

President's Message

As we are about to end another season of meetings and break for a summer (hopefully) of travel and shelling, I want to remind you of what we still have planned for the month of June. Foremost is our annual shell auction and potluck. We've been working on getting some really nice shells for our voice auction. Many of this year's lots will be "sets" or groupings of shells. We actually had more shells than we thought and combined many specimens into single lots, which means you may only have to take a single lot to end-up with a tidy handful of shells. One lot has 34 species (and more than a single specimen per specie)! There will also be some hard-to-get California coral and we always have plenty of bargains in our silent auction. Let's not forget the potluck. We will provide chicken and soft drinks, we ask that you bring your favorite dish to share; entries, side-dishes and deserts are always appreciated. The event starts at 1:30 but come a little early to help with setup.

Also, Phil Liff-Grief will be leading a

field trip to some early Pleistocene fossil sites in the Santa Barbara area on Saturday, June 3. Sammy Kram will be coordinating carpooling, but you can arrive on your own, too. A flyer will be available with details. Let us know if you are interested so we can make sure you get the info.



Fossil Pteropod, Santa Barbara Formation
Rincon Hill, Santa Barbara County 8.5 mm

It's not too early to start planning for next October, when we resume meeting again. One thing I always like is for members to bring in shells to show; plan to bring a display of "what-I-collected-this-summer". In fact, we encourage you to bring something to any regular meeting. Another thing: we are interested in hearing about your collecting adventures – if

you put together a presentation, you may be our next guest speaker. And, as always, you are requested to write articles for *Las Conchas*, ideally with pictures.

Finally, I'd like to thank all our members for their support and the Natural History Museum for hosting our meetings.

Aloha a hui hou,

Terry Rutkas

Our cover photo is of a fossil of a Pleistocene pteropod—an unusual pelagic mollusk. This specimen comes from the location of the Club's field trip being held this month, Rincon Hill near Carpenteria. Since this is one of the few Southern California fossil localities still accessible, this issue of Las Conchas and the next will be devoted to a pictorial exploration of the diverse fauna from this site.

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Las Conchas is a publication of the Pacific Conchological Club

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The Pacific Conchological Club was organized in 2003 as a result of the merger between the Pacific Shell Club and the Conchological Club of Southern California. Its mission is to further the interest in shell collecting and malacology and to provide a forum for individuals who love shells and other marine life. The Club meets on the second Sunday of each month from October through June at the Los Angeles County Museum of Natural History (900 Exposition Blvd., Los Angeles).

Rincon Hill Revisited: Part I (Gastropods)

An iconography of molluscan fossils from a middle Pleistocene collecting locality

by Phil Liff-Grieff

In 2002, the Pacific Shell Club held a field trip to the fossil collecting site known as the “Off-Ramp Locality”. This spot, on the southwestern flank of Rincon Hill, provides an excellent opportunity to sample more than a dozen strata from within the Plio-Pleistocene Santa Barbara Formation.

This month, our club returns to the off ramp to collect middle Pleistocene fossils. As a resource for that trip (and for others who collect at this easily-accessed fossil locality), we will devote much of this issue to pictures of many of the fossil mollusks that are to be found along the northbound exit from Highway 101 to Highway 150. Some of the fossils featured in this issue are incredibly abundant, others moderately common and a few extremely rare at this site.

Santa Barbara Formation at the Rincon Hill Site

The freeway off ramp cuts through 16 marine strata from middle Pleistocene section of the Santa Barbara Formation (approximately 400,000 to one million years old). These beds are composed of a variety of rock types, including loosely consolidated sandstones and siltstones, bryozoan marls, a bed of tuff (pictured above). The most eastern bed of the outcrop is blackened by a tar seep.

The faunal assemblages encountered in these upturned beds are predominantly cooler water species, some of which are only found today in deep waters. On the other



2002 Field trip to the Rincon Hill fossil site. The bare stratum in the foreground contains the occasional large specimen of the extinct species *Crepidula princeps* and many small gastropods including *Boreotrophon orpheus praecursor*.

hand, one bed contains dense pockets of our local Bursa and large, fragile specimens of Kellet’s Whelk (*Kelletia kelletii*).

