

President's Message

I started picking up shells over 25 years ago. To call it collecting would be too strong a term. I'd always appreciated shells as natural artifacts but also as mementos of some adventure or other. For several years it never really occurred to me that people actually *collected* shells until I came across a large coffee-table book with the intriguing title, "*The Shell: Five Hundred-Million Years of Inspired Design.*" The Introduction by R. Tucker Abbot introduced me to an obsession that has affected emperors and paupers alike. Abbot also wrote about the roles mollusks played in human history: primarily as food then as useful natural objects then as curiosities and finally as a motif and a material in the arts. Of course *natural scientists* (as far back as there were such persons) sought out new species, described and cataloged them. The point of all this is that the humble mollusk – and its shell – touches mankind in many ways. Each of us has come to *conchology*, our study of shells, from a different starting point and we, naturally, have our own interests in pursuing it.

Up until about 6 years ago, I was skeptical about joining a shell club. Who were these people and what could they do at these meeting to interest me? Well, I'm glad I went to that first meeting. Since then I've had the pleasure of meeting some very interesting people; each one has a life with other interests but shell collecting is what we have in common. Likewise, every meeting has been about something different but always informative and entertaining. At our last meeting Sean Wiedrick shared his collecting adventures in Costa Rico including the perilous parts his mother doesn't know about. Coming this month

Phil Liff-Grief will lead us in a hands-on session about collecting micro-shells, complete with binocular microscopes and plenty of "grunge" to explore. For my part, I'll be contributing a series of articles about the *Use of Shell in Oceanic Material Culture*, i.e., shell tools and other artifacts of the people of Polynesia, Micronesia and Melanesia.

It's still several months away but we just booked our trip to the COA convention in Sanibel Island in July. We attended our first one in 2003 in Tacoma, Washington. I had such a good time meeting other shellers and acquiring yet more shells, that when I learned this year's convention was to be held in Sanibel Island, the epicenter of Florida shelling, I had no choice but to sign-up again.

Shell club dues are pretty cheap; you should consider giving your friends a membership!

Terry Rutkas
tirutkas@verizon.net



Megasurcula carpenteriana (Gabb, 1865)
For a picture of a live specimen, turn to page 7

Contents	
So. Cal Beach Collecting at its Best	2
The Use of Shells in Oceania	4
Tide Tables	6
From Paul's Aquarium— Megasurcula carpenteriana	7
Meeting information	8

Las Conchas is a publication of the Pacific Conchological Club

Pacific Conchological Club Officers:

President: *Terry Rutkas*
 Vice-President: *Dave Bridgnell*
 Secretary: *Phil Liff-Grieff*
 Treasurer: *Kathy Kalobi*

Membership Chairperson: Vacant
 Field Trip Chairperson: Vacant
 Librarian: *Janice Abdulian*
 Raffle Chairperson: *Janice Abdulian*
 Las Conchas Editor: *Phil Liff-Grieff*

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).

Southern California Beach Collecting at its Best

by Shawn Wiedrick

Although most avid shell collectors believe that beached specimens are of no value, I disagree. For me, the thrill of the hunt and the extreme rush in finding new species for my collection is justifiable.

Over the last several years, I have gone to great lengths to research, record and explore the many beaches, tide pools, breakwaters and bays in Southern California. In doing so, I have found several locations that I dearly adore and continue to visit. One area that I really like is Northern San Diego County. It has an extremely unpredictable range of fauna. Some seasons, it casts millions of shells upon shore and other seasons only a few.

This location has yielded some of the most uncommon species in my California collection. Don't be deceived though, most of the time there is practically nothing. Reading and researching, R. Tucker Abbott's book, "American Seashells," has triggered an awareness

From the editor....

Shawn's article records the aftermath of a beach replenishment project undertaken by San Diego County during the summer of 2001. Approximately two million cubic yards of offshore sand was dredged up from a depth of 60 to 90 feet and deposited on beaches from Oceanside to Imperial Beach. Along with all of the offshore sand, a wide variety of offshore, intertidal and mudflat shells were deposited on San Diego Co. beaches. This collection of shells represented both recent-dead material and fossils from a submerged shoreline. Such a mix of material from different habitats can truly prove to be both confusing and exciting.

For a listing of other species that were to be found on N. San Diego County beaches during that wonderful summer (*reprinted from Las Conchas, vol. 33, no. 2*), turn to page 7.



Fusinus barbarentis



Fig 2 Fusinus harfordi

about the extreme variety of Southern California species. It took me a while to figure out that some species are very similar and confusing. While collecting, these shells can be overseen quite easily.

