. The November meeting will be the holiday party and potluck at Powell Butte Community Center on Nov. 20. Club members can bring items to sell, and each member is to bring one unwrapped rock-related item for the gift exchange. Marty will contact members in advance to determine what food items the members plan to bring to the party. The club provides the turkey and paper goods.

The club newsletter will be published periodically during the winter months when there are no regular meetings (from December through February). There are now 24 members on the Facebook page for the club, and there are approximately 100 visits monthly to the club web page. Development of a liability waiver for club field trips has been deferred to next year.

Elections need to be held for President and Vice-President of the club. The election will be held at the November party. The positions are for a length of two years. Sue Liebetrau mentioned she would prefer to remain on the program committee, but she would like to have a new chair of that committee. Club members will be encouraged to participate on committees and consider running for office.

The formation of a new committee, the hospitality committee, was discussed. The members of this committee would be there early to set up, provide refreshments, greet members and guests, and direct everyone to sign in. A volunteer is also needed to take responsibility for the storage of club supplies. Al will update the list of club property.

The committee discussed the number of door prizes to be awarded. The suggestion was made to limit the number of prizes per meeting. The committee decided to postpone donating to Petersen's Rock Garden until more information could be gathered. Marty is in the process of locating contact info for their foundation. The meeting adjourned at 6:50 p.m.

**General Meeting:** Deb Simon called the meeting to order at 7:15 p.m. She introduced herself and welcomed guests and new members.

Approximately 37 people attended the general meeting. The club website is located at [www.corockcollectors.com](http://www.corockcollectors.com) and includes past newsletters, information on upcoming field trips and resources.

**Sharing:** Jules Wetzel shared samples of rock collected on the October club field trip to McDermitt OR/NV.

### **Business:**

Treasurer's Report – approximately \$2188. Dues for the 2017 year can be given to Marty tonight or at the November Holiday party, which is the final gathering of the year. The cost is \$20 for an individual and \$25 for a family membership. New members who join now will have their dues apply to membership for 2017.

Secretary's Report – accepted as posted in the CORC newsletter

Announcements – The Clackamas Club will hold its annual show this coming weekend in Canby, near Portland.

Programs – The November program is the Holiday Party, which will be held on Sunday, Nov. 20, at the Powell Butte Community Center, located at 8404 SW Reif Rd. in Powell Butte. Liquid refreshments, paper goods and turkey are provided by the club. All members attending are asked to bring a side dish or dessert and a rock-related gift, unwrapped. Members may sell items before and after the party, so interested club members should bring money. The doors at the community center will open at 11 a.m. The dinner will be served at 12:30 p.m.

Marty will contact club members about a week in advance of the party to finalize the side dish or dessert that club members will bring.

Regular programs will resume in March, 2017. Sue Liebetrau requested volunteers for the committee, and asked that members consider chairing the committee. New ideas for programs are always welcome.

Elections – The positions of President and Vice-President are open, and the term of service is two years. Anyone interested in either of these positions should contact Deb Simon or Al Liebetrau. The election will be held at the November Holiday Party. Please consider volunteering.

Volunteers are needed on all committees, including the new Hospitality Committee. Members of this committee will help set up the room, provide refreshments which are reimbursed by the club, and welcome members and guests. Laurie Sensibaugh volunteered to coordinate the refreshments.

NW Federation – Club members are automatically members of the Northwest Federation. The monthly newsletter is sent by mail, but members may opt to receive them electronically to save costs. Please let Clara know if that is your preference. The Federation is an association of rock-

related clubs throughout the Northwest. A directory is published annually, and it can be very useful when traveling to help you locate other club members who might be willing to share their favorite rockhounding sites.

Club Newsletter – is posted online on the website. The newsletter is published monthly from March through November, and intermittently during the months the club does not hold regular meetings (December through February). Club members receive the newsletter electronically if they have email and by regular US mail if they do not.

Electronic Media – The club Facebook group has 24 members. Approximately 100 visits are logged each month to the club webpage.

Field Trips – Elizabeth is willing to continue as the Field Trip Chair. She is asking club members to consider leading individual trips so that the responsibility is shared.

Club property needs to find a permanent home. Suggestions are needed on how to manage and store the property.

Door prizes were distributed.

**Presentation:** The program presenter was introduced by Al Liebetrau.

An entertaining and informative presentation on meteorites was given by John Kashuba and Dorothy Norton Kashuba. They discussed where meteorites come from, the different types of meteorites, and the locations on earth where they can be found. The Sunriver Nature Center has a display on meteorites that was developed by the Kashubas. The Kashubas generously distributed a sample of a meteorite to each club member. The members particularly enjoyed the colorful and informative slide display. The wait for the presentation was well worth it!

The meeting was adjourned at 9 p.m.

--Suzie Meeker, Secretary

## **Business Cards:**

[We are more than happy to include members rock-related business cards in this section.]



Canutts Gems is offering a 5% discount to members showing a CORC membership card

**Classified Ads:** If you have a rockhound related object you wish to sell, send the announcement to Jules Wetzel [jjwetzel@bendbroadband.com](mailto:jjwetzel@bendbroadband.com) and we'll post it. If you don't want your address, phone number or email address posted, submit your ad with only the specific contact information you do want published.



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