The following pages contain photos and some brief information about a few of the species that are found as fossils at this locality. **Please note that the photographs are not to scale and that careful attention should be paid to the indicated size of each specimen.** A list of the gastropods collected at this site can be found on page 7. (*This list consists of species that the author has collected and iden-*



Some of the more common species at Rincon Hill (from left to right): *Cycloardium ventricosa* (18.3 mm), *Olivella biplicata* (23.5 mm), *Lirobittium quadrifilatum* (8.6 mm), *Epilucina californica* (28 mm), *Nassarius mendicus* (20 mm)

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tified. There are still many pelecypods and micro-gastropods that remain to be identified. The current article will deal with gastropods. Pelecypods and scaphopods will be treated in the next issue of *Las Conchas*.

The More Common Species

As one walks along the base of the outcrop, it is clear that each upturned bed has its own distinct set of species. The first species that one encounters is the bivalve *Cyclocardia ventricosa*. As you continue to explore additional beds, you will find many small gastropods washed out of the matrix, most commonly *Olivella biplicata*, various Cerithiids and large specimens of *Nassarius mendicus cooperi*.

Three other Nassarids are found rather frequently at this locality (pictured, right; the thinner-profiled, less-highly ribbed *Nassarius mendicus*; chunky, cancellate-sculptured *Nassarius perpinguis* and the deep water *Nassarius insculptus*. The latter is characterized by a relatively smooth surface and an inflated, thickened outer lip.



From left to right: *Nassarius mendicus* (13.06 mm), *N. perpinguis* (20.3 mm), and *N. insculptus* (21.48 mm)



From left to right: *Alia carinata* (9.8 mm), *Alia tuberosa* (8.3 mm), *Astyris gausapata* (11.3 mm) and *Amphissa versicolor* (12.5 mm)

Also common among the small gastropods washed out of the matrix are a number of local Columbellids. The most common is *Alia carinata*– easily identified by the sharp carina at the shoulder of the body whorl. *Alia tuberosa* is smaller than *A. carinata*, with a more slender profile. *Astyris gausapata* is larger with a rounded body whorl.

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Rincon Hill Fossils (Continued from page 3)

A few Turbans and Trochids are found at this site, most notably *Homalopoma lurida* and the two Southern Californian *Astraea*s. *Astraea* shells don't survive fossilization very well and, usually, their presence in this locality is marked only by pockets of shimmering shell fragments and their sturdy opercula being strewn about in significant numbers. Based on the relative quantity of opercula along this outcrop, *Astraea gibberosa* must have been far more common than *A. undosa* in this habitat.

Crepidulas of all sorts abound. The real prize, however, is the extinct *Crepidula princeps*, a shell that can reach 100 mm in size. The specimen pictured (right) is only 90 mm in size!

Among the most prized of the fossil mollusks found at this site are rather common local species. Large intact (but fragile) specimens of the Bursa, *Crossata californica* (right), and Kellet's Whelk are found together in one bed of dense siltstone.

Two large gastropods characteristic of this horizon are *Fusinus barbarentis* and the extinct Buccinid, *Calicanthus fortis* (pictured right).

The Muricids represented in this fauna include a selection of cool water Boreotrophons, all small to medium sized shells but well preserved and beautifully sculptured (see below). In addition, Ocinebrinas are very common and are found with a range of sculpture to keep the collector confused about their identity. *Ocinebrina foveolata*, in particular, can be found in smooth shouldered forms (below) and more carinate varieties as well.

A remarkable extinct species, *Maxwellia eldredgei* (below, right) is occasionally found at this location.