In the winter months of 2002, there was an incredible surge of seashells on the beaches. During this season I found about a dozen or so *Fusinus barbarentis* (Fig. 1) in some shell rubble along the beach. Upon further investigation, I found a much thicker and robust *Fusinus* under some seaweed. When I returned to my house in Huntington Beach, I was eager to research and find out what I found. With the aid of "American Seashells," I

(Continued on page 3)

(Continued from page 2)

identified it as a *Fusinus barfordii* (Fig. 2).

I was constantly finding small Nassarius within these shell piles. Mostly, *Nassarius mendicus* (Fig. 3), *N. tegula* (Fig. 4), *N. perpinguis* (Fig. 5), and *N. fossatus* (Fig. 6). When I referred back to Tucker's reference I realized how many similar species of Nassarius there were. After much research and persistence on the beach, I began to find different species. I recognized the more coarsely ribbed subspecies, *N. mendicus cooperi* (Fig. 7). The next two I found were a little less common. The first was a *N. rhinetes* (Fig. 8) and then I found a *N. insculptus* (Fig. 9).

Another interesting species was popping up unexpectedly too, *Cancellaria cooperi* (Fig. 10). Once again, while researching, I found that another uncommon species lived in the area too. There was one problem.... the amount of common Nassarius that perfectly camouflage themselves between and among similar looking specimen. Searching and searching seemed hopeless until one day I walked along the shore and found a rock pocket half submerged under water. The water was rising from an excellent low tide, when I spotted what I thought was an oversized *Nassarius perpinguis*. To my amazement, this speci-

men had two very small folds on the columnella. My heart pounded with excitement as I realized that I had found a specimen of *C. crawfordiana* (Fig. 11).

Over the course of several months, I had accumulated quite a few *Megasurcula carpenteriana* (Fig. 12). Fortunately, during a father/son excursion, my father and I visited the Cabrillo Marine Museum. This is where I located a small *Megasurcula* that appeared to me to be a juvenile *M. carpenteriana*. The label read, "*Megasurcula remondii*." When I returned home I opened a drawer in one of my shell cases labeled, "Unidentified Species." There inside the drawer I found a *M. remondii* (Fig. 13) that I had collected months before.

I also found *Mitra idae* (Fig. 14) and *Pseudomelatomella penicillata* (Fig. 15). My research began to get frustrating when Tucker's text appeared with no images. The next two specimen I recognize are only assumptions as to the correct name. By reading, comparison and process of elimination, I identified and labeled the following: *Cymatosyrinx empyrosia* (Fig. 16) and *Ophiodermella incermis* (Fig. 17).



Fig. 3 Nassarius mendicus



Fig. 4 Nassarius tegula



Fig. 5 Nassarius perpinguis



Fig. 6 Nassarius fossatus



Fig. 7 Nassarius mendicus cooperi



Fig. 8 Nassarius rhinetes



Fig. 9 Nassarius insculptus



Fig. 10 Cancellaria cooperi

Continued on page 6

The Use of Shell in Oceanic Material Culture I

Terry Rutkas

40,000 years ago, while much of the world's water was bound up in glaciers, stone-age people began to move from South-east-Asia into the Pacific via exposed shelves of land, later sailing in raft and canoe. Throughout the following millennia, the progeny of these emigrants populated almost every habitable speck of land in the vast Pacific Ocean, from New Guinea and Australia to Easter Island and Hawaii. As time progressed, new races emerged, adapted to an oceanic environment.

As recently as 100 years ago, these oceanic peoples still lived a stone-age existence. Without metals, their tools were fashioned from whatever was available: stone, bone, wood and shell. In the Western Pacific, large continental land masses offered the hard stone needed to fashion *toki* (*to'i*, *ko'i*), the fundamental tool of all oceanic peoples, what we would call an adze.

Migrating eastward: the *High Islands*, volcanoes rising from the ocean floor, provided basalt, suitable for hewing canoes from local trees. Traveling farther eastward: the *Low Islands*, coral atolls, posed a challenge—no hard stone for tool making.

As Darwin realized, coral atolls are the remnants of subsided volcanic peaks. What was once an encircling ring of coral continued to grow as the volcanic rock sank. Eventually only a coral lagoon remains; consolidated calcium carbonate, rising to the surface of the ocean, thousands of feet above hard rock. To a people who thrived in the ocean, it hardly seemed to matter. A substitute for hard rock could be found on the reef itself. **Shell.**



Tridacna gigas S.W. Pacific. They can grow to 4 feet across and can be found on reefs in shallow water, 2–20 meters.

While not as hard as volcanic stone, mollusk shell is the hardest material found in the atoll environment. Many tools were made from shell, including adzes. *Tridacna gigas* and *T. maxima* were preferred. The large heavy shells could be broken and chipped into blanks which could be ground into final form with sand and coral blocks.