From left to right: opercula from *Astraea gibberosa* (27 mm), *Homalopoma luridum* (9.2 mm)



The extinct *Crepidula princeps* (90 mm)



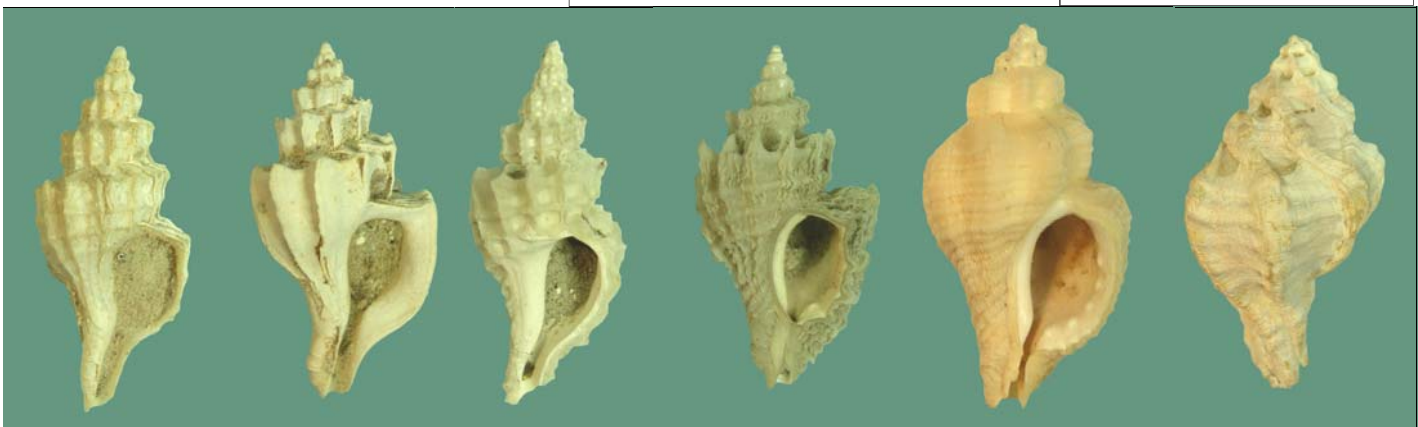
Crossata californica (66.7 mm)



From left to right: *Fusinus barbarentis* (67 mm), *Calicanthus fortis* (51.7 mm)



Granulina margaritula (3 mm)



From left to right: *Boreotrophon orpheus praecursor* (14.8 mm), *B. multicostatus* (26 mm), *B. cf. stuarti* (30.8 mm), *Ocinebrina squamulifera* (14.5 mm), *O. foveolata* (18 mm) and the extinct Muricid, *Maxwellia eldredgei* (36 mm)



From left to right: *Crassispira semiinflata* (44.6 mm), *Clathurella canfieldi* (13.2 mm), *Ophioderma inermis* (33.6 mm), *Antiplanes perversa* (45 mm), *Borsonella* sp?? (39.7 mm), *Megasurcula carpenteriana* (40.3 mm)

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The Turrids are well represented at this site (I am including those species recently reclassified as *Conidae*). Pictured, above, are some of the species that can be collected along the off ramp. The tiny *Clathurellas* are particularly common in the tuffaceous bed in the middle of the outcrop.

Two species from the family Cancellariidae are more rarely encountered here. The small *Admete* (right) is not uncommon among the smaller gastropods that abound in certain beds. The extinct *Cancellaria arnoldi* is rarely encountered.

Perhaps the most unusual find at this



From left to right: *Admete gracilor* (12.3 mm), *Cancellaria arnoldi* (24 mm)



Architectonica sp. (24.5 mm)

site is the *Architectonica* pictured above. With so much of this fauna coming from cooler waters, it was surprising to encounter a representative of this tropical genus.

Among the smaller

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Minus low tides provide great conditions for observing mollusks and other marine life on Southern California shores. Listed below are some minus low tides that occur during daylight hours in the summer months:

Please be sure that you are familiar with the California Dept. of Fish and Game regulations regarding the collecting of live mollusks— for details see *Las Conchas*, vol 33, no. 3)

June, 2006

Tuesday, June 13	5:38 am	-1.2
Wednesday, June 14	6:24 am	-1.1
Thursday, June 15	7:12 am	-0.9
Friday, June 16	8:01 am	-0.5
Saturday, June 17	8:51 am	-0.1
Tuesday, June 27	5:39 am	-0.9
Wednesday, June 28	6:16 am	-0.6
Thursday, June 29	6:53 am	-0.3

July, 2006

Thursday, July 13	5:59 am	-1.1
Friday, July 14	6:40 am	-0.7
Saturday, July 15	7:20 am	-0.2
Thursday, July 27	5:38 am	-0.3

August, 2006

Friday, August 11	5:24 am	-0.7
Saturday, August 12	6:00 am	-0.1

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species encountered at the Rincon Hill locality, there are a number of Bubble Shells. To date, I have collected the species shown (left). These are, for the most part, tiny shells and are often missed by many collectors.

It is advisable to bring home a bag full of shell-laden sand found at the base of the many of the most fossiliferous beds to sift and examine under magnification at

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From left to right: *Acteocina harpa* (4.7 mm), *Acteocina culcitella* (11.4 mm), *Volvullela cylindrica* (8 mm), *Cylichna cf alba* (9.5 mm)

2006 Pacific Shell Club Shell Auction

Sunday, June 11

1:30-4:00 pm

Oakwood Apartments, Toluca Lake

(3682 Barham Boulevard— between Cahuenga and Forest Lawn Drive)

Voice Auction highlighting a special selection of unusual Volutes from an old collection and a wide range of specimen shells available at incredible prices!

Silent Auction will take place in two rounds with bids starting as low as 50¢. You will be able to find great deals on a wide variety of shells, fossils, books, coral and related “stuff”

THIS IS AN INCREDIBLE OPPORTUNITY TO ACQUIRE SOME OUTSTANDING SHELLS AT AN UNBELIEVABLE BARGAIN PRICE WHILE SUPPORTING THE CLUB.

DON'T MISS OUT!!

The afternoon will include feasting on chicken supplied by the Club; participants are asked to bring the other foodstuffs potluck. Contact Terry Rutkas at 562-868-8394 to RSVP and to indicate what you will be bringing.

(Please note: RSVP's are necessary to confirm the amount of chicken to purchase)

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home. Another example of a micro-mollusk found in this manner is the 3 mm *Granulina* specimen pictured on page 4.

The fauna list below contains the gastropods identified (or, in some cases, tentatively identified) by the author. There is no doubt that this is an incomplete list and, periodically, we will publish an update. I welcome any

corrections or more complete identification, where needed.

The next issue of *Las Conchas* will present the bivalves, scaphopods and a few non-mollusks that can be collected at this locality. Updates to the gastropod fauna list and a list of references will also be provided.

A Preliminary Checklist of Gastropods From Rincon Hill— Mid-Pleistocene Santa Barbara Formation

Haliotidae

Haliotis sp.

Fissurellidae

Lucapinella cf. *callomarginata* (Dall, 1871)

Puncturella sp.

Turbinidae

Astraea gibberosa (Dillwyn, 1817)

Astraea undosa (Wood, 1828)

Homalopoma luridum (Dall, 1885)

Homalopoma paucicostatum (Dall, 1871)

Trochidae

Lirularia succincta (Carpenter, 1864)

Margarites pupillus (Gould, 1849)

Solaria peramabilis Carpenter, 1864

Tegula cf. *montereyi* (Keiner, 1850)

Cerithiidae

Lirobittium attenuatum (Carpenter, 1864)

Lirobittium quadrifilatum (Carpenter, 1864)

Seila montereyensis (Bartsch, 1907)

Stylidium eschrichtii (Middendorff, 1849)

Turritellidae

Turritella cooperi (Carpenter, 1864)

Turritella gonostoma hemphilli Applin *

Littorinidae

Lucina carinata (Gould, 1848)

Hipponicidae

Hipponix antiquatus (Linnaeus, 1767)

Calyptraeidae

Calyptria fastigiata (Gould, 1856)

Crepidula adunca (Sowerby, 1825)

Crepidula nummularia Gould, 1846

Crepidula perforans (Valenciennes, 1846)

Crepidula princeps Conrad, 1856*

Crepidatella dorsata (Broderip, 1834)

Naticidae

Glossanulax reclusiana (Deshayes, 1839)

Bursidae

Crossata californica (Hinds, 1843)

Epitoniidae

Epitonium sp.