Adze from Kiribati (Gilbert Is.) Lack of harder material made using *Tridacna* shell a necessity for atoll dwelling people.

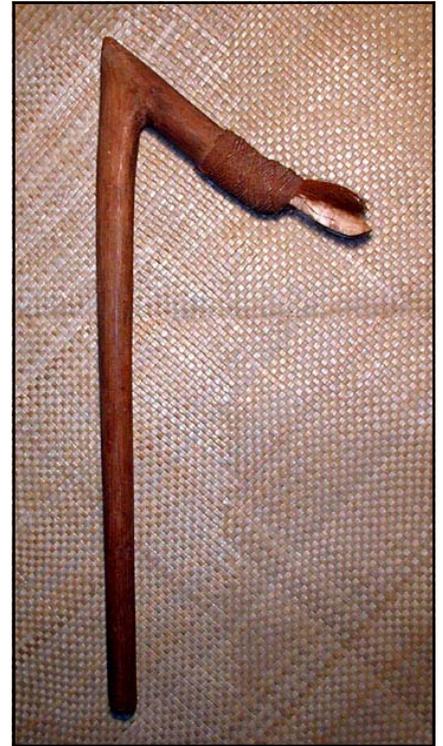
I've watched Pacific Islanders working with adzes. It's amazing how delicate and precise these tools can be. Contemporary craftsmen claim that *Tridacna* adzes were just as good as steel, they just got dull faster.

The Oceanian's tool kit contained adzes in a variety of sizes and



Adze attributed to Western Samoa is not usually found in a *High Islands* tool kit; an import from Tokelau or Tuvalu?

weights for jobs large and small. Where *Tridacna* was not available, other shells like *Terebra*, *Cassis*, *Conus* and *Mitra* were employed.



Adze from Mortlock Islands, (North-East of Bougainville. Solomon Is). *Terebra maculata* shell with basal whorl ground down to form a concave cutting edge. This type of adze has been dated to A.D. 460-620 in Melanesia. Also found in the Solomon Islands and Vanuatu at about the same time. This may signify contact between these regions and Micronesia where they were very common.



Some other species that were used for tool making: *Mitra papalis*, *M. mitra*, *Terebra maculata*, *Conus suratensis*, *C. marmoreus*.



Species used for adze & chisel blades: *Cassis cornuta*, *Cypraea rufa*.

The shells we collect as specimens and curiosities were crucial for the first settlers of Oceania to survive in that harsh paradise.



Fig. 11 *Cancellaria crawfordiana*



Fig 12 *Megasurcula carpenteriana*



Fig. 13 *Megasurcula remondii*



Fig. 14 *Mitra idae*



Fig.15 *Pseudomelastoma penicillata*

(Continued from page 3)

As the season came to an end, the shell piles slowly decreased in size and numbers. The beach quickly turned back to its sandy yet pebbly state. My hopes were diminishing when I returned to the beaches to find nothing. I walked miles along the coastline in hopes that I would find a pile of shells to sort through. Just as I was about to turn to my car and drive the 80 miles home, I spotted a small pile of shells far up on the beach. Out of this crowd I pulled one of the most beautiful shells in my collection, a *Crassispira seminiflata* (Fig.18). The beaches have never been the same, it was a year to remember forever.



Fig 16



Fig 17



Fig 18

Low tides provide great conditions for observing mollusks and other marine life on Southern Californian shores. Listed below are some extremely low tides that occur during daylight hours:

(Please be sure that you are familiar with the California Department of Fish and Game regulations regarding the collecting of live mollusks.)

April, 2005			May, 2005		
Date	Time	Ht.	Date	Time	Ht.
Friday, 04/01	09:33 am	0.0	Sunday, 05/01	11:10 am	-0.4
Saturday, 04/02	10:50 am	-0.3	Monday, 05/02	12:03 pm	-0.4
Sunday, 04/03	12:46 pm	-0.7	Tuesday, 05/03	12:47 pm	-0.2
Monday, 04/04	01:29 pm	-0.8	Wednesday, 05/11	06:20 am	-0.4
Tuesday, 04/05	02:07 pm	-0.8	Thursday, 05/12	07:12 am	-0.2
Tuesday, 04/12	06:37 am	-0.2	Wednesday, 05/25	05:29 am	-1.4
Wednesday, 04/27	06:24 am	-0.8	Thursday, 05/26	06:23 am	-1.3
Thursday, 04/28	07:29 am	-0.6	Friday, 05/27	07:21 am	-1.1
Friday, 04/29	08:45 am	-0.5	Saturday, 05/28	08:23 am	-0.8
Saturday, 04/30	10:03 am	-0.4	Sunday, 05/29	09:24 am	-0.5
			Monday, 05/30	10:22 am	-0.1

Other Shells From the San Diego County Beach Replenishment of 2002

In addition to some of the species mentioned in Shawn's article, the following were found by the editor while visiting the replenished beaches of San Diego Co. in July, 2001.

Admete sp.

Alia carinata (Hinds, 1844)

Anomia peruviana Orbigny, 1846

Argopecten aquisulcatus (Carpenter, 1864)

Astraea undosa (Wood, 1828)

Balcis micans (Carpenter, 1864)

Bulla gouldiana Pilsbry, 1893

Bursa californica (Hinds, 1843)

Calliostoma gemmulatum Carpenter, 1864

Calliostoma tricolor Gabb, 1865

Cardiomya pectinata (Carpenter, 1864)

Cerithidea californica (Haldeman, 1840)

Chione californiensis (Broderip, 1835)

Chione fluctifraga (Sowerby, 1853)

Clinocardium nuttalli

Conus californicus (Reeve, 1844)

Crepidula onyx Sowerby, 1824

Crucibulum spinosum (Sowerby, 1824)

Cypraea spadicea Swainson, 1823

Dentalium neohexagonum Pilsbry & Sharp, 1897

Donax gouldii Dall, 1921

Epitonium indianorum Carpenter, 1865

Epitonium lowei Dall, 1906

Epitonium sawinae Dall, 1903

Erato vitellina Hinds, 1844

Fissurella volcano Reeve, 1849

Granulina sp.

Haliotis corrugate Wood, 1828

Here excavata (Carpenter, 1857)

Hipponix tumens Carpenter, 1864

Kelletia kelletii (Forbes, 1852)

Leptopecten latiauratus (Conrad, 1837)

Lucapinella sp.

Lucinisca nuttalli Conrad, 1837

Maxwellia gemma (Sowerby, 1879)

Maxwellia santarosana (Dall, 1905)

Melampus olivaceus Carpenter, 1857

Norrissia norrissi (Sowerby, 1838)

Notoacmaea insessa (Hinds, 1842)

Nucula exigua Sowerby, 1833

Nuculana taphria (Dall, 1897)

Ocenebra foveolata (Hinds, 1844)

Olivella baetica Carpenter, 1864

Olivella biplicata (Sowerby, 1825)

Opalia funiculate (Carpenter, 1857)

Ostrea lurida Carpenter, 1864

Petricola carditoides Conrad, 1837

Polinices draconis (Dall, 1903)

Polinices reclusianus (Deshayes, 1839)

Pteropurpura festiva (Hinds, 1844)

Pteropurpura vokesae Emerson, 1964

Roperia poulsoni (Carpenter, 1864)

Serpulorbis squamigerus (Carpenter, 1857)

Sinum scopulosum (Conrad, 1849)

Tegula aureotincta (Forbes, 1852)

Tegula eiseni Jordan, 1836

Tellina bodegensis Hinds, 1845

Terebra pedroana Dall, 1908

Tivela stultorum (Mawe, 1823)

Trivia californiana (Gray, 1827)

Trivia solandri (Sowerby, 1832)

Turbonilla sps.

Live from Paul Kanner's Tank-

Photos of Living Southern California Mollusks



This month, we are featuring photos of the large Southern Californian Turrid, *Megasurcula carpenteriana*. Not uncommon on offshore sandy bottoms, this species is frequently encountered at depths of 60 feet or more.

Hold the Date
2004 -2005
PCC meeting dates

April 10

May 15

June 12

Unless otherwise noted, all meetings begin at 1:30 pm

April Meeting: SUNDAY, April 10, 2005

1:30 pm — 4:00 pm

PROGRAM: Good Things Come in Small Packages

Presenter: Phil Liff-Grieff

An exploration of collecting mini and micro mollusks. Where can they be found? How are they collected? How are they stored? A closer “hands-on” look at collecting small shells.

May Meeting: SUNDAY, May 15, 2005

1:30 pm — 4:00 pm

PROGRAM: California Shelling

Presenter: Paul Kanner

An overview of the shells and collecting habitats found in Southern California.

Location: Natural History Museum of Los Angeles County

900 Exposition Boulevard, Los Angeles (Exposition exit from the 110 Freeway— follow the signs). Park in the west parking lot or, if it is filled, in the pay lot immediately west of the museum (the pay lot will cost \$5).

Enter at the staff entrance which is located at the bottom level of the museum, on the left side of the main Museum entrance on Exposition Boulevard. The security guard can direct you to the Times-Mirror Room.

Refreshments are potluck

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.

**Pacific
Conchological
Club**

2447 Kemper Avenue
La Crescenta, CA 91214

DATED MATERIAL