Muricidae

Boreotrophon multicostatus (Eschscholtz, 1829)

Boreotrophon orpheus praecursor (Arnold, 1903)*

Boreotrophon cf. *stuarti* (E. A. Smith, 1880)

Maxwellia eldridgei (Arnold, 1907)*

Maxwellia santarosana (Dall, 1905)

Ocinebrena foveolata (Hinds, 1844)

Ocinebrena lurida aspera (Baird, 1863)

Ocinebrena squamulifera (Carpenter, 1868)

Pteropurpura vokesae Emerson, 1964

Buccinidae

Calicanthus fortis (Carpenter, 1866)*

Engina sp.

Kelletia kelletii (Forbes, 1852)

Lirabuccinum dirum (Reeve, 1846)

Neptunea hawleyi (Carson, 1926)*

Nassariidae

Nassarinus insculptus (Carpenter, 1864)

Nassarinus perpinguis (Hinds, 1844)

Nassarinus mendicus (Gould, 1849)

Nassarinus mendicus cooperi (Forbes, 1850)

Fasciolaridae

Fusinus barbarendis (Trask, 1888)

Columbellidae

Alia carinata (Hinds, 1844)

Alia tuberosa (Carpenter, 1864)

Amphissa versicolor (Dall, 1871)

Astyris gausapata (Gould, 1850)

Olividae

Olivella baetica Carpenter, 1864

Olivella biplicata (Sowerby, 1825)

Cystiscidae

Granulina margaritula (Carpenter, 1857)

Mitridae

Mitra idae Melvill, 1893

Cancellariidae

Admete gracilor (Carpenter, 1869)

Cancellaria arnoldi (Dall, 1909)*

Turridae

Antiplanes perversa (Gabb, 1865)

Crassispira semiinflata (Grant & Gale, 1931)

Megasurcula carpenteriana (Gabb, 1865)

Megasurcula stearnsiana (Raymond, 1904)

Conidae

Conus californicus Reeve, 1844

Borsonella sp?

Clathurella canfieldi (Dall, 1871)

Ophiodermella inermis (Reeve, 1843)

Architectonicidae

Architectonica sp.

Pyramidellidae

Odostomia avellana Carpenter, 1864

Odostomia sp.

Odostomia sp.

Turbonilla sp.

Cylichnidae

Cylichna cf. *alba* (T. Brown, 1827)

Acteocina culcitella (Gould, 1853)

Acteocina harpa (Dall, 1871)

Retusidae

Volvulella cylindrica (Carpenter, 1864)

* *extinct species*

June Meeting: SUNDAY, June 11, 2006 1:30 pm — 4:00 pm

Final Party and Annual Shell Auction

Location: Oakwood Apartments, (3682 Barham Boulevard) Toluca Hills *(ask the guard for directions to the clubhouse where the party/ auction is being held)*

Directions:

from the Hollywood Freeway (northbound), exit at Barham Boulevard. Travel north on Barham until you see the Oakwood Apartments on your right. Turn right onto South Coyote Canyon Drive. Stop at the access gatehouse and inform the guard that you are with the Pacific Shell Club. Follow the yellow line to the North Clubhouse.

From the Hollywood Freeway southbound, exit at Cahuenga. Turn left on Cahuenga to Barham. Turn left onto Barham and follow the direction above.

You can park in guest parking or wherever you there is a single space. Do not park in reserved or double spaces.

(If you have questions about the location of the meeting, contact Sammy Krams at 323-876-8538)

This meeting will be devoted to three of our favorite things: **food, shells, and good company**. The club will be supplying chicken and members are asked to bring everything else potluck. Please contact Terry Rutkas at 562-868-8394 to RSVP and to indicate what you will be bringing.

Silent and voice auctions will begin after a brief business meeting.

Articles of interest to shell collectors are solicited for publication in this newsletter. Contents may be reprinted with credit being given to the Pacific Conchological Club, Inc.



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